



Open Source Used In Edge Intelligence Edge_1.6.2

Cisco Systems, Inc.

www.cisco.com

Cisco has more than 200 offices worldwide.
Addresses, phone numbers, and fax numbers
are listed on the Cisco website at
www.cisco.com/go/offices.

Text Part Number: 78EE117C99-1296953726

This document contains licenses and notices for open source software used in this product. With respect to the free/open source software listed in this document, if you have any questions or wish to receive a copy of any source code to which you may be entitled under the applicable free/open source license(s) (such as the GNU Lesser/General Public License), please submit this [form](#).

In your requests please include the following reference number 78EE117C99-1296953726

Contents

1.1 minizip 1.01

1.1.1 Available under license

1.2 libmodbus 3.1.6

1.2.1 Available under license

1.3 minizip 1.1

1.3.1 Available under license

1.4 rapidjson 1.1.0

1.4.1 Available under license

1.5 net-snmp 5.9

1.5.1 Available under license

1.6 mosquitto 1.6.12

1.6.1 Available under license

1.7 azure-iot-sdk-c 1.3.9

1.7.1 Available under license

1.8 popsicle-cookie 1.0.0

1.8.1 Available under license

1.9 cpp-httplib 0.7.8

1.9.1 Available under license

1.10 acatl 0.2.0

1.10.1 Available under license

1.11 popt 1.18-r0

1.11.1 Available under license

1.12 fmt 7.0.1

1.12.1 Available under license

1.13 scanelf 1.2.8-r0

1.13.1 Available under license

- 1.14 azure-iot-sdk-c LTS_07_2020_Ref01**
 - 1.14.1 Available under license
- 1.15 duktape 2.5.0**
 - 1.15.1 Available under license
- 1.16 sqlite 3.35.5**
 - 1.16.1 Available under license
- 1.17 pax-utils 1.3.3-r0**
 - 1.17.1 Available under license
- 1.18 musl 1.2.2-r7**
 - 1.18.1 Available under license
- 1.19 apk-tools 2.12.7-r3**
 - 1.19.1 Available under license
- 1.20 boost 1.77.0**
 - 1.20.1 Available under license
- 1.21 alpine-keys 2.4-r1**
 - 1.21.1 Available under license
- 1.22 alpine-baselayout 3.2.0-r18**
 - 1.22.1 Available under license
- 1.23 log-rotate 3.18.1-r1**
 - 1.23.1 Available under license
- 1.24 mosquito 2.0.14**
 - 1.24.1 Available under license
- 1.25 ca-certificates 20211220-r0**
 - 1.25.1 Available under license
- 1.26 openssl 1.1.1n-r0**
 - 1.26.1 Available under license
- 1.27 libretls 3.3.4-r3**
 - 1.27.1 Available under license
- 1.28 zlib 1.2.12-r0**
 - 1.28.1 Available under license
- 1.29 zlib 1.2.12**
 - 1.29.1 Available under license
- 1.30 busybox 1.34.1-r5**
 - 1.30.1 Available under license
- 1.31 open62541 v1.1-dev-280-gff87c287**
 - 1.31.1 Available under license
- 1.32 open62541 v1.2.3-dev-280-gff87c287**
 - 1.32.1 Available under license

1.1 minizip 1.01

1.1.1 Available under license :

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.2 libmodbus 3.1.6

1.2.1 Available under license :

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your

freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot

effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run

that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium,

provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of

this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary

GNU General Public

License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a

work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever

changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the

Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse

you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by

the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively

convey

the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>

Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

1.3 minizip 1.1

1.3.1 Available under license :

No license file was found, but licenses were detected in source scan.

MiniZip - Copyright (c) 1998-2010 - by Gilles Vollant - version 1.1 64 bits from Mathias Svensson

Introduction

MiniZip 1.1 is built from MiniZip 1.0 by Gilles Vollant (<http://www.winimage.com/zLibDll/minizip.html>)

When adding ZIP64 support into minizip it would result into risk of breaking compatibility with minizip 1.0. All possible work was done for compatibility.

Background

When adding ZIP64 support Mathias Svensson found that Even Rouault have added ZIP64 support for unzip.c into minizip for a open source project called gdal (<http://www.gdal.org/>)

That was used as a starting point. And after that ZIP64 support was added to zip.c some refactoring and code cleanup was also done.

Changed from MiniZip 1.0 to MiniZip 1.1

- * Added ZIP64 support for unzip (by Even Rouault)
- * Added ZIP64 support for zip (by Mathias Svensson)
- * Reverted some changed that Even Rouault did.
- * Bunch of patches received from Gulle Vollant that he received for MiniZip from various users.
- * Added unzip patch for BZIP Compression method (patch create by Daniel Borca)
- * Added BZIP Compress method for zip
- * Did some refactoring and code cleanup

Credits

Gilles Vollant - Original MiniZip author
Even Rouault - ZIP64 unzip Support
Daniel Borca - BZip Compression method support in unzip
Mathias Svensson - ZIP64 zip support
Mathias Svensson - BZip Compression method support in zip

Resources

ZipLayout <http://result42.com/projects/ZipFileLayout>

Command line tool for Windows that shows the layout and information of the headers in a zip archive.
Used when debugging and validating the creation of zip files using MiniZip64

ZIP App Note <http://www.pkware.com/documents/casestudies/APPNOTE.TXT>
Zip File specification

Notes.

- * To be able to use BZip compression method in zip64.c or unzip64.c the BZIP2 lib is needed and HAVE_BZIP2 need to be defined.

License

Condition of use and distribution are the same than zlib :

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Found in path(s):

* /opt/ws_local/PERMITS_SQL/1081995793_1597853129.04/0/f2i-consulting-minizip-1-1-0-g835d6e4-tar-gz/F2I-Consulting-Minizip-835d6e4/MiniZip64_info.txt

No license file was found, but licenses were detected in source scan.

/* zip.h -- IO on .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - (<http://www.winimage.com/zLibDll/minizip.html>)

Copyright (C) 1998-2010 Gilles Vollant (<http://www.winimage.com/zLibDll/minizip.html>)

Modifications for Zip64 support

Copyright (C) 2009-2010 Mathias Svensson (<http://result42.com>)

For more info read MiniZip_info.txt

Condition of use and distribution are the same than zlib :

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,

including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Changes

See header of zip.h

*/

Found in path(s):

* /opt/ws_local/PERMITS_SQL/1081995793_1597853129.04/0/f2i-consulting-minizip-1-1-0-g835d6e4-tar-gz/F2I-Consulting-Minizip-835d6e4/zip.h

No license file was found, but licenses were detected in source scan.

/* unzip.c -- IO for uncompress .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - (<http://www.winimage.com/zLibDll/minizip.html>)

Copyright (C) 1998-2010 Gilles Vollant (minizip) (<http://www.winimage.com/zLibDll/minizip.html>)

Modifications of Unzip for Zip64

Copyright (C) 2007-2008 Even Rouault

Modifications for Zip64 support on both zip and unzip

Copyright (C) 2009-2010 Mathias Svensson (<http://result42.com>)

For more info read MiniZip_info.txt

Decryption code comes from crypt.c by Info-ZIP but has been greatly reduced in terms of compatibility with older software. The following is from the original crypt.c.

Code woven in by Terry Thorsen 1/2003.

Copyright (c) 1990-2000 Info-ZIP. All rights reserved.

See the accompanying

file LICENSE, version 2000-Apr-09 or later
(the contents of which are also included in zip.h) for terms of use.
If, for some reason, all these files are missing, the Info-ZIP license
also may be found at: <ftp://ftp.info-zip.org/pub/infozip/license.html>

crypt.c (full version) by Info-ZIP. Last revised: [see crypt.h]

The encryption/decryption parts of this source code (as opposed to the
non-echoing password parts) were originally written in Europe. The
whole source package can be freely distributed, including from the USA.
(Prior to January 2000, re-export from the US was a violation of US law.)

This encryption code is a direct transcription of the algorithm from
Roger Schlafly, described by Phil Katz in the file appnote.txt. This
file (appnote.txt) is distributed with the PKZIP program (even in the
version without encryption capabilities).

Changes in unzip.c

2007-2008 - Even Rouault - Addition of cpl_unzGetCurrentFileZStreamPos
2007-2008 - Even Rouault - Decoration of symbol names unz* -> cpl_unz*
2007-2008 - Even Rouault - Remove old C style function prototypes
2007-2008 - Even Rouault - Add unzip support for ZIP64

Copyright (C) 2007-2008 Even Rouault

Oct-2009 - Mathias Svensson - Removed cpl_* from symbol names (Even Rouault added them but since this is
now moved to a new project (minizip64) I renamed them again).

Oct-2009 - Mathias Svensson - Fixed problem if uncompressed size was > 4G and compressed size was <4G
should only read the compressed/uncompressed size from the Zip64 format if
the size from normal header was 0xFFFFFFFF

Oct-2009 - Mathias Svensson - Applied some bug fixes from patches received from Gilles Vollant

Oct-2009 - Mathias Svensson - Applied support to unzip files with compression method
BZIP2 (bzip2 lib is required)

Patch created by Daniel Borca

Jan-2010 - back to unzip and minizip 1.0 name scheme, with compatibility layer

Copyright (C) 1998 - 2010 Gilles Vollant, Even Rouault, Mathias Svensson

*/

Found in path(s):

* /opt/ws_local/PERMITS_SQL/1081995793_1597853129.04/0/f2i-consulting-minizip-1-1-0-g835d6e4-tar-gz/F2I-
Consulting-Minizip-835d6e4/unzip.c

No license file was found, but licenses were detected in source scan.

/* unzip.h -- IO for uncompress .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - (<http://www.winimage.com/zLibDll/minizip.html>)

Copyright (C) 1998-2010 Gilles Vollant (minizip) (<http://www.winimage.com/zLibDll/minizip.html>)

Modifications of Unzip for Zip64

Copyright (C) 2007-2008 Even Rouault

Modifications for Zip64 support on both zip and unzip

Copyright (C) 2009-2010 Mathias Svensson (<http://result42.com>)

For more info read MiniZip_info.txt

Condition of use and distribution are the same than zlib :

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Changes

See header of unzip64.c

*/

Found in path(s):

* /opt/ws_local/PERMITS_SQL/1081995793_1597853129.04/0/f2i-consulting-minizip-1-1-0-g835d6e4-tar-gz/F2I-Consulting-Minizip-835d6e4/unzip.h

1.4 rapidjson 1.1.0

1.4.1 Available under license :

Copyright (c) 2012 Julian Berman

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Tencent is pleased to support the open source community by making RapidJSON available.

Copyright (C) 2015 THL A29 Limited, a Tencent company, and Milo Yip. All rights reserved.

If you have downloaded a copy of the RapidJSON binary from Tencent, please note that the RapidJSON binary is licensed under the MIT License.

If you have downloaded a copy of the RapidJSON source code from Tencent, please note that RapidJSON source code is licensed under the MIT License, except for the third-party components listed below which are subject to different license terms. Your integration of RapidJSON into your own projects may require compliance with the MIT License, as well as the other licenses applicable to the third-party components included within RapidJSON. To avoid the problematic JSON license in your own projects, it's sufficient to exclude the bin/jsonchecker/ directory, as it's the only code under the JSON license.

A copy of the MIT License is included in this file.

Other dependencies
and licenses:

Open Source Software Licensed Under the BSD License:

The msinttypes r29

Copyright (c) 2006-2013 Alexander Chemeris

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS AND CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Open Source Software Licensed Under the JSON License:

json.org
Copyright (c) 2002 JSON.org
All Rights Reserved.

JSON_checker
Copyright (c) 2002 JSON.org
All Rights Reserved.

Terms of the JSON License:

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

The Software shall be used for Good, not Evil.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Terms of the MIT License:

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.5 net-snmp 5.9

1.5.1 Available under license :

Various copyrights apply to this package, listed in various separate parts below. Please make sure that you read all the parts.

---- Part 1: Sparta, Inc (BSD) ----

Copyright (c) 2003-2010, Sparta, Inc
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of Sparta, Inc nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 2: ScienceLogic, LLC (BSD) ----

Copyright (c) 2006, ScienceLogic, LLC
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of ScienceLogic, LLC nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED

AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

Various copyrights apply to this package, listed in various separate
parts below. Please make sure that you read all the parts.

---- Part 1: CMU/UCD copyright notice: (BSD like) ----

Copyright 1989, 1991, 1992 by Carnegie Mellon University

Derivative Work - 1996, 1998-2000

Copyright 1996, 1998-2000 The Regents of the University of California

All Rights Reserved

Permission to use, copy, modify and distribute this software and its
documentation for any purpose and without fee is hereby granted,
provided that the above copyright notice appears in all copies and
that both that copyright notice and this permission notice appear in
supporting documentation, and that the name of CMU and The Regents of
the University of California not be used in advertising or publicity
pertaining to distribution of the software without specific written
permission.

CMU AND THE REGENTS OF THE UNIVERSITY OF CALIFORNIA DISCLAIM ALL
WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED
WARRANTIES

OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL CMU OR
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA BE LIABLE FOR ANY SPECIAL,
INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING
FROM THE LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

---- Part 2: Networks Associates Technology, Inc copyright notice (BSD) ----

Copyright (c) 2001-2003, Networks Associates Technology, Inc
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of the Networks Associates Technology, Inc nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 3: Cambridge Broadband Ltd. copyright notice (BSD) ----

Portions of this code are copyright (c) 2001-2003, Cambridge Broadband Ltd.
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* The name of Cambridge Broadband Ltd. may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE

LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 4: Sun Microsystems, Inc. copyright notice (BSD) ----

Copyright (c) 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Use is subject to license terms below.

This distribution may include materials developed by third parties.

Sun, Sun Microsystems, the Sun logo and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of the Sun Microsystems, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR

CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF

ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 5: Sparta, Inc copyright notice (BSD) ----

Copyright (c) 2003-2013, Sparta, Inc
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following
disclaimer in the
documentation and/or other materials provided with the distribution.
- * Neither the name of Sparta, Inc nor the names of its contributors may
be used to endorse or promote products derived from this software
without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS
IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS;
OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN
IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 6: Cisco/BUPTNIC copyright notice (BSD) ----

Copyright (c) 2004, Cisco, Inc and Information Network
Center of Beijing University of Posts and Telecommunications.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright

notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- * Neither the name of Cisco, Inc, Beijing University of Posts and Telecommunications, nor the names of their contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 7: Fabasoft R&D Software GmbH & Co KG copyright notice (BSD) ----

Copyright (c) Fabasoft R&D Software GmbH & Co KG, 2003

oss@fabasoft.com

Author: Bernhard Penz <bernhard.penz@fabasoft.com>

Redistribution and use in source and binary forms, with or without

modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * The name of Fabasoft R&D Software GmbH & Co KG or any of its subsidiaries, brand or product names may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 8: Apple Inc. copyright notice (BSD) ----

Copyright (c) 2007 Apple Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of Apple Inc. ("Apple") nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY APPLE AND ITS CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL APPLE OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 9: ScienceLogic, LLC copyright notice (BSD) ----

Copyright
(c) 2009, ScienceLogic, LLC
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of ScienceLogic, LLC nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
`AS IS' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT
SHALL THE COPYRIGHT
HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

---- Part 10: Lennart Poettering copyright notice (BSD-like) ----

Copyright 2010 Lennart Poettering

Permission is hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation files
(the "Software"), to deal in the Software without restriction,
including without limitation the rights to use, copy, modify, merge,
publish, distribute, sublicense, and/or sell copies of the Software,
and to permit persons to whom the Software
is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS
BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN
ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN

CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

---- Part 11: IETF copyright notice (BSD) ----

Copyright (c) 2013 IETF Trust and the persons identified as authors of the code. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of Internet Society, IETF or IETF Trust, nor the names of specific contributors, may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 12: Arista Networks copyright notice (BSD) ----

Copyright (c) 2013, Arista Networks, Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice,

this list of conditions and the following disclaimer.

- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of Arista Networks, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 13: VMware, Inc. copyright notice (BSD) ----

Copyright (c) 2016, VMware, Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of VMware, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR

CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 14: USC/Information Sciences Institute copyright notice (BSD) ----

Copyright (c) 2017-2018, Information Sciences Institute
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of Information Sciences Institute nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

LICENSE ISSUES

=====

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style

Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL License

/* =====

* Copyright (c) 1998-2008 The OpenSSL Project. All rights reserved.

*

* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:

*

* 1. Redistributions of source code must retain the above copyright
* notice, this list of conditions and the following disclaimer.

*

* 2. Redistributions in binary form must reproduce the above copyright
* notice, this list of conditions and the following disclaimer

in

* the documentation and/or other materials provided with the
* distribution.

*

* 3. All advertising materials mentioning features or use of this
* software must display the following acknowledgment:
* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"

*

* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
* endorse or promote products derived from this software without
* prior written permission. For written permission, please contact
* openssl-core@openssl.org.

*

* 5. Products derived from this software may not be called "OpenSSL"
* nor may "OpenSSL" appear in their names without prior written
* permission of the OpenSSL Project.

*

* 6. Redistributions of any form whatsoever must retain the following
* acknowledgment:

* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"

*

* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS" AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;

* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.

* =====
*

* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product includes software
written by Tim
* Hudson (tjh@cryptsoft.com).
*
*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
* All rights reserved.
*
* This package is an SSL implementation written
* by Eric Young (eay@cryptsoft.com).
* The implementation was written so as to conform with Netscapes SSL.
*
* This library is free for commercial and non-commercial use as long as
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).
*
* Copyright remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.
* If this package is used in a product, Eric Young should be given attribution
* as the author of the parts of the
library used.
* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the copyright
* notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
* notice, this list of conditions and the following disclaimer in the
* documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software

- * must display the following acknowledgement:
- * "This product includes cryptographic software written by
- * Eric Young (eay@cryptsoft.com)"
- * The word 'cryptographic' can be left out if the routines from the library
- * being used are not cryptographic
- related :-).
- * 4. If you include any Windows specific code (or a derivative thereof) from
- * the apps directory (application code) you must include an acknowledgement:
- * "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
- *
- * THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS" AND
- * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
- * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
- * ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
- * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
- * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
- * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
- * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
- * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
- * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
- OF
- * SUCH DAMAGE.
- *
- * The licence and distribution terms for any publically available version or
- * derivative of this code cannot be changed. i.e. this code cannot simply be
- * copied and put under another distribution licence
- * [including the GNU Public Licence.]
- */

1.6 mosquito 1.6.12

1.6.1 Available under license :

Eclipse Public License - v 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

1. DEFINITIONS

"Contribution" means:

- a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and
- b) in the case of each subsequent Contributor:

- i) changes to the Program, and
- ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents " mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

2. GRANT OF RIGHTS

- a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.
- b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.
- c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims

any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a) it complies with the terms and conditions of this Agreement; and
- b) its license agreement:
 - i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
 - ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
 - iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
 - iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a) it must be made available under this Agreement; and
- b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter

any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must:

- a) promptly notify the Commercial Contributor in writing of such claim, and
- b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM IS PROVIDED ON AN "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, EITHER

EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

Eclipse Distribution License - v 1.0

Copyright (c) 2007, Eclipse Foundation, Inc. and its licensors.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of the Eclipse Foundation, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY

AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This project is dual licensed under the Eclipse Public License 1.0 and the
Eclipse Distribution License 1.0 as described in the epl-v10 and edl-v10 files.

1.7 azure-iot-sdk-c 1.3.9

1.7.1 Available under license :

Format: <http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: azure-iot-sdk-c

Source: <https://github.com/Azure/azure-iot-sdk-c.git>

Files: *

Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>

License: MIT

Files: debian/*

Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>

License: MIT

License: MIT

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

.

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED,

INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Microsoft Azure IoT SDKs

Copyright (c) Microsoft Corporation

All rights reserved.

MIT License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED *AS IS*, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Format: <http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: iotHub-client-sample-firmware-update

Source: <https://github.com/Azure/azure-iot-sdks.git>

Files: *

Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>

License: MIT

Files: debian/*

Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>

License: MIT

License: MIT

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

.

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,

TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.8 popsicle-cookie 1.0.0

1.8.1 Available under license :

The MIT License (MIT)

Copyright (c) 2019 Blake Embrey (hello@blakeembrey.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.9 cpp-httplib 0.7.8

1.9.1 Available under license :

The MIT License (MIT)

Copyright (c) 2017 yhirose

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.10 acatl 0.2.0

1.10.1 Available under license :

acatl library

=====

BSD 3-Clause License

Copyright (c) 2016-2019, Lars-Christian Frstenberg

lcf@miztli.de

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING

NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.11 popt 1.18-r0

1.11.1 Available under license :

Copyright (c) 1998 Red Hat Software

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of the X Consortium shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from the X Consortium.

1.12 fmt 7.0.1

1.12.1 Available under license :

A. HISTORY OF THE SOFTWARE

=====

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the

software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see <http://www.zope.com>). In 2001, the Python Software Foundation (PSF, see <http://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

All Python releases are Open Source (see <http://www.opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.2	2.1.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3				
2.1.2	2002	PSF	yes	
2.2.1	2.2	2002	PSF	yes
2.2.2	2.2.1	2002	PSF	yes
2.2.3	2.2.2	2003	PSF	yes
2.3	2.2.2	2002-2003	PSF	yes
2.3.1	2.3	2002-2003	PSF	yes
2.3.2	2.3.1	2002-2003	PSF	yes
2.3.3	2.3.2	2002-2003	PSF	yes
2.3.4	2.3.3	2004	PSF	yes
2.3.5	2.3.4	2005	PSF	yes
2.4	2.3	2004	PSF	yes
2.4.1	2.4	2005	PSF	yes
2.4.2	2.4.1	2005	PSF	yes
2.4.3	2.4.2	2006	PSF	yes
2.4.4	2.4.3	2006	PSF	yes
2.5	2.4	2006	PSF	yes
2.5.1	2.5	2007	PSF	yes

2.5.2	2.5.1	2008	PSF	yes
2.5.3	2.5.2	2008	PSF	yes
2.6	2.5	2008	PSF	yes
2.6.1	2.6	2008	PSF	yes
2.6.2	2.6.1	2009	PSF	yes
2.6.3	2.6.2	2009	PSF	yes
2.6.4	2.6.3	2009	PSF	yes
2.6.5	2.6.4	2010	PSF	yes
3.0	2.6	2008	PSF	yes
3.0.1	3.0	2009	PSF	yes
3.1	3.0.1	2009	PSF	yes
3.1.1	3.1	2009	PSF	yes
3.1.2	3.1.1	2010	PSF	yes
3.1.3	3.1.2	2010	PSF	yes
3.1.4	3.1.3	2011	PSF	yes
3.2	3.1	2011	PSF	yes
3.2.1	3.2	2011		
	PSF	yes		
3.2.2	3.2.1	2011	PSF	yes
3.2.3	3.2.2	2012	PSF	yes
3.3.0	3.2	2012	PSF	yes

Footnotes:

(1) GPL-compatible doesn't mean that we're distributing Python under the GPL. All Python licenses, unlike the GPL, let you distribute a modified version without making your changes open source. The GPL-compatible licenses make it possible to combine Python with other software that is released under the GPL; the others don't.

(2) According to Richard Stallman, 1.6.1 is not GPL-compatible, because its license has a choice of law clause. According to CNRI, however, Stallman's lawyer has told CNRI's lawyer that 1.6.1 is "not incompatible" with the GPL.

Thanks to the many outside volunteers who have worked under Guido's direction to make these releases possible.

B. TERMS AND CONDITIONS FOR ACCESSING OR OTHERWISE USING PYTHON

=====

**PYTHON
SOFTWARE FOUNDATION LICENSE VERSION 2**

1. This LICENSE AGREEMENT is between the Python Software Foundation ("PSF"), and the Individual or Organization ("Licensee") accessing and

otherwise using this software ("Python") in source or binary form and its associated documentation.

2. Subject to the terms and conditions of this License Agreement, PSF hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python alone or in any derivative version, provided, however, that PSF's License Agreement and PSF's notice of copyright, i.e., "Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012 Python Software Foundation; All Rights Reserved" are retained in Python alone or in any derivative version prepared by Licensee.

3. In the event Licensee prepares a derivative work that is based on or incorporates Python or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python.

4. PSF is making Python available to Licensee on an "AS IS" basis. PSF MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, PSF MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.

5. PSF SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.

7. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between PSF and Licensee. This License Agreement does not grant permission to use PSF trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.

8. By copying, installing or otherwise using Python, Licensee agrees to be bound by the terms and conditions of this License Agreement.

BEOPEN.COM LICENSE AGREEMENT FOR PYTHON 2.0

BEOPEN PYTHON OPEN SOURCE LICENSE AGREEMENT VERSION 1

1. This LICENSE AGREEMENT is between BeOpen.com ("BeOpen"), having an office at 160 Saratoga Avenue, Santa Clara, CA 95051, and the Individual or Organization ("Licensee") accessing and otherwise using this software in source or binary form and its associated documentation ("the Software").
2. Subject to the terms and conditions of this BeOpen Python License Agreement, BeOpen hereby grants Licensee a non-exclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use the Software alone or in any derivative version, provided, however, that the BeOpen Python License is retained in the Software, alone or in any derivative version prepared by Licensee.
3. BeOpen is making the Software available to Licensee on an "AS IS" basis. BEOPEN MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, BEOPEN MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
4. BEOPEN SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF THE SOFTWARE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THE SOFTWARE, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.
5. This License Agreement will automatically terminate upon a material breach of its terms and conditions.
6. This License Agreement shall be governed by and interpreted in all respects by the law of the State of California, excluding conflict of law provisions. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between BeOpen and Licensee. This License Agreement does not grant permission to use BeOpen trademarks or trade names in a trademark sense to endorse or promote products or services of Licensee, or any third party. As an exception, the "BeOpen Python" logos available at <http://www.pythonlabs.com/logos.html> may be used according to the permissions granted on that web page.
7. By copying, installing or otherwise using the software, Licensee agrees to be bound by the terms and conditions of this License Agreement.

CNRI LICENSE AGREEMENT FOR PYTHON 1.6.1

1.

This LICENSE AGREEMENT is between the Corporation for National Research Initiatives, having an office at 1895 Preston White Drive, Reston, VA 20191 ("CNRI"), and the Individual or Organization ("Licensee") accessing and otherwise using Python 1.6.1 software in source or binary form and its associated documentation.

2. Subject to the terms and conditions of this License Agreement, CNRI hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python 1.6.1 alone or in any derivative version, provided, however, that CNRI's License Agreement and CNRI's notice of copyright, i.e., "Copyright (c) 1995-2001 Corporation for National Research Initiatives; All Rights Reserved" are retained in Python 1.6.1 alone or in any derivative version prepared by Licensee. Alternately, in lieu of CNRI's License Agreement, Licensee may substitute the following text (omitting the quotes): "Python 1.6.1 is made available subject to the terms and conditions in CNRI's License Agreement. This Agreement together with Python 1.6.1 may be located on the Internet using the following unique, persistent identifier (known as a handle): 1895.22/1013. This Agreement may also be obtained from a proxy server on the Internet using the following URL: <http://hdl.handle.net/1895.22/1013>".

3. In the event Licensee prepares a derivative work that is based on or incorporates Python 1.6.1 or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python 1.6.1.

4. CNRI is making Python 1.6.1 available to Licensee on an "AS IS" basis. CNRI MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, CNRI MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON 1.6.1 WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.

5. CNRI SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON 1.6.1 FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON 1.6.1, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.

7. This License Agreement shall be governed by the federal intellectual property law of the United States, including without limitation the federal copyright law, and, to the extent such U.S. federal law does not apply, by the law of the Commonwealth of Virginia, excluding Virginia's conflict of law provisions. Notwithstanding the foregoing, with regard to derivative works based on Python 1.6.1 that incorporate non-separable material that was previously distributed under the GNU General Public License (GPL), the law of the Commonwealth of Virginia shall govern this License Agreement only as to issues arising under or with respect to Paragraphs 4, 5, and 7 of this License Agreement. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between CNRI and Licensee. This License Agreement does not grant permission to use CNRI trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.

8. By clicking on the "ACCEPT" button where indicated, or by copying, installing or otherwise using Python 1.6.1, Licensee agrees to be bound by the terms and conditions of this License Agreement.

ACCEPT

CWI LICENSE AGREEMENT FOR PYTHON 0.9.0 THROUGH 1.2

Copyright (c) 1991 - 1995, Stichting Mathematisch Centrum Amsterdam, The Netherlands. All rights reserved.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of Stichting Mathematisch Centrum or CWI not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

STICHTING MATHEMATISCH CENTRUM DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL STICHTING MATHEMATISCH CENTRUM BE LIABLE

FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.13 scanelf 1.2.8-r0

1.13.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty;

and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program

with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is

void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed

through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS

TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

```
This program is free software; you can redistribute it and/or modify  
it under the terms of the GNU General Public License as published by  
the Free Software Foundation; either version  
2 of the License, or  
(at your option) any later version.
```

```
This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.
```

```
You should have received a copy of the GNU General Public License  
along with this program; if not, write to the Free Software  
Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
```

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

1.14 azure-iot-sdk-c LTS_07_2020_Ref01

1.14.1 Available under license :

```
Format: http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: azure-iot-sdk-c
Source: https://github.com/Azure/azure-iot-sdk-c.git
```

```
Files: *
Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>
License: MIT
```

```
Files: debian/*
Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>
License: MIT
```

```
License: MIT
```

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Microsoft Azure IoT SDKs

Copyright (c) Microsoft Corporation

All rights reserved.

MIT License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED *AS IS*, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Format: <http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: iotHub-client-sample-firmware-update

Source: <https://github.com/Azure/azure-iot-sdks.git>

Files: *

Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>

License: MIT

Files: debian/*

Copyright: 2015 AzureIoT User <aziotsdklinux@outlook.com>

License: MIT

License: MIT

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

.

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.15 duktape 2.5.0

1.15.1 Available under license :

Lua is under the MIT license: <http://www.lua.org/license.html>.

The MIT License

Copyright (c) <year> <copyright holders>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF

OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

=====
Duktape license
=====

(<http://opensource.org/licenses/MIT>)

Copyright (c) 2013-2019 by Duktape authors (see AUTHORS.rst)

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY,

WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

/* Written in 2016 by David Blackman and Sebastiano Vigna (vigna@acm.org)

To the extent possible under law, the author has dedicated all copyright
and related and neighboring rights to this software to the public domain
worldwide. This software is distributed without any warranty.

See <<http://creativecommons.org/publicdomain/zero/1.0/>>. */

/* Written in 2015 by Sebastiano Vigna (vigna@acm.org)

To the extent possible under law, the author has dedicated all copyright
and related and neighboring rights to this software to the public domain
worldwide. This software is distributed without any warranty.

See <<http://creativecommons.org/publicdomain/zero/1.0/>>. */

CommonJS specification snapshots are included in the references/
directory. CommonJS is under the MIT license: <http://www.commonjs.org/>.

1.16 sqlite 3.35.5

1.16.1 Available under license :

The author disclaims copyright to this source code. In place of a legal notice, here is a blessing:

May you do good and not evil.

May you find forgiveness for yourself and forgive others.

May you share freely, never taking more than you give.

1.17 pax-utils 1.3.3-r0

1.17.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not

compelled

to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY

FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

1.18 musl 1.2.2-r7

1.18.1 Available under license :

musl as a whole is licensed under the following standard MIT license:

Copyright 2005-2020 Rich Felker, et al.

Permission is hereby granted, free of charge, to any person obtaining

a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Authors/contributors include:

A. Wilcox
Ada Worcester
Alex Dowad
Alex Suykov
Alexander Monakov
Andre McCurdy
Andrew Kelley
Anthony G. Basile
Aric Belsito
Arvid Picciani
Bartosz Brachaczek
Benjamin Peterson
Bobby Bingham
Boris Brezillon
Brent Cook
Chris Spiegel
Clment Vasseur
Daniel Micay
Daniel Sabogal
Daurnimator
David Carlier
David Edelsohn
Denys Vlasenko
Dmitry Ivanov
Dmitry V. Levin
Drew DeVault

Emil Renner Berthing
Fangrui Song
Felix Fietkau
Felix Janda
Gianluca Anzolin
Hauke Mehrtens
He X
Hiltjo Posthuma
Isaac Dunham
Jaydeep Patil
Jens Gustedt
Jeremy Huntwork
Jo-Philipp Wich
Joakim Sindholt
John Spencer
Julien Ramseier
Justin Cormack
Kaarle Ritvanen
Khem Raj
Kylie McClain
Leah Neukirchen
Luca Barbato
Luka
Perkov
M Farkas-Dyck (Strake)
Mahesh Bodapati
Markus Wichmann
Masanori Ogin
Michael Clark
Michael Forney
Mikhail Kremnyov
Natanael Copa
Nicholas J. Kain
orc
Pascal Cuoq
Patrick Oppenlander
Petr Hosek
Petr Skocik
Pierre Carrier
Reini Urban
Rich Felker
Richard Pennington
Ryan Fairfax
Samuel Holland
Segev Finer
Shiz
sin
Solar Designer

Stefan Kristiansson
Stefan O'Rear
Szabolcs Nagy
Timo Ters
Trutz Behn
Valentin Ochs
Will Dietz
William Haddon
William Pitcock

Portions of this software are derived from third-party works licensed under terms compatible with the above MIT license:

The TRE regular expression implementation (`src/regex/reg*` and `src/regex/tre*`) is Copyright 2001-2008 Ville Laurikari and licensed under a 2-clause BSD license (license text in the source files). The included version has been heavily modified by Rich Felker in 2012, in the interests of size, simplicity, and namespace cleanliness.

Much of the math library code (`src/math/*` and `src/complex/*`) is Copyright 1993,2004 Sun Microsystems or Copyright 2003-2011 David Schultz or Copyright 2003-2009 Steven G. Kargl or Copyright 2003-2009 Bruce D. Evans or Copyright 2008 Stephen L. Moshier or Copyright 2017-2018 Arm Limited and labelled as such in comments in the individual source files. All have been licensed under extremely permissive terms.

The ARM memcpy code (`src/string/arm/memcpy.S`) is Copyright 2008 The Android Open Source Project and is licensed under a two-clause BSD license. It was taken from Bionic libc, used on Android.

The AArch64 memcpy and memset code (`src/string/aarch64/*`) are Copyright 1999-2019, Arm Limited.

The implementation of DES for crypt (`src/crypt/crypt_des.c`) is Copyright 1994 David Burren. It is licensed under a BSD license.

The implementation of blowfish crypt (`src/crypt/crypt_blowfish.c`) was originally written by Solar Designer and placed into the public domain. The code also comes with a fallback permissive license for use in jurisdictions that may not recognize the public domain.

The smoothsort implementation (`src/stdlib/qsart.c`) is Copyright 2011 Valentin Ochs and is licensed under an MIT-style license.

The x86_64 port was written by Nicholas J. Kain and is licensed under the standard MIT terms.

The mips and microblaze ports were originally written by Richard Pennington for use in the elcc project. The original code was adapted by Rich Felker for build system and code conventions during upstream integration. It is licensed under the standard MIT terms.

The mips64 port was contributed by Imagination Technologies and is licensed under the standard MIT terms.

The powerpc port was also originally written by Richard Pennington, and later supplemented and integrated by John Spencer. It is licensed under the standard MIT terms.

All other files which have no copyright comments are original works produced specifically for use as part of this library, written either by Rich Felker, the main author of the library, or by one or more contributors listed above. Details on authorship of individual files can be found in the git version control history of the project. The omission of copyright and license comments in each file is in the interest of source tree size.

In addition, permission is hereby granted for all public header files (include/* and arch/*/bits/*) and crt files intended to be linked into applications (crt/*, ldso/dlstart.c, and arch/*/crt_arch.h) to omit the copyright notice and permission notice otherwise required by the license, and to use these files without any requirement of attribution. These files include substantial contributions from:

Bobby Bingham
John Spencer
Nicholas J. Kain
Rich Felker
Richard Pennington
Stefan Kristiansson
Szabolcs Nagy

all of whom have explicitly granted such permission.

This file previously contained text expressing a belief that most of the files covered by the above exception were sufficiently trivial not to be subject to copyright, resulting in confusion over whether it negated

the permissions granted in the license. In the spirit of permissive licensing, and of not having licensing issues being an

obstacle to adoption, that text has been removed.

1.19 apk-tools 2.12.7-r3

1.19.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute

and/or modify the software.

Also, for

each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works.

But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying

the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions.

You may

not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of

this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain

countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best

way to achieve this is to make it free software
which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and an idea of what it does.>

Copyright (C)< yyyy> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon >, 1 April 1989 Ty Coon, President of Vice This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

1.20 boost 1.77.0

1.20.1 Available under license :

////

Copyright 2018, 2019 Peter Dimov

Distributed under the Boost Software License, Version 1.0.

See accompanying file LICENSE_1_0.txt or copy at

http://www.boost.org/LICENSE_1_0.txt

////

[#copyright]

Copyright and License

:idprefix:

This documentation is copyright 2018, 2019 Peter Dimov and is distributed under the http://www.boost.org/LICENSE_1_0.txt[Boost Software License, Version 1.0].
The MIT License (MIT)

Copyright (c) 2014 fqiang

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION

WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

This program, "bzip2", the associated library "libbzip2", and all documentation, are copyright (C) 1996-2019 Julian R Seward. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
4. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, jseward@acm.org
bzip2/libbzip2 version 1.0.8 of 13 July 2019

The following people hereby grant permission to replace all existing licenses on their contributions to Boost with the Boost Software License, Version 1.0. (boostinspect:nolicense boostinspect:nocopyright)

Aleksey Gurtovoy (agurtovoy@meta-comm.com)
Andrei Alexandrescu (andrewalex - at - hotmail.com) (See Boost list message of August 12, 2004 11:06:58 AM EST)
Andrew Lumsdaine ()
Anthony Williams (anthony -at- justsoftwaresolutions.co.uk)
Beman Dawes (bdawes@acm.org)
Brad King (brad.king -at- kitware.com) (See Boost list message of Wed, 21 Jul 2004 11:15:46 -0400)
Brian Osman (osman -at- vvisions.com) (See CVS log)
Bruce Barr (schmoost -at- yahoo.com) (See Boost list of Mon, 16 Aug 2004 15:06:43 -0500)
Bruno da Silva de Oliveira (bruno - at - esss.com.br)
Christain Engstrom (christian.engstrom -at- glindra.org) (See Boost list message of Mon, 30 Aug 2004 14:31:49 +0200)
Cromwell D Enage (sponage -at- yahoo.com) (See Boost list message of August 12, 2004 11:49:13 AM EST)
Dan Gohman (djg -at- cray.com) (See Boost list message of Sat, 21 Aug 2004 10:54:59 +0100)
Dan Nuffer (dan -at- nuffer.name)
Daniel Frey (d.frey -at- gmx.de, daniel.frey -at- aixigo.de)
Daniel Nuffer (dan -at- nuffer.name)
Darin Adler (darin -at- bentspoon.com) (Email to Andreas Huber, see change log)
Daryle Walker (darylew - at - hotmail.com)
Dave Abrahams (dave@boost-consulting.com)
Dave Moore (dmoore -at- viefinancial.com) (See Boost list message of 18 Dec 2003 15:35:50 -0500)
David Abrahams (dave@boost-consulting.com)
Dietmar Kuehl (dietmar_kuehl -at- yahoo.com) (Email to Andreas Huber, see change log)
Douglas Gregor (gregod -at- cs.rpi.edu, dgregor -at- cs.indiana.edu, doug.gregor -at- gmail.com)
Dr John Maddock (john - at - johnmaddock.co.uk)
Edward D. Brey (brey -at- ductape.net) (Email to Andreas Huber, see change log)
Eric Ford (un5o6n902 -at- sneakemail.com) (See Boost list message of Sun, 15 Aug 2004 10:29:13 +0100)
Eric Friedman (ebf@users.sourceforge.net)
Eric Niebler (eric@boost-consulting.com)
Fernando
Cacciola (fernando_cacciola@ciudad.com.ar)
Fernando Luis Cacciola Carballal (fernando_cacciola@ciudad.com.ar)
Francois Faure (Francois.Faure -at- imag.fr) (See CVS log)
Gary Powell (powellg - at - amazon.com) (See Boost list message of 10 Feb 2004 14:22:46 -0800)
Gennadiy Rozental (rogeeff -at- mail.com) (Email to Andreas Huber, see change log)
Gottfried Ganssaue (Gottfried.Ganssaue -at- HAUF.DE) (See Boost List message of Mon, 16 Aug 2004 10:09:19 +0200)
Gottfried Ganaue (Gottfried.Ganssaue -at- HAUF.DE) (Alternative spelling of Gottfried Ganssaue)
Greg Colvin (gregory.colvin -at- oracle.com) (See Boost list message of Sat, 14 Aug 2004 10:57:00 +0100)
Gregory Colvin (gregory.colvin -at- oracle.com) (See Boost list message of Sat, 14 Aug 2004 10:57:00 +0100)
Gunter Winkler (gunter.winkler -at- unibw-muenchen.de) (See Boost List message of Mon, 16 Aug 2004 10:24:17 +0200)
Hartmut Kaiser (hartmut.kaiser -at- gmail.com)
Herve Bronnimann (hbr -at- poly.edu)
Herv

Brnnimann (hbr -at- poly.edu)
Housemarque Oy (Ilari Kuittinen ilari.kuittinen -at- housemarque.fi)
Howard Hinnant (hinnant -at- twcnny.rr.com) (See Boost list message of July 25, 2004 3:44:49 PM EST)
Hubert Holin (hubert_holin -at- users.sourceforge.net)
Indiana University ()
Itay Maman (imaman -at- users.sourceforge.net)
Jaakko Jrv (jajarvi -at- osl.iu.edu)
Jaap Suter (j.suter -at- student.utwente.nl) (See Boost list message of Thu, 16 Sep 2004 09:32:43 -0700)
Jeff Garland (jeff - at - crystalclearsoftware.com) (see Boost list post of July 25, 2004 19:31:09 -0700)
Jens Maurer (Jens.Maurer@gmx.net)
Jeremy G Siek (jsiek@osl.iu.edu)
Jeremy Siek (jsiek@osl.iu.edu)
Joel de Guzman (joel -at- boost-consulting.com) (See Boost list message of July 25, 2004 8:32:00 PM EST)
John Bandela (jbandela-at-ufl.edu)
John Maddock (john - at - johnmaddock.co.uk)
John R Bandela (jbandela-at-ufl.edu)
Jonathan Turkanis (turkanis -at- coderage dot com)
Juergen Hunold (hunold -at- ive.uni-hannover.de) (See Boost List Message of Fri, 13 Aug 2004 19:39:55 +0200)
Kevlin Henney (kevin -at- curbralan.com) (See Boost list message of Wed, 15 Sep 2004 18:15:17 +0200)
Kresimir Fresl (fresl -at- master.grad.hr) (See Boost List message of August 16, 2004 8:23:35 AM EST)
Lars Gullik Bjnnes (larsbj -at- lyx.org) (See Boost list message of Tue, 17 Aug 2004 15:49:02 +0100)
Lie-Quan Lee (liequan - at - slac.stanford.edu, llee - at - cs.indiana.edu)
Maarten Keijzer (mkeijzer -at- cs.vu.nl) (See Boost list message of Wed, 18 Aug 2004 21:43:18 +0100)
Mac Murrett (mmurrett -at- mac.com)
Marc Wintermantel (wintermantel -at- imes.mavt.ethz.ch, wintermantel -at- even-ag.ch) (See CVS log)
Michael Glassford (glassfordm - at - hotmail.com)
Michael Stevens (Michael.Stevens - at - epost.de)
Multi Media Ltd. (pdimov@mmltd.net)
Nicolai M Josuttis (solutions -at- josuttis.com) (See Boost list message of Mon, 30 Aug 2004 10:52:00 +0100)
Nikolay Mladenov (nickm -at- sitius.com) (See Boost list message of Tue, 17 Aug 2004 15:45:33 +0100)
Paul Mensonides (pmenso57 -at- comcast.net) (See Boost list message of July 21, 2004 1:12:21 AM EST)
Pavol Droba (droba -at- topmail.sk)
Peter Dimov (pdimov@mmltd.net)
R W Grosse-Kunsteleve (RWGrosse-Kunsteleve@lbl.gov)
Ralf W. Grosse-Kunsteleve (RWGrosse-Kunsteleve@lbl.gov)
Rational Discovery LLC (Greg Landrum Landrum -at- RationalDiscovery.com) (See Boost list post of Tue, 17 Aug 2004 10:35:36 +0100)
Rene Rivera (grafik/redshift-software.com, rrivera/acm.org)
Robert Ramey (ramey@www.rrsd.com)
Roland Richter (roland -at- fill.jku.at) (See Boost list post of Mon, 16 Aug 2004 22:16:55 +0200)
Roland Schwarz (roland.schwarz -at- chello.at)
Ronald Garcia (garcia -at- cs.indiana.edu) (Email to Andreas Huber, see change log)
Samuel Krempp (krempp -at- crans.ens-cachan.fr) (See Boost list message of Mon, 27 Sep 2004 13:18:36 +0200)
Stefan Seefeld (seefeld -at- sympatico.ca)
Stephen Cleary (scleary -at- jerviswebb.com) (See Boost list message of Tue, 28 Sep 2004 13:11:46 +0100)
Steve

Cleary (Variant of Stephen Cleary)
Sylvain Pion (Sylvain.Pion - at - sophia.inria.fr)
The Trustees of Indiana University ()
Thomas Witt (witt - at - ive.uni-hannover.de, witt - at - acm.org, witt - at - styleadvisor.com)
Thorsten Jrgen Ottosen (nesotto - at - cs.auc.dk)
Thorsten Ottosen (nesotto - at - cs.auc.dk)
Toon Knapen (toon dot knapen - at - fft.be)
Trustees of Indiana University ()
University of Notre Dame ()
Vladimir Prus (ghost@cs.msu.su)
William E. Kempf () (email to Beman Dawes, 9/14/2006 4:18 PM)
Joerg Walter (jhr.walter - at - t-online.de : email to ublas mailing list Mon, 17 Sep 2007 10:17:08 +0200)
Mathias Koch (mkoch - at - idesis.de 7 : email to boost-owner@lists.boost.org Sep 2007 13:20:09 +0200)

--- end ---

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS

FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

<!-- Copyright 2018 Paul Fultz II

Distributed under the Boost Software License, Version 1.0.

(http://www.boost.org/LICENSE_1_0.txt)

-->

License

=====

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER

////

Copyright 2018-2021 Peter Dimov

Distributed under the Boost Software License, Version 1.0.

See accompanying file LICENSE_1_0.txt or copy at
http://www.boost.org/LICENSE_1_0.txt

////

[#copyright]

Copyright and License

:idprefix:

This documentation is

* Copyright 2003-2017 Beman Dawes

* Copyright 2018-2021 Peter Dimov

and is distributed under the http://www.boost.org/LICENSE_1_0.txt[Boost Software License, Version 1.0].

////

Copyright 2017 Peter Dimov

Distributed under the Boost Software License, Version 1.0.

See accompanying file LICENSE_1_0.txt or copy at
http://www.boost.org/LICENSE_1_0.txt

```
////
```

```
[#mpl]  
# MPL Support, <boost/mp11/mpl.hpp>  
:toc:  
:toc-title:  
:idprefix:
```

The header `<boost/mp11/mpl.hpp>`, when included, defines the necessary support infrastructure for `mp_list` and `std::tuple` to be valid link:../../../../libs/mpl[MPL] sequences.

NOTE: `mpl.hpp` is not included by `<boost/mp11.hpp>`.

It's also possible to only enable support for `mp_list` by including `<boost/mp11/mpl_list.hpp>`, and for `std::tuple` by including `<boost/mp11/mpl_tuple.hpp>`. This may be required because some libraries, such as Boost.Fusion, contain their own MPL support for `std::tuple`, which conflicts with Mp11's one.

```
<!DOCTYPE html>
```

```
<html>  
<head></head>  
<body>  
<h3>  
  Copyright Test  
</h3>  
<p class="copyright">  
  1963, 1964, 1965 Jane Doe  
</p>  
<p class="copyright">  
  2018 Joe Blow, John Coe  
</p>  
<p class="copyright">  
  1977, 1985 Someone else  
</p>  
</body>  
</html>
```

```
////
```

```
Copyright 2020 Peter Dimov  
Distributed under the Boost Software License, Version 1.0.  
https://www.boost.org/LICENSE\_1\_0.txt
```

```
////
```

```
[#copyright]  
# Copyright and License  
:idprefix:
```

This documentation is copyright 2020 Peter Dimov and is distributed under

the http://www.boost.org/LICENSE_1_0.txt[Boost Software License, Version 1.0].

Use of this software is granted under one of the following two licenses,
to be chosen freely by the user.

1. Boost Software License - Version 1.0 - August 17th, 2003

Copyright (c) 2006, 2007 Marcin Kalicinski

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

2. The MIT License

Copyright (c) 2006, 2007 Marcin Kalicinski

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE article PUBLIC "-//Boost//DTD BoostBook XML V1.0//EN"
"http://www.boost.org/tools/boostbook/dtd/boostbook.dtd">
<article id="copyright_test" last-revision="DEBUG MODE Date: 2000/12/20 12:00:00 $"
xmlns:xi="http://www.w3.org/2001/XInclude">
<title>Copyright Test</title>
<articleinfo>
<copyright>
<year>1963</year> <year>1964</year> <year>1965</year> <holder>Jane Doe</holder>
</copyright>
<copyright>
<year>2018</year> <holder>Joe Blow, John Coe</holder>
</copyright>
<copyright>
<year>1977</year> <year>1985</year> <holder>Someone else</holder>
</copyright>
</articleinfo>
</article>
```

=====
Copyright (c) 2007-2011 Barend Gehrels, Amsterdam, the Netherlands.
Copyright (c) 2008-2011 Bruno Lalande, Paris, France.
Copyright (c) 2009-2011 Mateusz Loskot, London, UK.

Use, modification and distribution is subject to the Boost Software License,
Version 1.0. (See accompanying file LICENSE_1_0.txt or copy at
http://www.boost.org/LICENSE_1_0.txt)

=====
The default copyright note for C++ source files reads:

```
// Boost.Geometry (aka GGL, Generic Geometry Library)

// Copyright (c) 2007-2011 Barend Gehrels, Amsterdam, the Netherlands.
// Copyright (c) 2008-2011 Bruno Lalande, Paris, France.
// Copyright (c) 2009-2011 Mateusz Loskot, London, UK.

// Parts of Boost.Geometry are redesigned from Geodan's Geographic Library
// (geolib/GGL), copyright (c) 1995-2010 Geodan, Amsterdam, the Netherlands.

// Use, modification and distribution is
```

subject to the Boost Software License,
// Version 1.0. (See accompanying file LICENSE_1_0.txt or copy at
// http://www.boost.org/LICENSE_1_0.txt)

Exceptions:

- 1) Major work of any author -> might change order, change date
- 2) Exclusive work of one author including design -> might take sole copyright

Examples:

- adapted geometry types e.g. array, Boost.Polygon
- implemented file-format e.g. WKB
- implemented specific strategy or algorithm e.g. intersections

- 3) Examples -> might take sole copyright
- 4) Tests -> might take sole copyright
- 5) Docs -> might take sole copyright
- 6) Utilities e.g. converters -> might take sole copyright

The copyright note for other (source) files as .py, Jamfiles, etc is similar and comments are changed accordingly.

Copyright Paul Fultz II 2016-2018

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Copyright Louis Dionne 2013-2017

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Parts of the navigation implementation were borrowed from the docdock theme, and thus they are copyright as follows:

The MIT License (MIT)

Copyright (c) 2014 Grav

Copyright (c) 2016 MATHIEU CORNIC

Copyright (c) 2017 Valere JEANTET

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The

above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Software License, Version 1.0

Copyright 2002-2003, Trustees of Indiana University.

Copyright 2000-2001, University of Notre Dame.

All rights reserved.

Indiana University has the exclusive rights to license this product under the following license.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * All redistributions of source code must retain the above copyright notice, the list of authors in the original source code, this list of conditions and the disclaimer listed in this license;
- * All redistributions in binary form must reproduce the above copyright notice, this list of conditions and the disclaimer listed in this license in the documentation and/or other materials provided with the distribution;

* Any documentation included with all redistributions must include the following acknowledgement:

"This product includes software developed at the University of Notre Dame and the Pervasive Technology Labs at Indiana University. For technical information contact Andrew Lumsdaine at the Pervasive Technology Labs at Indiana University. For administrative and license questions contact the Advanced Research and Technology Institute at 351 West 10th Street, Indianapolis, Indiana 46202, phone 317-278-4100, fax 317-274-5902."

Alternatively, this acknowledgement may appear in the software itself, and wherever such third-party acknowledgments normally appear.

* The name Indiana University, the University of Notre Dame or "Caramel" shall not be used to endorse or promote products derived from this software without prior written permission from Indiana University. For written permission, please contact Indiana University Advanced Research & Technology Institute.

* Products derived from this software may not be called "Caramel", nor may Indiana University, the University of Notre Dame or "Caramel" appear in their name, without prior written permission of Indiana University Advanced Research & Technology Institute.

Indiana University provides no reassurances that the source code provided does not infringe the patent or any other intellectual property rights of any other entity. Indiana University disclaims any liability to any recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise.

LICENSEE UNDERSTANDS THAT SOFTWARE IS PROVIDED "AS IS" FOR WHICH NO WARRANTIES AS TO CAPABILITIES OR ACCURACY ARE MADE. INDIANA UNIVERSITY GIVES NO WARRANTIES AND MAKES NO REPRESENTATION THAT SOFTWARE IS FREE OF INFRINGEMENT OF THIRD PARTY PATENT, COPYRIGHT, OR OTHER PROPRIETARY RIGHTS. INDIANA UNIVERSITY MAKES NO WARRANTIES THAT SOFTWARE IS FREE FROM "BUGS", "VIRUSES", "TROJAN HORSES", "TRAP DOORS", "WORMS", OR OTHER HARMFUL CODE. LICENSEE ASSUMES THE ENTIRE RISK AS TO THE PERFORMANCE OF SOFTWARE AND/OR ASSOCIATED MATERIALS, AND TO THE PERFORMANCE AND VALIDITY OF INFORMATION GENERATED USING SOFTWARE.

Copyright 2015-2016 Barrett Adair

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute,

execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

This package was debianized by Vladimir Prus <ghost@cs.msu.su> on Wed, 17 July 2002, 19:27:00 +0400.

Copyright:

```
/+\
+\ Copyright 1993-2002 Christopher Seiwald and Perforce Software, Inc.
\+/
```

This is Release 2.4 of Jam/MR, a make-like program.

License is hereby granted to use this software and distribute it freely, as long as this copyright notice is retained and modifications are clearly marked.

ALL WARRANTIES ARE HEREBY DISCLAIMED.

Some portions are also:

Copyright 2001-2006 David Abrahams.
Copyright 2002-2006 Rene Rivera.
Copyright 2003-2006 Vladimir Prus.

Distributed under the Boost Software License, Version 1.0.
(See accompanying file LICENSE_1_0.txt or http://www.boost.org/LICENSE_1_0.txt)
http_parser.c is based on src/http/nginx_http_parse.c from NGINX copyright Igor Sysoev.

Additional changes are licensed under the same terms as NGINX and

copyright Joyent, Inc. and other Node contributors. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

////

Copyright 2020 Peter Dimov

Distributed under the Boost Software License, Version 1.0.

https://www.boost.org/LICENSE_1_0.txt

////

[#copyright]

Copyright and License

:idprefix:

This documentation is copyright 2020, 2021 Peter Dimov and is distributed under the http://www.boost.org/LICENSE_1_0.txt[Boost Software License, Version 1.0].

1.21 alpine-keys 2.4-r1

1.21.1 Available under license :

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.22 alpine-baselayout 3.2.0-r18

1.22.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid

anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law:

that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of

running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on

the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you

distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any

associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component

itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes

make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or

(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type 'show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type 'show c' for details.
```

The hypothetical commands 'show w' and 'show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than 'show w' and 'show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter
the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program  
'Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
```

```
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.

1.23 log-rotate 3.18.1-r1

1.23.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free

software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an

announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution)

and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing

version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

1.24 mosquito 2.0.14

1.24.1 Available under license :

Notices for Mosquitto

This content is produced and maintained by the Eclipse Mosquitto project.

* Project home: <https://projects.eclipse.org/projects/iot.mosquitto>

Trademarks

Eclipse Mosquitto trademarks of the Eclipse Foundation. Eclipse, and the Eclipse Logo are registered trademarks of the Eclipse Foundation.

Copyright

All content is the property of the respective authors or their employers. For more information regarding authorship of content, please consult the listed source code repository logs.

Declared Project Licenses

This program and the accompanying materials are made available under the terms of the Eclipse Public License v2.0 which is available at <http://www.eclipse.org/legal/epl-v10.html>, or the BSD 3 Clause license.

SPDX-License-Identifier: EPL-2.0 or BSD-3-Clause

Source Code

The project maintains the following source code repositories:

* <https://github.com/eclipse/mosquitto>

Third-party Content

This project makes use of the follow third party projects.

cJSON (1.7.x)

* License: MIT

* Project: <https://github.com/DaveGamble/cJSON>

libwebsockets (4.x)

* License: MIT

* Project: <https://github.com/warmcat/libwebsockets>

openssl (1.1.1)

* License: OpenSSL License and SSLeay License

* Project: <https://openssl.org>

* Source: <https://github.com/openssl/openssl>

uthash (2.1.0)

* License: BSD revised (<https://troydhanson.github.io/uthash/license.html>)

* Project: <https://github.com/troydhanson/uthash>

Cryptography

Content may contain encryption software. The country in which you are currently may have restrictions on the import, possession, and use, and/or re-export to another country, of encryption software. BEFORE using any encryption software, please check the country's laws, regulations and policies concerning the import, possession, or use, and re-export of encryption software, to see if this is permitted.

This project is dual licensed under the Eclipse Public License 2.0 and the Eclipse Distribution License 1.0 as described in the epl-v20 and edl-v10 files.
Eclipse Public License - v 2.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

1. DEFINITIONS

"Contribution" means:

a) in the case of the initial Contributor, the initial content
Distributed under this Agreement, and

b) in the case of each subsequent Contributor:

- i) changes to the Program, and
- ii) additions to the Program;

where such changes and/or additions to the Program originate from

and are Distributed by that particular Contributor. A Contribution "originates" from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include changes or additions to the Program that are not Modified Works.

"Contributor" means any person or entity that Distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions Distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement or any Secondary License (as applicable), including Contributors.

"Derivative Works" shall mean any work, whether in Source Code or other form, that is based on (or derived from) the Program and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship.

"Modified Works" shall mean any work in Source Code or other form that results from an addition to, deletion from, or modification of the contents of the Program, including, for purposes of clarity any new file in Source Code form that contains any contents of the Program. Modified Works shall not include works that contain only declarations, interfaces, types, classes, structures, or files of the Program solely in each case in order to link to, bind by name, or subclass the Program or Modified Works thereof.

"Distribute" means the acts of a) distributing or b) making available in any manner that enables the transfer of a copy.

"Source Code" means the form of a Program preferred for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Secondary License" means either the GNU General Public License, Version 2.0, or any later versions of that license, including any exceptions or additional permissions as identified by the initial Contributor.

2. GRANT OF RIGHTS

a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, Distribute and sublicense the Contribution of such Contributor, if any, and such Derivative Works.

b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in Source Code or other form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.

c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity.

Each

Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to Distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

e) Notwithstanding the terms of any Secondary License, no Contributor makes additional grants to any Recipient (other than those set forth in this Agreement) as a result of such Recipient's receipt of the Program under the terms of a Secondary License (if permitted under the terms of Section 3).

3. REQUIREMENTS

3.1 If a Contributor Distributes the Program in any form, then:

a) the Program must also be made available as Source Code, in accordance with section 3.2, and the Contributor must accompany the Program with a statement that the Source Code for the Program is available under this Agreement, and informs Recipients how to obtain it in a reasonable manner on or through a medium customarily used for software exchange; and

b) the Contributor may Distribute the Program under a license different than this Agreement, provided that such license:

i) effectively disclaims on behalf of all other Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;

ii) effectively excludes on behalf of all other Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;

iii) does not attempt to limit or alter the recipients' rights in the Source Code under section 3.2; and

iv) requires any subsequent distribution of the Program by any party to be under a license that satisfies the requirements of this section 3.

3.2 When the Program is Distributed as Source Code:

a) it must be made available under this Agreement, or if the Program (i) is combined with other material in a separate file or files made available under a Secondary License, and (ii) the initial Contributor attached to the Source Code the notice described in Exhibit A of this Agreement, then the Program may be made available under the terms of such Secondary Licenses, and

b) a copy of this Agreement must be included with each copy of the Program.

3.3 Contributors may not remove or alter any copyright, patent, trademark, attribution notices, disclaimers of warranty, or limitations of liability ("notices") contained within the Program from any copy of the Program which they Distribute, provided that Contributors may add their own appropriate notices.

4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE PROGRAM IS PROVIDED ON AN "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage

to or loss of data, programs
or equipment, and unavailability or interruption of operations.

6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the

responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be Distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to Distribute the Program (including its Contributions) under the new version.

Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives

no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved. Nothing in this Agreement is intended to be enforceable by any entity that is not a Contributor or Recipient. No third-party beneficiary rights are created under this Agreement.

Exhibit A - Form of Secondary Licenses Notice

"This Source Code may also be made available under the following Secondary Licenses when the conditions for such availability set forth in the Eclipse Public License, v. 2.0 are satisfied: {name license(s), version(s), and exceptions or additional permissions here}."

Simply including a copy of this Agreement, including this Exhibit A is not sufficient to license the Source Code under Secondary Licenses.

If it is not possible or desirable to put the notice in a particular file, then You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

You may add additional accurate notices of copyright ownership.
Eclipse Distribution License - v 1.0

Copyright (c) 2007, Eclipse Foundation, Inc. and its licensors.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation

and/or other materials provided with the distribution.

Neither the name of the Eclipse Foundation, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.25 ca-certificates 20211220-r0

1.25.1 Available under license :

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.26 openssl 1.1.1n-r0

1.26.1 Available under license :

LICENSE ISSUES

=====

The OpenSSL toolkit stays under a double license, i.e. both the conditions of

the OpenSSL License and the original SSLeay license apply to the toolkit.
See below for the actual license texts.

OpenSSL License

/* =====

* Copyright (c) 1998-2019 The OpenSSL Project. All rights reserved.

*

* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:

*

* 1. Redistributions of source code must retain the above copyright
* notice, this list of conditions and the following disclaimer.

*

* 2. Redistributions in binary form must reproduce the above copyright
* notice, this list of conditions and the following disclaimer in
* the documentation and/or other materials provided with the
* distribution.

*

* 3. All advertising materials mentioning features or use
of this

* software must display the following acknowledgment:

* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"

*

* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
* endorse or promote products derived from this software without
* prior written permission. For written permission, please contact
* openssl-core@openssl.org.

*

* 5. Products derived from this software may not be called "OpenSSL"
* nor may "OpenSSL" appear in their names without prior written
* permission of the OpenSSL Project.

*

* 6. Redistributions of any form whatsoever must retain the following
* acknowledgment:

* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"

*

* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS" AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED
TO, THE

* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT

* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.

* =====

*

* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product includes software written by Tim
* Hudson (tjh@cryptsoft.com).

*

*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

* All rights reserved.

*

* This package is an SSL implementation written

* by Eric Young (eay@cryptsoft.com).

* The implementation was written so as to conform with Netscapes SSL.

*

* This library is free for commercial and non-commercial use as long as
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).

*

* Copyright remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.

* If this package is used in a product, Eric Young should be given attribution
* as the author of the parts of the library used.

* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.

*

* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:

* 1. Redistributions of source code must retain the copyright

* notice, this list of conditions and the following disclaimer.

* 2. Redistributions in binary form must reproduce the above copyright

* notice, this list of conditions and the following disclaimer in the
* documentation and/or other materials provided with the distribution.

* 3. All advertising materials mentioning features or use of this software

* must display the following acknowledgement:

- * "This product includes cryptographic software written by
- * Eric Young (eay@cryptsoft.com)"
- * The word 'cryptographic' can be left out if the routines from the library
- * being used are not cryptographic related :-).
- * 4. If you include any Windows specific code (or a derivative thereof) from
- * the apps directory (application code) you must include
- an acknowledgement:
- * "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
- *
- * THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
- * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
- * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
- * ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
- * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
- * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
- * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
- * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
- * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
- * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
- * SUCH DAMAGE.
- *
- * The licence and distribution terms for any publically available version or
- * derivative of this code cannot be changed. i.e. this
- code cannot simply be
- * copied and put under another distribution licence
- * [including the GNU Public Licence.]
- */

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

59 Temple Place - Suite 330, Boston, MA

02111-1307, USA.

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This

License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program"

means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may

copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any

associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you

may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.

If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) 19yy name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c'
for details.
```

The hypothetical commands ``show w'` and ``show c'` should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than ``show w'` and ``show c'`; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public

License instead of this License.

The "Artistic License"

Preamble

The intent of this document is to state the conditions under which a Package may be copied, such that the Copyright Holder maintains some semblance of artistic control over the development of the package, while giving the users of the package the right to use and distribute the Package in a more-or-less customary fashion, plus the right to make reasonable modifications.

Definitions:

"Package" refers to the collection of files distributed by the Copyright Holder, and derivatives of that collection of files created through textual modification.

"Standard Version" refers to such a Package if it has not been modified, or has been modified in accordance with the wishes of the Copyright Holder as specified below.

"Copyright Holder" is whoever is named in the copyright or copyrights for the package.

"You" is you, if you're thinking about copying or distributing this Package.

"Reasonable copying fee" is whatever you can justify on the basis of media cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)

"Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of the source form of the Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.
3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:
 - a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as uunet.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.
 - b) use the modified Package only within your corporation or organization.
 - c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.
 - d) make other distribution arrangements with the Copyright Holder.
4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:
 - a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.
 - b) accompany the distribution with the machine-readable source of the Package with your modifications.
 - c) give non-standard executables non-standard names, and clearly document the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.
 - d) make other distribution arrangements with the Copyright Holder.
5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided

that you do not advertise this Package as a product of your own. You may embed this Package's interpreter within an executable of yours (by linking); this shall be construed as a mere form of aggregation, provided that the complete Standard Version of the interpreter is so embedded.

6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whoever generated them, and may be sold commercially, and may be aggregated with this Package. If such scripts or library files are aggregated with this Package via the so-called "undump" or "unexec" methods of producing a binary executable image, then distribution of such an image shall neither be construed as a distribution of this Package nor shall it fall under the restrictions of Paragraphs 3 and 4, provided that you do not represent such an executable image as a Standard Version of this Package.

7. C subroutines

(or comparably compiled subroutines in other languages) supplied by you and linked into this Package in order to emulate subroutines and variables of the language defined by this Package shall not be considered part of this Package, but are the equivalent of input as in Paragraph 6, provided these subroutines do not change the language in any way that would cause it to fail the regression tests for the language.

8. Aggregation of this Package with a commercial distribution is always permitted provided that the use of this Package is embedded; that is, when no overt attempt is made to make this Package's interfaces visible to the end user of the commercial distribution. Such use shall not be construed as a distribution of this Package.

9. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

10. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

1.27 libretls 3.3.4-r3

1.27.1 Available under license :

```
/* $OpenBSD: tls.c,v 1.90 2021/10/02 09:46:48 jsing Exp $ */
/*
 * Copyright (c) 2014 Joel Sing <jsing@openbsd.org>
 *
 * Permission to use, copy, modify, and distribute this software for any
 * purpose with or without fee is hereby granted, provided that the above
 * copyright notice and this permission notice appear in all copies.
 *
 * THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
 * WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
 * MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
 * ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
 * WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
 * ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
 * OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
*/
```

1.28 zlib 1.2.12-r0

1.28.1 Available under license :

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.29 zlib 1.2.12

1.29.1 Available under license :

* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.12, March 11th, 2022

Copyright (C) 1995-2022 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler
jloup@gzip.org madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

*/

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.30 busybox 1.34.1-r5

1.30.1 Available under license :

bzip2 applet in busybox is based on lightly-modified source of bzip2 version 1.0.4. bzip2 source is distributed under the following conditions (copied verbatim from LICENSE file)

=====

This program, "bzip2", the associated library "libbzip2", and all documentation, are copyright (C) 1996-2006 Julian R Seward. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
4. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY

DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, Cambridge, UK.

jseward@bzip.org

bzip2/libbzip2 version 1.0.4 of 20 December 2006

--- A note on GPL versions

BusyBox is distributed under version 2 of the General Public License (included in its entirety, below). Version 2 is the only version of this license which this version of BusyBox (or modified versions derived from this one) may be distributed under.

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's

software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid

anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this

License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based

on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under

any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity

of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make

exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of
Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

1.31 open62541 v1.1-dev-280-gff87c287

1.31.1 Available under license :

Mozilla Public License Version 2.0

=====

1. Definitions

1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

1.3. "Contribution"

means Covered Software of a particular Contributor.

1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

1.5. "Incompatible With Secondary Licenses"

means

(a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or

(b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

1.6. "Executable Form"

means any form of the work other than Source Code Form.

1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

1.8. "License"

means this document.

1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.

1.10. "Modifications"

means any of the following:

(a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or

(b) any new file in Source Code Form that contains any Covered Software.

1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its Contributor Version.

1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

1.13. "Source Code Form"

means the form of the work preferred for making modifications.

1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. License Grants and Conditions

2.1. Grants

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

(a) under intellectual property rights (other than patent or trademark) Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and

(b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

2.2. Effective Date

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.

2.3. Limitations on Grant Scope

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

- (a) for any code that a Contributor has removed from Covered Software; or
- (b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or
- (c) under Patent Claims infringed by Covered Software in the absence of its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

2.5. Representation

Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities

3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the

Source

Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

3.2. Distribution of Executable Form

If You distribute Covered Software in Executable Form then:

(a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and

(b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

3.3. Distribution of a Larger Work

You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the

Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

3.4. Notices

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination

5.1. The rights granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become

compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

*

*

* 6. Disclaimer of Warranty

*

* -----

*

*

*

* Covered Software is provided under this License on an "as is" *

* basis, without warranty of any kind, either expressed, implied, or *

* statutory, including, without limitation, warranties that the *

* Covered Software is free of defects, merchantable, fit for a *

* particular purpose or non-infringing. The entire risk as to the *

* quality and performance of the Covered Software is with You. *

* Should any Covered Software prove defective in any respect, You *

* (not any Contributor) assume the cost of any necessary servicing, *

* repair, or correction. This disclaimer of warranty constitutes an *

* essential part of this License. No use of any Covered

Software is *

* authorized under this License except under this disclaimer. *

*

*

*

*

* 7. Limitation of Liability *
 * ----- *
 * *
 * Under no circumstances and under no legal theory, whether tort *
 * (including negligence), contract, or otherwise, shall any *
 * Contributor, or anyone who distributes Covered Software as *
 * permitted above, be liable to You for any direct, indirect, *
 * special, incidental, or consequential damages of any character *
 * including, without limitation, *
 * damages for lost profits, loss of *
 * goodwill, work stoppage, computer failure or malfunction, or any *
 * and all other commercial damages or losses, even if such party *
 * shall have been informed of the possibility of such damages. This *
 * limitation of liability shall not apply to liability for death or *
 * personal injury resulting from such party's negligence to the *
 * extent applicable law prohibits such limitation. Some *
 * jurisdictions do not allow the exclusion or limitation of *
 * incidental or consequential damages, so this exclusion and *
 * limitation may not apply to You. *
 * *

8. Litigation

Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party's ability to bring cross-claims or counter-claims.

9. Miscellaneous

This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

10. Versions of the License

10.1. New Versions

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

10.3. Modified Versions

If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses

If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

Exhibit A - Source Code Form License Notice

This Source

Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, You can obtain one at <http://mozilla.org/MPL/2.0/>.

If it is not possible or desirable to put the notice in a particular file, then You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

You may add additional accurate notices of copyright ownership.

Exhibit B - "Incompatible With Secondary Licenses" Notice

This Source Code Form is "Incompatible With Secondary Licenses", as defined by the Mozilla Public License, v. 2.0.

```

<opc:TypeDictionary xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:tns="http://opcfoundation.org/UA/POWERLINK/" DefaultByteOrder="LittleEndian"
xmlns:opc="http://opcfoundation.org/BinarySchema/" xmlns:ua="http://opcfoundation.org/UA/"
TargetNamespace="http://opcfoundation.org/UA/POWERLINK/">
  <opc:Import Namespace="http://opcfoundation.org/UA/" />
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="ErrorRegisterBits">
    <opc:Documentation>Represents the values of the POWERLINK ErrorRegister </opc:Documentation>
    <opc:Field TypeName="opc:ByteString" Name="Value"/>
    <opc:Field TypeName="opc:ByteString" Name="ValidBits"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkAttribute">
    <opc:Documentation>Represents the POWERLINK entry attributes</opc:Documentation>
    <opc:Field TypeName="opc:ByteString" Name="Value"/>
    <opc:Field TypeName="opc:ByteString" Name="ValidBits"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkErrorEntryDataType">
    <opc:Documentation>Represents the entries of the POWERLINK Object ERR_History_ADOM (Object 1003h,
SubIndex 1..254)</opc:Documentation>
    <opc:Field TypeName="opc:UInt16" Name="entryType"/>
    <opc:Field TypeName="opc:UInt16" Name="errorCode"/>
    <opc:Field TypeName="opc:UInt64" Name="timeStamp"/>
    <opc:Field TypeName="opc:UInt64" Name="additionalInformation"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkIpAddressDataType">
    <opc:Documentation>Structure DataType PowerlinkIpAddressDataType to represent POWERLINK Objects of
the POWERLINK data type IP_ADDRESS</opc:Documentation>
    <opc:Field TypeName="opc:Byte" Name="b1"/>
    <opc:Field TypeName="opc:Byte" Name="b2"/>
    <opc:Field TypeName="opc:Byte" Name="b3"/>
    <opc:Field TypeName="opc:Byte" Name="b4"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkPDOMappingEntryDataType">
    <opc:Documentation>Structure DataType PowerlinkPDOMappingEntryDataType to represent the entries of
POWERLINK Objects like PDO_RxCommParam_00h_REC</opc:Documentation>
    <opc:Field TypeName="opc:UInt16" Name="length"/>
    <opc:Field TypeName="opc:UInt16" Name="offset"/>
    <opc:Field TypeName="opc:Byte" Name="reserved"/>
    <opc:Field TypeName="opc:Byte" Name="subIndex"/>
    <opc:Field TypeName="opc:UInt16" Name="index"/>
  </opc:StructuredType>
  <opc:EnumeratedType LengthInBits="32" Name="PowerlinkNMTRResetCmdEnumeration">
    <opc:Documentation>This DataType is an Enumeration that represents the NMT reset commands for
POWERLINK</opc:Documentation>
    <opc:EnumeratedValue Name="NMTRResetNode" Value="40"/>
    <opc:EnumeratedValue Name="NMTRResetCommunication" Value="41"/>
    <opc:EnumeratedValue Name="NMTRResetConfiguration" Value="42"/>
    <opc:EnumeratedValue Name="NMTRSwReset" Value="43"/>
    <opc:EnumeratedValue Name="NMTInvalidService" Value="255"/>

```

```

</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="PowerlinkNMTStateEnumeration">
  <opc:Documentation>This DataType is an enumeration that represents the NMT State</opc:Documentation>
  <opc:EnumeratedValue Name="NMT_GS_OFF " Value="0"/>
  <opc:EnumeratedValue Name="NMT_GS_INITIALISING" Value="25"/>
  <opc:EnumeratedValue Name="NMT_GS_RESET_APPLICATION" Value="41"/>
  <opc:EnumeratedValue Name="NMT_GS_RESET_COMMUNICATION" Value="57"/>
  <opc:EnumeratedValue Name="NMT_GS_RESET_CONFIGURATION" Value="121"/>
  <opc:EnumeratedValue Name="NMT_XS_NOT_ACTIVE" Value="28"/>
  <opc:EnumeratedValue Name="NMT_XS_PRE_OPERATIONAL_1" Value="29"/>
  <opc:EnumeratedValue Name="NMT_XS_PRE_OPERATIONAL_2" Value="93"/>
  <opc:EnumeratedValue Name="NMT_XS_READY_TO_OPERATE" Value="109"/>
  <opc:EnumeratedValue
Name="NMT_XS_OPERATIONAL" Value="253"/>
  <opc:EnumeratedValue Name="NMT_CS_STOPPED" Value="77"/>
  <opc:EnumeratedValue Name="NMT_XS_BASIC_ETHERNET" Value="30"/>
</opc:EnumeratedType>
</opc:TypeDictionary>
Creative Commons CCZero 1.0 Universal

```

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an "owner") of an original work of authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be

protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

- i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
- ii. moral rights retained by the original author(s) and/or performer(s);
- iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;
- iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;
- v. rights protecting the extraction, dissemination, use and reuse of data in a Work;
- vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and
- vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive,

irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

- a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.
- b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.
- c. Affirmer disclaims responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.
- d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

```
<opc:TypeDictionary
xmlns:opc="http://opcfoundation.org/BinarySchema/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ua="http://opcfoundation.org/UA/"
xmlns:tns="http://opcfoundation.org/UA/"
DefaultByteOrder="LittleEndian"
TargetNamespace="http://opcfoundation.org/UA/"
>

<opc:Import Namespace="http://opcfoundation.org/BinarySchema/" />
```

<!-- Transport types begin -->

```
<opc:EnumeratedType Name="MessageType" LengthInBits="32">
  <opc:Documentation>Message Type and whether the message contains an intermediate
chunk</opc:Documentation>
  <opc:EnumeratedValue Name="ACK" Value="0x4B4341" />
  <opc:EnumeratedValue Name="HEL" Value="0x4C4548" />
  <opc:EnumeratedValue Name="MSG" Value="0x47534D" />
  <opc:EnumeratedValue Name="OPN" Value="0x4E504F" />
  <opc:EnumeratedValue Name="CLO" Value="0x4F4C43" />
  <opc:EnumeratedValue Name="ERR" Value="0x525245" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="ChunkType" LengthInBits="32">
  <opc:Documentation>Type
of the chunk</opc:Documentation>
  <opc:EnumeratedValue Name="FINAL" Value="0x46000000" />
  <opc:EnumeratedValue Name="INTERMEDIATE" Value="0x43000000" />
  <opc:EnumeratedValue Name="ABORT" Value="0x41000000" />
```

```
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="TcpMessageHeader">
  <opc:Documentation>TCP Header</opc:Documentation>
  <opc:Field Name="MessageTypeAndChunkType" TypeName="opc:UInt32" />
  <opc:Field Name="MessageSize" TypeName="opc:UInt32" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="TcpHelloMessage">
  <opc:Documentation>Hello Message</opc:Documentation>
  <opc:Field Name="ProtocolVersion" TypeName="opc:UInt32" />
  <opc:Field Name="ReceiveBufferSize" TypeName="opc:UInt32" />
  <opc:Field Name="SendBufferSize" TypeName="opc:UInt32" />
  <opc:Field Name="MaxMessageSize" TypeName="opc:UInt32" />
  <opc:Field Name="MaxChunkCount" TypeName="opc:UInt32" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="TcpAcknowledgeMessage">
  <opc:Documentation>Acknowledge Message</opc:Documentation>
  <opc:Field Name="ProtocolVersion" TypeName="opc:UInt32" />
  <opc:Field Name="ReceiveBufferSize" TypeName="opc:UInt32" />
  <opc:Field Name="SendBufferSize" TypeName="opc:UInt32" />
  <opc:Field Name="MaxMessageSize" TypeName="opc:UInt32" />
  <opc:Field Name="MaxChunkCount" TypeName="opc:UInt32" />
</opc:StructuredType>
```



```

<opc:StructuredType Name="TcpErrorMessage">
  <opc:Documentation>Error Message</opc:Documentation>
  <opc:Field Name="Error" TypeName="opc:UInt32" />
  <opc:Field Name="Reason" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="SecureConversationMessageHeader">
  <opc:Documentation>Secure Layer Sequence Header</opc:Documentation>
  <opc:Field Name="MessageHeader" TypeName="opc:TcpMessageHeader" />
  <opc:Field Name="SecureChannelId" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="AsymmetricAlgorithmSecurityHeader">
  <opc:Documentation>Security Header</opc:Documentation>
  <opc:Field Name="SecurityPolicyUri" TypeName="opc:ByteString" />
  <opc:Field Name="SenderCertificate" TypeName="opc:ByteString" />
  <opc:Field Name="ReceiverCertificateThumbprint" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="SymmetricAlgorithmSecurityHeader">
  <opc:Documentation>Secure Layer Symmetric Algorithm Header</opc:Documentation>
  <opc:Field Name="TokenId" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="SequenceHeader">
  <opc:Documentation>Secure Layer Sequence Header</opc:Documentation>
  <opc:Field Name="SequenceNumber" TypeName="opc:UInt32" />
  <opc:Field Name="RequestId" TypeName="opc:UInt32"/>
</opc:StructuredType>

<opc:StructuredType Name="SecureConversationMessageFooter">
  <opc:Documentation>Secure Conversation Message Footer</opc:Documentation>
  <opc:Field Name="PaddingSize" TypeName="opc:Byte" />
  <opc:Field Name="Padding" TypeName="opc:Byte" LengthField="PaddingSize" />
  <opc:Field Name="Signature" TypeName="opc:Byte"/>
</opc:StructuredType>

<opc:StructuredType Name="SecureConversationMessageAbortBody">
  <opc:Documentation>Secure Conversation Message Abort Body</opc:Documentation>
  <opc:Field Name="Error" TypeName="opc:UInt32" />
  <opc:Field Name="Reason" TypeName="opc:String" />
</opc:StructuredType>

<!-- Transport types end -->

</opc:TypeDictionary>
<?xml version="1.0" encoding="utf-8" ?>
<!--

```

* Copyright (c) 2005-2018 The OPC Foundation, Inc. All rights reserved.

*

* OPC Foundation MIT License 1.00

*

* Permission is hereby granted, free of charge, to any person

* obtaining a copy of this software and associated documentation

* files (the "Software"), to deal in the Software without

* restriction, including without limitation the rights to use,

* copy, modify, merge, publish, distribute, sublicense, and/or sell

* copies of the Software, and to permit persons to whom the

* Software is furnished to do so, subject to the following

* conditions:

*

* The above copyright notice and this permission notice shall be

* included in all copies or substantial portions of the Software.

* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,

* EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES

* OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND

* NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR

* COPYRIGHT

* HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,

* WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING

* FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR

* OTHER DEALINGS IN THE SOFTWARE.

*

* The complete license agreement can be found here:

* <http://opcfoundation.org/License/MIT/1.00/>

-->

<opc:TypeDictionary

xmlns:opc="http://opcfoundation.org/BinarySchema/"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xmlns:ua="http://opcfoundation.org/UA/"

xmlns:tns="http://yourorganisation.org/test/"

DefaultByteOrder="LittleEndian"

TargetNamespace="http://yourorganisation.org/test/"

>

<opc:Import Namespace="http://opcfoundation.org/UA/" Location="Opc.Ua.BinarySchema.bsd"/>

<opc:StructuredType Name="Point" BaseType="ua:ExtensionObject">

<opc:Field Name="x" TypeName="opc:Double" />

<opc:Field Name="y" TypeName="opc:Double" />

</opc:StructuredType>

<opc:StructuredType Name="NestedPoint" BaseType="ua:ExtensionObject">

<opc:Field Name="x" TypeName="opc:Double" />

<opc:Field Name="y" TypeName="opc:Double" />

<opc:Field Name="point1" TypeName="tns:Point" />

</opc:StructuredType>

```
<opc:StructuredType Name="PointWithArray" BaseType="ua:ExtensionObject">
  <opc:Field Name="x" TypeName="opc:Double" />
  <opc:Field Name="y" TypeName="opc:Double" />
  <opc:Field Name="z" TypeName="opc:Double" />
  <opc:Field Name="array1Size" TypeName="opc:UInt32" />
  <opc:Field Name="array1" TypeName="opc:Double" LengthField="array1Size" />
</opc:StructuredType>
```

</opc:TypeDictionary>

Format: <https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: open62541

Upstream-Contact: open62541 Team <open62541-core@googlegroups.com>

Source: <https://open62541.org/>

Files: *

Copyright: 2019 open62541 Team <open62541-core@googlegroups.com>

License: MPL-2.0

Mozilla Public License Version 2.0

=====

.
1. Definitions

.
1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

.
1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

.
1.3. "Contribution"

means Covered Software of a particular Contributor.

.
1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such

Source Code Form, in each case including portions thereof.

.
1.5. "Incompatible With Secondary Licenses"

means

.
(a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or

.
(b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.
.

1.6. "Executable Form"

means any form of the work other than Source Code Form.
.

1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.
.

1.8. "License"

means this document.
.

1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.
.

1.10. "Modifications"

means any of the following:
.

(a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or
.

(b) any new file in Source Code Form that contains any Covered Software.
.

1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its Contributor Version.
.

1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.
.

1.13. "Source Code Form"

means the form of the work preferred for making modifications.
.

1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

.
2. License Grants and Conditions

.
2.1. Grants
.

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

.
(a) under intellectual property rights (other than patent or trademark) Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and

.
(b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.
.

2.2. Effective Date
.

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.
.

2.3. Limitations on Grant Scope
.

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

.
(a) for any code that a Contributor has removed from Covered Software;
or

.
(b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii)

the combination of its

Contributions with other software (except as part of its Contributor Version); or

(c) under Patent Claims infringed by Covered Software in the absence of its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

2.5. Representation

Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities

3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the Source Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

.

3.2. Distribution of Executable Form

.

If You distribute Covered Software in Executable Form then:

.

(a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form

how they can obtain a copy of such Source Code

Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and

.

(b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

.

3.3. Distribution of a Larger Work

.

You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

.

3.4. Notices

.

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

.

3.5. Application of Additional Terms

.

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred

by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination

5.1. The rights

granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.


```

*****
*
*
* 6. Disclaimer of Warranty
* -----
*
* Covered Software is provided under this License on an "as is"
* basis, without warranty
* of any kind, either expressed, implied, or
* statutory, including, without limitation, warranties that the
* Covered Software is free of defects, merchantable, fit for a
* particular purpose or non-infringing. The entire risk as to the
* quality and performance of the Covered Software is with You.
* Should any Covered Software prove defective in any respect, You
* (not any Contributor) assume the cost of any necessary servicing,
* repair, or correction. This disclaimer of warranty constitutes an
* essential part of this License. No use of any Covered Software is
* authorized under this License except under this disclaimer.
*
*****

```

```

*****
*
*
* 7. Limitation of Liability
* -----
*
* Under no circumstances and under no legal theory, whether tort
* (including negligence), contract, or otherwise, shall any
* Contributor, or anyone who distributes Covered Software as
* permitted above, be liable to You for any direct, indirect,
* special, incidental, or consequential damages of any character
* including, without limitation, damages for lost profits, loss of
* goodwill, work stoppage, computer failure or malfunction, or any
* and all other commercial damages or losses, even if such party
* shall have been informed of the possibility of such damages. This
* limitation of liability shall not apply to liability for death or
* personal injury resulting
* from such party's negligence to the
* extent applicable law prohibits such limitation. Some
* jurisdictions do not allow the exclusion or limitation of
* incidental or consequential damages, so this exclusion and
* limitation may not apply to You.
*
*****

```

```

.
8. Litigation
-----
.

```

Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party's ability to bring cross-claims or counter-claims.

.
9. Miscellaneous

.

This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

.
10. Versions of the License

.

10.1. New Versions
.

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

.
10.2. Effect of New Versions
.

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

.
10.3. Modified Versions
.

If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

.
10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses
.

If You choose to distribute Source Code Form that is Incompatible With

Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

.
Exhibit A - Source Code Form License Notice

.
This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, You can obtain one at <http://mozilla.org/MPL/2.0/>.

.
If it is not possible or desirable to put the notice in a particular file, then

You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

.
You may add additional accurate notices of copyright ownership.

.
Exhibit B - "Incompatible With Secondary Licenses" Notice

.
This Source Code Form is "Incompatible With Secondary Licenses", as defined by the Mozilla Public License, v. 2.0.

Copyright (c) 2010 Serge A. Zaitsev

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

<?xml version="1.0" encoding="utf-8" ?>

<!--

* Copyright (c) 2005-2018 The OPC Foundation, Inc. All rights reserved.

*

* OPC Foundation MIT License 1.00

*
 * Permission is hereby granted, free of charge, to any person
 * obtaining a copy of this software and associated documentation
 * files (the "Software"), to deal in the Software without
 * restriction, including without limitation the rights to use,
 * copy, modify, merge, publish, distribute, sublicense, and/or sell
 * copies of the Software, and to permit persons to whom the
 * Software is furnished to do so, subject to the following
 * conditions:
 *
 * The above copyright notice and this permission notice shall be
 * included in all copies or substantial portions of the Software.
 * THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
 * EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
 * OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
 * NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
 * COPYRIGHT
 * HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
 * WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
 * FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
 * OTHER DEALINGS IN THE SOFTWARE.
 *
 * The complete license agreement can be found here:
 * <http://opcfoundation.org/License/MIT/1.00/>
 -->

```
<opc:TypeDictionary
xmlns:opc="http://opcfoundation.org/BinarySchema/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ua="http://opcfoundation.org/UA/"
xmlns:tns="http://opcfoundation.org/UA/"
DefaultByteOrder="LittleEndian"
TargetNamespace="http://opcfoundation.org/UA/"
>

<opc:Import Namespace="http://opcfoundation.org/BinarySchema/" />

<opc:StructuredType Name="XmlElement">
  <opc:Documentation>An XML element encoded as a UTF-8 string.</opc:Documentation>
  <opc:Field Name="Length" TypeName="opc:Int32" />
  <opc:Field Name="Value" TypeName="opc:Char" LengthField="Length" />
</opc:StructuredType>

<opc:EnumeratedType
Name="NodeIdType" LengthInBits="6">
  <opc:Documentation>The possible encodings for a NodeId value.</opc:Documentation>
  <opc:EnumeratedValue Name="TwoByte" Value="0" />
  <opc:EnumeratedValue Name="FourByte" Value="1" />
```

```

<opc:EnumeratedValue Name="Numeric" Value="2" />
<opc:EnumeratedValue Name="String" Value="3" />
<opc:EnumeratedValue Name="Guid" Value="4" />
<opc:EnumeratedValue Name="ByteString" Value="5" />
</opc:EnumeratedType>

<opc:StructuredType Name="TwoByteNodeId">
  <opc:Field Name="Identifier" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="FourByteNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:Byte" />
  <opc:Field Name="Identifier" TypeName="opc:UInt16" />
</opc:StructuredType>

<opc:StructuredType Name="NumericNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType
Name="StringNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:CharArray" />
</opc:StructuredType>

<opc:StructuredType Name="GuidNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:Guid" />
</opc:StructuredType>

<opc:StructuredType Name="ByteStringNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="NodeId">
  <opc:Documentation>An identifier for a node in a UA server address space.</opc:Documentation>
  <opc:Field Name="NodeIdType" TypeName="ua:NodeIdType" />
  <opc:Field Name="Reserved1" TypeName="opc:Bit" Length="2" />
  <opc:Field Name="TwoByte" TypeName="ua:TwoByteNodeId" SwitchField="NodeIdType" SwitchValue="0" />
  <opc:Field Name="FourByte" TypeName="ua:FourByteNodeId" SwitchField="NodeIdType" SwitchValue="1" />
  <opc:Field Name="Numeric" TypeName="ua:NumericNodeId" SwitchField="NodeIdType" SwitchValue="2" />
  <opc:Field Name="String" TypeName="ua:StringNodeId" SwitchField="NodeIdType" SwitchValue="3" />
  <opc:Field Name="Guid" TypeName="ua:GuidNodeId" SwitchField="NodeIdType" SwitchValue="4" />
  <opc:Field Name="ByteString" TypeName="ua:ByteStringNodeId" SwitchField="NodeIdType"
SwitchValue="5" />

```

</opc:StructuredType>

<opc:StructuredType Name="ExpandedNodeId">

<opc:Documentation>An identifier for a node in a UA server address space qualified with a complete namespace string.</opc:Documentation>

<opc:Field Name="NodeIdType" TypeName="ua:NodeIdType" />

<opc:Field Name="ServerIndexSpecified" TypeName="opc:Bit" />

<opc:Field Name="NamespaceURISpecified" TypeName="opc:Bit" />

<opc:Field Name="TwoByte" TypeName="ua:TwoByteNodeId" SwitchField="NodeIdType" SwitchValue="0" />

<opc:Field Name="FourByte" TypeName="ua:FourByteNodeId" SwitchField="NodeIdType"

SwitchValue="1" />

<opc:Field Name="Numeric" TypeName="ua:NumericNodeId" SwitchField="NodeIdType" SwitchValue="2" />

<opc:Field Name="String" TypeName="ua:StringNodeId" SwitchField="NodeIdType" SwitchValue="3" />

<opc:Field Name="Guid" TypeName="ua:GuidNodeId" SwitchField="NodeIdType" SwitchValue="4" />

<opc:Field Name="ByteString" TypeName="ua:ByteStringNodeId" SwitchField="NodeIdType"

SwitchValue="5" />

<opc:Field Name="NamespaceURI" TypeName="opc:CharArray" SwitchField="NamespaceURISpecified"/>

<opc:Field Name="ServerIndex" TypeName="opc:UInt32" SwitchField="ServerIndexSpecified"/>

</opc:StructuredType>

<opc:OpaqueType Name="StatusCode" LengthInBits="32" ByteOrderSignificant="true">

<opc:Documentation>A 32-bit status code value.</opc:Documentation>

</opc:OpaqueType>

<opc:StructuredType Name="DiagnosticInfo">

<opc:Documentation>A recursive structure containing diagnostic information associated with a status code.</opc:Documentation>

<opc:Field Name="SymbolicIdSpecified" TypeName="opc:Bit" />

<opc:Field Name="NamespaceURISpecified" TypeName="opc:Bit" />

<opc:Field Name="LocaleSpecified" TypeName="opc:Bit" />

<opc:Field Name="LocalizedTextSpecified" TypeName="opc:Bit" />

<opc:Field Name="AdditionalInfoSpecified" TypeName="opc:Bit" />

<opc:Field Name="InnerStatusCodeSpecified" TypeName="opc:Bit" />

<opc:Field Name="InnerDiagnosticInfoSpecified" TypeName="opc:Bit" />

<opc:Field Name="Reserved1" TypeName="opc:Bit" Length="2" />

<opc:Field Name="SymbolicId" TypeName="opc:Int32" SwitchField="SymbolicIdSpecified" />

<opc:Field Name="NamespaceURI" TypeName="opc:Int32" SwitchField="NamespaceURISpecified" />

<opc:Field Name="Locale" TypeName="opc:Int32" SwitchField="LocaleSpecified" />

<opc:Field Name="LocalizedText" TypeName="opc:Int32" SwitchField="LocalizedTextSpecified" />

<opc:Field Name="AdditionalInfo" TypeName="opc:CharArray" SwitchField="AdditionalInfoSpecified"

/>

<opc:Field Name="InnerStatusCode" TypeName="ua:StatusCode" SwitchField="InnerStatusCodeSpecified" />

<opc:Field Name="InnerDiagnosticInfo" TypeName="ua:DiagnosticInfo"

SwitchField="InnerDiagnosticInfoSpecified" />

</opc:StructuredType>

<opc:StructuredType Name="QualifiedName">

<opc:Documentation>A string qualified with a namespace index.</opc:Documentation>

```

<opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
<opc:Field Name="Name" TypeName="opc:CharArray" />
</opc:StructuredType>

<opc:StructuredType Name="LocalizedText">
  <opc:Documentation>A string qualified with a namespace index.</opc:Documentation>
  <opc:Field Name="LocaleSpecified" TypeName="opc:Bit" />
  <opc:Field Name="TextSpecified" TypeName="opc:Bit" />
  <opc:Field Name="Reserved1" TypeName="opc:Bit" Length="6" />
  <opc:Field Name="Locale" TypeName="opc:CharArray" SwitchField="LocaleSpecified" />
  <opc:Field Name="Text" TypeName="opc:CharArray" SwitchField="TextSpecified"
/>
</opc:StructuredType>

<opc:StructuredType Name="DataValue">
  <opc:Documentation>A value with an associated timestamp, and quality.</opc:Documentation>
  <opc:Field Name="ValueSpecified" TypeName="opc:Bit" />
  <opc:Field Name="StatusCodeSpecified" TypeName="opc:Bit" />
  <opc:Field Name="SourceTimestampSpecified" TypeName="opc:Bit" />
  <opc:Field Name="SourcePicosecondsSpecified" TypeName="opc:Bit" />
  <opc:Field Name="ServerTimestampSpecified" TypeName="opc:Bit" />
  <opc:Field Name="ServerPicosecondsSpecified" TypeName="opc:Bit" />
  <opc:Field Name="Reserved1" TypeName="opc:Bit" Length="2" />
  <opc:Field Name="Value" TypeName="ua:Variant" SwitchField="ValueSpecified" />
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" SwitchField="StatusCodeSpecified" />
  <opc:Field Name="SourceTimestamp" TypeName="opc:DateTime" SwitchField="SourceTimestampSpecified" />
  <opc:Field Name="SourcePicoseconds" TypeName="opc:UInt16" SwitchField="SourcePicosecondsSpecified"
/>
  <opc:Field Name="ServerTimestamp" TypeName="opc:DateTime" SwitchField="ServerTimestampSpecified" />
  <opc:Field Name="ServerPicoseconds" TypeName="opc:UInt16" SwitchField="ServerPicosecondsSpecified" />
</opc:StructuredType>

<opc:StructuredType Name="ExtensionObject">
  <opc:Documentation>A serialized object prefixed with its data type identifier.</opc:Documentation>
  <opc:Field Name="TypeIdSpecified" TypeName="opc:Bit" />
  <opc:Field Name="BinaryBody" TypeName="opc:Bit" />
  <opc:Field Name="XmlBody" TypeName="opc:Bit" />
  <opc:Field Name="Reserved1" TypeName="opc:Bit" Length="5" />
  <opc:Field Name="TypeId" TypeName="ua:ExpandedNodeId" SwitchField="TypeIdSpecified" />
  <opc:Field Name="BodyLength" TypeName="opc:Int32" />
  <opc:Field Name="Body" TypeName="opc:Byte" LengthField="BodyLength" />
</opc:StructuredType>

<opc:StructuredType Name="Variant">
  <opc:Documentation>A union of several types.</opc:Documentation>
  <opc:Field
Name="VariantType" TypeName="opc:Bit" Length="6" />
  <opc:Field Name="ArrayDimensionsSpecified" TypeName="opc:Bit" Length="1"/>

```

```

<opc:Field Name="ArrayLengthSpecified" TypeName="opc:Bit" Length="1"/>
<opc:Field Name="ArrayLength" TypeName="opc:Int32" SwitchField="ArrayLengthSpecified" />
<opc:Field Name="Boolean" TypeName="opc:Boolean" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="1" />
<opc:Field Name="SByte" TypeName="opc:SByte" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="2" />
<opc:Field Name="Byte" TypeName="opc:Byte" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="3" />
<opc:Field Name="Int16" TypeName="opc:Int16" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="4" />
<opc:Field Name="UInt16" TypeName="opc:UInt16" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="5" />
<opc:Field Name="Int32" TypeName="opc:Int32" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="6" />
<opc:Field Name="UInt32" TypeName="opc:UInt32" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="7" />
<opc:Field Name="Int64" TypeName="opc:Int64" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="8" />
<opc:Field Name="UInt64" TypeName="opc:UInt64" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="9" />
<opc:Field Name="Float" TypeName="opc:Float" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="10" />
<opc:Field Name="Double" TypeName="opc:Double" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="11" />
<opc:Field Name="String" TypeName="opc:CharArray" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="12" />
<opc:Field Name="DateTime" TypeName="opc:DateTime" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="13" />
<opc:Field Name="Guid" TypeName="opc:Guid" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="14"
/>
<opc:Field Name="ByteString" TypeName="opc:ByteString" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="15" />
<opc:Field Name="XmlElement" TypeName="ua:XmlElement" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="16" />
<opc:Field Name="NodeId" TypeName="ua:NodeId" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="17" />
<opc:Field Name="ExpandedNodeId" TypeName="ua:ExpandedNodeId" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="18" />
<opc:Field Name="StatusCode" TypeName="ua:StatusCode" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="19" />
<opc:Field Name="QualifiedName" TypeName="ua:QualifiedName" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="20" />
<opc:Field Name="LocalizedText" TypeName="ua:LocalizedText" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="21" />
<opc:Field Name="ExtensionObject" TypeName="ua:ExtensionObject"
LengthField="ArrayLength" SwitchField="VariantType" SwitchValue="22" />
<opc:Field Name="DataValue" TypeName="ua:DataValue" LengthField="ArrayLength"

```



```

SwitchField="VariantType" SwitchValue="23" />
  <opc:Field Name="Variant" TypeName="ua:Variant" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="24" />
  <opc:Field Name="DiagnosticInfo" TypeName="ua:DiagnosticInfo" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="25" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" SwitchField="ArrayDimensionsSpecified"
/>
  <opc:Field Name="ArrayDimensions" TypeName="opc:Int32" LengthField="NoOfArrayDimensions"
SwitchField="ArrayDimensionsSpecified" />
</opc:StructuredType>

<opc:EnumeratedType Name="NamingRuleType" LengthInBits="32">
  <opc:EnumeratedValue Name="Mandatory" Value="1" />
  <opc:EnumeratedValue Name="Optional" Value="2" />
  <opc:EnumeratedValue Name="Constraint" Value="3" />
</opc:EnumeratedType>

<opc:OpaqueType
Name="ImageBMP">
  <opc:Documentation>An image encoded in BMP format.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="ImageGIF">
  <opc:Documentation>An image encoded in GIF format.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="ImageJPG">
  <opc:Documentation>An image encoded in JPEG format.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="ImagePNG">
  <opc:Documentation>An image encoded in PNG format.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="AudioDataType">
  <opc:Documentation>An image encoded in PNG format.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="BitFieldMaskDataType">
  <opc:Documentation>A mask of 32 bits that can be updated individually by using the top 32 bits as a
mask.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="KeyValuePair" BaseType="ua:ExtensionObject">
  <opc:Field Name="Key" TypeName="ua:QualifiedName" />
  <opc:Field Name="Value"

```

```

TypeName="ua:Variant" />
</opc:StructuredType>

<opc:StructuredType Name="EndpointType" BaseType="ua:ExtensionObject">
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
  <opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
  <opc:Field Name="TransportProfileUri" TypeName="opc:String" />
</opc:StructuredType>

<opc:EnumeratedType Name="OpenFileMode" LengthInBits="32">
  <opc:EnumeratedValue Name="Read" Value="1" />
  <opc:EnumeratedValue Name="Write" Value="2" />
  <opc:EnumeratedValue Name="EraseExisting" Value="4" />
  <opc:EnumeratedValue Name="Append" Value="8" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="IdentityCriteriaType" LengthInBits="32">
  <opc:EnumeratedValue Name="UserName" Value="1" />
  <opc:EnumeratedValue Name="Thumbprint" Value="2" />
  <opc:EnumeratedValue Name="Role" Value="3" />
  <opc:EnumeratedValue Name="GroupId" Value="4" />
  <opc:EnumeratedValue
Name="Anonymous" Value="5" />
  <opc:EnumeratedValue Name="AuthenticatedUser" Value="6" />
</opc:EnumeratedType>

<opc:StructuredType Name="IdentityMappingRuleType" BaseType="ua:ExtensionObject">
  <opc:Field Name="CriteriaType" TypeName="tns:IdentityCriteriaType" />
  <opc:Field Name="Criteria" TypeName="opc:String" />
</opc:StructuredType>

<opc:EnumeratedType Name="TrustListMasks" LengthInBits="32">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="TrustedCertificates" Value="1" />
  <opc:EnumeratedValue Name="TrustedCrls" Value="2" />
  <opc:EnumeratedValue Name="IssuerCertificates" Value="4" />
  <opc:EnumeratedValue Name="IssuerCrls" Value="8" />
  <opc:EnumeratedValue Name="All" Value="15" />
</opc:EnumeratedType>

<opc:StructuredType Name="TrustListDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="SpecifiedLists" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfTrustedCertificates" TypeName="opc:Int32"
/>
  <opc:Field Name="TrustedCertificates" TypeName="opc:ByteString" LengthField="NoOfTrustedCertificates" />
  <opc:Field Name="NoOfTrustedCrls" TypeName="opc:Int32" />
  <opc:Field Name="TrustedCrls" TypeName="opc:ByteString" LengthField="NoOfTrustedCrls" />

```

```

<opc:Field Name="NoOfIssuerCertificates" TypeName="opc:Int32" />
<opc:Field Name="IssuerCertificates" TypeName="opc:ByteString" LengthField="NoOfIssuerCertificates" />
<opc:Field Name="NoOfIssuerCrls" TypeName="opc:Int32" />
<opc:Field Name="IssuerCrls" TypeName="opc:ByteString" LengthField="NoOfIssuerCrls" />
</opc:StructuredType>

<opc:StructuredType Name="DecimalDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Scale" TypeName="opc:Int16" />
  <opc:Field Name="Value" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="DataTypeSchemaHeader" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfNamespaces" TypeName="opc:Int32" />
  <opc:Field
Name="Namespaces" TypeName="opc:String" LengthField="NoOfNamespaces" />
  <opc:Field Name="NoOfStructureDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="StructureDataTypes" TypeName="tns:StructureDescription"
LengthField="NoOfStructureDataTypes" />
  <opc:Field Name="NoOfEnumDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="EnumDataTypes" TypeName="tns:EnumDescription" LengthField="NoOfEnumDataTypes"
/>
  <opc:Field Name="NoOfSimpleDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="SimpleDataTypes" TypeName="tns:SimpleTypeDescription"
LengthField="NoOfSimpleDataTypes" />
</opc:StructuredType>

<opc:StructuredType Name="DataTypeDescription" BaseType="ua:ExtensionObject">
  <opc:Field Name="DataTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="Name" TypeName="ua:QualifiedName" />
</opc:StructuredType>

<opc:StructuredType Name="StructureDescription" BaseType="tns:DataTypeDescription">
  <opc:Field Name="DataTypeId" TypeName="ua:NodeId" SourceType="tns:DataTypeDescription"
/>
  <opc:Field Name="Name" TypeName="ua:QualifiedName" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="StructureDefinition" TypeName="tns:StructureDefinition" />
</opc:StructuredType>

<opc:StructuredType Name="EnumDescription" BaseType="tns:DataTypeDescription">
  <opc:Field Name="DataTypeId" TypeName="ua:NodeId" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="Name" TypeName="ua:QualifiedName" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="EnumDefinition" TypeName="tns:EnumDefinition" />
  <opc:Field Name="BuiltInType" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="SimpleTypeDescription" BaseType="tns:DataTypeDescription">
  <opc:Field Name="DataTypeId" TypeName="ua:NodeId" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="Name" TypeName="ua:QualifiedName" SourceType="tns:DataTypeDescription" />

```

```

<opc:Field Name="BaseDataType" TypeName="ua:NodeId" />
<opc:Field
Name="BuiltInType" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="UABinaryFileDataType" BaseType="tns:DataTypeSchemaHeader">
<opc:Field Name="NoOfNamespaces" TypeName="opc:Int32" />
<opc:Field Name="Namespaces" TypeName="opc:String" LengthField="NoOfNamespaces" />
<opc:Field Name="NoOfStructureDataTypes" TypeName="opc:Int32" />
<opc:Field Name="StructureDataTypes" TypeName="tns:StructureDescription"
LengthField="NoOfStructureDataTypes" />
<opc:Field Name="NoOfEnumDataTypes" TypeName="opc:Int32" />
<opc:Field Name="EnumDataTypes" TypeName="tns:EnumDescription" LengthField="NoOfEnumDataTypes"
/>
<opc:Field Name="NoOfSimpleDataTypes" TypeName="opc:Int32" />
<opc:Field Name="SimpleDataTypes" TypeName="tns:SimpleTypeDescription"
LengthField="NoOfSimpleDataTypes" />
<opc:Field Name="SchemaLocation" TypeName="opc:String" />
<opc:Field Name="NoOfFileHeader" TypeName="opc:Int32" />
<opc:Field Name="FileHeader" TypeName="tns:KeyValuePair"
LengthField="NoOfFileHeader" />
<opc:Field Name="Body" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:EnumeratedType Name="PubSubState" LengthInBits="32">
<opc:EnumeratedValue Name="Disabled" Value="0" />
<opc:EnumeratedValue Name="Paused" Value="1" />
<opc:EnumeratedValue Name="Operational" Value="2" />
<opc:EnumeratedValue Name="Error" Value="3" />
</opc:EnumeratedType>

<opc:StructuredType Name="DataSetMetaDataType" BaseType="tns:DataTypeSchemaHeader">
<opc:Field Name="NoOfNamespaces" TypeName="opc:Int32" />
<opc:Field Name="Namespaces" TypeName="opc:String" LengthField="NoOfNamespaces" />
<opc:Field Name="NoOfStructureDataTypes" TypeName="opc:Int32" />
<opc:Field Name="StructureDataTypes" TypeName="tns:StructureDescription"
LengthField="NoOfStructureDataTypes" />
<opc:Field Name="NoOfEnumDataTypes" TypeName="opc:Int32" />
<opc:Field Name="EnumDataTypes" TypeName="tns:EnumDescription" LengthField="NoOfEnumDataTypes"
/>
<opc:Field Name="NoOfSimpleDataTypes" TypeName="opc:Int32" />
<opc:Field Name="SimpleDataTypes" TypeName="tns:SimpleTypeDescription"
LengthField="NoOfSimpleDataTypes" />
<opc:Field Name="Name" TypeName="opc:String" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" />
<opc:Field Name="NoOfFields" TypeName="opc:Int32" />
<opc:Field Name="Fields" TypeName="tns:FieldMetaData" LengthField="NoOfFields" />
<opc:Field Name="DataSetClassId" TypeName="opc:Guid" />

```

```
<opc:Field Name="ConfigurationVersion" TypeName="tns:ConfigurationVersionDataType" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="FieldMetaData" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="FieldFlags" TypeName="tns:DataSetFieldFlags" />
  <opc:Field Name="BuiltInType" TypeName="opc:Byte" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field
Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="MaxStringLength" TypeName="opc:UInt32" />
  <opc:Field Name="DataSetFieldId" TypeName="opc:Guid" />
  <opc:Field Name="NoOfProperties" TypeName="opc:Int32" />
  <opc:Field Name="Properties" TypeName="tns:KeyValuePair" LengthField="NoOfProperties" />
</opc:StructuredType>
```

```
<opc:EnumeratedType Name="DataSetFieldFlags" LengthInBits="16" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="PromotedField" Value="1" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="ConfigurationVersionDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="MajorVersion" TypeName="opc:UInt32" />
  <opc:Field Name="MinorVersion" TypeName="opc:UInt32" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="PublishedDataSetDataType"
BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="NoOfDataSetFolder" TypeName="opc:Int32" />
  <opc:Field Name="DataSetFolder" TypeName="opc:String" LengthField="NoOfDataSetFolder" />
  <opc:Field Name="DataSetMetaData" TypeName="tns:DataSetMetaDataType" />
  <opc:Field Name="NoOfExtensionFields" TypeName="opc:Int32" />
  <opc:Field Name="ExtensionFields" TypeName="tns:KeyValuePair" LengthField="NoOfExtensionFields" />
  <opc:Field Name="DataSetSource" TypeName="ua:ExtensionObject" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="PublishedDataSetSourceDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>
```

```
<opc:StructuredType Name="PublishedVariableDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="PublishedVariable" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="SamplingIntervalHint" TypeName="opc:Double" />
  <opc:Field
```

```

Name="DeadbandType" TypeName="opc:UInt32" />
  <opc:Field Name="DeadbandValue" TypeName="opc:Double" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="SubstituteValue" TypeName="ua:Variant" />
  <opc:Field Name="NoOfMetaDataProperties" TypeName="opc:Int32" />
  <opc:Field Name="MetaDataProperties" TypeName="ua:QualifiedName"
LengthField="NoOfMetaDataProperties" />
</opc:StructuredType>

<opc:StructuredType Name="PublishedDataItemsDataType" BaseType="tns:PublishedDataSetSourceDataType">
  <opc:Field Name="NoOfPublishedData" TypeName="opc:Int32" />
  <opc:Field Name="PublishedData" TypeName="tns:PublishedVariableDataType"
LengthField="NoOfPublishedData" />
</opc:StructuredType>

<opc:StructuredType Name="PublishedEventsDataType" BaseType="tns:PublishedDataSetSourceDataType">
  <opc:Field Name="EventNotifier" TypeName="ua:NodeId" />
  <opc:Field Name="NoOfSelectedFields" TypeName="opc:Int32" />
  <opc:Field Name="SelectedFields"
TypeName="tns:SimpleAttributeOperand" LengthField="NoOfSelectedFields" />
  <opc:Field Name="Filter" TypeName="tns:ContentFilter" />
</opc:StructuredType>

<opc:EnumeratedType Name="DataSetFieldContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="StatusCode" Value="1" />
  <opc:EnumeratedValue Name="SourceTimestamp" Value="2" />
  <opc:EnumeratedValue Name="ServerTimestamp" Value="4" />
  <opc:EnumeratedValue Name="SourcePicoSeconds" Value="8" />
  <opc:EnumeratedValue Name="ServerPicoSeconds" Value="16" />
  <opc:EnumeratedValue Name="RawData" Value="32" />
</opc:EnumeratedType>

<opc:StructuredType Name="DataSetWriterDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" />
  <opc:Field Name="DataSetWriterId" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetFieldContentMask" TypeName="tns:DataSetFieldContentMask"
/>
  <opc:Field Name="KeyFrameCount" TypeName="opc:UInt32" />
  <opc:Field Name="DataSetName" TypeName="opc:String" />
  <opc:Field Name="NoOfDataSetWriterProperties" TypeName="opc:Int32" />
  <opc:Field Name="DataSetWriterProperties" TypeName="tns:KeyValuePair"
LengthField="NoOfDataSetWriterProperties" />
  <opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
  <opc:Field Name="MessageSettings" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="DataSetWriterTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataSetWriterMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="PubSubGroupDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
/>
  <opc:Field Name="SecurityGroupId" TypeName="opc:String" />
  <opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
  <opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
  <opc:Field Name="MaxNetworkMessageSize" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfGroupProperties" TypeName="opc:Int32" />
  <opc:Field Name="GroupProperties" TypeName="tns:KeyValuePair" LengthField="NoOfGroupProperties" />
</opc:StructuredType>

<opc:StructuredType Name="WriterGroupDataType" BaseType="tns:PubSubGroupDataType">
  <opc:Field Name="Name" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="SecurityGroupId" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />

  <opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
  <opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
  <opc:Field Name="MaxNetworkMessageSize" TypeName="opc:UInt32"
SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="NoOfGroupProperties" TypeName="opc:Int32" />
  <opc:Field Name="GroupProperties" TypeName="tns:KeyValuePair" LengthField="NoOfGroupProperties" />
  <opc:Field Name="WriterGroupId" TypeName="opc:UInt16" />
  <opc:Field Name="PublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="KeepAliveTime" TypeName="opc:Double" />
  <opc:Field Name="Priority" TypeName="opc:Byte" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="HeaderLayoutUri" TypeName="opc:String" />
  <opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
  <opc:Field Name="MessageSettings"
TypeName="ua:ExtensionObject" />
  <opc:Field Name="NoOfDataSetWriters" TypeName="opc:Int32" />
  <opc:Field Name="DataSetWriters" TypeName="tns:DataSetWriterDataType"
LengthField="NoOfDataSetWriters" />
</opc:StructuredType>

```

```
<opc:StructuredType Name="WriterGroupTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>
```

```
<opc:StructuredType Name="WriterGroupMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>
```

```
<opc:StructuredType Name="PubSubConnectionDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" />
  <opc:Field Name="PublisherId" TypeName="ua:Variant" />
  <opc:Field Name="TransportProfileUri" TypeName="opc:String" />
  <opc:Field Name="Address" TypeName="ua:ExtensionObject" />
  <opc:Field Name="NoOfConnectionProperties" TypeName="opc:Int32" />
  <opc:Field Name="ConnectionProperties" TypeName="tns:KeyValuePair"
LengthField="NoOfConnectionProperties" />
  <opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
  <opc:Field Name="NoOfWriterGroups" TypeName="opc:Int32" />
  <opc:Field Name="WriterGroups" TypeName="tns:WriterGroupDataType" LengthField="NoOfWriterGroups" />
  <opc:Field Name="NoOfReaderGroups" TypeName="opc:Int32" />
  <opc:Field Name="ReaderGroups" TypeName="tns:ReaderGroupDataType" LengthField="NoOfReaderGroups"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="ConnectionTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>
```

```
<opc:StructuredType Name="NetworkAddressDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NetworkInterface" TypeName="opc:String" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="NetworkAddressUrlDataType" BaseType="tns:NetworkAddressDataType">
  <opc:Field Name="NetworkInterface" TypeName="opc:String" SourceType="tns:NetworkAddressDataType" />
  <opc:Field Name="Url" TypeName="opc:String"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="ReaderGroupDataType" BaseType="tns:PubSubGroupDataType">
  <opc:Field Name="Name" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="SecurityGroupId" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
  <opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
  <opc:Field Name="MaxNetworkMessageSize" TypeName="opc:UInt32"
SourceType="tns:PubSubGroupDataType" />
```



```

<opc:Field Name="NoOfGroupProperties" TypeName="opc:Int32" />
<opc:Field Name="GroupProperties" TypeName="tns:KeyValuePair" LengthField="NoOfGroupProperties" />
<opc:Field Name="TransportSettings"
TypeName="ua:ExtensionObject" />
<opc:Field Name="MessageSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="NoOfDataSetReaders" TypeName="opc:Int32" />
<opc:Field Name="DataSetReaders" TypeName="tns:DataSetReaderDataType"
LengthField="NoOfDataSetReaders" />
</opc:StructuredType>

<opc:StructuredType Name="ReaderGroupTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="ReaderGroupMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataSetReaderDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="Name" TypeName="opc:String" />
<opc:Field Name="Enabled" TypeName="opc:Boolean" />
<opc:Field Name="PublisherId" TypeName="ua:Variant" />
<opc:Field Name="WriterGroupId" TypeName="opc:UInt16" />
<opc:Field Name="DataSetWriterId" TypeName="opc:UInt16" />
<opc:Field Name="DataSetMetaData" TypeName="tns:DataSetMetaDataType" />
<opc:Field
Name="DataSetFieldContentMask" TypeName="tns:DataSetFieldContentMask" />
<opc:Field Name="MessageReceiveTimeout" TypeName="opc:Double" />
<opc:Field Name="KeyFrameCount" TypeName="opc:UInt32" />
<opc:Field Name="HeaderLayoutUri" TypeName="opc:String" />
<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
<opc:Field Name="SecurityGroupId" TypeName="opc:String" />
<opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
<opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
<opc:Field Name="NoOfDataSetReaderProperties" TypeName="opc:Int32" />
<opc:Field Name="DataSetReaderProperties" TypeName="tns:KeyValuePair"
LengthField="NoOfDataSetReaderProperties" />
<opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="MessageSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="SubscribedDataSet" TypeName="ua:ExtensionObject"
/>
</opc:StructuredType>

<opc:StructuredType Name="DataSetReaderTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataSetReaderMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

```

```

<opc:StructuredType Name="SubscribedDataSetDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="TargetVariablesDataType" BaseType="tns:SubscribedDataSetDataType">
  <opc:Field Name="NoOfTargetVariables" TypeName="opc:Int32" />
  <opc:Field Name="TargetVariables" TypeName="tns:FieldTargetDataType"
LengthField="NoOfTargetVariables" />
</opc:StructuredType>

<opc:StructuredType Name="FieldTargetDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="DataSetFieldId" TypeName="opc:Guid" />
  <opc:Field Name="ReceiverIndexRange" TypeName="opc:String" />
  <opc:Field Name="TargetNodeId" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />

  <opc:Field Name="WriteIndexRange" TypeName="opc:String" />
  <opc:Field Name="OverrideValueHandling" TypeName="tns:OverrideValueHandling" />
  <opc:Field Name="OverrideValue" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:EnumeratedType Name="OverrideValueHandling" LengthInBits="32">
  <opc:EnumeratedValue Name="Disabled" Value="0" />
  <opc:EnumeratedValue Name="LastUsableValue" Value="1" />
  <opc:EnumeratedValue Name="OverrideValue" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="SubscribedDataSetMirrorDataType" BaseType="tns:SubscribedDataSetDataType">
  <opc:Field Name="ParentNodeName" TypeName="opc:String" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
</opc:StructuredType>

<opc:StructuredType Name="PubSubConfigurationDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfPublishedDataSets" TypeName="opc:Int32"
/>
  <opc:Field Name="PublishedDataSets" TypeName="tns:PublishedDataSetDataType"
LengthField="NoOfPublishedDataSets" />
  <opc:Field Name="NoOfConnections" TypeName="opc:Int32" />
  <opc:Field Name="Connections" TypeName="tns:PubSubConnectionDataType"
LengthField="NoOfConnections" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:EnumeratedType Name="DataSetOrderingType" LengthInBits="32">
  <opc:EnumeratedValue Name="Undefined" Value="0" />
  <opc:EnumeratedValue Name="AscendingWriterId" Value="1" />
  <opc:EnumeratedValue Name="AscendingWriterIdSingle" Value="2" />

```

```

</opc:EnumeratedType>

<opc:EnumeratedType Name="UadpNetworkMessageContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="PublisherId" Value="1" />
  <opc:EnumeratedValue Name="GroupHeader" Value="2" />
  <opc:EnumeratedValue Name="WriterGroupId" Value="4" />
  <opc:EnumeratedValue
Name="GroupVersion" Value="8" />
  <opc:EnumeratedValue Name="NetworkMessageNumber" Value="16" />
  <opc:EnumeratedValue Name="SequenceNumber" Value="32" />
  <opc:EnumeratedValue Name="PayloadHeader" Value="64" />
  <opc:EnumeratedValue Name="Timestamp" Value="128" />
  <opc:EnumeratedValue Name="PicoSeconds" Value="256" />
  <opc:EnumeratedValue Name="DataSetClassId" Value="512" />
  <opc:EnumeratedValue Name="PromotedFields" Value="1024" />
</opc:EnumeratedType>

<opc:StructuredType Name="UadpWriterGroupMessageDataType"
BaseType="tns:WriterGroupMessageDataType">
  <opc:Field Name="GroupVersion" TypeName="opc:UInt32" />
  <opc:Field Name="DataSetOrdering" TypeName="tns:DataSetOrderingType" />
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:UadpNetworkMessageContentMask" />
  <opc:Field Name="SamplingOffset" TypeName="opc:Double" />
  <opc:Field Name="NoOfPublishingOffset" TypeName="opc:Int32" />
  <opc:Field Name="PublishingOffset"
TypeName="opc:Double" LengthField="NoOfPublishingOffset" />
</opc:StructuredType>

<opc:EnumeratedType Name="UadpDataSetMessageContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="Timestamp" Value="1" />
  <opc:EnumeratedValue Name="PicoSeconds" Value="2" />
  <opc:EnumeratedValue Name="Status" Value="4" />
  <opc:EnumeratedValue Name="MajorVersion" Value="8" />
  <opc:EnumeratedValue Name="MinorVersion" Value="16" />
  <opc:EnumeratedValue Name="SequenceNumber" Value="32" />
</opc:EnumeratedType>

<opc:StructuredType Name="UadpDataSetWriterMessageDataType"
BaseType="tns:DataSetWriterMessageDataType">
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:UadpDataSetMessageContentMask" />
  <opc:Field Name="ConfiguredSize" TypeName="opc:UInt16" />
  <opc:Field Name="NetworkMessageNumber" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetOffset" TypeName="opc:UInt16" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="UadpDataSetReaderMessageDataType"
BaseType="tns:DataSetReaderMessageDataType">
  <opc:Field Name="GroupVersion" TypeName="opc:UInt32" />
  <opc:Field Name="NetworkMessageNumber" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetOffset" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetClassId" TypeName="opc:Guid" />
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:UadpNetworkMessageContentMask" />
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:UadpDataSetMessageContentMask" />
  <opc:Field Name="PublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="ReceiveOffset" TypeName="opc:Double" />
  <opc:Field Name="ProcessingOffset" TypeName="opc:Double" />
</opc:StructuredType>

<opc:EnumeratedType Name="JsonNetworkMessageContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="NetworkMessageHeader" Value="1" />

  <opc:EnumeratedValue Name="DataSetMessageHeader" Value="2" />
  <opc:EnumeratedValue Name="SingleDataSetMessage" Value="4" />
  <opc:EnumeratedValue Name="PublisherId" Value="8" />
  <opc:EnumeratedValue Name="DataSetClassId" Value="16" />
  <opc:EnumeratedValue Name="ReplyTo" Value="32" />
</opc:EnumeratedType>

<opc:StructuredType Name="JsonWriterGroupMessageDataType"
BaseType="tns:WriterGroupMessageDataType">
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:JsonNetworkMessageContentMask" />
</opc:StructuredType>

<opc:EnumeratedType Name="JsonDataSetMessageContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="DataSetWriterId" Value="1" />
  <opc:EnumeratedValue Name="MetaDataVersion" Value="2" />
  <opc:EnumeratedValue Name="SequenceNumber" Value="4" />
  <opc:EnumeratedValue Name="Timestamp" Value="8" />
  <opc:EnumeratedValue Name="Status" Value="16" />
</opc:EnumeratedType>

<opc:StructuredType Name="JsonDataSetWriterMessageDataType"
BaseType="tns:DataSetWriterMessageDataType">
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:JsonDataSetMessageContentMask" />
</opc:StructuredType>

<opc:StructuredType Name="JsonDataSetReaderMessageDataType"
BaseType="tns:DataSetReaderMessageDataType">
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:JsonNetworkMessageContentMask" />
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:JsonDataSetMessageContentMask" />
</opc:StructuredType>

```

```
<opc:StructuredType Name="DatagramConnectionTransportDataType"
BaseType="tns:ConnectionTransportDataType">
  <opc:Field Name="DiscoveryAddress" TypeName="ua:ExtensionObject" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DatagramWriterGroupTransportDataType"
BaseType="tns:WriterGroupTransportDataType">
  <opc:Field Name="MessageRepeatCount" TypeName="opc:Byte" />
  <opc:Field Name="MessageRepeatDelay" TypeName="opc:Double"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="BrokerConnectionTransportDataType"
BaseType="tns:ConnectionTransportDataType">
  <opc:Field Name="ResourceUri" TypeName="opc:String" />
  <opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
</opc:StructuredType>
```

```
<opc:EnumeratedType Name="BrokerTransportQualityOfService" LengthInBits="32">
  <opc:EnumeratedValue Name="NotSpecified" Value="0" />
  <opc:EnumeratedValue Name="BestEffort" Value="1" />
  <opc:EnumeratedValue Name="AtLeastOnce" Value="2" />
  <opc:EnumeratedValue Name="AtMostOnce" Value="3" />
  <opc:EnumeratedValue Name="ExactlyOnce" Value="4" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="BrokerWriterGroupTransportDataType"
BaseType="tns:WriterGroupTransportDataType">
  <opc:Field Name="QueueName" TypeName="opc:String" />
  <opc:Field Name="ResourceUri" TypeName="opc:String" />
  <opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
  <opc:Field
Name="RequestedDeliveryGuarantee" TypeName="tns:BrokerTransportQualityOfService" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="BrokerDataSetWriterTransportDataType"
BaseType="tns:DataSetWriterTransportDataType">
  <opc:Field Name="QueueName" TypeName="opc:String" />
  <opc:Field Name="ResourceUri" TypeName="opc:String" />
  <opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
  <opc:Field Name="RequestedDeliveryGuarantee" TypeName="tns:BrokerTransportQualityOfService" />
  <opc:Field Name="MetaDataQueueName" TypeName="opc:String" />
  <opc:Field Name="MetaDataUpdateTime" TypeName="opc:Double" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="BrokerDataSetReaderTransportDataType"
BaseType="tns:DataSetReaderTransportDataType">
```

```
<opc:Field Name="QueueName" TypeName="opc:String" />
<opc:Field Name="ResourceUri" TypeName="opc:String" />
<opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
<opc:Field Name="RequestedDeliveryGuarantee"
TypeName="tns:BrokerTransportQualityOfService" />
<opc:Field Name="MetaDataQueueName" TypeName="opc:String" />
</opc:StructuredType>
```

```
<opc:EnumeratedType Name="DiagnosticsLevel" LengthInBits="32">
  <opc:EnumeratedValue Name="Basic" Value="0" />
  <opc:EnumeratedValue Name="Advanced" Value="1" />
  <opc:EnumeratedValue Name="Info" Value="2" />
  <opc:EnumeratedValue Name="Log" Value="3" />
  <opc:EnumeratedValue Name="Debug" Value="4" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="PubSubDiagnosticsCounterClassification" LengthInBits="32">
  <opc:EnumeratedValue Name="Information" Value="0" />
  <opc:EnumeratedValue Name="Error" Value="1" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="IdType" LengthInBits="32">
  <opc:Documentation>The type of identifier used in a node id.</opc:Documentation>
  <opc:EnumeratedValue Name="Numeric" Value="0" />
  <opc:EnumeratedValue Name="String" Value="1" />
  <opc:EnumeratedValue Name="Guid"
Value="2" />
  <opc:EnumeratedValue Name="Opaque" Value="3" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="NodeClass" LengthInBits="32">
  <opc:Documentation>A mask specifying the class of the node.</opc:Documentation>
  <opc:EnumeratedValue Name="Unspecified" Value="0" />
  <opc:EnumeratedValue Name="Object" Value="1" />
  <opc:EnumeratedValue Name="Variable" Value="2" />
  <opc:EnumeratedValue Name="Method" Value="4" />
  <opc:EnumeratedValue Name="ObjectType" Value="8" />
  <opc:EnumeratedValue Name="VariableType" Value="16" />
  <opc:EnumeratedValue Name="ReferenceType" Value="32" />
  <opc:EnumeratedValue Name="DataType" Value="64" />
  <opc:EnumeratedValue Name="View" Value="128" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="PermissionType" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="Browse" Value="1" />
  <opc:EnumeratedValue Name="ReadRolePermissions" Value="2"
```

```

/>
<opc:EnumeratedValue Name="WriteAttribute" Value="4" />
<opc:EnumeratedValue Name="WriteRolePermissions" Value="8" />
<opc:EnumeratedValue Name="WriteHistorizing" Value="16" />
<opc:EnumeratedValue Name="Read" Value="32" />
<opc:EnumeratedValue Name="Write" Value="64" />
<opc:EnumeratedValue Name="ReadHistory" Value="128" />
<opc:EnumeratedValue Name="InsertHistory" Value="256" />
<opc:EnumeratedValue Name="ModifyHistory" Value="512" />
<opc:EnumeratedValue Name="DeleteHistory" Value="1024" />
<opc:EnumeratedValue Name="ReceiveEvents" Value="2048" />
<opc:EnumeratedValue Name="Call" Value="4096" />
<opc:EnumeratedValue Name="AddReference" Value="8192" />
<opc:EnumeratedValue Name="RemoveReference" Value="16384" />
<opc:EnumeratedValue Name="DeleteNode" Value="32768" />
<opc:EnumeratedValue Name="AddNode" Value="65536" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="AccessLevelType" LengthInBits="8" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="CurrentRead" Value="1" />
  <opc:EnumeratedValue Name="CurrentWrite" Value="2" />
  <opc:EnumeratedValue Name="HistoryRead" Value="4" />
  <opc:EnumeratedValue Name="HistoryWrite" Value="8" />
  <opc:EnumeratedValue Name="SemanticChange" Value="16" />
  <opc:EnumeratedValue Name="StatusWrite" Value="32" />
  <opc:EnumeratedValue Name="TimestampWrite" Value="64" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="AccessLevelExType" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="CurrentRead" Value="1" />
  <opc:EnumeratedValue Name="CurrentWrite" Value="2" />
  <opc:EnumeratedValue Name="HistoryRead" Value="4" />
  <opc:EnumeratedValue Name="HistoryWrite" Value="8" />
  <opc:EnumeratedValue Name="SemanticChange" Value="16" />
  <opc:EnumeratedValue Name="StatusWrite" Value="32" />
  <opc:EnumeratedValue
Name="TimestampWrite" Value="64" />
  <opc:EnumeratedValue Name="NonatomicRead" Value="256" />
  <opc:EnumeratedValue Name="NonatomicWrite" Value="512" />
  <opc:EnumeratedValue Name="WriteFullArrayOnly" Value="1024" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="EventNotifierType" LengthInBits="8" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="SubscribeToEvents" Value="1" />
  <opc:EnumeratedValue Name="HistoryRead" Value="4" />

```

```

    <opc:EnumeratedValue Name="HistoryWrite" Value="8" />
</opc:EnumeratedType>

<opc:StructuredType Name="RolePermissionType" BaseType="ua:ExtensionObject">
  <opc:Field Name="RoleId" TypeName="ua:NodeId" />
  <opc:Field Name="Permissions" TypeName="tns:PermissionType" />
</opc:StructuredType>

<opc:EnumeratedType Name="AccessRestrictionType" LengthInBits="32">
  <opc:EnumeratedValue Name="SigningRequired" Value="0" />
  <opc:EnumeratedValue Name="EncryptionRequired" Value="1"
/>
  <opc:EnumeratedValue Name="SessionRequired" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="StructureType" LengthInBits="32">
  <opc:EnumeratedValue Name="Structure" Value="0" />
  <opc:EnumeratedValue Name="StructureWithOptionalFields" Value="1" />
  <opc:EnumeratedValue Name="Union" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="StructureField" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="MaxStringLength" TypeName="opc:UInt32" />
  <opc:Field Name="IsOptional" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="StructureDefinition"
BaseType="tns:DataTypeDefinition">
  <opc:Field Name="DefaultEncodingId" TypeName="ua:NodeId" />
  <opc:Field Name="BaseDataType" TypeName="ua:NodeId" />
  <opc:Field Name="StructureType" TypeName="tns:StructureType" />
  <opc:Field Name="NoOfFields" TypeName="opc:Int32" />
  <opc:Field Name="Fields" TypeName="tns:StructureField" LengthField="NoOfFields" />
</opc:StructuredType>

<opc:StructuredType Name="EnumDefinition" BaseType="tns:DataTypeDefinition">
  <opc:Field Name="NoOfFields" TypeName="opc:Int32" />
  <opc:Field Name="Fields" TypeName="tns:EnumField" LengthField="NoOfFields" />
</opc:StructuredType>

<opc:StructuredType Name="Node" BaseType="ua:ExtensionObject">
  <opc:Documentation>Specifies the attributes which belong to all nodes.</opc:Documentation>

```



```

<opc:Field Name="NodeId" TypeName="ua:NodeId" />
<opc:Field Name="NodeClass" TypeName="tns:NodeClass" />
<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" />

<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" />
<opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
<opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
<opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" />
<opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="InstanceNode" BaseType="tns:Node">
<opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
<opc:Field
Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
<opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
<opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
<opc:Field Name="NoOfReferences" TypeName="opc:Int32"
/>
<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="TypeNode" BaseType="tns:Node">
<opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
<opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />

```

```

    <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
    <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32"
/>
    <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
    <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
    <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
    <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ObjectNode" BaseType="tns:InstanceNode">
    <opc:Documentation>Specifies the attributes which belong to object nodes.</opc:Documentation>
    <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
    <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
    <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
    <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
    <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
    <opc:Field Name="WriteMask"
TypeName="opc:UInt32" SourceType="tns:Node" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
    <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
    <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
    <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
    <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
    <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
    <opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ObjectTypeNode" BaseType="tns:TypeNode">
    <opc:Documentation>Specifies the attributes which belong to object type nodes.</opc:Documentation>
    <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
    <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
    <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
    <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
    <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
    <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
    <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
    <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"

```

```

LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16"
SourceTypes="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="VariableNode" BaseType="tns:InstanceNode">
  <opc:Documentation>Specifies the attributes which belong to variable nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node"
/>
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="Value" TypeName="ua:Variant" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="AccessLevel" TypeName="opc:Byte"
/>
  <opc:Field Name="UserAccessLevel" TypeName="opc:Byte" />
  <opc:Field Name="MinimumSamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="Historizing" TypeName="opc:Boolean" />
  <opc:Field Name="AccessLevelEx" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="VariableTypeNode" BaseType="tns:TypeNode">
  <opc:Documentation>Specifies the attributes which belong to variable type nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />

```

```

    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32"
SourceType="tns:Node" />
    <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
    <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
    <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
    <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
    <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
    <opc:Field Name="Value" TypeName="ua:Variant" />
    <opc:Field Name="DataType" TypeName="ua:NodeId" />
    <opc:Field Name="ValueRank" TypeName="opc:Int32" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
    <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
    <opc:Field Name="IsAbstract"
TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ReferenceTypeNode" BaseType="tns:TypeNode">
    <opc:Documentation>Specifies the attributes which belong to reference type nodes.</opc:Documentation>
    <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
    <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
    <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
    <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
    <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
    <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
    <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
    <opc:Field
Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
    <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
    <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
    <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
    <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
    <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
    <opc:Field Name="Symmetric" TypeName="opc:Boolean" />
    <opc:Field Name="InverseName" TypeName="ua:LocalizedText" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="MethodNode" BaseType="tns:InstanceNode">
    <opc:Documentation>Specifies the attributes which belong to method nodes.</opc:Documentation>
    <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
    <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />

```

```

<opc:Field Name="BrowseName" TypeName="ua:QualifiedName"
SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
<opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
<opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
<opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
<opc:Field Name="Executable"
TypeName="opc:Boolean" />
<opc:Field Name="UserExecutable" TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ViewNode" BaseType="tns:InstanceNode">
<opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
<opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
<opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32"
/>
<opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
<opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
<opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
<opc:Field Name="ContainsNoLoops" TypeName="opc:Boolean" />
<opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="DataTypeNode" BaseType="tns:TypeNode">
<opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
<opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />

```

```

/>
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
  <opc:Field Name="DataTypeDefintion" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="ReferenceNode" BaseType="ua:ExtensionObject">
  <opc:Documentation>Specifies a reference which belongs to a node.</opc:Documentation>
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsInverse" TypeName="opc:Boolean" />
  <opc:Field Name="TargetId" TypeName="ua:ExpandedNodeId" />
</opc:StructuredType>

<opc:StructuredType Name="Argument" BaseType="ua:ExtensionObject">
  <opc:Documentation>An argument for a method.</opc:Documentation>
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:StructuredType Name="EnumValueType" BaseType="ua:ExtensionObject">
  <opc:Documentation>A mapping between a value of an enumerated type
and a name and description.</opc:Documentation>
  <opc:Field Name="Value" TypeName="opc:Int64" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:StructuredType Name="EnumField" BaseType="tns:EnumValueType">
  <opc:Field Name="Value" TypeName="opc:Int64" SourceType="tns:EnumValueType" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:EnumValueType" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:EnumValueType" />
  <opc:Field Name="Name" TypeName="opc:String" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="OptionSet" BaseType="ua:ExtensionObject">
  <opc:Documentation>This abstract Structured DataType is the base DataType for all DataTypes representing a bit
mask.</opc:Documentation>
  <opc:Field Name="Value" TypeName="opc:ByteString" />
  <opc:Field Name="ValidBits" TypeName="opc:ByteString"
/>
</opc:StructuredType>

<opc:StructuredType Name="Union" BaseType="ua:ExtensionObject">
  <opc:Documentation>This abstract DataType is the base DataType for all union
DataTypes.</opc:Documentation>
</opc:StructuredType>

<opc:OpaqueType Name="NormalizedString">
  <opc:Documentation>A string normalized based on the rules in the unicode specification.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="DecimalString">
  <opc:Documentation>An arbitrary numeric value.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="DurationString">
  <opc:Documentation>A period of time formatted as defined in ISO 8601-2000.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="TimeString">
  <opc:Documentation>A time formatted as defined in ISO 8601-2000.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="DateString">
  <opc:Documentation>A date formatted as defined in ISO 8601-2000.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType
Name="Duration">
  <opc:Documentation>A period of time measured in milliseconds.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="UtcTime">
  <opc:Documentation>A date/time value specified in Universal Coordinated Time (UTC).</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="LocaleId">
  <opc:Documentation>An identifier for a user locale.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="TimeZoneDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Offset" TypeName="opc:Int16" />

```

```
<opc:Field Name="DaylightSavingInOffset" TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:OpaqueType Name="Index">
  <opc:Documentation>This primitive data type is a UInt32 that identifies an element of an
  array.</opc:Documentation>
</opc:OpaqueType>
```

```
<opc:OpaqueType Name="IntegerId">
  <opc:Documentation>A numeric identifier for an object.</opc:Documentation>
</opc:OpaqueType>
```

```
<opc:EnumeratedType Name="ApplicationType"
LengthInBits="32">
  <opc:Documentation>The types of applications.</opc:Documentation>
  <opc:EnumeratedValue Name="Server" Value="0" />
  <opc:EnumeratedValue Name="Client" Value="1" />
  <opc:EnumeratedValue Name="ClientAndServer" Value="2" />
  <opc:EnumeratedValue Name="DiscoveryServer" Value="3" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="ApplicationDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>Describes an application and how to find it.</opc:Documentation>
  <opc:Field Name="ApplicationUri" TypeName="opc:String" />
  <opc:Field Name="ProductUri" TypeName="opc:String" />
  <opc:Field Name="ApplicationName" TypeName="ua:LocalizedText" />
  <opc:Field Name="ApplicationType" TypeName="tns:ApplicationType" />
  <opc:Field Name="GatewayServerUri" TypeName="opc:String" />
  <opc:Field Name="DiscoveryProfileUri" TypeName="opc:String" />
  <opc:Field Name="NoOfDiscoveryUrls" TypeName="opc:UInt32" />
  <opc:Field Name="DiscoveryUrls"
  TypeName="opc:String" LengthField="NoOfDiscoveryUrls" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="RequestHeader" BaseType="ua:ExtensionObject">
  <opc:Documentation>The header passed with every server request.</opc:Documentation>
  <opc:Field Name="AuthenticationToken" TypeName="ua:NodeId" />
  <opc:Field Name="Timestamp" TypeName="opc:DateTime" />
  <opc:Field Name="RequestHandle" TypeName="opc:UInt32" />
  <opc:Field Name="ReturnDiagnostics" TypeName="opc:UInt32" />
  <opc:Field Name="AuditEntryId" TypeName="opc:String" />
  <opc:Field Name="TimeoutHint" TypeName="opc:UInt32" />
  <opc:Field Name="AdditionalHeader" TypeName="ua:ExtensionObject" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ResponseHeader" BaseType="ua:ExtensionObject">
  <opc:Documentation>The header passed with every server response.</opc:Documentation>
  <opc:Field Name="Timestamp" TypeName="opc:DateTime" />
```



```

    <opc:Field Name="RequestHandle" TypeName="opc:UInt32"
  />
  <opc:Field Name="ServiceResult" TypeName="ua:StatusCode" />
  <opc:Field Name="ServiceDiagnostics" TypeName="ua:DiagnosticInfo" />
  <opc:Field Name="NoOfStringTable" TypeName="opc:Int32" />
  <opc:Field Name="StringTable" TypeName="opc:String" LengthField="NoOfStringTable" />
  <opc:Field Name="AdditionalHeader" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:OpaqueType Name="VersionTime">
</opc:OpaqueType>

<opc:StructuredType Name="ServiceFault" BaseType="ua:ExtensionObject">
  <opc:Documentation>The response returned by all services when there is a service level
error.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="SessionlessInvokeRequestType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfUrisVersion" TypeName="opc:Int32" />
  <opc:Field Name="UrisVersion" TypeName="opc:UInt32" LengthField="NoOfUrisVersion" />
  <opc:Field Name="NoOfNamespaceUris"
TypeName="opc:Int32" />
  <opc:Field Name="NamespaceUris" TypeName="opc:String" LengthField="NoOfNamespaceUris" />
  <opc:Field Name="NoOfServerUris" TypeName="opc:Int32" />
  <opc:Field Name="ServerUris" TypeName="opc:String" LengthField="NoOfServerUris" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="ServiceId" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="SessionlessInvokeResponseType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfNamespaceUris" TypeName="opc:Int32" />
  <opc:Field Name="NamespaceUris" TypeName="opc:String" LengthField="NoOfNamespaceUris" />
  <opc:Field Name="NoOfServerUris" TypeName="opc:Int32" />
  <opc:Field Name="ServerUris" TypeName="opc:String" LengthField="NoOfServerUris" />
  <opc:Field Name="ServiceId" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType
Name="FindServersRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Finds the servers known to the discovery server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="NoOfServerUris" TypeName="opc:Int32" />
  <opc:Field Name="ServerUris" TypeName="opc:String" LengthField="NoOfServerUris" />

```

</opc:StructuredType>

```
<opc:StructuredType Name="FindServersResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Finds the servers known to the discovery server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfServers" TypeName="opc:Int32" />
  <opc:Field Name="Servers" TypeName="tns:ApplicationDescription" LengthField="NoOfServers"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="ServerOnNetwork" BaseType="ua:ExtensionObject">
  <opc:Field Name="RecordId" TypeName="opc:UInt32" />
  <opc:Field Name="ServerName" TypeName="opc:String" />
  <opc:Field Name="DiscoveryUrl" TypeName="opc:String" />
  <opc:Field Name="NoOfServerCapabilities" TypeName="opc:Int32" />
  <opc:Field Name="ServerCapabilities" TypeName="opc:String" LengthField="NoOfServerCapabilities" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="FindServersOnNetworkRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="StartingRecordId" TypeName="opc:UInt32" />
  <opc:Field Name="MaxRecordsToReturn" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfServerCapabilityFilter" TypeName="opc:Int32" />
  <opc:Field Name="ServerCapabilityFilter" TypeName="opc:String" LengthField="NoOfServerCapabilityFilter"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="FindServersOnNetworkResponse"
BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="LastCounterResetTime" TypeName="opc:DateTime" />
  <opc:Field Name="NoOfServers" TypeName="opc:Int32" />
  <opc:Field Name="Servers" TypeName="tns:ServerOnNetwork" LengthField="NoOfServers" />
</opc:StructuredType>
```

```
<opc:OpaqueType Name="ApplicationInstanceCertificate">
  <opc:Documentation>A certificate for an instance of an application.</opc:Documentation>
</opc:OpaqueType>
```

```
<opc:EnumeratedType Name="MessageSecurityMode" LengthInBits="32">
  <opc:Documentation>The type of security to use on a message.</opc:Documentation>
  <opc:EnumeratedValue Name="Invalid" Value="0" />
  <opc:EnumeratedValue Name="None" Value="1" />
  <opc:EnumeratedValue Name="Sign" Value="2" />
  <opc:EnumeratedValue Name="SignAndEncrypt" Value="3" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="UserTokenType" LengthInBits="32">
```

```

<opc:Documentation>The possible user token types.</opc:Documentation>
  <opc:EnumeratedValue Name="Anonymous" Value="0" />
  <opc:EnumeratedValue Name="UserName" Value="1" />
  <opc:EnumeratedValue Name="Certificate" Value="2" />
  <opc:EnumeratedValue Name="IssuedToken" Value="3" />
</opc:EnumeratedType>

<opc:StructuredType Name="UserTokenPolicy" BaseType="ua:ExtensionObject">
  <opc:Documentation>Describes a user token that can be used with a server.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" />
  <opc:Field Name="TokenType" TypeName="tns:UserTokenType" />
  <opc:Field Name="IssuedTokenType" TypeName="opc:String" />
  <opc:Field Name="IssuerEndpointUrl" TypeName="opc:String" />
  <opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="EndpointDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>The description of an endpoint that can be used to access a server.</opc:Documentation>
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="Server" TypeName="tns:ApplicationDescription" />
  <opc:Field Name="ServerCertificate" TypeName="opc:ByteString" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
  <opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
  <opc:Field Name="NoOfUserIdentityTokens" TypeName="opc:Int32" />
  <opc:Field Name="UserIdentityTokens" TypeName="tns:UserTokenPolicy"
LengthField="NoOfUserIdentityTokens" />
  <opc:Field Name="TransportProfileUri" TypeName="opc:String" />
  <opc:Field Name="SecurityLevel" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="GetEndpointsRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Gets the endpoints used by the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="NoOfLocaleIds"
TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="NoOfProfileUris" TypeName="opc:Int32" />
  <opc:Field Name="ProfileUris" TypeName="opc:String" LengthField="NoOfProfileUris" />
</opc:StructuredType>

<opc:StructuredType Name="GetEndpointsResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Gets the endpoints used by the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfEndpoints" TypeName="opc:Int32" />
  <opc:Field Name="Endpoints" TypeName="tns:EndpointDescription" LengthField="NoOfEndpoints" />
</opc:StructuredType>

```

```
<opc:StructuredType Name="RegisteredServer" BaseType="ua:ExtensionObject">
  <opc:Documentation>The information required to register a server with a discovery server.</opc:Documentation>
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="ProductUri" TypeName="opc:String" />
  </opc:StructuredType>
  <opc:Field Name="NoOfServerNames" TypeName="opc:Int32" />
  <opc:Field Name="ServerNames" TypeName="ua:LocalizedText" LengthField="NoOfServerNames" />
  <opc:Field Name="ServerType" TypeName="tns:ApplicationType" />
  <opc:Field Name="GatewayServerUri" TypeName="opc:String" />
  <opc:Field Name="NoOfDiscoveryUrls" TypeName="opc:Int32" />
  <opc:Field Name="DiscoveryUrls" TypeName="opc:String" LengthField="NoOfDiscoveryUrls" />
  <opc:Field Name="SemaphoreFilePath" TypeName="opc:String" />
  <opc:Field Name="IsOnline" TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="RegisterServerRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers a server with the discovery server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="Server" TypeName="tns:RegisteredServer" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="RegisterServerResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers a server with the discovery server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DiscoveryConfiguration" BaseType="ua:ExtensionObject">
  <opc:Documentation>A base type for discovery configuration information.</opc:Documentation>
</opc:StructuredType>
```

```
<opc:StructuredType Name="MdnsDiscoveryConfiguration" BaseType="tns:DiscoveryConfiguration">
  <opc:Documentation>The discovery information needed for mDNS registration.</opc:Documentation>
  <opc:Field Name="MdnsServerName" TypeName="opc:String" />
  <opc:Field Name="NoOfServerCapabilities" TypeName="opc:Int32" />
  <opc:Field Name="ServerCapabilities" TypeName="opc:String" LengthField="NoOfServerCapabilities" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="RegisterServer2Request" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  </opc:StructuredType>
  <opc:Field Name="Server" TypeName="tns:RegisteredServer" />
  <opc:Field Name="NoOfDiscoveryConfiguration" TypeName="opc:Int32" />
  <opc:Field Name="DiscoveryConfiguration" TypeName="ua:ExtensionObject" LengthField="NoOfDiscoveryConfiguration" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="RegisterServer2Response" BaseType="ua:ExtensionObject">
```

```

    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
    <opc:Field Name="NoOfConfigurationResults" TypeName="opc:Int32" />
    <opc:Field Name="ConfigurationResults" TypeName="ua:StatusCode"
LengthField="NoOfConfigurationResults" />
    <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
    <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:EnumeratedType Name="SecurityTokenRequestType" LengthInBits="32">
    <opc:Documentation>Indicates whether a token if being created or renewed.</opc:Documentation>

    <opc:EnumeratedValue Name="Issue" Value="0" />
    <opc:EnumeratedValue Name="Renew" Value="1" />
</opc:EnumeratedType>

<opc:StructuredType Name="ChannelSecurityToken" BaseType="ua:ExtensionObject">
    <opc:Documentation>The token that identifies a set of keys for an active secure channel.</opc:Documentation>
    <opc:Field Name="ChannelId" TypeName="opc:UInt32" />
    <opc:Field Name="TokenId" TypeName="opc:UInt32" />
    <opc:Field Name="CreatedAt" TypeName="opc:DateTime" />
    <opc:Field Name="RevisedLifetime" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="OpenSecureChannelRequest" BaseType="ua:ExtensionObject">
    <opc:Documentation>Creates a secure channel with a server.</opc:Documentation>
    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
    <opc:Field Name="ClientProtocolVersion" TypeName="opc:UInt32" />
    <opc:Field Name="RequestType" TypeName="tns:SecurityTokenRequestType" />
    <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
/>
    <opc:Field Name="ClientNonce" TypeName="opc:ByteString" />
    <opc:Field Name="RequestedLifetime" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="OpenSecureChannelResponse" BaseType="ua:ExtensionObject">
    <opc:Documentation>Creates a secure channel with a server.</opc:Documentation>
    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
    <opc:Field Name="ServerProtocolVersion" TypeName="opc:UInt32" />
    <opc:Field Name="SecurityToken" TypeName="tns:ChannelSecurityToken" />
    <opc:Field Name="ServerNonce" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSecureChannelRequest" BaseType="ua:ExtensionObject">
    <opc:Documentation>Closes a secure channel.</opc:Documentation>
    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSecureChannelResponse" BaseType="ua:ExtensionObject">

```

```

    <opc:Documentation>Closes
    a secure channel.</opc:Documentation>
    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="SignedSoftwareCertificate" BaseType="ua:ExtensionObject">
  <opc:Documentation>A software certificate with a digital signature.</opc:Documentation>
  <opc:Field Name="CertificateData" TypeName="opc:ByteString" />
  <opc:Field Name="Signature" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:OpaqueType Name="SessionAuthenticationToken">
  <opc:Documentation>A unique identifier for a session used to authenticate requests.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="SignatureData" BaseType="ua:ExtensionObject">
  <opc:Documentation>A digital signature.</opc:Documentation>
  <opc:Field Name="Algorithm" TypeName="opc:String" />
  <opc:Field Name="Signature" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="CreateSessionRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Creates a new session with the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ClientDescription" TypeName="tns:ApplicationDescription" />
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="SessionName" TypeName="opc:String" />
  <opc:Field Name="ClientNonce" TypeName="opc:ByteString" />
  <opc:Field Name="ClientCertificate" TypeName="opc:ByteString" />
  <opc:Field Name="RequestedSessionTimeout" TypeName="opc:Double" />
  <opc:Field Name="MaxResponseMessageSize" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="CreateSessionResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Creates a new session with the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="SessionId" TypeName="ua:NodeId"
/>
  <opc:Field Name="AuthenticationToken" TypeName="ua:NodeId" />
  <opc:Field Name="RevisedSessionTimeout" TypeName="opc:Double" />
  <opc:Field Name="ServerNonce" TypeName="opc:ByteString" />
  <opc:Field Name="ServerCertificate" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfServerEndpoints" TypeName="opc:Int32" />
  <opc:Field Name="ServerEndpoints" TypeName="tns:EndpointDescription"
LengthField="NoOfServerEndpoints" />
  <opc:Field Name="NoOfServerSoftwareCertificates" TypeName="opc:Int32" />
  <opc:Field Name="ServerSoftwareCertificates" TypeName="tns:SignedSoftwareCertificate"

```

```

LengthField="NoOfServerSoftwareCertificates" />
  <opc:Field Name="ServerSignature" TypeName="tns:SignatureData" />
  <opc:Field Name="MaxRequestMessageSize" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="UserIdentityToken" BaseType="ua:ExtensionObject">
  <opc:Documentation>A base type for a user identity token.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="AnonymousIdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing an anonymous user.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
</opc:StructuredType>

<opc:StructuredType Name="UserNameIdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing a user identified by a user name and password.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
  <opc:Field Name="UserName" TypeName="opc:String" />
  <opc:Field Name="Password" TypeName="opc:ByteString" />
  <opc:Field Name="EncryptionAlgorithm" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="X509IdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing a user identified
by an X509 certificate.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
  <opc:Field Name="CertificateData" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="IssuedIdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing a user identified by a WS-Security XML token.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
  <opc:Field Name="TokenData" TypeName="opc:ByteString" />
  <opc:Field Name="EncryptionAlgorithm" TypeName="opc:String" />
</opc:StructuredType>

<opc:OpaqueType Name="RsaEncryptedSecret">
</opc:OpaqueType>

<opc:StructuredType Name="ActivateSessionRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Activates a session with the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ClientSignature"
TypeName="tns:SignatureData" />
  <opc:Field Name="NoOfClientSoftwareCertificates" TypeName="opc:Int32" />
  <opc:Field Name="ClientSoftwareCertificates" TypeName="tns:SignedSoftwareCertificate"
LengthField="NoOfClientSoftwareCertificates" />

```

```

<opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
<opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
<opc:Field Name="UserIdentityToken" TypeName="ua:ExtensionObject" />
<opc:Field Name="UserTokenSignature" TypeName="tns:SignatureData" />
</opc:StructuredType>

<opc:StructuredType Name="ActivateSessionResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Activates a session with the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="ServerNonce" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults"
/>
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSessionRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Closes a session with the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="DeleteSubscriptions" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSessionResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Closes a session with the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="CancelRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Cancels an outstanding request.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field
Name="RequestHandle" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="CancelResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Cancels an outstanding request.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="CancelCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:EnumeratedType Name="NodeAttributesMask" LengthInBits="32">
  <opc:Documentation>The bits used to specify default attributes for a new node.</opc:Documentation>
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="AccessLevel" Value="1" />
  <opc:EnumeratedValue Name="ArrayDimensions" Value="2" />
  <opc:EnumeratedValue Name="BrowseName" Value="4" />
  <opc:EnumeratedValue Name="ContainsNoLoops" Value="8" />

```



```

<opc:EnumeratedValue Name="DataType" Value="16" />
<opc:EnumeratedValue Name="Description" Value="32" />
<opc:EnumeratedValue Name="DisplayName" Value="64"
/>
<opc:EnumeratedValue Name="EventNotifier" Value="128" />
<opc:EnumeratedValue Name="Executable" Value="256" />
<opc:EnumeratedValue Name="Historizing" Value="512" />
<opc:EnumeratedValue Name="InverseName" Value="1024" />
<opc:EnumeratedValue Name="IsAbstract" Value="2048" />
<opc:EnumeratedValue Name="MinimumSamplingInterval" Value="4096" />
<opc:EnumeratedValue Name="NodeClass" Value="8192" />
<opc:EnumeratedValue Name="NodeId" Value="16384" />
<opc:EnumeratedValue Name="Symmetric" Value="32768" />
<opc:EnumeratedValue Name="UserAccessLevel" Value="65536" />
<opc:EnumeratedValue Name="UserExecutable" Value="131072" />
<opc:EnumeratedValue Name="UserWriteMask" Value="262144" />
<opc:EnumeratedValue Name="ValueRank" Value="524288" />
<opc:EnumeratedValue Name="WriteMask" Value="1048576" />
<opc:EnumeratedValue Name="Value" Value="2097152" />
<opc:EnumeratedValue Name="DataTypeDefinition" Value="4194304" />
<opc:EnumeratedValue
Name="RolePermissions" Value="8388608" />
<opc:EnumeratedValue Name="AccessRestrictions" Value="16777216" />
<opc:EnumeratedValue Name="All" Value="33554431" />
<opc:EnumeratedValue Name="BaseNode" Value="26501220" />
<opc:EnumeratedValue Name="Object" Value="26501348" />
<opc:EnumeratedValue Name="ObjectType" Value="26503268" />
<opc:EnumeratedValue Name="Variable" Value="26571383" />
<opc:EnumeratedValue Name="VariableType" Value="28600438" />
<opc:EnumeratedValue Name="Method" Value="26632548" />
<opc:EnumeratedValue Name="ReferenceType" Value="26537060" />
<opc:EnumeratedValue Name="View" Value="26501356" />
</opc:EnumeratedType>

<opc:StructuredType Name="NodeAttributes" BaseType="ua:ExtensionObject">
  <opc:Documentation>The base attributes for all nodes.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field
Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="ObjectAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for an object node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />

```

```
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="VariableAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The
attributes for a variable node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Value" TypeName="ua:Variant" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="AccessLevel" TypeName="opc:Byte" />
  <opc:Field Name="UserAccessLevel" TypeName="opc:Byte" />
  <opc:Field
Name="MinimumSamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="Historizing" TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="MethodAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for a method node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Executable" TypeName="opc:Boolean" />
  <opc:Field Name="UserExecutable" TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ObjectTypeAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for an object type node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="VariableTypeAttributes" BaseType="tns:NodeAttributes">
```

```

<opc:Documentation>The attributes for a variable type node.</opc:Documentation>
<opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes"
/>
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="Value" TypeName="ua:Variant" />
<opc:Field Name="DataType" TypeName="ua:NodeId" />
<opc:Field Name="ValueRank" TypeName="opc:Int32" />
<opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
<opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
<opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ReferenceTypeAttributes" BaseType="tns:NodeAttributes">
<opc:Documentation>The attributes for a reference type node.</opc:Documentation>
<opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText"
SourceType="tns:NodeAttributes" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
<opc:Field Name="Symmetric" TypeName="opc:Boolean" />
<opc:Field Name="InverseName" TypeName="ua:LocalizedText" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="DataTypeAttributes" BaseType="tns:NodeAttributes">
<opc:Documentation>The attributes for a data type node.</opc:Documentation>
<opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ViewAttributes" BaseType="tns:NodeAttributes">
<opc:Documentation>The attributes for a view node.</opc:Documentation>
<opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="ContainsNoLoops" TypeName="opc:Boolean" />
<opc:Field Name="EventNotifier" TypeName="opc:Byte"

```

```

/>
</opc:StructuredType>

<opc:StructuredType Name="GenericAttributeValue" BaseType="ua:ExtensionObject">
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="Value" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:StructuredType Name="GenericAttributes" BaseType="tns:NodeAttributes">
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="NoOfAttributeValues" TypeName="opc:Int32" />
  <opc:Field Name="AttributeValues" TypeName="tns:GenericAttributeValue"
LengthField="NoOfAttributeValues" />
</opc:StructuredType>

<opc:StructuredType Name="AddNodesItem" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to add a node to the server address space.</opc:Documentation>
  <opc:Field Name="ParentNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="RequestedNewNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" />
  <opc:Field Name="NodeAttributes" TypeName="ua:ExtensionObject" />
  <opc:Field Name="TypeDefinition" TypeName="ua:ExpandedNodeId" />
</opc:StructuredType>

<opc:StructuredType Name="AddNodesResult" BaseType="ua:ExtensionObject">
  <opc:Documentation>A result of an add node operation.</opc:Documentation>
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="AddedNodeId" TypeName="ua:NodeId" />
</opc:StructuredType>

<opc:StructuredType Name="AddNodesRequest"
BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more nodes to the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToAdd" TypeName="opc:Int32" />
  <opc:Field Name="NodesToAdd" TypeName="tns:AddNodesItem" LengthField="NoOfNodesToAdd" />
</opc:StructuredType>

<opc:StructuredType Name="AddNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more nodes to the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />

```

```
<opc:Field Name="Results" TypeName="tns:AddNodesResult" LengthField="NoOfResults" />
<opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
<opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="AddReferencesItem"
BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to add a reference to the server address space.</opc:Documentation>
  <opc:Field Name="SourceNodeId" TypeName="ua:NodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean" />
  <opc:Field Name="TargetServerUri" TypeName="opc:String" />
  <opc:Field Name="TargetNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="TargetNodeClass" TypeName="tns:NodeClass" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="AddReferencesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more references to the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfReferencesToAdd" TypeName="opc:Int32" />
  <opc:Field Name="ReferencesToAdd" TypeName="tns:AddReferencesItem"
LengthField="NoOfReferencesToAdd" />
</opc:StructuredType>
```

```
<opc:StructuredType
Name="AddReferencesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more references to the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DeleteNodesItem" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to delete a node to the server address space.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="DeleteTargetReferences" TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DeleteNodesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete
one or more nodes from the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToDelete" TypeName="opc:Int32" />
  <opc:Field Name="NodesToDelete" TypeName="tns>DeleteNodesItem" LengthField="NoOfNodesToDelete" />
</opc:StructuredType>
```

```

<opc:StructuredType Name="DeleteNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete one or more nodes from the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="DeleteReferencesItem" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to delete a node from the server address space.</opc:Documentation>
  <opc:Field Name="SourceNodeId" TypeName="ua:NodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean" />
  <opc:Field Name="TargetNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="DeleteBidirectional" TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="DeleteReferencesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete one or more references from the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfReferencesToDelete" TypeName="opc:Int32" />
  <opc:Field Name="ReferencesToDelete" TypeName="tns:DeleteReferencesItem"
LengthField="NoOfReferencesToDelete" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="DeleteReferencesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete one or more references from the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:EnumeratedType Name="AttributeWriteMask" LengthInBits="32" IsOptionSet="true">
  <opc:Documentation>Define bits used to indicate which attributes are writable.</opc:Documentation>
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="AccessLevel" Value="1" />
  <opc:EnumeratedValue Name="ArrayDimensions" Value="2" />
  <opc:EnumeratedValue Name="BrowseName" Value="4" />
  <opc:EnumeratedValue Name="ContainsNoLoops" Value="8" />
  <opc:EnumeratedValue
Name="DataType" Value="16" />
  <opc:EnumeratedValue Name="Description" Value="32" />
  <opc:EnumeratedValue Name="DisplayName" Value="64" />
  <opc:EnumeratedValue Name="EventNotifier" Value="128" />
  <opc:EnumeratedValue Name="Executable" Value="256" />

```

```

<opc:EnumeratedValue Name="Historizing" Value="512" />
<opc:EnumeratedValue Name="InverseName" Value="1024" />
<opc:EnumeratedValue Name="IsAbstract" Value="2048" />
<opc:EnumeratedValue Name="MinimumSamplingInterval" Value="4096" />
<opc:EnumeratedValue Name="NodeClass" Value="8192" />
<opc:EnumeratedValue Name="NodeId" Value="16384" />
<opc:EnumeratedValue Name="Symmetric" Value="32768" />
<opc:EnumeratedValue Name="UserAccessLevel" Value="65536" />
<opc:EnumeratedValue Name="UserExecutable" Value="131072" />
<opc:EnumeratedValue Name="UserWriteMask" Value="262144" />
<opc:EnumeratedValue Name="ValueRank" Value="524288" />
<opc:EnumeratedValue Name="WriteMask"
Value="1048576" />
<opc:EnumeratedValue Name="ValueForVariableType" Value="2097152" />
<opc:EnumeratedValue Name="DataTypeDefinition" Value="4194304" />
<opc:EnumeratedValue Name="RolePermissions" Value="8388608" />
<opc:EnumeratedValue Name="AccessRestrictions" Value="16777216" />
<opc:EnumeratedValue Name="AccessLevelEx" Value="33554432" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="BrowseDirection" LengthInBits="32">
  <opc:Documentation>The directions of the references to return.</opc:Documentation>
  <opc:EnumeratedValue Name="Forward" Value="0" />
  <opc:EnumeratedValue Name="Inverse" Value="1" />
  <opc:EnumeratedValue Name="Both" Value="2" />
  <opc:EnumeratedValue Name="Invalid" Value="3" />
</opc:EnumeratedType>

<opc:StructuredType Name="ViewDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>The view to browse.</opc:Documentation>
  <opc:Field Name="ViewId" TypeName="ua:NodeId" />
  <opc:Field Name="Timestamp" TypeName="opc:DateTime"
/>
  <opc:Field Name="ViewVersion" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="BrowseDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to browse the the references from a node.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="BrowseDirection" TypeName="tns:BrowseDirection" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IncludeSubtypes" TypeName="opc:Boolean" />
  <opc:Field Name="NodeClassMask" TypeName="opc:UInt32" />
  <opc:Field Name="ResultMask" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:EnumeratedType Name="BrowseResultMask" LengthInBits="32">
  <opc:Documentation>A bit mask which specifies what should be returned in a browse

```

```

response.</opc:Documentation>
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="ReferenceTypeId" Value="1" />
  <opc:EnumeratedValue Name="IsForward"
Value="2" />
  <opc:EnumeratedValue Name="NodeClass" Value="4" />
  <opc:EnumeratedValue Name="BrowseName" Value="8" />
  <opc:EnumeratedValue Name="DisplayName" Value="16" />
  <opc:EnumeratedValue Name="TypeDefinition" Value="32" />
  <opc:EnumeratedValue Name="All" Value="63" />
  <opc:EnumeratedValue Name="ReferenceTypeInfo" Value="3" />
  <opc:EnumeratedValue Name="TargetInfo" Value="60" />
</opc:EnumeratedType>

<opc:StructuredType Name="ReferenceDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>The description of a reference.</opc:Documentation>
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean" />
  <opc:Field Name="NodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" />
  <opc:Field Name="TypeDefinition"
TypeName="ua:ExpandedNodeId" />
</opc:StructuredType>

<opc:OpaqueType Name="ContinuationPoint">
  <opc:Documentation>An identifier for a suspended query or browse operation.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="BrowseResult" BaseType="ua:ExtensionObject">
  <opc:Documentation>The result of a browse operation.</opc:Documentation>
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceDescription" LengthField="NoOfReferences" />
</opc:StructuredType>

<opc:StructuredType Name="BrowseRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Browse the references for one or more nodes from the server address
space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="View" TypeName="tns:ViewDescription"
/>
  <opc:Field Name="RequestedMaxReferencesPerNode" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfNodesToBrowse" TypeName="opc:Int32" />
  <opc:Field Name="NodesToBrowse" TypeName="tns:BrowseDescription" LengthField="NoOfNodesToBrowse"
/>

```


</opc:StructuredType>

<opc:StructuredType Name="BrowseResponse" BaseType="ua:ExtensionObject">

<opc:Documentation>Browse the references for one or more nodes from the server address space.</opc:Documentation>

<opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />

<opc:Field Name="NoOfResults" TypeName="opc:Int32" />

<opc:Field Name="Results" TypeName="tns:BrowseResult" LengthField="NoOfResults" />

<opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />

<opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />

</opc:StructuredType>

<opc:StructuredType Name="BrowseNextRequest" BaseType="ua:ExtensionObject">

<opc:Documentation>Continues

one or more browse operations.</opc:Documentation>

<opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />

<opc:Field Name="ReleaseContinuationPoints" TypeName="opc:Boolean" />

<opc:Field Name="NoOfContinuationPoints" TypeName="opc:Int32" />

<opc:Field Name="ContinuationPoints" TypeName="opc:ByteString" LengthField="NoOfContinuationPoints" />

</opc:StructuredType>

<opc:StructuredType Name="BrowseNextResponse" BaseType="ua:ExtensionObject">

<opc:Documentation>Continues one or more browse operations.</opc:Documentation>

<opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />

<opc:Field Name="NoOfResults" TypeName="opc:Int32" />

<opc:Field Name="Results" TypeName="tns:BrowseResult" LengthField="NoOfResults" />

<opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />

<opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />

</opc:StructuredType>

<opc:StructuredType Name="RelativePathElement"

BaseType="ua:ExtensionObject">

<opc:Documentation>An element in a relative path.</opc:Documentation>

<opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />

<opc:Field Name="IsInverse" TypeName="opc:Boolean" />

<opc:Field Name="IncludeSubtypes" TypeName="opc:Boolean" />

<opc:Field Name="TargetName" TypeName="ua:QualifiedName" />

</opc:StructuredType>

<opc:StructuredType Name="RelativePath" BaseType="ua:ExtensionObject">

<opc:Documentation>A relative path constructed from reference types and browse names.</opc:Documentation>

<opc:Field Name="NoOfElements" TypeName="opc:Int32" />

<opc:Field Name="Elements" TypeName="tns:RelativePathElement" LengthField="NoOfElements" />

</opc:StructuredType>

<opc:StructuredType Name="BrowsePath" BaseType="ua:ExtensionObject">

<opc:Documentation>A request to translate a path into a node id.</opc:Documentation>

<opc:Field Name="StartingNode" TypeName="ua:NodeId" />

```

    <opc:Field Name="RelativePath"
    TypeName="tns:RelativePath" />
</opc:StructuredType>

<opc:StructuredType Name="BrowsePathTarget" BaseType="ua:ExtensionObject">
  <opc:Documentation>The target of the translated path.</opc:Documentation>
  <opc:Field Name="TargetId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="RemainingPathIndex" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="BrowsePathResult" BaseType="ua:ExtensionObject">
  <opc:Documentation>The result of a translate operation.</opc:Documentation>
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfTargets" TypeName="opc:Int32" />
  <opc:Field Name="Targets" TypeName="tns:BrowsePathTarget" LengthField="NoOfTargets" />
</opc:StructuredType>

<opc:StructuredType Name="TranslateBrowsePathsToNodeIdsRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Translates one or more paths in the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader"
    TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfBrowsePaths" TypeName="opc:Int32" />
  <opc:Field Name="BrowsePaths" TypeName="tns:BrowsePath" LengthField="NoOfBrowsePaths" />
</opc:StructuredType>

<opc:StructuredType Name="TranslateBrowsePathsToNodeIdsResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Translates one or more paths in the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:BrowsePathResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterNodesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers one or more nodes for repeated use within a session.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToRegister" TypeName="opc:Int32" />
  <opc:Field Name="NodesToRegister" TypeName="ua:NodeId" LengthField="NoOfNodesToRegister" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers one or more nodes for repeated use within a session.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfRegisteredNodeIds" TypeName="opc:Int32" />
  <opc:Field Name="RegisteredNodeIds" TypeName="ua:NodeId" LengthField="NoOfRegisteredNodeIds" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="UnregisterNodesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Unregisters one or more previously registered nodes.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToUnregister"
TypeName="opc:Int32" />
  <opc:Field Name="NodesToUnregister" TypeName="ua:NodeId" LengthField="NoOfNodesToUnregister" />
</opc:StructuredType>

<opc:StructuredType Name="UnregisterNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Unregisters one or more previously registered nodes.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:OpaqueType Name="Counter">
  <opc:Documentation>A monotonically increasing value.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="NumericRange">
  <opc:Documentation>Specifies a range of array indexes.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="Time">
  <opc:Documentation>A time value specified as HH:MM:SS.SSS.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="Date">
  <opc:Documentation>A date value.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="EndpointConfiguration"
BaseType="ua:ExtensionObject">
  <opc:Field Name="OperationTimeout" TypeName="opc:Int32" />
  <opc:Field Name="UseBinaryEncoding" TypeName="opc:Boolean" />
  <opc:Field Name="MaxStringLength" TypeName="opc:Int32" />
  <opc:Field Name="MaxByteStringLength" TypeName="opc:Int32" />
  <opc:Field Name="MaxArrayLength" TypeName="opc:Int32" />
  <opc:Field Name="MaxMessageSize" TypeName="opc:Int32" />
  <opc:Field Name="MaxBufferSize" TypeName="opc:Int32" />
  <opc:Field Name="ChannelLifetime" TypeName="opc:Int32" />
  <opc:Field Name="SecurityTokenLifetime" TypeName="opc:Int32" />
</opc:StructuredType>

<opc:StructuredType Name="QueryDataDescription" BaseType="ua:ExtensionObject">
  <opc:Field Name="RelativePath" TypeName="tns:RelativePath" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="NodeTypeDescription" BaseType="ua:ExtensionObject">
  <opc:Field Name="TypeDefinitionNode" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="IncludeSubTypes" TypeName="opc:Boolean" />
  <opc:Field Name="NoOfDataToReturn" TypeName="opc:Int32" />
  <opc:Field Name="DataToReturn" TypeName="tns:QueryDataDescription" LengthField="NoOfDataToReturn"
/>
</opc:StructuredType>

```

```

<opc:EnumeratedType Name="FilterOperator" LengthInBits="32">
  <opc:EnumeratedValue Name="Equals" Value="0" />
  <opc:EnumeratedValue Name="IsNull" Value="1" />
  <opc:EnumeratedValue Name="GreaterThan" Value="2" />
  <opc:EnumeratedValue Name="LessThan" Value="3" />
  <opc:EnumeratedValue Name="GreaterThanOrEqual" Value="4" />
  <opc:EnumeratedValue Name="LessThanOrEqual" Value="5" />
  <opc:EnumeratedValue Name="Like" Value="6" />
  <opc:EnumeratedValue Name="Not" Value="7" />
  <opc:EnumeratedValue Name="Between" Value="8" />
  <opc:EnumeratedValue Name="InList" Value="9" />
  <opc:EnumeratedValue Name="And" Value="10" />
  <opc:EnumeratedValue
Name="Or" Value="11" />
  <opc:EnumeratedValue Name="Cast" Value="12" />
  <opc:EnumeratedValue Name="InView" Value="13" />
  <opc:EnumeratedValue Name="OfType" Value="14" />
  <opc:EnumeratedValue Name="RelatedTo" Value="15" />
  <opc:EnumeratedValue Name="BitwiseAnd" Value="16" />
  <opc:EnumeratedValue Name="BitwiseOr" Value="17" />
</opc:EnumeratedType>

```

```

<opc:StructuredType Name="QueryDataSet" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="TypeDefinitionNode" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="NoOfValues" TypeName="opc:Int32" />
  <opc:Field Name="Values" TypeName="ua:Variant" LengthField="NoOfValues" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="NodeReference" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean"
/>
  <opc:Field Name="NoOfReferencedNodeIds" TypeName="opc:Int32" />
  <opc:Field Name="ReferencedNodeIds" TypeName="ua:NodeId" LengthField="NoOfReferencedNodeIds" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ContentFilterElement" BaseType="ua:ExtensionObject">
  <opc:Field Name="FilterOperator" TypeName="tns:FilterOperator" />

```

```

    <opc:Field Name="NoOfFilterOperands" TypeName="opc:Int32" />
    <opc:Field Name="FilterOperands" TypeName="ua:ExtensionObject" LengthField="NoOfFilterOperands" />
</opc:StructuredType>

<opc:StructuredType Name="ContentFilter" BaseType="ua:ExtensionObject">
    <opc:Field Name="NoOfElements" TypeName="opc:Int32" />
    <opc:Field Name="Elements" TypeName="tns:ContentFilterElement" LengthField="NoOfElements" />
</opc:StructuredType>

<opc:StructuredType Name="FilterOperand" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="ElementOperand" BaseType="tns:FilterOperand">
    <opc:Field Name="Index" TypeName="opc:UInt32"
/>
</opc:StructuredType>

<opc:StructuredType Name="LiteralOperand" BaseType="tns:FilterOperand">
    <opc:Field Name="Value" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:StructuredType Name="AttributeOperand" BaseType="tns:FilterOperand">
    <opc:Field Name="NodeId" TypeName="ua:NodeId" />
    <opc:Field Name="Alias" TypeName="opc:String" />
    <opc:Field Name="BrowsePath" TypeName="tns:RelativePath" />
    <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
    <opc:Field Name="IndexRange" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="SimpleAttributeOperand" BaseType="tns:FilterOperand">
    <opc:Field Name="TypeDefinitionId" TypeName="ua:NodeId" />
    <opc:Field Name="NoOfBrowsePath" TypeName="opc:Int32" />
    <opc:Field Name="BrowsePath" TypeName="ua:QualifiedName" LengthField="NoOfBrowsePath" />
    <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
    <opc:Field Name="IndexRange" TypeName="opc:String"
/>
</opc:StructuredType>

<opc:StructuredType Name="ContentFilterElementResult" BaseType="ua:ExtensionObject">
    <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
    <opc:Field Name="NoOfOperandStatusCodes" TypeName="opc:Int32" />
    <opc:Field Name="OperandStatusCodes" TypeName="ua:StatusCode" LengthField="NoOfOperandStatusCodes"
/>
    <opc:Field Name="NoOfOperandDiagnosticInfos" TypeName="opc:Int32" />
    <opc:Field Name="OperandDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfOperandDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ContentFilterResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfElementResults" TypeName="opc:Int32" />
  <opc:Field Name="ElementResults" TypeName="tns:ContentFilterElementResult"
LengthField="NoOfElementResults" />
  <opc:Field Name="NoOfElementDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="ElementDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfElementDiagnosticInfos"
/>
</opc:StructuredType>

<opc:StructuredType Name="ParsingResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfDataStatusCodes" TypeName="opc:Int32" />
  <opc:Field Name="DataStatusCodes" TypeName="ua:StatusCode" LengthField="NoOfDataStatusCodes" />
  <opc:Field Name="NoOfDataDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DataDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfDataDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="QueryFirstRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="View" TypeName="tns:ViewDescription" />
  <opc:Field Name="NoOfNodeTypes" TypeName="opc:Int32" />
  <opc:Field Name="NodeTypes" TypeName="tns:NodeTypeDescription" LengthField="NoOfNodeTypes" />
  <opc:Field Name="Filter" TypeName="tns:ContentFilter" />
  <opc:Field Name="MaxDataSetsToReturn"
TypeName="opc:UInt32" />
  <opc:Field Name="MaxReferencesToReturn" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="QueryFirstResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfQueryDataSets" TypeName="opc:Int32" />
  <opc:Field Name="QueryDataSets" TypeName="tns:QueryDataSet" LengthField="NoOfQueryDataSets" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfParsingResults" TypeName="opc:Int32" />
  <opc:Field Name="ParsingResults" TypeName="tns:ParsingResult" LengthField="NoOfParsingResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
  <opc:Field Name="FilterResult" TypeName="tns:ContentFilterResult" />
</opc:StructuredType>

<opc:StructuredType Name="QueryNextRequest"
BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ReleaseContinuationPoint" TypeName="opc:Boolean" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="QueryNextResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfQueryDataSets" TypeName="opc:Int32" />
  <opc:Field Name="QueryDataSets" TypeName="tns:QueryDataSet" LengthField="NoOfQueryDataSets" />
  <opc:Field Name="RevisedContinuationPoint" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:EnumeratedType Name="TimestampsToReturn" LengthInBits="32">
  <opc:EnumeratedValue Name="Source" Value="0" />
  <opc:EnumeratedValue Name="Server" Value="1" />
  <opc:EnumeratedValue Name="Both" Value="2" />
  <opc:EnumeratedValue Name="Neither" Value="3" />
  <opc:EnumeratedValue Name="Invalid" Value="4" />
/>
</opc:EnumeratedType>

<opc:StructuredType Name="ReadValueId" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="DataEncoding" TypeName="ua:QualifiedName" />
</opc:StructuredType>

<opc:StructuredType Name="ReadRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="MaxAge" TypeName="opc:Double" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />
  <opc:Field Name="NoOfNodesToRead" TypeName="opc:Int32" />
  <opc:Field Name="NodesToRead" TypeName="tns:ReadValueId" LengthField="NoOfNodesToRead" />
</opc:StructuredType>

<opc:StructuredType Name="ReadResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
/>
  <opc:Field Name="Results" TypeName="ua:DataValue" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadValueId" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="DataEncoding" TypeName="ua:QualifiedName" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="HistoryReadResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
  <opc:Field Name="HistoryData" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadDetails" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="ReadEventDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="NumValuesPerNode" TypeName="opc:UInt32" />
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
  <opc:Field Name="Filter" TypeName="tns:EventFilter" />
</opc:StructuredType>

<opc:StructuredType Name="ReadRawModifiedDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="IsReadModified" TypeName="opc:Boolean" />
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
  <opc:Field Name="NumValuesPerNode" TypeName="opc:UInt32" />
  <opc:Field Name="ReturnBounds" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="ReadProcessedDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
  </opc:Field Name="ProcessingInterval" TypeName="opc:Double" />
  <opc:Field Name="NoOfAggregateType" TypeName="opc:Int32" />
  <opc:Field Name="AggregateType" TypeName="ua:NodeId" LengthField="NoOfAggregateType" />
  <opc:Field Name="AggregateConfiguration" TypeName="tns:AggregateConfiguration" />
</opc:StructuredType>

<opc:StructuredType Name="ReadAtTimeDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="NoOfReqTimes" TypeName="opc:Int32" />
  <opc:Field Name="ReqTimes" TypeName="opc:DateTime" LengthField="NoOfReqTimes" />
  <opc:Field Name="UseSimpleBounds" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryData" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfDataValues" TypeName="opc:Int32" />
  <opc:Field Name="DataValues" TypeName="ua:DataValue" LengthField="NoOfDataValues" />
</opc:StructuredType>

<opc:StructuredType Name="ModificationInfo" BaseType="ua:ExtensionObject">
  <opc:Field Name="ModificationTime" />

```



```

TypeName="opc:DateTime" />
  <opc:Field Name="UpdateType" TypeName="tns:HistoryUpdateType" />
  <opc:Field Name="UserName" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryModifiedData" BaseType="tns:HistoryData">
  <opc:Field Name="NoOfDataValues" TypeName="opc:Int32" />
  <opc:Field Name="DataValues" TypeName="ua:DataValue" LengthField="NoOfDataValues" />
  <opc:Field Name="NoOfModificationInfos" TypeName="opc:Int32" />
  <opc:Field Name="ModificationInfos" TypeName="tns:ModificationInfo"
LengthField="NoOfModificationInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryEvent" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfEvents" TypeName="opc:Int32" />
  <opc:Field Name="Events" TypeName="tns:HistoryEventFieldList" LengthField="NoOfEvents" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader"
/>
  <opc:Field Name="HistoryReadDetails" TypeName="ua:ExtensionObject" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />
  <opc:Field Name="ReleaseContinuationPoints" TypeName="opc:Boolean" />
  <opc:Field Name="NoOfNodesToRead" TypeName="opc:Int32" />
  <opc:Field Name="NodesToRead" TypeName="tns:HistoryReadValueId" LengthField="NoOfNodesToRead" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:HistoryReadResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="WriteValue" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="Value" TypeName="ua:DataValue" />
</opc:StructuredType>

<opc:StructuredType Name="WriteRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToWrite" TypeName="opc:Int32" />
  <opc:Field Name="NodesToWrite" TypeName="tns:WriteValue" LengthField="NoOfNodesToWrite" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="WriteResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateDetails" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
</opc:StructuredType>

<opc:EnumeratedType Name="HistoryUpdateType" LengthInBits="32">
  <opc:EnumeratedValue Name="Insert" Value="1" />
  <opc:EnumeratedValue Name="Replace" Value="2" />
  <opc:EnumeratedValue Name="Update" Value="3" />
  <opc:EnumeratedValue Name="Delete" Value="4" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="PerformUpdateType" LengthInBits="32">
  <opc:EnumeratedValue Name="Insert" Value="1" />
  <opc:EnumeratedValue Name="Replace" Value="2" />
  <opc:EnumeratedValue Name="Update" Value="3" />
  <opc:EnumeratedValue Name="Remove" Value="4" />
</opc:EnumeratedType>

<opc:StructuredType Name="UpdateDataDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />

<opc:Field Name="PerformInsertReplace" TypeName="tns:PerformUpdateType" />
  <opc:Field Name="NoOfUpdateValues" TypeName="opc:Int32" />
  <opc:Field Name="UpdateValues" TypeName="ua:DataValue" LengthField="NoOfUpdateValues" />
</opc:StructuredType>

<opc:StructuredType Name="UpdateStructureDataDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="PerformInsertReplace" TypeName="tns:PerformUpdateType" />
  <opc:Field Name="NoOfUpdateValues" TypeName="opc:Int32" />
  <opc:Field Name="UpdateValues" TypeName="ua:DataValue" LengthField="NoOfUpdateValues" />
</opc:StructuredType>

<opc:StructuredType Name="UpdateEventDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="PerformInsertReplace" TypeName="tns:PerformUpdateType" />
  <opc:Field Name="Filter" TypeName="tns:EventFilter"

```

```

/>
  <opc:Field Name="NoOfEventData" TypeName="opc:Int32" />
  <opc:Field Name="EventData" TypeName="tns:HistoryEventFieldList" LengthField="NoOfEventData" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteRawModifiedDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="IsDeleteModified" TypeName="opc:Boolean" />
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteAtTimeDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="NoOfReqTimes" TypeName="opc:Int32" />
  <opc:Field Name="ReqTimes" TypeName="opc:DateTime" LengthField="NoOfReqTimes" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteEventDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="NoOfEventIds" TypeName="opc:Int32" />
  <opc:Field Name="EventIds" TypeName="opc:ByteString" LengthField="NoOfEventIds" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfOperationResults" TypeName="opc:Int32" />
  <opc:Field Name="OperationResults" TypeName="ua:StatusCode" LengthField="NoOfOperationResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfHistoryUpdateDetails" TypeName="opc:Int32" />
/>
  <opc:Field Name="HistoryUpdateDetails" TypeName="ua:ExtensionObject"
LengthField="NoOfHistoryUpdateDetails" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:HistoryUpdateResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="CallMethodRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="ObjectId" TypeName="ua:NodeId" />
  <opc:Field Name="MethodId" TypeName="ua:NodeId" />
  <opc:Field Name="NoOfInputArguments" TypeName="opc:Int32" />
  <opc:Field Name="InputArguments" TypeName="ua:Variant" LengthField="NoOfInputArguments" />
</opc:StructuredType>

<opc:StructuredType Name="CallMethodResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfInputArgumentResults" TypeName="opc:Int32" />
  <opc:Field Name="InputArgumentResults" TypeName="ua:StatusCode"
LengthField="NoOfInputArgumentResults" />
  <opc:Field Name="NoOfInputArgumentDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="InputArgumentDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfInputArgumentDiagnosticInfos" />
  <opc:Field Name="NoOfOutputArguments" TypeName="opc:Int32" />
  <opc:Field Name="OutputArguments" TypeName="ua:Variant" LengthField="NoOfOutputArguments" />
</opc:StructuredType>

<opc:StructuredType Name="CallRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfMethodsToCall" TypeName="opc:Int32" />
  <opc:Field Name="MethodsToCall" TypeName="tns:CallMethodRequest"
LengthField="NoOfMethodsToCall" />
</opc:StructuredType>

<opc:StructuredType Name="CallResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:CallMethodResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:EnumeratedType Name="MonitoringMode" LengthInBits="32">
  <opc:EnumeratedValue Name="Disabled" Value="0" />
  <opc:EnumeratedValue Name="Sampling" Value="1" />
  <opc:EnumeratedValue Name="Reporting" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="DataChangeTrigger" LengthInBits="32">
  <opc:EnumeratedValue Name="Status" Value="0" />
  <opc:EnumeratedValue Name="StatusValue" Value="1" />
  <opc:EnumeratedValue
Name="StatusValueTimestamp" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="DeadbandType" LengthInBits="32">

```

```

<opc:EnumeratedValue Name="None" Value="0" />
<opc:EnumeratedValue Name="Absolute" Value="1" />
<opc:EnumeratedValue Name="Percent" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="MonitoringFilter" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataChangeFilter" BaseType="tns:MonitoringFilter">
  <opc:Field Name="Trigger" TypeName="tns:DataChangeTrigger" />
  <opc:Field Name="DeadbandType" TypeName="opc:UInt32" />
  <opc:Field Name="DeadbandValue" TypeName="opc:Double" />
</opc:StructuredType>

<opc:StructuredType Name="EventFilter" BaseType="tns:MonitoringFilter">
  <opc:Field Name="NoOfSelectClauses" TypeName="opc:Int32" />
  <opc:Field Name="SelectClauses" TypeName="tns:SimpleAttributeOperand" LengthField="NoOfSelectClauses"
/>
  <opc:Field Name="WhereClause" TypeName="tns:ContentFilter"
/>
</opc:StructuredType>

<opc:StructuredType Name="AggregateConfiguration" BaseType="ua:ExtensionObject">
  <opc:Field Name="UseServerCapabilitiesDefaults" TypeName="opc:Boolean" />
  <opc:Field Name="TreatUncertainAsBad" TypeName="opc:Boolean" />
  <opc:Field Name="PercentDataBad" TypeName="opc:Byte" />
  <opc:Field Name="PercentDataGood" TypeName="opc:Byte" />
  <opc:Field Name="UseSlopedExtrapolation" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="AggregateFilter" BaseType="tns:MonitoringFilter">
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="AggregateType" TypeName="ua:NodeId" />
  <opc:Field Name="ProcessingInterval" TypeName="opc:Double" />
  <opc:Field Name="AggregateConfiguration" TypeName="tns:AggregateConfiguration" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoringFilterResult" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="EventFilterResult"
BaseType="tns:MonitoringFilterResult">
  <opc:Field Name="NoOfSelectClauseResults" TypeName="opc:Int32" />
  <opc:Field Name="SelectClauseResults" TypeName="ua:StatusCode" LengthField="NoOfSelectClauseResults"
/>
  <opc:Field Name="NoOfSelectClauseDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="SelectClauseDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfSelectClauseDiagnosticInfos" />

```

```

    <opc:Field Name="WhereClauseResult" TypeName="tns:ContentFilterResult" />
  </opc:StructuredType>

  <opc:StructuredType Name="AggregateFilterResult" BaseType="tns:MonitoringFilterResult">
    <opc:Field Name="RevisedStartTime" TypeName="opc:DateTime" />
    <opc:Field Name="RevisedProcessingInterval" TypeName="opc:Double" />
    <opc:Field Name="RevisedAggregateConfiguration" TypeName="tns:AggregateConfiguration" />
  </opc:StructuredType>

  <opc:StructuredType Name="MonitoringParameters" BaseType="ua:ExtensionObject">
    <opc:Field Name="ClientHandle"
      TypeName="opc:UInt32" />
    <opc:Field Name="SamplingInterval" TypeName="opc:Double" />
    <opc:Field Name="Filter" TypeName="ua:ExtensionObject" />
    <opc:Field Name="QueueSize" TypeName="opc:UInt32" />
    <opc:Field Name="DiscardOldest" TypeName="opc:Boolean" />
  </opc:StructuredType>

  <opc:StructuredType Name="MonitoredItemCreateRequest" BaseType="ua:ExtensionObject">
    <opc:Field Name="ItemToMonitor" TypeName="tns:ReadValueId" />
    <opc:Field Name="MonitoringMode" TypeName="tns:MonitoringMode" />
    <opc:Field Name="RequestedParameters" TypeName="tns:MonitoringParameters" />
  </opc:StructuredType>

  <opc:StructuredType Name="MonitoredItemCreateResult" BaseType="ua:ExtensionObject">
    <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
    <opc:Field Name="MonitoredItemId" TypeName="opc:UInt32" />
    <opc:Field Name="RevisedSamplingInterval" TypeName="opc:Double" />
    <opc:Field Name="RevisedQueueSize" TypeName="opc:UInt32" />
    <opc:Field Name="FilterResult"
      TypeName="ua:ExtensionObject" />
  </opc:StructuredType>

  <opc:StructuredType Name="CreateMonitoredItemsRequest" BaseType="ua:ExtensionObject">
    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
    <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
    <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />
    <opc:Field Name="NoOfItemsToCreate" TypeName="opc:Int32" />
    <opc:Field Name="ItemsToCreate" TypeName="tns:MonitoredItemCreateRequest"
      LengthField="NoOfItemsToCreate" />
  </opc:StructuredType>

  <opc:StructuredType Name="CreateMonitoredItemsResponse" BaseType="ua:ExtensionObject">
    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
    <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
    <opc:Field Name="Results" TypeName="tns:MonitoredItemCreateResult" LengthField="NoOfResults" />
    <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
    <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" />
  </opc:StructuredType>

```

```

LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemModifyRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="MonitoredItemId" TypeName="opc:UInt32" />
  <opc:Field Name="RequestedParameters" TypeName="tns:MonitoringParameters" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemModifyResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="RevisedSamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="RevisedQueueSize" TypeName="opc:UInt32" />
  <opc:Field Name="FilterResult" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="ModifyMonitoredItemsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />
  />
  <opc:Field Name="NoOfItemsToModify" TypeName="opc:Int32" />
  <opc:Field Name="ItemsToModify" TypeName="tns:MonitoredItemModifyRequest" />
LengthField="NoOfItemsToModify" />
</opc:StructuredType>

<opc:StructuredType Name="ModifyMonitoredItemsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:MonitoredItemModifyResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="SetMonitoringModeRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="MonitoringMode" TypeName="tns:MonitoringMode" />
  />
  <opc:Field Name="NoOfMonitoredItemIds" TypeName="opc:Int32" />
  <opc:Field Name="MonitoredItemIds" TypeName="opc:UInt32" LengthField="NoOfMonitoredItemIds" />
</opc:StructuredType>

<opc:StructuredType Name="SetMonitoringModeResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />

```

</opc:StructuredType>

```
<opc:StructuredType Name="SetTriggeringRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="TriggeringItemId" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfLinksToAdd"
  TypeName="opc:Int32" />
  <opc:Field Name="LinksToAdd" TypeName="opc:UInt32" LengthField="NoOfLinksToAdd" />
  <opc:Field Name="NoOfLinksToRemove" TypeName="opc:Int32" />
  <opc:Field Name="LinksToRemove" TypeName="opc:UInt32" LengthField="NoOfLinksToRemove" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="SetTriggeringResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfAddResults" TypeName="opc:Int32" />
  <opc:Field Name="AddResults" TypeName="ua:StatusCode" LengthField="NoOfAddResults" />
  <opc:Field Name="NoOfAddDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="AddDiagnosticInfos" TypeName="ua:DiagnosticInfo"
  LengthField="NoOfAddDiagnosticInfos" />
  <opc:Field Name="NoOfRemoveResults" TypeName="opc:Int32" />
  <opc:Field Name="RemoveResults" TypeName="ua:StatusCode" LengthField="NoOfRemoveResults" />
  <opc:Field Name="NoOfRemoveDiagnosticInfos" TypeName="opc:Int32"
  />
  <opc:Field Name="RemoveDiagnosticInfos" TypeName="ua:DiagnosticInfo"
  LengthField="NoOfRemoveDiagnosticInfos" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DeleteMonitoredItemsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfMonitoredItemIds" TypeName="opc:Int32" />
  <opc:Field Name="MonitoredItemIds" TypeName="opc:UInt32" LengthField="NoOfMonitoredItemIds" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DeleteMonitoredItemsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos"
  />
</opc:StructuredType>
```

```
<opc:StructuredType Name="CreateSubscriptionRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="RequestedPublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="RequestedLifetimeCount" TypeName="opc:UInt32" />
```



```

<opc:Field Name="RequestedMaxKeepAliveCount" TypeName="opc:UInt32" />
<opc:Field Name="MaxNotificationsPerPublish" TypeName="opc:UInt32" />
<opc:Field Name="PublishingEnabled" TypeName="opc:Boolean" />
<opc:Field Name="Priority" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="CreateSubscriptionResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="RevisedPublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="RevisedLifetimeCount" TypeName="opc:UInt32" />
  </opc:StructuredType>
  <opc:Field Name="RevisedMaxKeepAliveCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="ModifySubscriptionRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="RequestedPublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="RequestedLifetimeCount" TypeName="opc:UInt32" />
  <opc:Field Name="RequestedMaxKeepAliveCount" TypeName="opc:UInt32" />
  <opc:Field Name="MaxNotificationsPerPublish" TypeName="opc:UInt32" />
  <opc:Field Name="Priority" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="ModifySubscriptionResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="RevisedPublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="RevisedLifetimeCount" TypeName="opc:UInt32" />
  <opc:Field Name="RevisedMaxKeepAliveCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="SetPublishingModeRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="PublishingEnabled" TypeName="opc:Boolean" />
  <opc:Field Name="NoOfSubscriptionIds" TypeName="opc:Int32" />
  <opc:Field Name="SubscriptionIds" TypeName="opc:UInt32" LengthField="NoOfSubscriptionIds" />
</opc:StructuredType>

<opc:StructuredType Name="SetPublishingModeResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:StructuredType
Name="NotificationMessage" BaseType="ua:ExtensionObject">
  <opc:Field Name="SequenceNumber" TypeName="opc:UInt32" />
  <opc:Field Name="PublishTime" TypeName="opc:DateTime" />
  <opc:Field Name="NoOfNotificationData" TypeName="opc:Int32" />
  <opc:Field Name="NotificationData" TypeName="ua:ExtensionObject" LengthField="NoOfNotificationData" />
</opc:StructuredType>

<opc:StructuredType Name="NotificationData" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataChangeNotification" BaseType="tns:NotificationData">
  <opc:Field Name="NoOfMonitoredItems" TypeName="opc:Int32" />
  <opc:Field Name="MonitoredItems" TypeName="tns:MonitoredItemNotification"
LengthField="NoOfMonitoredItems" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemNotification"
BaseType="ua:ExtensionObject">
  <opc:Field Name="ClientHandle" TypeName="opc:UInt32" />
  <opc:Field Name="Value" TypeName="ua:DataValue" />
</opc:StructuredType>

<opc:StructuredType Name="EventNotificationList" BaseType="tns:NotificationData">
  <opc:Field Name="NoOfEvents" TypeName="opc:Int32" />
  <opc:Field Name="Events" TypeName="tns:EventFieldList" LengthField="NoOfEvents" />
</opc:StructuredType>

<opc:StructuredType Name="EventFieldList" BaseType="ua:ExtensionObject">
  <opc:Field Name="ClientHandle" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfEventFields" TypeName="opc:Int32" />
  <opc:Field Name="EventFields" TypeName="ua:Variant" LengthField="NoOfEventFields" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryEventFieldList" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfEventFields" TypeName="opc:Int32" />
  <opc:Field Name="EventFields" TypeName="ua:Variant" LengthField="NoOfEventFields" />
</opc:StructuredType>

<opc:StructuredType Name="StatusChangeNotification" BaseType="tns:NotificationData">
  <opc:Field Name="Status" TypeName="ua:StatusCode" />
  <opc:Field Name="DiagnosticInfo" TypeName="ua:DiagnosticInfo" />
</opc:StructuredType>

<opc:StructuredType Name="SubscriptionAcknowledgement" BaseType="ua:ExtensionObject">

```

```

    <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
    <opc:Field Name="SequenceNumber" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="PublishRequest" BaseType="ua:ExtensionObject">
    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
    <opc:Field Name="NoOfSubscriptionAcknowledgements" TypeName="opc:Int32" />
    <opc:Field Name="SubscriptionAcknowledgements" TypeName="tns:SubscriptionAcknowledgement"
LengthField="NoOfSubscriptionAcknowledgements" />
</opc:StructuredType>

<opc:StructuredType Name="PublishResponse" BaseType="ua:ExtensionObject">
    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader"
/>
    <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
    <opc:Field Name="NoOfAvailableSequenceNumbers" TypeName="opc:Int32" />
    <opc:Field Name="AvailableSequenceNumbers" TypeName="opc:UInt32"
LengthField="NoOfAvailableSequenceNumbers" />
    <opc:Field Name="MoreNotifications" TypeName="opc:Boolean" />
    <opc:Field Name="NotificationMessage" TypeName="tns:NotificationMessage" />
    <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
    <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
    <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
    <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="RepublishRequest" BaseType="ua:ExtensionObject">
    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
    <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
    <opc:Field Name="RetransmitSequenceNumber" TypeName="opc:UInt32"
/>
</opc:StructuredType>

<opc:StructuredType Name="RepublishResponse" BaseType="ua:ExtensionObject">
    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
    <opc:Field Name="NotificationMessage" TypeName="tns:NotificationMessage" />
</opc:StructuredType>

<opc:StructuredType Name="TransferResult" BaseType="ua:ExtensionObject">
    <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
    <opc:Field Name="NoOfAvailableSequenceNumbers" TypeName="opc:Int32" />
    <opc:Field Name="AvailableSequenceNumbers" TypeName="opc:UInt32"
LengthField="NoOfAvailableSequenceNumbers" />
</opc:StructuredType>

<opc:StructuredType Name="TransferSubscriptionsRequest" BaseType="ua:ExtensionObject">
    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
    <opc:Field Name="NoOfSubscriptionIds" TypeName="opc:Int32" />

```

```

    <opc:Field Name="SubscriptionIds" TypeName="opc:UInt32" LengthField="NoOfSubscriptionIds" />
    <opc:Field Name="SendInitialValues"
TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="TransferSubscriptionsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:TransferResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteSubscriptionsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfSubscriptionIds" TypeName="opc:Int32" />
  <opc:Field Name="SubscriptionIds" TypeName="opc:UInt32" LengthField="NoOfSubscriptionIds" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteSubscriptionsResponse" BaseType="ua:ExtensionObject">

  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="BuildInfo" BaseType="ua:ExtensionObject">
  <opc:Field Name="ProductUri" TypeName="opc:String" />
  <opc:Field Name="ManufacturerName" TypeName="opc:String" />
  <opc:Field Name="ProductName" TypeName="opc:String" />
  <opc:Field Name="SoftwareVersion" TypeName="opc:String" />
  <opc:Field Name="BuildNumber" TypeName="opc:String" />
  <opc:Field Name="BuildDate" TypeName="opc:DateTime" />
</opc:StructuredType>

<opc:EnumeratedType Name="RedundancySupport" LengthInBits="32">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue
Name="Cold" Value="1" />
  <opc:EnumeratedValue Name="Warm" Value="2" />
  <opc:EnumeratedValue Name="Hot" Value="3" />
  <opc:EnumeratedValue Name="Transparent" Value="4" />
  <opc:EnumeratedValue Name="HotAndMirrored" Value="5" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="ServerState" LengthInBits="32">

```

```

<opc:EnumeratedValue Name="Running" Value="0" />
<opc:EnumeratedValue Name="Failed" Value="1" />
<opc:EnumeratedValue Name="NoConfiguration" Value="2" />
<opc:EnumeratedValue Name="Suspended" Value="3" />
<opc:EnumeratedValue Name="Shutdown" Value="4" />
<opc:EnumeratedValue Name="Test" Value="5" />
<opc:EnumeratedValue Name="CommunicationFault" Value="6" />
<opc:EnumeratedValue Name="Unknown" Value="7" />
</opc:EnumeratedType>

<opc:StructuredType Name="RedundantServerDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="ServerId" TypeName="opc:String" />
  <opc:Field Name="ServiceLevel" TypeName="opc:Byte" />
  <opc:Field
Name="ServerState" TypeName="tns:ServerState" />
</opc:StructuredType>

<opc:StructuredType Name="EndpointUrlListDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfEndpointUrlList" TypeName="opc:Int32" />
  <opc:Field Name="EndpointUrlList" TypeName="opc:String" LengthField="NoOfEndpointUrlList" />
</opc:StructuredType>

<opc:StructuredType Name="NetworkGroupDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="NoOfNetworkPaths" TypeName="opc:Int32" />
  <opc:Field Name="NetworkPaths" TypeName="tns:EndpointUrlListDataType"
LengthField="NoOfNetworkPaths" />
</opc:StructuredType>

<opc:StructuredType Name="SamplingIntervalDiagnosticsDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="SamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="MonitoredItemCount" TypeName="opc:UInt32" />
  <opc:Field Name="MaxMonitoredItemCount" TypeName="opc:UInt32" />
  <opc:Field Name="DisabledMonitoredItemCount"
TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="ServerDiagnosticsSummaryDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="ServerViewCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="CumulatedSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="SecurityRejectedSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="RejectedSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="SessionTimeoutCount" TypeName="opc:UInt32" />
  <opc:Field Name="SessionAbortCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentSubscriptionCount" TypeName="opc:UInt32" />
  <opc:Field Name="CumulatedSubscriptionCount" TypeName="opc:UInt32" />
  <opc:Field Name="PublishingIntervalCount" TypeName="opc:UInt32" />

```

```

<opc:Field Name="SecurityRejectedRequestsCount" TypeName="opc:UInt32" />
<opc:Field Name="RejectedRequestsCount" TypeName="opc:UInt32"
/>
</opc:StructuredType>

<opc:StructuredType Name="ServerStatusDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="StartTime" TypeName="opc:DateTime" />
<opc:Field Name="CurrentTime" TypeName="opc:DateTime" />
<opc:Field Name="State" TypeName="tns:ServerState" />
<opc:Field Name="BuildInfo" TypeName="tns:BuildInfo" />
<opc:Field Name="SecondsTillShutdown" TypeName="opc:UInt32" />
<opc:Field Name="ShutdownReason" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:StructuredType Name="SessionDiagnosticsDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="SessionId" TypeName="ua:NodeId" />
<opc:Field Name="SessionName" TypeName="opc:String" />
<opc:Field Name="ClientDescription" TypeName="tns:ApplicationDescription" />
<opc:Field Name="ServerUri" TypeName="opc:String" />
<opc:Field Name="EndpointUrl" TypeName="opc:String" />
<opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
<opc:Field Name="LocaleIds"
TypeName="opc:String" LengthField="NoOfLocaleIds" />
<opc:Field Name="ActualSessionTimeout" TypeName="opc:Double" />
<opc:Field Name="MaxResponseMessageSize" TypeName="opc:UInt32" />
<opc:Field Name="ClientConnectionTime" TypeName="opc:DateTime" />
<opc:Field Name="ClientLastContactTime" TypeName="opc:DateTime" />
<opc:Field Name="CurrentSubscriptionsCount" TypeName="opc:UInt32" />
<opc:Field Name="CurrentMonitoredItemsCount" TypeName="opc:UInt32" />
<opc:Field Name="CurrentPublishRequestsInQueue" TypeName="opc:UInt32" />
<opc:Field Name="TotalRequestCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="UnauthorizedRequestCount" TypeName="opc:UInt32" />
<opc:Field Name="ReadCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="HistoryReadCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="WriteCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="HistoryUpdateCount" TypeName="tns:ServiceCounterDataType"
/>
<opc:Field Name="CallCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="CreateMonitoredItemsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="ModifyMonitoredItemsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="SetMonitoringModeCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="SetTriggeringCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="DeleteMonitoredItemsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="CreateSubscriptionCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="ModifySubscriptionCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="SetPublishingModeCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="PublishCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="RepublishCount" TypeName="tns:ServiceCounterDataType" />

```

```

<opc:Field Name="TransferSubscriptionsCount" TypeName="tns:ServiceCounterDataType"
/>
/>
<opc:Field Name="DeleteSubscriptionsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="AddNodesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="AddReferencesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="DeleteNodesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="DeleteReferencesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="BrowseCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="BrowseNextCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="TranslateBrowsePathsToNodeIdsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="QueryFirstCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="QueryNextCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="RegisterNodesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="UnregisterNodesCount" TypeName="tns:ServiceCounterDataType"
/>
/>
</opc:StructuredType>

<opc:StructuredType Name="SessionSecurityDiagnosticsDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="SessionId" TypeName="ua:NodeId" />
<opc:Field Name="ClientUserIdOfSession" TypeName="opc:String" />
<opc:Field Name="NoOfClientUserIdHistory" TypeName="opc:Int32" />
<opc:Field Name="ClientUserIdHistory" TypeName="opc:String" LengthField="NoOfClientUserIdHistory" />
<opc:Field Name="AuthenticationMechanism" TypeName="opc:String" />
<opc:Field Name="Encoding" TypeName="opc:String" />
<opc:Field Name="TransportProtocol" TypeName="opc:String" />
<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
<opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
<opc:Field Name="ClientCertificate" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="ServiceCounterDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="TotalCount" TypeName="opc:UInt32"
/>
/>
<opc:Field Name="ErrorCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="StatusResult" BaseType="ua:ExtensionObject">
<opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
<opc:Field Name="DiagnosticInfo" TypeName="ua:DiagnosticInfo" />
</opc:StructuredType>

<opc:StructuredType Name="SubscriptionDiagnosticsDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="SessionId" TypeName="ua:NodeId" />
<opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
<opc:Field Name="Priority" TypeName="opc:Byte" />
<opc:Field Name="PublishingInterval" TypeName="opc:Double" />
<opc:Field Name="MaxKeepAliveCount" TypeName="opc:UInt32" />
<opc:Field Name="MaxLifetimeCount" TypeName="opc:UInt32" />

```

```

<opc:Field Name="MaxNotificationsPerPublish" TypeName="opc:UInt32" />
<opc:Field Name="PublishingEnabled" TypeName="opc:Boolean" />
<opc:Field Name="ModifyCount" TypeName="opc:UInt32" />
<opc:Field Name="EnableCount"
TypeName="opc:UInt32" />
<opc:Field Name="DisableCount" TypeName="opc:UInt32" />
<opc:Field Name="RepublishRequestCount" TypeName="opc:UInt32" />
<opc:Field Name="RepublishMessageRequestCount" TypeName="opc:UInt32" />
<opc:Field Name="RepublishMessageCount" TypeName="opc:UInt32" />
<opc:Field Name="TransferRequestCount" TypeName="opc:UInt32" />
<opc:Field Name="TransferredToAltClientCount" TypeName="opc:UInt32" />
<opc:Field Name="TransferredToSameClientCount" TypeName="opc:UInt32" />
<opc:Field Name="PublishRequestCount" TypeName="opc:UInt32" />
<opc:Field Name="DataChangeNotificationsCount" TypeName="opc:UInt32" />
<opc:Field Name="EventNotificationsCount" TypeName="opc:UInt32" />
<opc:Field Name="NotificationsCount" TypeName="opc:UInt32" />
<opc:Field Name="LatePublishRequestCount" TypeName="opc:UInt32" />
<opc:Field Name="CurrentKeepAliveCount" TypeName="opc:UInt32" />
<opc:Field Name="CurrentLifetimeCount" TypeName="opc:UInt32"
/>
<opc:Field Name="UnacknowledgedMessageCount" TypeName="opc:UInt32" />
<opc:Field Name="DiscardedMessageCount" TypeName="opc:UInt32" />
<opc:Field Name="MonitoredItemCount" TypeName="opc:UInt32" />
<opc:Field Name="DisabledMonitoredItemCount" TypeName="opc:UInt32" />
<opc:Field Name="MonitoringQueueOverflowCount" TypeName="opc:UInt32" />
<opc:Field Name="NextSequenceNumber" TypeName="opc:UInt32" />
<opc:Field Name="EventQueueOverFlowCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:EnumeratedType Name="ModelChangeStructureVerbMask" LengthInBits="32">
<opc:EnumeratedValue Name="NodeAdded" Value="1" />
<opc:EnumeratedValue Name="NodeDeleted" Value="2" />
<opc:EnumeratedValue Name="ReferenceAdded" Value="4" />
<opc:EnumeratedValue Name="ReferenceDeleted" Value="8" />
<opc:EnumeratedValue Name="DataTypeChanged" Value="16" />
</opc:EnumeratedType>

<opc:StructuredType Name="ModelChangeStructureDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="Affected" TypeName="ua:NodeId" />
<opc:Field Name="AffectedType" TypeName="ua:NodeId" />
<opc:Field Name="Verb" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="SemanticChangeStructureDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="Affected" TypeName="ua:NodeId" />
<opc:Field Name="AffectedType" TypeName="ua:NodeId" />
</opc:StructuredType>

```



```

<opc:StructuredType Name="Range" BaseType="ua:ExtensionObject">
  <opc:Field Name="Low" TypeName="opc:Double" />
  <opc:Field Name="High" TypeName="opc:Double" />
</opc:StructuredType>

<opc:StructuredType Name="EUInformation" BaseType="ua:ExtensionObject">
  <opc:Field Name="NamespaceUri" TypeName="opc:String" />
  <opc:Field Name="UnitId" TypeName="opc:Int32" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:EnumeratedType
Name="AxisScaleEnumeration" LengthInBits="32">
  <opc:EnumeratedValue Name="Linear" Value="0" />
  <opc:EnumeratedValue Name="Log" Value="1" />
  <opc:EnumeratedValue Name="Ln" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="ComplexNumberType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Real" TypeName="opc:Float" />
  <opc:Field Name="Imaginary" TypeName="opc:Float" />
</opc:StructuredType>

<opc:StructuredType Name="DoubleComplexNumberType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Real" TypeName="opc:Double" />
  <opc:Field Name="Imaginary" TypeName="opc:Double" />
</opc:StructuredType>

<opc:StructuredType Name="AxisInformation" BaseType="ua:ExtensionObject">
  <opc:Field Name="EngineeringUnits" TypeName="tns:EUInformation" />
  <opc:Field Name="EURange" TypeName="tns:Range" />
  <opc:Field Name="Title" TypeName="ua:LocalizedText" />
  <opc:Field Name="AxisScaleType" TypeName="tns:AxisScaleEnumeration" />
  <opc:Field
Name="NoOfAxisSteps" TypeName="opc:Int32" />
  <opc:Field Name="AxisSteps" TypeName="opc:Double" LengthField="NoOfAxisSteps" />
</opc:StructuredType>

<opc:StructuredType Name="XVType" BaseType="ua:ExtensionObject">
  <opc:Field Name="X" TypeName="opc:Double" />
  <opc:Field Name="Value" TypeName="opc:Float" />
</opc:StructuredType>

<opc:StructuredType Name="ProgramDiagnosticDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="CreateSessionId" TypeName="ua:NodeId" />
  <opc:Field Name="CreateClientName" TypeName="opc:String" />
  <opc:Field Name="InvocationCreationTime" TypeName="opc:DateTime" />

```

```

<opc:Field Name="LastTransitionTime" TypeName="opc:DateTime" />
<opc:Field Name="LastMethodCall" TypeName="opc:String" />
<opc:Field Name="LastMethodSessionId" TypeName="ua:NodeId" />
<opc:Field Name="NoOfLastMethodInputArguments" TypeName="opc:Int32" />
<opc:Field Name="LastMethodInputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodInputArguments"
/>
<opc:Field Name="NoOfLastMethodOutputArguments" TypeName="opc:Int32" />
<opc:Field Name="LastMethodOutputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodOutputArguments" />
<opc:Field Name="LastMethodCallTime" TypeName="opc:DateTime" />
<opc:Field Name="LastMethodReturnStatus" TypeName="tns:StatusResult" />
</opc:StructuredType>

<opc:StructuredType Name="ProgramDiagnostic2DataType" BaseType="ua:ExtensionObject">
<opc:Field Name="CreateSessionId" TypeName="ua:NodeId" />
<opc:Field Name="CreateClientName" TypeName="opc:String" />
<opc:Field Name="InvocationCreationTime" TypeName="opc:DateTime" />
<opc:Field Name="LastTransitionTime" TypeName="opc:DateTime" />
<opc:Field Name="LastMethodCall" TypeName="opc:String" />
<opc:Field Name="LastMethodSessionId" TypeName="ua:NodeId" />
<opc:Field Name="NoOfLastMethodInputArguments" TypeName="opc:Int32" />
<opc:Field Name="LastMethodInputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodInputArguments" />
<opc:Field Name="NoOfLastMethodOutputArguments" TypeName="opc:Int32" />
<opc:Field Name="LastMethodOutputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodOutputArguments" />
<opc:Field Name="NoOfLastMethodInputValues" TypeName="opc:Int32" />
<opc:Field Name="LastMethodInputValues" TypeName="ua:Variant"
LengthField="NoOfLastMethodInputValues" />
<opc:Field Name="NoOfLastMethodOutputValues" TypeName="opc:Int32" />
<opc:Field Name="LastMethodOutputValues" TypeName="ua:Variant"
LengthField="NoOfLastMethodOutputValues" />
<opc:Field Name="LastMethodCallTime" TypeName="opc:DateTime" />
<opc:Field Name="LastMethodReturnStatus" TypeName="tns:StatusResult" />
</opc:StructuredType>

<opc:StructuredType Name="Annotation" BaseType="ua:ExtensionObject">
<opc:Field Name="Message" TypeName="opc:String" />
<opc:Field Name="UserName" TypeName="opc:String" />
<opc:Field Name="AnnotationTime"
TypeName="opc:DateTime" />
</opc:StructuredType>

<opc:EnumeratedType Name="ExceptionDeviationFormat" LengthInBits="32">
<opc:EnumeratedValue Name="AbsoluteValue" Value="0" />
<opc:EnumeratedValue Name="PercentOfValue" Value="1" />
<opc:EnumeratedValue Name="PercentOfRange" Value="2" />

```

```

    <opc:EnumeratedValue Name="PercentOfEURange" Value="3" />
    <opc:EnumeratedValue Name="Unknown" Value="4" />
</opc:EnumeratedType>

</opc:TypeDictionary>
<?xml version="1.0" encoding="utf-8" ?>
<!--
* Copyright (c) 2005-2018 The OPC Foundation, Inc. All rights reserved.
*
* OPC Foundation MIT License 1.00
*
* Permission is hereby granted, free of charge, to any person
* obtaining a copy of this software and associated documentation
* files (the "Software"), to deal in the Software without
* restriction, including without limitation the rights to use,
* copy, modify, merge, publish, distribute, sublicense, and/or sell
* copies of the Software, and to permit persons to whom the
* Software is furnished to do so, subject to the following
* conditions:
*
* The above copyright notice and this permission notice shall be
* included in all copies or substantial portions of the Software.
* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
* EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
* OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
* NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
* COPYRIGHT
* HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
* WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
* FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
* OTHER DEALINGS IN THE SOFTWARE.
*
* The complete license agreement can be found here:
* http://opcfoundation.org/License/MIT/1.00/
-->

<opc:TypeDictionary
  xmlns:opc="http://opcfoundation.org/BinarySchema/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:ua="http://opcfoundation.org/UA/"
  xmlns:tns="http://yourorganisation.org/test/"
  DefaultByteOrder="LittleEndian"
  TargetNamespace="http://yourorganisation.org/test/"
>
  <opc:Import Namespace="http://opcfoundation.org/UA/" Location="Opc.Ua.BinarySchema.bsd"/>

  <opc:StructuredType Name="Point" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />

```

```

    <opc:Field Name="y" TypeName="opc:Double" />
  </opc:StructuredType>

  <opc:StructuredType Name="NestedPoint" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
    <opc:Field Name="point1" TypeName="tns:Point" />
  </opc:StructuredType>

  <opc:StructuredType Name="PointWithArray" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
    <opc:Field Name="z" TypeName="opc:Double" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
    <opc:Field Name="array1" TypeName="opc:Double" LengthField="NoOfArrayDimensions" />
  </opc:StructuredType>

  <opc:StructuredType Name="PointWithPointArray" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
    <opc:Field Name="z" TypeName="opc:Double" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
    <opc:Field Name="array1" TypeName="tns:Point" LengthField="NoOfArrayDimensions" />
  </opc:StructuredType>

</opc:TypeDictionary>

```

1.32 open62541 v1.2.3-dev-280-gff87c287

1.32.1 Available under license :

```

<opc:TypeDictionary xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:tns="http://opcfoundation.org/UA/POWERLINK/" DefaultByteOrder="LittleEndian"
  xmlns:opc="http://opcfoundation.org/BinarySchema/" xmlns:ua="http://opcfoundation.org/UA/"
  TargetNamespace="http://opcfoundation.org/UA/POWERLINK/">
  <opc:Import Namespace="http://opcfoundation.org/UA/" />
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="ErrorRegisterBits">
    <opc:Documentation>Represents the values of the POWERLINK ErrorRegister </opc:Documentation>
    <opc:Field TypeName="opc:ByteString" Name="Value"/>
    <opc:Field TypeName="opc:ByteString" Name="ValidBits"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkAttribute">
    <opc:Documentation>Represents the POWERLINK entry attributes</opc:Documentation>
    <opc:Field TypeName="opc:ByteString" Name="Value"/>
    <opc:Field TypeName="opc:ByteString" Name="ValidBits"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkErrorEntryDataType">
    <opc:Documentation>Represents the entries of the POWERLINK Object ERR_History_ADOM (Object 1003h,

```

```

SubIndex 1..254)</opc:Documentation>
  <opc:Field TypeName="opc:UInt16" Name="entryType"/>
  <opc:Field TypeName="opc:UInt16" Name="errorCode"/>
  <opc:Field TypeName="opc:UInt64" Name="timeStamp"/>
  <opc:Field TypeName="opc:UInt64" Name="additionalInformation"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkIpAddressDataType">
  <opc:Documentation>Structure DataType PowerlinkIpAddressDataType to represent POWERLINK Objects of
the POWERLINK data type IP_ADDRESS</opc:Documentation>
  <opc:Field TypeName="opc:Byte" Name="b1"/>
  <opc:Field TypeName="opc:Byte" Name="b2"/>
  <opc:Field TypeName="opc:Byte" Name="b3"/>
  <opc:Field TypeName="opc:Byte" Name="b4"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="PowerlinkPDOMappingEntryDataType">
  <opc:Documentation>Structure DataType PowerlinkPDOMappingEntryDataType to represent the entries of
POWERLINK Objects like PDO_RxCommParam_00h_REC</opc:Documentation>
  <opc:Field TypeName="opc:UInt16" Name="length"/>
  <opc:Field TypeName="opc:UInt16" Name="offset"/>
  <opc:Field TypeName="opc:Byte" Name="reserved"/>
  <opc:Field TypeName="opc:Byte" Name="subIndex"/>
  <opc:Field TypeName="opc:UInt16" Name="index"/>
</opc:StructuredType>
<opc:EnumeratedType LengthInBits="32" Name="PowerlinkNMTRResetCmdEnumeration">
  <opc:Documentation>This DataType is an Enumeration that represents the NMT reset commands for
POWERLINK</opc:Documentation>
  <opc:EnumeratedValue Name="NMTRResetNode" Value="40"/>
  <opc:EnumeratedValue Name="NMTRResetCommunication" Value="41"/>
  <opc:EnumeratedValue Name="NMTRResetConfiguration" Value="42"/>
  <opc:EnumeratedValue Name="NMTRSwReset" Value="43"/>
  <opc:EnumeratedValue Name="NMTInvalidService" Value="255"/>
</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="PowerlinkNMTStateEnumeration">
  <opc:Documentation>This DataType is an enumeration that represents the NMT State</opc:Documentation>
  <opc:EnumeratedValue Name="NMT_GS_OFF " Value="0"/>
  <opc:EnumeratedValue Name="NMT_GS_INITIALISING" Value="25"/>
  <opc:EnumeratedValue Name="NMT_GS_RESET_APPLICATION" Value="41"/>
  <opc:EnumeratedValue Name="NMT_GS_RESET_COMMUNICATION" Value="57"/>
  <opc:EnumeratedValue Name="NMT_GS_RESET_CONFIGURATION" Value="121"/>
  <opc:EnumeratedValue Name="NMT_XS_NOT_ACTIVE" Value="28"/>
  <opc:EnumeratedValue Name="NMT_XS_PRE_OPERATIONAL_1" Value="29"/>
  <opc:EnumeratedValue Name="NMT_XS_PRE_OPERATIONAL_2" Value="93"/>
  <opc:EnumeratedValue Name="NMT_XS_READY_TO_OPERATE" Value="109"/>
  <opc:EnumeratedValue
Name="NMT_XS_OPERATIONAL" Value="253"/>
  <opc:EnumeratedValue Name="NMT_CS_STOPPED" Value="77"/>
  <opc:EnumeratedValue Name="NMT_XS_BASIC_ETHERNET" Value="30"/>
</opc:EnumeratedType>

```

=====

1. Definitions

1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

1.3. "Contribution"

means Covered Software of a particular Contributor.

1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

1.5. "Incompatible With Secondary Licenses"

means

(a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or

(b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

1.6. "Executable Form"

means any form of the work other than Source Code Form.

1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

1.8. "License"

means this document.

1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and

all of the rights conveyed by this License.

1.10. "Modifications"

means any of the following:

(a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or

(b) any new file in Source Code Form that contains any Covered Software.

1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its Contributor Version.

1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

1.13. "Source Code Form"

means the form of the work preferred for making modifications.

1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. License Grants and Conditions

2.1. Grants

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

(a) under intellectual property rights (other than patent or trademark)

Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and

(b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

2.2. Effective Date

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.

2.3. Limitations on Grant Scope

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

- (a) for any code that a Contributor has removed from Covered Software; or
- (b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or
- (c) under Patent Claims infringed by Covered Software in the absence of its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

2.5. Representation

Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities

3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the

Source

Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

3.2. Distribution of Executable Form

If You distribute Covered Software in Executable Form then:

(a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and

(b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

3.3. Distribution of a Larger Work

You may create and distribute

a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

3.4. Notices

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination

5.1. The rights granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

*
*
*
* 6. Disclaimer of Warranty *
* ----- *
* *
* Covered Software is provided under this License on an "as is" *
* basis, without warranty of any kind, either expressed, implied, or *
* statutory, including, without limitation, warranties that the *
* Covered Software is free of defects, merchantable, fit for a *
* particular purpose or non-infringing. The entire risk as to the *
* quality and performance of the Covered Software is with You. *
* Should any Covered Software prove defective in any respect, You *
* (not any Contributor) assume the cost of any necessary servicing, *
* repair, or correction. This disclaimer of warranty constitutes an *
* essential part of this License. No use of any Covered
Software is *
* authorized under this License except under this disclaimer. *
* *

*

* 7. Limitation of Liability *

* ----- *

* *

* Under no circumstances and under no legal theory, whether tort *

* (including negligence), contract, or otherwise, shall any *

* Contributor, or anyone who distributes Covered Software as *

* permitted above, be liable to You for any direct, indirect, *

* special, incidental, or consequential damages of any character *

* including, without limitation,

damages for lost profits, loss of *

* goodwill, work stoppage, computer failure or malfunction, or any *

* and all other commercial damages or losses, even if such party *

* shall have been informed of the possibility of such damages. This *

* limitation of liability shall not apply to liability for death or *

* personal injury resulting from such party's negligence to the *

* extent applicable law prohibits such limitation. Some *

* jurisdictions do not allow the exclusion or limitation of *

* incidental or consequential damages, so this exclusion and *

* limitation may not apply to You. *

* *

8. Litigation

Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party's ability to bring cross-claims or counter-claims.

9. Miscellaneous

This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

10. Versions of the License

10.1. New Versions

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

10.3. Modified Versions

If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses

If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

Exhibit A - Source Code Form License Notice

This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, You can obtain one at <http://mozilla.org/MPL/2.0/>.

If it is not possible or desirable to put the notice in a particular file, then You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

You may add additional accurate notices of copyright ownership.

Exhibit B - "Incompatible With Secondary Licenses" Notice

This Source Code Form is "Incompatible With Secondary Licenses", as defined by the Mozilla Public License, v. 2.0.
Creative Commons CCZero 1.0 Universal

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an "owner") of an original work of authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

- i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
- ii. moral rights retained by the original author(s) and/or performer(s);
- iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;
- iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;
- v. rights protecting the extraction, dissemination, use and reuse of data in a Work;

- vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and
- vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of

action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.

b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.

c. Affirmer disclaims

responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.

d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

```
<opc:TypeDictionary xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:tns="http://opcfoundation.org/UA/AutoID/" DefaultByteOrder="LittleEndian"
xmlns:opc="http://opcfoundation.org/BinarySchema/" xmlns:ua="http://opcfoundation.org/UA/"
TargetNamespace="http://opcfoundation.org/UA/AutoID/">
<opc:Import Namespace="http://opcfoundation.org/UA/">
<opc:StructuredType BaseType="ua:ExtensionObject" Name="StructWithBitsWithoutOF">
<opc:Field TypeName="opc:Bit" Name="Bit3"/>
<opc:Field TypeName="opc:CharArray" Name="AntennaName"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="StructWithOFBitsNotAtBeginning">
<opc:Field TypeName="opc:Double" Name="testDouble"/>
<opc:Field TypeName="opc:Bit" Name="AntennaNameSpecified"/>
<opc:Field Length="31" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field SwitchField="AntennaNameSpecified" TypeName="opc:CharArray" Name="AntennaName"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject"
Name="StructWithOFWithoutSpecified">
<opc:Field TypeName="opc:Bit" Name="AntennaNameSpec"/>
<opc:Field Length="31" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field TypeName="opc:Double" Name="testDouble"/>
<opc:Field SwitchField="AntennaNameSpec" TypeName="opc:CharArray" Name="AntennaName"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="StructWithOFWithoutSwitchField">
<opc:Field TypeName="opc:Bit" Name="AntennaNameSpecified"/>
```



```

<opc:Field Length="31" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field TypeName="opc:Double" Name="testDouble"/>
<opc:Field TypeName="opc:CharArray" Name="AntennaName"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="StructWithOFWithoutReserved1">
<opc:Field TypeName="opc:Bit" Name="AntennaNameSpecified"/>
<opc:Field TypeName="opc:Double" Name="testDouble"/>
<opc:Field SwitchField="AntennaNameSpecified" TypeName="opc:CharArray" Name="AntennaName"/>
</opc:StructuredType>
</opc:TypeDictionary>
<opc:TypeDictionary xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:tns="http://opcfoundation.org/UA/AutoID/" DefaultByteOrder="LittleEndian"
xmlns:opc="http://opcfoundation.org/BinarySchema/" xmlns:ua="http://opcfoundation.org/UA/"
TargetNamespace="http://opcfoundation.org/UA/AutoID/">
<opc:Import Namespace="http://opcfoundation.org/UA/">
<opc:StructuredType BaseType="ua:ExtensionObject" Name="AccessResult">
<opc:Documentation>Result values of an AutoID Identifier access</opc:Documentation>
<opc:Field TypeName="opc:Bit" Name="CodeTypeSpecified"/>
<opc:Field TypeName="opc:Bit" Name="IdentifierSpecified"/>
<opc:Field TypeName="opc:Bit" Name="TimestampSpecified"/>
<opc:Field Length="29" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field SwitchField="CodeTypeSpecified" TypeName="opc:CharArray" Name="CodeType"/>
<opc:Field SwitchField="IdentifierSpecified" TypeName="tns:ScanData" Name="Identifier"/>
<opc:Field SwitchField="TimestampSpecified" TypeName="opc:DateTime"
Name="Timestamp"/>
</opc:StructuredType>
<opc:StructuredType BaseType="tns:AccessResult" Name="RfidAccessResult">
<opc:Documentation>Additional result values of an Rfid Transponder access</opc:Documentation>
<opc:Field TypeName="opc:Bit" Name="CodeTypeSpecified"/>
<opc:Field TypeName="opc:Bit" Name="IdentifierSpecified"/>
<opc:Field TypeName="opc:Bit" Name="TimestampSpecified"/>
<opc:Field TypeName="opc:Bit" Name="CodeTypeRWDataSpecified"/>
<opc:Field TypeName="opc:Bit" Name="RWDataSpecified"/>
<opc:Field TypeName="opc:Bit" Name="AntennaSpecified"/>
<opc:Field TypeName="opc:Bit" Name="CurrentPowerLevelSpecified"/>
<opc:Field TypeName="opc:Bit" Name="PCSpecified"/>
<opc:Field TypeName="opc:Bit" Name="PolarizationSpecified"/>
<opc:Field TypeName="opc:Bit" Name="StrengthSpecified"/>
<opc:Field Length="22" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field SwitchField="CodeTypeSpecified" SourceType="tns:AccessResult" TypeName="opc:CharArray"
Name="CodeType"/>
<opc:Field SwitchField="IdentifierSpecified" SourceType="tns:AccessResult" TypeName="tns:ScanData"
Name="Identifier"/>
<opc:Field SwitchField="TimestampSpecified" SourceType="tns:AccessResult" TypeName="opc:DateTime"
Name="Timestamp"/>
<opc:Field SwitchField="CodeTypeRWDataSpecified" TypeName="opc:CharArray"
Name="CodeTypeRWData"/>
<opc:Field SwitchField="RWDataSpecified" TypeName="tns:ScanData" Name="RWData"/>

```

```

<opc:Field SwitchField="AntennaSpecified" TypeName="opc:Int32" Name="Antenna"/>
<opc:Field SwitchField="CurrentPowerLevelSpecified" TypeName="opc:Int32" Name="CurrentPowerLevel"/>
<opc:Field SwitchField="PCSpecified" TypeName="opc:UInt16" Name="PC"/>
<opc:Field SwitchField="PolarizationSpecified" TypeName="opc:CharArray" Name="Polarization"/>
<opc:Field SwitchField="StrengthSpecified" TypeName="opc:Int32" Name="Strength"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="AntennaNameIdPair">
  <opc:Field TypeName="opc:Int32" Name="AntennaId"/>
  <opc:Field TypeName="opc:CharArray" Name="AntennaName"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="DhcpGeoConfCoordinate">
  <opc:Field TypeName="opc:Byte" Name="LaRes"/>
  <opc:Field TypeName="opc:Int16" Name="LatitudeInteger"/>
  <opc:Field TypeName="opc:Int32" Name="LatitudeFraction"/>
  <opc:Field TypeName="opc:Byte" Name="LoRes"/>
  <opc:Field TypeName="opc:Int16" Name="LongitudeInteger"/>
  <opc:Field TypeName="opc:Int32" Name="LongitudeFraction"/>
  <opc:Field TypeName="opc:Byte" Name="AT"/>
  <opc:Field TypeName="opc:Byte" Name="AltRes"/>
  <opc:Field TypeName="opc:Int32" Name="AltitudeInteger"/>
  <opc:Field TypeName="opc:Int16" Name="AltitudeFraction"/>
  <opc:Field TypeName="opc:Byte" Name="Datum"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="LocalCoordinate">
  <opc:Field TypeName="opc:Double" Name="X"/>
  <opc:Field TypeName="opc:Double" Name="Y"/>
  <opc:Field TypeName="opc:Double" Name="Z"/>
  <opc:Field TypeName="opc:DateTime" Name="Timestamp"/>
  <opc:Field TypeName="opc:Double" Name="DilutionOfPrecision"/>
  <opc:Field TypeName="opc:Int32" Name="UsefulPrecision"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="Position">
  <opc:Field TypeName="opc:Int32" Name="PositionX"/>
  <opc:Field TypeName="opc:Int32" Name="PositionY"/>
  <opc:Field TypeName="opc:Int32" Name="SizeX"/>
  <opc:Field TypeName="opc:Int32" Name="SizeY"/>
  <opc:Field TypeName="opc:Int32" Name="Rotation"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="RfidSighting">
  <opc:Field TypeName="opc:Int32" Name="Antenna"/>
  <opc:Field TypeName="opc:Int32" Name="Strength"/>
  <opc:Field TypeName="opc:DateTime" Name="Timestamp"/>
  <opc:Field TypeName="opc:Int32" Name="CurrentPowerLevel"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="Rotation">
  <opc:Field TypeName="opc:Double" Name="Yaw"/>
<opc:Field

```

```

    TypeName="opc:Double" Name="Pitch"/>
    <opc:Field TypeName="opc:Double" Name="Roll"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="ScanDataEpc">
    <opc:Field TypeName="opc:UInt16" Name="PC"/>
    <opc:Field TypeName="opc:ByteString" Name="UID"/>
    <opc:Field TypeName="opc:UInt16" Name="XPC_W1"/>
    <opc:Field TypeName="opc:UInt16" Name="XPC_W2"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="ua:ExtensionObject" Name="ScanResult">
    <opc:Field TypeName="opc:Bit" Name="LocationSpecified"/>
    <opc:Field Length="31" TypeName="opc:Bit" Name="Reserved1"/>
    <opc:Field TypeName="opc:CharArray" Name="CodeType"/>
    <opc:Field TypeName="tns:ScanData" Name="ScanData"/>
    <opc:Field TypeName="opc:DateTime" Name="Timestamp"/>
    <opc:Field SwitchField="LocationSpecified" TypeName="tns:Location" Name="Location"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="tns:ScanResult" Name="OcrScanResult">
    <opc:Field TypeName="opc:Bit" Name="LocationSpecified"/>
    <opc:Field TypeName="opc:Bit" Name="FontSpecified"/>
    <opc:Field TypeName="opc:Bit" Name="DecodingTimeSpecified"/>
    <opc:Field Length="29" TypeName="opc:Bit" Name="Reserved1"/>
    <opc:Field SourceType="tns:ScanResult" TypeName="opc:CharArray" Name="CodeType"/>
    <opc:Field SourceType="tns:ScanResult" TypeName="tns:ScanData" Name="ScanData"/>
    <opc:Field SourceType="tns:ScanResult" TypeName="opc:DateTime" Name="Timestamp"/>
    <opc:Field SwitchField="LocationSpecified" SourceType="tns:ScanResult" TypeName="tns:Location"
Name="Location"/>
    <opc:Field TypeName="ua:NodeId" Name="ImageId"/>
    <opc:Field TypeName="opc:Byte" Name="Quality"/>
    <opc:Field TypeName="tns:Position" Name="Position"/>
    <opc:Field SwitchField="FontSpecified" TypeName="opc:CharArray" Name="Font"/>
    <opc:Field SwitchField="DecodingTimeSpecified" TypeName="opc:DateTime" Name="DecodingTime"/>
  </opc:StructuredType>
  <opc:StructuredType BaseType="tns:ScanResult" Name="OpticalScanResult">
    <opc:Field TypeName="opc:Bit"
Name="LocationSpecified"/>
    <opc:Field TypeName="opc:Bit" Name="GradeSpecified"/>
    <opc:Field TypeName="opc:Bit" Name="PositionSpecified"/>
    <opc:Field TypeName="opc:Bit" Name="SymbologySpecified"/>
    <opc:Field TypeName="opc:Bit" Name="ImageIdSpecified"/>
    <opc:Field Length="27" TypeName="opc:Bit" Name="Reserved1"/>
    <opc:Field SourceType="tns:ScanResult" TypeName="opc:CharArray" Name="CodeType"/>
    <opc:Field SourceType="tns:ScanResult" TypeName="tns:ScanData" Name="ScanData"/>
    <opc:Field SourceType="tns:ScanResult" TypeName="opc:DateTime" Name="Timestamp"/>
    <opc:Field SwitchField="LocationSpecified" SourceType="tns:ScanResult" TypeName="tns:Location"
Name="Location"/>
    <opc:Field SwitchField="GradeSpecified" TypeName="opc:Float" Name="Grade"/>
    <opc:Field SwitchField="PositionSpecified" TypeName="tns:Position" Name="Position"/>

```

```

<opc:Field SwitchField="SymbologySpecified" TypeName="opc:CharArray" Name="Symbology"/>
<opc:Field SwitchField="ImageIdSpecified" TypeName="ua:NodeId"
Name="ImageId"/>
</opc:StructuredType>
<opc:StructuredType BaseType="tns:OpticalScanResult" Name="OpticalVerifierScanResult">
<opc:Field TypeName="opc:Bit" Name="LocationSpecified"/>
<opc:Field TypeName="opc:Bit" Name="GradeSpecified"/>
<opc:Field TypeName="opc:Bit" Name="PositionSpecified"/>
<opc:Field TypeName="opc:Bit" Name="SymbologySpecified"/>
<opc:Field TypeName="opc:Bit" Name="ImageIdSpecified"/>
<opc:Field Length="27" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field SourceType="tns:ScanResult" TypeName="opc:CharArray" Name="CodeType"/>
<opc:Field SourceType="tns:ScanResult" TypeName="tns:ScanData" Name="ScanData"/>
<opc:Field SourceType="tns:ScanResult" TypeName="opc:DateTime" Name="Timestamp"/>
<opc:Field SwitchField="LocationSpecified" SourceType="tns:ScanResult" TypeName="tns:Location"
Name="Location"/>
<opc:Field SwitchField="GradeSpecified" SourceType="tns:OpticalScanResult" TypeName="opc:Float"
Name="Grade"/>
<opc:Field SwitchField="PositionSpecified"
SourceType="tns:OpticalScanResult" TypeName="tns:Position" Name="Position"/>
<opc:Field SwitchField="SymbologySpecified" SourceType="tns:OpticalScanResult"
TypeName="opc:CharArray" Name="Symbology"/>
<opc:Field SwitchField="ImageIdSpecified" SourceType="tns:OpticalScanResult" TypeName="ua:NodeId"
Name="ImageId"/>
<opc:Field TypeName="opc:CharArray" Name="IsoGrade"/>
<opc:Field TypeName="opc:Int16" Name="RMin"/>
<opc:Field TypeName="opc:Int16" Name="SymbolContrast"/>
<opc:Field TypeName="opc:Int16" Name="ECMin"/>
<opc:Field TypeName="opc:Int16" Name="Modulation"/>
<opc:Field TypeName="opc:Int16" Name="Defects"/>
<opc:Field TypeName="opc:Int16" Name="Decodability"/>
<opc:Field TypeName="opc:Int16" Name="Decode"/>
<opc:Field TypeName="opc:Int16" Name="PrintGain"/>
</opc:StructuredType>
<opc:StructuredType BaseType="tns:ScanResult" Name="RfidScanResult">
<opc:Field TypeName="opc:Bit" Name="LocationSpecified"/>
<opc:Field Length="31" TypeName="opc:Bit"
Name="Reserved1"/>
<opc:Field SourceType="tns:ScanResult" TypeName="opc:CharArray" Name="CodeType"/>
<opc:Field SourceType="tns:ScanResult" TypeName="tns:ScanData" Name="ScanData"/>
<opc:Field SourceType="tns:ScanResult" TypeName="opc:DateTime" Name="Timestamp"/>
<opc:Field SwitchField="LocationSpecified" SourceType="tns:ScanResult" TypeName="tns:Location"
Name="Location"/>
<opc:Field TypeName="opc:Int32" Name="NoOfSighting"/>
<opc:Field LengthField="NoOfSighting" TypeName="tns:RfidSighting" Name="Sighting"/>
</opc:StructuredType>
<opc:StructuredType BaseType="tns:ScanResult" Name="RtlsLocationResult">
<opc:Field TypeName="opc:Bit" Name="LocationSpecified"/>

```

```

<opc:Field Length="31" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field SourceType="tns:ScanResult" TypeName="opc:CharArray" Name="CodeType"/>
<opc:Field SourceType="tns:ScanResult" TypeName="tns:ScanData" Name="ScanData"/>
<opc:Field SourceType="tns:ScanResult" TypeName="opc:DateTime" Name="Timestamp"/>
<opc:Field SwitchField="LocationSpecified" SourceType="tns:ScanResult" TypeName="tns:Location"
Name="Location"/>
<opc:Field TypeName="opc:Double" Name="Speed"/>
<opc:Field TypeName="opc:Double" Name="Heading"/>
<opc:Field TypeName="tns:Rotation" Name="Rotation"/>
<opc:Field TypeName="opc:DateTime" Name="ReceiveTime"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="ScanSettings">
<opc:Field TypeName="opc:Bit" Name="LocationTypeSpecified"/>
<opc:Field Length="31" TypeName="opc:Bit" Name="Reserved1"/>
<opc:Field TypeName="opc:Double" Name="Duration"/>
<opc:Field TypeName="opc:Int32" Name="Cycles"/>
<opc:Field TypeName="opc:Boolean" Name="DataAvailable"/>
<opc:Field SwitchField="LocationTypeSpecified" TypeName="tns:LocationTypeEnumeration"
Name="LocationType"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:Union" Name="Location">
<opc:Field TypeName="opc:UInt32" Name="SwitchField"/>
<opc:Field SwitchField="SwitchField"
TypeName="opc:CharArray" SwitchValue="1" Name="NMEA"/>
<opc:Field SwitchField="SwitchField" TypeName="tns:LocalCoordinate" SwitchValue="2" Name="Local"/>
<opc:Field SwitchField="SwitchField" TypeName="tns:WGS84Coordinate" SwitchValue="3" Name="WGS84"/>
<opc:Field SwitchField="SwitchField" TypeName="opc:CharArray" SwitchValue="4" Name="Name"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:Union" Name="ScanData">
<opc:Field TypeName="opc:UInt32" Name="SwitchField"/>
<opc:Field SwitchField="SwitchField" TypeName="opc:ByteString" SwitchValue="1" Name="ByteString"/>
<opc:Field SwitchField="SwitchField" TypeName="opc:CharArray" SwitchValue="2" Name="String"/>
<opc:Field SwitchField="SwitchField" TypeName="tns:ScanDataEpc" SwitchValue="3" Name="Epc"/>
<opc:Field SwitchField="SwitchField" TypeName="ua:Variant" SwitchValue="4" Name="Custom"/>
</opc:StructuredType>
<opc:StructuredType BaseType="ua:ExtensionObject" Name="WGS84Coordinate">
<opc:Field TypeName="opc:CharArray"
Name="N/S Hemisphere"/>
<opc:Field TypeName="opc:Double" Name="Latitude"/>
<opc:Field TypeName="opc:CharArray" Name="E/W Hemisphere"/>
<opc:Field TypeName="opc:Double" Name="Longitude"/>
<opc:Field TypeName="opc:Double" Name="Altitude"/>
<opc:Field TypeName="opc:DateTime" Name="Timestamp"/>
<opc:Field TypeName="opc:Double" Name="DilutionOfPrecision"/>
<opc:Field TypeName="opc:Int32" Name="UsefulPrecisionLatLon"/>
<opc:Field TypeName="opc:Int32" Name="UsefulPrecisionAlt"/>
</opc:StructuredType>
<opc:EnumeratedType LengthInBits="32" Name="AutoIdOperationStatusEnumeration">

```

```

<opc:EnumeratedValue Name="SUCCESS" Value="0"/>
<opc:EnumeratedValue Name="MISC_ERROR_TOTAL" Value="1"/>
<opc:EnumeratedValue Name="MISC_ERROR_PARTIAL" Value="2"/>
<opc:EnumeratedValue Name="PERMISSION_ERROR" Value="3"/>
<opc:EnumeratedValue Name="PASSWORD_ERROR" Value="4"/>
<opc:EnumeratedValue Name="REGION_NOT_FOUND_ERROR" Value="5"/>
<opc:EnumeratedValue Name="OP_NOT_POSSIBLE_ERROR"
Value="6"/>
<opc:EnumeratedValue Name="OUT_OF_RANGE_ERROR" Value="7"/>
<opc:EnumeratedValue Name="NO_IDENTIFIER" Value="8"/>
<opc:EnumeratedValue Name="MULTIPLE_IDENTIFIERS" Value="9"/>
<opc:EnumeratedValue Name="READ_ERROR" Value="10"/>
<opc:EnumeratedValue Name="DECODING_ERROR" Value="11"/>
<opc:EnumeratedValue Name="MATCH_ERROR" Value="12"/>
<opc:EnumeratedValue Name="CODE_NOT_SUPPORTED" Value="13"/>
<opc:EnumeratedValue Name="WRITE_ERROR" Value="14"/>
<opc:EnumeratedValue Name="NOT_SUPPORTED_BY_DEVICE" Value="15"/>
<opc:EnumeratedValue Name="NOT_SUPPORTED_BY_TAG" Value="16"/>
<opc:EnumeratedValue Name="DEVICE_NOT_READY" Value="17"/>
<opc:EnumeratedValue Name="INVALID_CONFIGURATION" Value="18"/>
<opc:EnumeratedValue Name="RF_COMMUNICATION_ERROR" Value="19"/>
<opc:EnumeratedValue Name="DEVICE_FAULT" Value="20"/>
<opc:EnumeratedValue Name="TAG_HAS_LOW_BATTERY" Value="21"/>
</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="DeviceStatusEnumeration">
  <opc:EnumeratedValue Name="Idle" Value="0"/>
  <opc:EnumeratedValue Name="Error" Value="1"/>
  <opc:EnumeratedValue Name="Scanning" Value="2"/>
  <opc:EnumeratedValue Name="Busy" Value="3"/>
</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="LocationTypeEnumeration">
  <opc:EnumeratedValue Name="NMEA" Value="0"/>
  <opc:EnumeratedValue Name="LOCAL" Value="1"/>
  <opc:EnumeratedValue Name="WGS84" Value="2"/>
  <opc:EnumeratedValue Name="NAME" Value="3"/>
</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="RfidLockOperationEnumeration">
  <opc:EnumeratedValue Name="Lock" Value="0"/>
  <opc:EnumeratedValue Name="Unlock" Value="1"/>
  <opc:EnumeratedValue Name="PermanentLock" Value="2"/>
  <opc:EnumeratedValue Name="PermanentUnlock" Value="3"/>
</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="RfidLockRegionEnumeration">
  <opc:EnumeratedValue Name="Kill" Value="0"/>
  <opc:EnumeratedValue Name="Access" Value="1"/>
  <opc:EnumeratedValue Name="EPC" Value="2"/>
  <opc:EnumeratedValue Name="TID" Value="3"/>
  <opc:EnumeratedValue Name="User" Value="4"/>

```

```

</opc:EnumeratedType>
<opc:EnumeratedType LengthInBits="32" Name="RfidPasswordTypeEnumeration">
  <opc:EnumeratedValue Name="Access" Value="0"/>
  <opc:EnumeratedValue Name="Kill" Value="1"/>
  <opc:EnumeratedValue Name="Read" Value="2"/>
  <opc:EnumeratedValue Name="Write" Value="3"/>
</opc:EnumeratedType>
</opc:TypeDictionary>
<opc:TypeDictionary
  xmlns:opc="http://opcfoundation.org/BinarySchema/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:ua="http://opcfoundation.org/UA/"
  xmlns:tns="http://opcfoundation.org/UA/"
  DefaultByteOrder="LittleEndian"
  TargetNamespace="http://opcfoundation.org/UA/"
>

  <opc:Import Namespace="http://opcfoundation.org/BinarySchema/" />

  <!-- Transport types begin -->

  <opc:EnumeratedType Name="MessageType" LengthInBits="32">
    <opc:Documentation>Message Type and whether the message contains an intermediate
    chunk</opc:Documentation>
    <opc:EnumeratedValue Name="ACK" Value="0x4B4341" />
    <opc:EnumeratedValue Name="HEL" Value="0x4C4548" />
    <opc:EnumeratedValue Name="MSG" Value="0x47534D" />
    <opc:EnumeratedValue Name="OPN" Value="0x4E504F" />
    <opc:EnumeratedValue Name="CLO" Value="0x4F4C43" />
    <opc:EnumeratedValue Name="ERR" Value="0x525245" />
    <opc:EnumeratedValue Name="INVALID" Value="0x0" />
  </opc:EnumeratedType>

  <opc:EnumeratedType
  Name="ChunkType" LengthInBits="32">
    <opc:Documentation>Type of the chunk</opc:Documentation>
    <opc:EnumeratedValue Name="FINAL" Value="0x46000000" />
    <opc:EnumeratedValue Name="INTERMEDIATE" Value="0x43000000" />
    <opc:EnumeratedValue Name="ABORT" Value="0x41000000" />
  </opc:EnumeratedType>

  <opc:StructuredType Name="TcpMessageHeader">
    <opc:Documentation>TCP Header</opc:Documentation>
    <opc:Field Name="MessageTypeAndChunkType" TypeName="opc:UInt32" />
    <opc:Field Name="MessageSize" TypeName="opc:UInt32" />
  </opc:StructuredType>

  <opc:StructuredType Name="TcpHelloMessage">

```

```

<opc:Documentation>Hello Message</opc:Documentation>
<opc:Field Name="ProtocolVersion" TypeName="opc:UInt32" />
<opc:Field Name="ReceiveBufferSize" TypeName="opc:UInt32" />
<opc:Field Name="SendBufferSize" TypeName="opc:UInt32" />
<opc:Field Name="MaxMessageSize" TypeName="opc:UInt32" />
<opc:Field Name="MaxChunkCount" TypeName="opc:UInt32" />
<opc:Field
Name="EndpointUrl" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="TcpAcknowledgeMessage">
<opc:Documentation>Acknowledge Message</opc:Documentation>
<opc:Field Name="ProtocolVersion" TypeName="opc:UInt32" />
<opc:Field Name="ReceiveBufferSize" TypeName="opc:UInt32" />
<opc:Field Name="SendBufferSize" TypeName="opc:UInt32" />
<opc:Field Name="MaxMessageSize" TypeName="opc:UInt32" />
<opc:Field Name="MaxChunkCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="TcpErrorMessage">
<opc:Documentation>Error Message</opc:Documentation>
<opc:Field Name="Error" TypeName="opc:UInt32" />
<opc:Field Name="Reason" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="AsymmetricAlgorithmSecurityHeader">
<opc:Documentation>Asymmetric Security Header</opc:Documentation>
<opc:Field Name="SecurityPolicyUri" TypeName="opc:ByteString" />
<opc:Field Name="SenderCertificate"
TypeName="opc:ByteString" />
<opc:Field Name="ReceiverCertificateThumbprint" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="SymmetricAlgorithmSecurityHeader">
<opc:Documentation>Symmetric Security Header</opc:Documentation>
<opc:Field Name="TokenId" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="SequenceHeader">
<opc:Documentation>Secure Layer Sequence Header</opc:Documentation>
<opc:Field Name="SequenceNumber" TypeName="opc:UInt32" />
<opc:Field Name="RequestId" TypeName="opc:UInt32"/>
</opc:StructuredType>

<!-- Transport types end -->

</opc:TypeDictionary>

```



```

<?xml version="1.0" encoding="utf-8" ?>
<!--
* Copyright (c) 2005-2018 The OPC Foundation, Inc. All rights reserved.
*
* OPC Foundation MIT License 1.00
*
* Permission is hereby granted, free of charge, to any person
* obtaining a copy of this software and associated documentation
* files (the "Software"), to deal in the Software without
* restriction, including without limitation the rights to use,
* copy, modify, merge, publish, distribute, sublicense, and/or sell
* copies of the Software, and to permit persons to whom the
* Software is furnished to do so, subject to the following
* conditions:
*
* The above copyright notice and this permission notice shall be
* included in all copies or substantial portions of the Software.
* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
* EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
* OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
* NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
* COPYRIGHT
* HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
* WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
* FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
* OTHER DEALINGS IN THE SOFTWARE.
*
* The complete license agreement can be found here:
* http://opcfoundation.org/License/MIT/1.00/
-->

<opc:TypeDictionary
xmlns:opc="http://opcfoundation.org/BinarySchema/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ua="http://opcfoundation.org/UA/"
xmlns:tns="http://yourorganisation.org/test/"
DefaultByteOrder="LittleEndian"
TargetNamespace="http://yourorganisation.org/test/"
>
<opc:Import Namespace="http://opcfoundation.org/UA/" Location="Opc.Ua.BinarySchema.bsd"/>

<opc:StructuredType Name="Point" BaseType="ua:ExtensionObject">
  <opc:Field Name="x" TypeName="opc:Double" />
  <opc:Field Name="y" TypeName="opc:Double" />
</opc:StructuredType>

<opc:StructuredType Name="NestedPoint" BaseType="ua:ExtensionObject">

```

```
<opc:Field Name="x" TypeName="opc:Double" />
<opc:Field Name="y" TypeName="opc:Double" />
<opc:Field Name="point1" TypeName="tns:Point" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="PointWithArray" BaseType="ua:ExtensionObject">
  <opc:Field Name="x" TypeName="opc:Double" />
  <opc:Field Name="y" TypeName="opc:Double" />
  <opc:Field Name="z" TypeName="opc:Double" />
  <opc:Field Name="array1Size" TypeName="opc:UInt32" />
  <opc:Field Name="array1" TypeName="opc:Double" LengthField="array1Size" />
</opc:StructuredType>
```

```
<opc:StructuredType BaseType="ua:Union" Name="SelfContainingUnion">
  <opc:Field TypeName="opc:UInt32" Name="SwitchField"/>
  <opc:Field SwitchField="SwitchField" TypeName="opc:Double" SwitchValue="1" Name="Double"/>
  <opc:Field SwitchField="SwitchField" TypeName="opc:Int32" SwitchValue="2" Name="NoOfArray"/>
  <opc:Field LengthField="NoOfArray" SwitchField="SwitchField" TypeName="tns:SelfContainingUnion"
SwitchValue="2"
Name="Array"/>
</opc:StructuredType>
```

```
</opc:TypeDictionary>
```

Format: <https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: open62541

Upstream-Contact: open62541 Team <open62541-core@googlegroups.com>

Source: <https://open62541.org/>

Files: *

Copyright: 2019 open62541 Team <open62541-core@googlegroups.com>

License: MPL-2.0

Mozilla Public License Version 2.0

=====

.
1. Definitions

.
1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

.
1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

.
1.3. "Contribution"

means Covered Software of a particular Contributor.

.

1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

1.5. "Incompatible With Secondary Licenses"

means

(a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or

(b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

1.6. "Executable Form"

means any form of the work other than Source Code Form.

1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

1.8. "License"

means this document.

1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.

1.10. "Modifications"

means any of the following:

(a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or

(b) any new file in Source Code Form that contains any Covered Software.

1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its

Contributor Version.

.
1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

.
1.13. "Source Code Form"

means the form of the work preferred for making modifications.

.
1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

.
2. License Grants and Conditions

.
2.1. Grants
.

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

.
(a) under intellectual property rights (other than patent or trademark)

Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and

.
(b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

.
2.2. Effective Date
.

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.

.
2.3. Limitations on Grant Scope
.

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

.
(a) for any code that a Contributor has removed from Covered Software;
or

.
(b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or

.
(c) under Patent Claims infringed by Covered Software in the absence of its Contributions.

.
This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses

.
No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

2.5. Representation

.
Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

.
This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions

.
Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities

.

3.1. Distribution of Source Form

.

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the Source Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

.

3.2. Distribution of Executable Form

.

If You distribute Covered Software in Executable Form then:

.

(a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and

.

(b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

.

3.3. Distribution of a Larger Work

.

You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

.

3.4. Notices

.

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to

the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred

by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination

5.1. The rights

granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent

infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

```
*
*
* 6. Disclaimer of Warranty
* -----
*
* Covered Software is provided under this License on an "as is"
* basis, without warranty
* of any kind, either expressed, implied, or
* statutory, including, without limitation, warranties that the
* Covered Software is free of defects, merchantable, fit for a
* particular purpose or non-infringing. The entire risk as to the
* quality and performance of the Covered Software is with You.
* Should any Covered Software prove defective in any respect, You
* (not any Contributor) assume the cost of any necessary servicing,
* repair, or correction. This disclaimer of warranty constitutes an
* essential part of this License. No use of any Covered Software is
* authorized under this License except under this disclaimer.
```

```
*
*
* 7. Limitation of Liability
* -----
*
* Under no circumstances and under no legal theory, whether tort
* (including negligence), contract, or otherwise, shall any
* Contributor, or anyone who distributes Covered Software as
* permitted above, be liable to You for any direct, indirect,
* special, incidental, or consequential damages of any character
* including, without limitation, damages for lost profits, loss of
* goodwill, work stoppage, computer failure or malfunction, or any
* and all other commercial damages or losses, even if such party
* shall have been informed of the possibility of such damages. This
* limitation of liability shall not apply to liability for death or
* personal injury resulting
```


from such party's negligence to the *
* extent applicable law prohibits such limitation. Some *
* jurisdictions do not allow the exclusion or limitation of *
* incidental or consequential damages, so this exclusion and *
* limitation may not apply to You. *

*

.
8. Litigation

.
Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party's ability to bring cross-claims or counter-claims.

.
9. Miscellaneous

.
This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

.
10. Versions of the License

.
10.1. New Versions
.

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

.
10.2. Effect of New Versions
.

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

.
10.3. Modified Versions
.

If you create

software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

.
10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses

.
If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

.
Exhibit A - Source Code Form License Notice

.
This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, You can obtain one at <http://mozilla.org/MPL/2.0/>.

.
If it is not possible or desirable to put the notice in a particular file, then

You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

.
You may add additional accurate notices of copyright ownership.

.
Exhibit B - "Incompatible With Secondary Licenses" Notice

.
This Source Code Form is "Incompatible With Secondary Licenses", as defined by the Mozilla Public License, v. 2.0.

Copyright (c) 2010 Serge A. Zaitsev

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,

FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

<?xml version="1.0" encoding="utf-8" ?>

<!--

* Copyright (c) 2005-2018 The OPC Foundation, Inc. All rights reserved.

*

* OPC Foundation MIT License 1.00

*

* Permission is hereby granted, free of charge, to any person

* obtaining a copy of this software and associated documentation

* files (the "Software"), to deal in the Software without

* restriction, including without limitation the rights to use,

* copy, modify, merge, publish, distribute, sublicense, and/or sell

* copies of the Software, and to permit persons to whom the

* Software is furnished to do so, subject to the following

* conditions:

*

* The above copyright notice and this permission notice shall be

* included in all copies or substantial portions of the Software.

* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,

* EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES

* OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND

* NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR

* COPYRIGHT

* HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,

* WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING

* FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR

* OTHER DEALINGS IN THE SOFTWARE.

*

* The complete license agreement can be found here:

* <http://opcfoundation.org/License/MIT/1.00/>

-->

<opc:TypeDictionary

xmlns:opc="http://opcfoundation.org/BinarySchema/"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xmlns:ua="http://opcfoundation.org/UA/"

xmlns:tns="http://opcfoundation.org/UA/"

DefaultByteOrder="LittleEndian"

TargetNamespace="http://opcfoundation.org/UA/"

>

<opc:Import Namespace="http://opcfoundation.org/BinarySchema" />

```
<opc:StructuredType Name="XmlElement">
  <opc:Documentation>An XML element encoded as a UTF-8 string.</opc:Documentation>
  <opc:Field Name="Length" TypeName="opc:Int32" />
  <opc:Field Name="Value" TypeName="opc:Char" LengthField="Length" />
</opc:StructuredType>
```

```
<opc:EnumeratedType
Name="NodeIdType" LengthInBits="6">
  <opc:Documentation>The possible encodings for a NodeId value.</opc:Documentation>
  <opc:EnumeratedValue Name="TwoByte" Value="0" />
  <opc:EnumeratedValue Name="FourByte" Value="1" />
  <opc:EnumeratedValue Name="Numeric" Value="2" />
  <opc:EnumeratedValue Name="String" Value="3" />
  <opc:EnumeratedValue Name="Guid" Value="4" />
  <opc:EnumeratedValue Name="ByteString" Value="5" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="TwoByteNodeId">
  <opc:Field Name="Identifier" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="FourByteNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:Byte" />
  <opc:Field Name="Identifier" TypeName="opc:UInt16" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="NumericNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:UInt32" />
</opc:StructuredType>
```

```
<opc:StructuredType
Name="StringNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:CharArray" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="GuidNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:Guid" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ByteStringNodeId">
  <opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
  <opc:Field Name="Identifier" TypeName="opc:ByteString" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="NodeId">
```

```

<opc:Documentation>An identifier for a node in a UA server address space.</opc:Documentation>
<opc:Field Name="NodeIdType" TypeName="ua:NodeIdType" />
<opc:Field Name="Reserved1" TypeName="opc:Bit" Length="2" />
<opc:Field Name="TwoByte" TypeName="ua:TwoByteNodeId" SwitchField="NodeIdType" SwitchValue="0" />
<opc:Field Name="FourByte" TypeName="ua:FourByteNodeId" SwitchField="NodeIdType" SwitchValue="1"
/>
<opc:Field Name="Numeric" TypeName="ua:NumericNodeId" SwitchField="NodeIdType" SwitchValue="2" />
<opc:Field Name="String" TypeName="ua:StringNodeId" SwitchField="NodeIdType" SwitchValue="3" />
<opc:Field Name="Guid" TypeName="ua:GuidNodeId" SwitchField="NodeIdType" SwitchValue="4" />
<opc:Field Name="ByteString" TypeName="ua:ByteStringNodeId" SwitchField="NodeIdType"
SwitchValue="5" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ExpandedNodeId">
  <opc:Documentation>An identifier for a node in a UA server address space qualified with a complete namespace
string.</opc:Documentation>
  <opc:Field Name="NodeIdType" TypeName="ua:NodeIdType" />
  <opc:Field Name="ServerIndexSpecified" TypeName="opc:Bit" />
  <opc:Field Name="NamespaceURISpecified" TypeName="opc:Bit" />
  <opc:Field Name="TwoByte" TypeName="ua:TwoByteNodeId" SwitchField="NodeIdType" SwitchValue="0" />
  <opc:Field Name="FourByte" TypeName="ua:FourByteNodeId" SwitchField="NodeIdType"
SwitchValue="1" />
  <opc:Field Name="Numeric" TypeName="ua:NumericNodeId" SwitchField="NodeIdType" SwitchValue="2" />
  <opc:Field Name="String" TypeName="ua:StringNodeId" SwitchField="NodeIdType" SwitchValue="3" />
  <opc:Field Name="Guid" TypeName="ua:GuidNodeId" SwitchField="NodeIdType" SwitchValue="4" />
  <opc:Field Name="ByteString" TypeName="ua:ByteStringNodeId" SwitchField="NodeIdType"
SwitchValue="5" />
  <opc:Field Name="NamespaceURI" TypeName="opc:CharArray" SwitchField="NamespaceURISpecified"/>
  <opc:Field Name="ServerIndex" TypeName="opc:UInt32" SwitchField="ServerIndexSpecified"/>
</opc:StructuredType>

```

```

<opc:OpaqueType Name="StatusCode" LengthInBits="32" ByteOrderSignificant="true">
  <opc:Documentation>A 32-bit status code value.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:StructuredType Name="DiagnosticInfo">
  <opc:Documentation>A recursive structure containing diagnostic information associated with a status
code.</opc:Documentation>
  <opc:Field Name="SymbolicIdSpecified" TypeName="opc:Bit" />
  <opc:Field Name="NamespaceURISpecified" TypeName="opc:Bit" />
  <opc:Field Name="LocaleSpecified" TypeName="opc:Bit" />
  <opc:Field Name="LocalizedTextSpecified" TypeName="opc:Bit" />
  <opc:Field Name="AdditionalInfoSpecified" TypeName="opc:Bit" />
  <opc:Field Name="InnerStatusCodeSpecified" TypeName="opc:Bit" />
  <opc:Field Name="InnerDiagnosticInfoSpecified" TypeName="opc:Bit" />
  <opc:Field Name="Reserved1" TypeName="opc:Bit" Length="2" />
  <opc:Field Name="SymbolicId" TypeName="opc:Int32" SwitchField="SymbolicIdSpecified" />
  <opc:Field Name="NamespaceURI" TypeName="opc:Int32" SwitchField="NamespaceURISpecified" />

```

```

<opc:Field Name="Locale" TypeName="opc:Int32" SwitchField="LocaleSpecified" />
<opc:Field Name="LocalizedText" TypeName="opc:Int32" SwitchField="LocalizedTextSpecified" />
<opc:Field Name="AdditionalInfo" TypeName="opc:CharArray" SwitchField="AdditionalInfoSpecified"
/>
<opc:Field Name="InnerStatusCode" TypeName="ua:StatusCode" SwitchField="InnerStatusCodeSpecified" />
<opc:Field Name="InnerDiagnosticInfo" TypeName="ua:DiagnosticInfo"
SwitchField="InnerDiagnosticInfoSpecified" />
</opc:StructuredType>

<opc:StructuredType Name="QualifiedName">
<opc:Documentation>A string qualified with a namespace index.</opc:Documentation>
<opc:Field Name="NamespaceIndex" TypeName="opc:UInt16" />
<opc:Field Name="Name" TypeName="opc:CharArray" />
</opc:StructuredType>

<opc:StructuredType Name="LocalizedText">
<opc:Documentation>A string qualified with a namespace index.</opc:Documentation>
<opc:Field Name="LocaleSpecified" TypeName="opc:Bit" />
<opc:Field Name="TextSpecified" TypeName="opc:Bit" />
<opc:Field Name="Reserved1" TypeName="opc:Bit" Length="6" />
<opc:Field Name="Locale" TypeName="opc:CharArray" SwitchField="LocaleSpecified" />
<opc:Field Name="Text" TypeName="opc:CharArray" SwitchField="TextSpecified"
/>
</opc:StructuredType>

<opc:StructuredType Name="DataValue">
<opc:Documentation>A value with an associated timestamp, and quality.</opc:Documentation>
<opc:Field Name="ValueSpecified" TypeName="opc:Bit" />
<opc:Field Name="StatusCodeSpecified" TypeName="opc:Bit" />
<opc:Field Name="SourceTimestampSpecified" TypeName="opc:Bit" />
<opc:Field Name="SourcePicoSecondsSpecified" TypeName="opc:Bit" />
<opc:Field Name="ServerTimestampSpecified" TypeName="opc:Bit" />
<opc:Field Name="ServerPicoSecondsSpecified" TypeName="opc:Bit" />
<opc:Field Name="Reserved1" TypeName="opc:Bit" Length="2" />
<opc:Field Name="Value" TypeName="ua:Variant" SwitchField="ValueSpecified" />
<opc:Field Name="StatusCode" TypeName="ua:StatusCode" SwitchField="StatusCodeSpecified" />
<opc:Field Name="SourceTimestamp" TypeName="opc:DateTime" SwitchField="SourceTimestampSpecified" />
<opc:Field Name="SourcePicoSeconds" TypeName="opc:UInt16" SwitchField="SourcePicoSecondsSpecified"
/>
<opc:Field Name="ServerTimestamp" TypeName="opc:DateTime" SwitchField="ServerTimestampSpecified" />
<opc:Field Name="ServerPicoSeconds" TypeName="opc:UInt16" SwitchField="ServerPicoSecondsSpecified" />
</opc:StructuredType>

<opc:StructuredType Name="ExtensionObject">
<opc:Documentation>A serialized object prefixed with its data type identifier.</opc:Documentation>
<opc:Field Name="TypeIdSpecified" TypeName="opc:Bit" />
<opc:Field Name="BinaryBody" TypeName="opc:Bit" />
<opc:Field Name="XmlBody" TypeName="opc:Bit" />

```

```

<opc:Field Name="Reserved1" TypeName="opc:Bit" Length="5" />
<opc:Field Name="TypeId" TypeName="ua:ExpandedNodeId" SwitchField="TypeIdSpecified" />
<opc:Field Name="BodyLength" TypeName="opc:Int32" />
<opc:Field Name="Body" TypeName="opc:Byte" LengthField="BodyLength" />
</opc:StructuredType>

<opc:StructuredType Name="Variant">
  <opc:Documentation>A union of several types.</opc:Documentation>
  <opc:Field
Name="VariantType" TypeName="opc:Bit" Length="6" />
  <opc:Field Name="ArrayDimensionsSpecified" TypeName="opc:Bit" Length="1"/>
  <opc:Field Name="ArrayLengthSpecified" TypeName="opc:Bit" Length="1"/>
  <opc:Field Name="ArrayLength" TypeName="opc:Int32" SwitchField="ArrayLengthSpecified" />
  <opc:Field Name="Boolean" TypeName="opc:Boolean" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="1" />
  <opc:Field Name="SByte" TypeName="opc:SByte" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="2" />
  <opc:Field Name="Byte" TypeName="opc:Byte" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="3" />
  <opc:Field Name="Int16" TypeName="opc:Int16" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="4" />
  <opc:Field Name="UInt16" TypeName="opc:UInt16" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="5" />
  <opc:Field Name="Int32" TypeName="opc:Int32" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="6" />
  <opc:Field Name="UInt32" TypeName="opc:UInt32" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="7" />
  <opc:Field Name="Int64" TypeName="opc:Int64" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="8" />
  <opc:Field Name="UInt64" TypeName="opc:UInt64" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="9" />
  <opc:Field Name="Float" TypeName="opc:Float" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="10" />
  <opc:Field Name="Double" TypeName="opc:Double" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="11" />
  <opc:Field Name="String" TypeName="opc:CharArray" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="12" />
  <opc:Field Name="DateTime" TypeName="opc:DateTime" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="13" />
  <opc:Field Name="Guid" TypeName="opc:Guid" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="14"
  />
  <opc:Field Name="ByteString" TypeName="opc:ByteString" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="15" />
  <opc:Field Name="XmlElement" TypeName="ua:XmlElement" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="16" />
  <opc:Field Name="NodeId" TypeName="ua:NodeId" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="17" />

```

```

    <opc:Field Name="ExpandedNodeId" TypeName="ua:ExpandedNodeId" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="18" />
    <opc:Field Name="StatusCode" TypeName="ua:StatusCode" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="19" />
    <opc:Field Name="QualifiedName" TypeName="ua:QualifiedName" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="20" />
    <opc:Field Name="LocalizedText" TypeName="ua:LocalizedText" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="21" />
    <opc:Field Name="ExtensionObject" TypeName="ua:ExtensionObject"
LengthField="ArrayLength" SwitchField="VariantType" SwitchValue="22" />
    <opc:Field Name="DataValue" TypeName="ua:DataValue" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="23" />
    <opc:Field Name="Variant" TypeName="ua:Variant" LengthField="ArrayLength" SwitchField="VariantType"
SwitchValue="24" />
    <opc:Field Name="DiagnosticInfo" TypeName="ua:DiagnosticInfo" LengthField="ArrayLength"
SwitchField="VariantType" SwitchValue="25" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" SwitchField="ArrayDimensionsSpecified"
/>
    <opc:Field Name="ArrayDimensions" TypeName="opc:Int32" LengthField="NoOfArrayDimensions"
SwitchField="ArrayDimensionsSpecified" />
</opc:StructuredType>

```

```

<opc:EnumeratedType Name="NamingRuleType" LengthInBits="32">
    <opc:EnumeratedValue Name="Mandatory" Value="1" />
    <opc:EnumeratedValue Name="Optional" Value="2" />
    <opc:EnumeratedValue Name="Constraint" Value="3" />
</opc:EnumeratedType>

```

```

<opc:OpaqueType
Name="ImageBMP">
    <opc:Documentation>An image encoded in BMP format.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:OpaqueType Name="ImageGIF">
    <opc:Documentation>An image encoded in GIF format.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:OpaqueType Name="ImageJPG">
    <opc:Documentation>An image encoded in JPEG format.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:OpaqueType Name="ImagePNG">
    <opc:Documentation>An image encoded in PNG format.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:OpaqueType Name="AudioDataType">
    <opc:Documentation>An image encoded in PNG format.</opc:Documentation>

```


</opc:OpaqueType>

<opc:OpaqueType Name="BitFieldMaskDataType">

<opc:Documentation>A mask of 32 bits that can be updated individually by using the top 32 bits as a mask.</opc:Documentation>

</opc:OpaqueType>

<opc:StructuredType Name="KeyValuePair" BaseType="ua:ExtensionObject">

<opc:Field Name="Key" TypeName="ua:QualifiedName" />

<opc:Field Name="Value"

TypeName="ua:Variant" />

</opc:StructuredType>

<opc:StructuredType Name="EndpointType" BaseType="ua:ExtensionObject">

<opc:Field Name="EndpointUrl" TypeName="opc:String" />

<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />

<opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />

<opc:Field Name="TransportProfileUri" TypeName="opc:String" />

</opc:StructuredType>

<opc:EnumeratedType Name="OpenFileMode" LengthInBits="32">

<opc:EnumeratedValue Name="Read" Value="1" />

<opc:EnumeratedValue Name="Write" Value="2" />

<opc:EnumeratedValue Name="EraseExisting" Value="4" />

<opc:EnumeratedValue Name="Append" Value="8" />

</opc:EnumeratedType>

<opc:EnumeratedType Name="IdentityCriteriaType" LengthInBits="32">

<opc:EnumeratedValue Name="UserName" Value="1" />

<opc:EnumeratedValue Name="Thumbprint" Value="2" />

<opc:EnumeratedValue Name="Role" Value="3" />

<opc:EnumeratedValue Name="GroupId" Value="4" />

<opc:EnumeratedValue

Name="Anonymous" Value="5" />

<opc:EnumeratedValue Name="AuthenticatedUser" Value="6" />

</opc:EnumeratedType>

<opc:StructuredType Name="IdentityMappingRuleType" BaseType="ua:ExtensionObject">

<opc:Field Name="CriteriaType" TypeName="tns:IdentityCriteriaType" />

<opc:Field Name="Criteria" TypeName="opc:String" />

</opc:StructuredType>

<opc:EnumeratedType Name="TrustListMasks" LengthInBits="32">

<opc:EnumeratedValue Name="None" Value="0" />

<opc:EnumeratedValue Name="TrustedCertificates" Value="1" />

<opc:EnumeratedValue Name="TrustedCrls" Value="2" />

<opc:EnumeratedValue Name="IssuerCertificates" Value="4" />

<opc:EnumeratedValue Name="IssuerCrls" Value="8" />

```

    <opc:EnumeratedValue Name="All" Value="15" />
  </opc:EnumeratedType>

  <opc:StructuredType Name="TrustListDataType" BaseType="ua:ExtensionObject">
    <opc:Field Name="SpecifiedLists" TypeName="opc:UInt32" />
    <opc:Field Name="NoOfTrustedCertificates" TypeName="opc:Int32" />
  </>
    <opc:Field Name="TrustedCertificates" TypeName="opc:ByteString" LengthField="NoOfTrustedCertificates" />
    <opc:Field Name="NoOfTrustedCrls" TypeName="opc:Int32" />
    <opc:Field Name="TrustedCrls" TypeName="opc:ByteString" LengthField="NoOfTrustedCrls" />
    <opc:Field Name="NoOfIssuerCertificates" TypeName="opc:Int32" />
    <opc:Field Name="IssuerCertificates" TypeName="opc:ByteString" LengthField="NoOfIssuerCertificates" />
    <opc:Field Name="NoOfIssuerCrls" TypeName="opc:Int32" />
    <opc:Field Name="IssuerCrls" TypeName="opc:ByteString" LengthField="NoOfIssuerCrls" />
  </opc:StructuredType>

  <opc:StructuredType Name="DecimalDataType" BaseType="ua:ExtensionObject">
    <opc:Field Name="Scale" TypeName="opc:Int16" />
    <opc:Field Name="Value" TypeName="opc:ByteString" />
  </opc:StructuredType>

  <opc:StructuredType Name="DataTypeSchemaHeader" BaseType="ua:ExtensionObject">
    <opc:Field Name="NoOfNamespaces" TypeName="opc:Int32" />
    <opc:Field
      Name="Namespaces" TypeName="opc:String" LengthField="NoOfNamespaces" />
    <opc:Field Name="NoOfStructureDataTypes" TypeName="opc:Int32" />
    <opc:Field Name="StructureDataTypes" TypeName="tns:StructureDescription"
      LengthField="NoOfStructureDataTypes" />
    <opc:Field Name="NoOfEnumDataTypes" TypeName="opc:Int32" />
    <opc:Field Name="EnumDataTypes" TypeName="tns:EnumDescription" LengthField="NoOfEnumDataTypes" />
  </>
    <opc:Field Name="NoOfSimpleDataTypes" TypeName="opc:Int32" />
    <opc:Field Name="SimpleDataTypes" TypeName="tns:SimpleTypeDescription"
      LengthField="NoOfSimpleDataTypes" />
  </opc:StructuredType>

  <opc:StructuredType Name="DataTypeDescription" BaseType="ua:ExtensionObject">
    <opc:Field Name="DataTypeId" TypeName="ua:NodeId" />
    <opc:Field Name="Name" TypeName="ua:QualifiedName" />
  </opc:StructuredType>

  <opc:StructuredType Name="StructureDescription" BaseType="tns:DataTypeDescription">
    <opc:Field Name="DataTypeId" TypeName="ua:NodeId" SourceType="tns:DataTypeDescription" />
  </>
    <opc:Field Name="Name" TypeName="ua:QualifiedName" SourceType="tns:DataTypeDescription" />
    <opc:Field Name="StructureDefinition" TypeName="tns:StructureDefinition" />
  </opc:StructuredType>

```

```

<opc:StructuredType Name="EnumDescription" BaseType="tns:DataTypeDescription">
  <opc:Field Name="DataTypeId" TypeName="ua:NodeId" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="Name" TypeName="ua:QualifiedName" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="EnumDefinition" TypeName="tns:EnumDefinition" />
  <opc:Field Name="BuiltInType" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="SimpleTypeDescription" BaseType="tns:DataTypeDescription">
  <opc:Field Name="DataTypeId" TypeName="ua:NodeId" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="Name" TypeName="ua:QualifiedName" SourceType="tns:DataTypeDescription" />
  <opc:Field Name="BaseDataType" TypeName="ua:NodeId" />
  <opc:Field
Name="BuiltInType" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="UABinaryFileDataType" BaseType="tns:DataTypeSchemaHeader">
  <opc:Field Name="NoOfNamespaces" TypeName="opc:Int32" />
  <opc:Field Name="Namespaces" TypeName="opc:String" LengthField="NoOfNamespaces" />
  <opc:Field Name="NoOfStructureDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="StructureDataTypes" TypeName="tns:StructureDescription"
LengthField="NoOfStructureDataTypes" />
  <opc:Field Name="NoOfEnumDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="EnumDataTypes" TypeName="tns:EnumDescription" LengthField="NoOfEnumDataTypes"
/>
  <opc:Field Name="NoOfSimpleDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="SimpleDataTypes" TypeName="tns:SimpleTypeDescription"
LengthField="NoOfSimpleDataTypes" />
  <opc:Field Name="SchemaLocation" TypeName="opc:String" />
  <opc:Field Name="NoOfFileHeader" TypeName="opc:Int32" />
  <opc:Field Name="FileHeader" TypeName="tns:KeyValuePair"
LengthField="NoOfFileHeader" />
  <opc:Field Name="Body" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:EnumeratedType Name="PubSubState" LengthInBits="32">
  <opc:EnumeratedValue Name="Disabled" Value="0" />
  <opc:EnumeratedValue Name="Paused" Value="1" />
  <opc:EnumeratedValue Name="Operational" Value="2" />
  <opc:EnumeratedValue Name="Error" Value="3" />
</opc:EnumeratedType>

<opc:StructuredType Name="DataSetMetaDataType" BaseType="tns:DataTypeSchemaHeader">
  <opc:Field Name="NoOfNamespaces" TypeName="opc:Int32" />
  <opc:Field Name="Namespaces" TypeName="opc:String" LengthField="NoOfNamespaces" />
  <opc:Field Name="NoOfStructureDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="StructureDataTypes" TypeName="tns:StructureDescription"
LengthField="NoOfStructureDataTypes" />
  <opc:Field Name="NoOfEnumDataTypes" TypeName="opc:Int32" />

```

```

    <opc:Field Name="EnumDataTypes" TypeName="tns:EnumDescription" LengthField="NoOfEnumDataTypes"
  />
  <opc:Field Name="NoOfSimpleDataTypes" TypeName="opc:Int32" />
  <opc:Field Name="SimpleDataTypes" TypeName="tns:SimpleTypeDescription"
LengthField="NoOfSimpleDataTypes" />
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="NoOfFields" TypeName="opc:Int32" />
  <opc:Field Name="Fields" TypeName="tns:FieldMetaData" LengthField="NoOfFields" />
  <opc:Field Name="DataSetClassId" TypeName="opc:Guid" />
  <opc:Field Name="ConfigurationVersion" TypeName="tns:ConfigurationVersionDataType" />
</opc:StructuredType>

<opc:StructuredType Name="FieldMetaData" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="FieldFlags" TypeName="tns:DataSetFieldFlags" />
  <opc:Field Name="BuiltInType" TypeName="opc:Byte" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field
Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="MaxStringLength" TypeName="opc:UInt32" />
  <opc:Field Name="DataSetFieldId" TypeName="opc:Guid" />
  <opc:Field Name="NoOfProperties" TypeName="opc:Int32" />
  <opc:Field Name="Properties" TypeName="tns:KeyValuePair" LengthField="NoOfProperties" />
</opc:StructuredType>

<opc:EnumeratedType Name="DataSetFieldFlags" LengthInBits="16" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="PromotedField" Value="1" />
</opc:EnumeratedType>

<opc:StructuredType Name="ConfigurationVersionDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="MajorVersion" TypeName="opc:UInt32" />
  <opc:Field Name="MinorVersion" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="PublishedDataSetDataType"
BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="NoOfDataSetFolder" TypeName="opc:Int32" />
  <opc:Field Name="DataSetFolder" TypeName="opc:String" LengthField="NoOfDataSetFolder" />
  <opc:Field Name="DataSetMetaData" TypeName="tns:DataSetMetaData" />
  <opc:Field Name="NoOfExtensionFields" TypeName="opc:Int32" />
  <opc:Field Name="ExtensionFields" TypeName="tns:KeyValuePair" LengthField="NoOfExtensionFields" />
  <opc:Field Name="DataSetSource" TypeName="ua:ExtensionObject" />

```

</opc:StructuredType>

<opc:StructuredType Name="PublishedDataSetSourceDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="PublishedVariableDataType" BaseType="ua:ExtensionObject">

<opc:Field Name="PublishedVariable" TypeName="ua:NodeId" />

<opc:Field Name="AttributeId" TypeName="opc:UInt32" />

<opc:Field Name="SamplingIntervalHint" TypeName="opc:Double" />

<opc:Field

Name="DeadbandType" TypeName="opc:UInt32" />

<opc:Field Name="DeadbandValue" TypeName="opc:Double" />

<opc:Field Name="IndexRange" TypeName="opc:String" />

<opc:Field Name="SubstituteValue" TypeName="ua:Variant" />

<opc:Field Name="NoOfMetaDataProperties" TypeName="opc:Int32" />

<opc:Field Name="MetaDataProperties" TypeName="ua:QualifiedName"

LengthField="NoOfMetaDataProperties" />

</opc:StructuredType>

<opc:StructuredType Name="PublishedDataItemsDataType" BaseType="tns:PublishedDataSetSourceDataType">

<opc:Field Name="NoOfPublishedData" TypeName="opc:Int32" />

<opc:Field Name="PublishedData" TypeName="tns:PublishedVariableDataType"

LengthField="NoOfPublishedData" />

</opc:StructuredType>

<opc:StructuredType Name="PublishedEventsDataType" BaseType="tns:PublishedDataSetSourceDataType">

<opc:Field Name="EventNotifier" TypeName="ua:NodeId" />

<opc:Field Name="NoOfSelectedFields" TypeName="opc:Int32" />

<opc:Field Name="SelectedFields"

TypeName="tns:SimpleAttributeOperand" LengthField="NoOfSelectedFields" />

<opc:Field Name="Filter" TypeName="tns:ContentFilter" />

</opc:StructuredType>

<opc:EnumeratedType Name="DataSetFieldContentMask" LengthInBits="32" IsOptionSet="true">

<opc:EnumeratedValue Name="None" Value="0" />

<opc:EnumeratedValue Name="StatusCode" Value="1" />

<opc:EnumeratedValue Name="SourceTimestamp" Value="2" />

<opc:EnumeratedValue Name="ServerTimestamp" Value="4" />

<opc:EnumeratedValue Name="SourcePicoSeconds" Value="8" />

<opc:EnumeratedValue Name="ServerPicoSeconds" Value="16" />

<opc:EnumeratedValue Name="RawData" Value="32" />

</opc:EnumeratedType>

<opc:StructuredType Name="DataSetWriterDataType" BaseType="ua:ExtensionObject">

<opc:Field Name="Name" TypeName="opc:String" />

<opc:Field Name="Enabled" TypeName="opc:Boolean" />

<opc:Field Name="DataSetWriterId" TypeName="opc:UInt16" />

<opc:Field Name="DataSetFieldContentMask" TypeName="tns:DataSetFieldContentMask"

```

/>
  <opc:Field Name="KeyFrameCount" TypeName="opc:UInt32" />
  <opc:Field Name="DataSetName" TypeName="opc:String" />
  <opc:Field Name="NoOfDataSetWriterProperties" TypeName="opc:Int32" />
  <opc:Field Name="DataSetWriterProperties" TypeName="tns:KeyValuePair"
LengthField="NoOfDataSetWriterProperties" />
  <opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
  <opc:Field Name="MessageSettings" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="DataSetWriterTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataSetWriterMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="PubSubGroupDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
/>
  <opc:Field Name="SecurityGroupId" TypeName="opc:String" />
  <opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
  <opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
  <opc:Field Name="MaxNetworkMessageSize" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfGroupProperties" TypeName="opc:Int32" />
  <opc:Field Name="GroupProperties" TypeName="tns:KeyValuePair" LengthField="NoOfGroupProperties" />
</opc:StructuredType>

<opc:StructuredType Name="WriterGroupDataType" BaseType="tns:PubSubGroupDataType">
  <opc:Field Name="Name" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="Enabled" TypeName="opc:Boolean" SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="SecurityGroupId" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />

  <opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
  <opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
  <opc:Field Name="MaxNetworkMessageSize" TypeName="opc:UInt32"
SourceType="tns:PubSubGroupDataType" />
  <opc:Field Name="NoOfGroupProperties" TypeName="opc:Int32" />
  <opc:Field Name="GroupProperties" TypeName="tns:KeyValuePair" LengthField="NoOfGroupProperties" />
  <opc:Field Name="WriterGroupId" TypeName="opc:UInt16" />
  <opc:Field Name="PublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="KeepAliveTime" TypeName="opc:Double" />
  <opc:Field Name="Priority" TypeName="opc:Byte" />

```

```

<opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
<opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
<opc:Field Name="HeaderLayoutUri" TypeName="opc:String" />
<opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="MessageSettings"
TypeName="ua:ExtensionObject" />
<opc:Field Name="NoOfDataSetWriters" TypeName="opc:Int32" />
<opc:Field Name="DataSetWriters" TypeName="tns:DataSetWriterDataType"
LengthField="NoOfDataSetWriters" />
</opc:StructuredType>

<opc:StructuredType Name="WriterGroupTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="WriterGroupMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="PubSubConnectionDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="Name" TypeName="opc:String" />
<opc:Field Name="Enabled" TypeName="opc:Boolean" />
<opc:Field Name="PublisherId" TypeName="ua:Variant" />
<opc:Field Name="TransportProfileUri" TypeName="opc:String" />
<opc:Field Name="Address" TypeName="ua:ExtensionObject" />
<opc:Field Name="NoOfConnectionProperties" TypeName="opc:Int32" />
<opc:Field Name="ConnectionProperties" TypeName="tns:KeyValuePair"
LengthField="NoOfConnectionProperties" />
<opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="NoOfWriterGroups" TypeName="opc:Int32" />
<opc:Field Name="WriterGroups" TypeName="tns:WriterGroupDataType" LengthField="NoOfWriterGroups" />
<opc:Field Name="NoOfReaderGroups" TypeName="opc:Int32" />
<opc:Field Name="ReaderGroups" TypeName="tns:ReaderGroupDataType" LengthField="NoOfReaderGroups"
/>
</opc:StructuredType>

<opc:StructuredType Name="ConnectionTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="NetworkAddressDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="NetworkInterface" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="NetworkAddressUrlDataType" BaseType="tns:NetworkAddressDataType">
<opc:Field Name="NetworkInterface" TypeName="opc:String" SourceType="tns:NetworkAddressDataType" />
<opc:Field Name="Url" TypeName="opc:String"
/>
</opc:StructuredType>

<opc:StructuredType Name="ReaderGroupDataType" BaseType="tns:PubSubGroupDataType">

```

```

<opc:Field Name="Name" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />
<opc:Field Name="Enabled" TypeName="opc:Boolean" SourceType="tns:PubSubGroupDataType" />
<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
SourceTypes="tns:PubSubGroupDataType" />
<opc:Field Name="SecurityGroupId" TypeName="opc:String" SourceType="tns:PubSubGroupDataType" />
<opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
<opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
<opc:Field Name="MaxNetworkMessageSize" TypeName="opc:UInt32"
SourceTypes="tns:PubSubGroupDataType" />
<opc:Field Name="NoOfGroupProperties" TypeName="opc:Int32" />
<opc:Field Name="GroupProperties" TypeName="tns:KeyValuePair" LengthField="NoOfGroupProperties" />
<opc:Field Name="TransportSettings"
TypeName="ua:ExtensionObject" />
<opc:Field Name="MessageSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="NoOfDataSetReaders" TypeName="opc:Int32" />
<opc:Field Name="DataSetReaders" TypeName="tns:DataSetReaderDataType"
LengthField="NoOfDataSetReaders" />
</opc:StructuredType>

<opc:StructuredType Name="ReaderGroupTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="ReaderGroupMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataSetReaderDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="Name" TypeName="opc:String" />
<opc:Field Name="Enabled" TypeName="opc:Boolean" />
<opc:Field Name="PublisherId" TypeName="ua:Variant" />
<opc:Field Name="WriterGroupId" TypeName="opc:UInt16" />
<opc:Field Name="DataSetWriterId" TypeName="opc:UInt16" />
<opc:Field Name="DataSetMetaData" TypeName="tns:DataSetMetaDataType" />
<opc:Field
Name="DataSetFieldContentMask" TypeName="tns:DataSetFieldContentMask" />
<opc:Field Name="MessageReceiveTimeout" TypeName="opc:Double" />
<opc:Field Name="KeyFrameCount" TypeName="opc:UInt32" />
<opc:Field Name="HeaderLayoutUri" TypeName="opc:String" />
<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
<opc:Field Name="SecurityGroupId" TypeName="opc:String" />
<opc:Field Name="NoOfSecurityKeyServices" TypeName="opc:Int32" />
<opc:Field Name="SecurityKeyServices" TypeName="tns:EndpointDescription"
LengthField="NoOfSecurityKeyServices" />
<opc:Field Name="NoOfDataSetReaderProperties" TypeName="opc:Int32" />
<opc:Field Name="DataSetReaderProperties" TypeName="tns:KeyValuePair"
LengthField="NoOfDataSetReaderProperties" />
<opc:Field Name="TransportSettings" TypeName="ua:ExtensionObject" />
<opc:Field Name="MessageSettings" TypeName="ua:ExtensionObject" />

```



```

    <opc:Field Name="SubscribedDataSet" TypeName="ua:ExtensionObject"
  />
</opc:StructuredType>

<opc:StructuredType Name="DataSetReaderTransportDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataSetReaderMessageDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="SubscribedDataSetDataType" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="TargetVariablesDataType" BaseType="tns:SubscribedDataSetDataType">
  <opc:Field Name="NoOfTargetVariables" TypeName="opc:Int32" />
  <opc:Field Name="TargetVariables" TypeName="tns:FieldTargetDataType"
LengthField="NoOfTargetVariables" />
</opc:StructuredType>

<opc:StructuredType Name="FieldTargetDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="DataSetFieldId" TypeName="opc:Guid" />
  <opc:Field Name="ReceiverIndexRange" TypeName="opc:String" />
  <opc:Field Name="TargetNodeId" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />

  <opc:Field Name="WriteIndexRange" TypeName="opc:String" />
  <opc:Field Name="OverrideValueHandling" TypeName="tns:OverrideValueHandling" />
  <opc:Field Name="OverrideValue" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:EnumeratedType Name="OverrideValueHandling" LengthInBits="32">
  <opc:EnumeratedValue Name="Disabled" Value="0" />
  <opc:EnumeratedValue Name="LastUsableValue" Value="1" />
  <opc:EnumeratedValue Name="OverrideValue" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="SubscribedDataSetMirrorDataType" BaseType="tns:SubscribedDataSetDataType">
  <opc:Field Name="ParentNodeName" TypeName="opc:String" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
</opc:StructuredType>

<opc:StructuredType Name="PubSubConfigurationDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfPublishedDataSets" TypeName="opc:Int32"
  />
  <opc:Field Name="PublishedDataSets" TypeName="tns:PublishedDataSetDataType"
LengthField="NoOfPublishedDataSets" />

```

```

    <opc:Field Name="NoOfConnections" TypeName="opc:Int32" />
    <opc:Field Name="Connections" TypeName="tns:PubSubConnectionDataType"
LengthField="NoOfConnections" />
    <opc:Field Name="Enabled" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:EnumeratedType Name="DataSetOrderingType" LengthInBits="32">
    <opc:EnumeratedValue Name="Undefined" Value="0" />
    <opc:EnumeratedValue Name="AscendingWriterId" Value="1" />
    <opc:EnumeratedValue Name="AscendingWriterIdSingle" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="UadpNetworkMessageContentMask" LengthInBits="32" IsOptionSet="true">
    <opc:EnumeratedValue Name="None" Value="0" />
    <opc:EnumeratedValue Name="PublisherId" Value="1" />
    <opc:EnumeratedValue Name="GroupHeader" Value="2" />
    <opc:EnumeratedValue Name="WriterGroupId" Value="4" />
    <opc:EnumeratedValue
Name="GroupVersion" Value="8" />
    <opc:EnumeratedValue Name="NetworkMessageNumber" Value="16" />
    <opc:EnumeratedValue Name="SequenceNumber" Value="32" />
    <opc:EnumeratedValue Name="PayloadHeader" Value="64" />
    <opc:EnumeratedValue Name="Timestamp" Value="128" />
    <opc:EnumeratedValue Name="PicoSeconds" Value="256" />
    <opc:EnumeratedValue Name="DataSetClassId" Value="512" />
    <opc:EnumeratedValue Name="PromotedFields" Value="1024" />
</opc:EnumeratedType>

<opc:StructuredType Name="UadpWriterGroupMessageDataType"
BaseType="tns:WriterGroupMessageDataType">
    <opc:Field Name="GroupVersion" TypeName="opc:UInt32" />
    <opc:Field Name="DataSetOrdering" TypeName="tns:DataSetOrderingType" />
    <opc:Field Name="NetworkMessageContentMask" TypeName="tns:UadpNetworkMessageContentMask" />
    <opc:Field Name="SamplingOffset" TypeName="opc:Double" />
    <opc:Field Name="NoOfPublishingOffset" TypeName="opc:Int32" />
    <opc:Field Name="PublishingOffset"
TypeName="opc:Double" LengthField="NoOfPublishingOffset" />
</opc:StructuredType>

<opc:EnumeratedType Name="UadpDataSetMessageContentMask" LengthInBits="32" IsOptionSet="true">
    <opc:EnumeratedValue Name="None" Value="0" />
    <opc:EnumeratedValue Name="Timestamp" Value="1" />
    <opc:EnumeratedValue Name="PicoSeconds" Value="2" />
    <opc:EnumeratedValue Name="Status" Value="4" />
    <opc:EnumeratedValue Name="MajorVersion" Value="8" />
    <opc:EnumeratedValue Name="MinorVersion" Value="16" />
    <opc:EnumeratedValue Name="SequenceNumber" Value="32" />
</opc:EnumeratedType>

```

```

<opc:StructuredType Name="UadpDataSetWriterMessageDataType"
BaseType="tns:DataSetWriterMessageDataType">
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:UadpDataSetMessageContentMask" />
  <opc:Field Name="ConfiguredSize" TypeName="opc:UInt16" />
  <opc:Field Name="NetworkMessageNumber" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetOffset" TypeName="opc:UInt16" />
</opc:StructuredType>

<opc:StructuredType Name="UadpDataSetReaderMessageDataType"
BaseType="tns:DataSetReaderMessageDataType">
  <opc:Field Name="GroupVersion" TypeName="opc:UInt32" />
  <opc:Field Name="NetworkMessageNumber" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetOffset" TypeName="opc:UInt16" />
  <opc:Field Name="DataSetClassId" TypeName="opc:Guid" />
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:UadpNetworkMessageContentMask" />
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:UadpDataSetMessageContentMask" />
  <opc:Field Name="PublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="ReceiveOffset" TypeName="opc:Double" />
  <opc:Field Name="ProcessingOffset" TypeName="opc:Double" />
</opc:StructuredType>

<opc:EnumeratedType Name="JsonNetworkMessageContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="NetworkMessageHeader" Value="1" />

  <opc:EnumeratedValue Name="DataSetMessageHeader" Value="2" />
  <opc:EnumeratedValue Name="SingleDataSetMessage" Value="4" />
  <opc:EnumeratedValue Name="PublisherId" Value="8" />
  <opc:EnumeratedValue Name="DataSetClassId" Value="16" />
  <opc:EnumeratedValue Name="ReplyTo" Value="32" />
</opc:EnumeratedType>

<opc:StructuredType Name="JsonWriterGroupMessageDataType"
BaseType="tns:WriterGroupMessageDataType">
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:JsonNetworkMessageContentMask" />
</opc:StructuredType>

<opc:EnumeratedType Name="JsonDataSetMessageContentMask" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="DataSetWriterId" Value="1" />
  <opc:EnumeratedValue Name="MetaDataVersion" Value="2" />
  <opc:EnumeratedValue Name="SequenceNumber" Value="4" />
  <opc:EnumeratedValue Name="Timestamp" Value="8" />
  <opc:EnumeratedValue Name="Status" Value="16" />
</opc:EnumeratedType>

```

```
<opc:StructuredType Name="JsonDataSetWriterMessageDataType"
BaseType="tns:DataSetWriterMessageDataType">
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:JsonDataSetMessageContentMask" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="JsonDataSetReaderMessageDataType"
BaseType="tns:DataSetReaderMessageDataType">
  <opc:Field Name="NetworkMessageContentMask" TypeName="tns:JsonNetworkMessageContentMask" />
  <opc:Field Name="DataSetMessageContentMask" TypeName="tns:JsonDataSetMessageContentMask" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DatagramConnectionTransportDataType"
BaseType="tns:ConnectionTransportDataType">
  <opc:Field Name="DiscoveryAddress" TypeName="ua:ExtensionObject" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DatagramWriterGroupTransportDataType"
BaseType="tns:WriterGroupTransportDataType">
  <opc:Field Name="MessageRepeatCount" TypeName="opc:Byte" />
  <opc:Field Name="MessageRepeatDelay" TypeName="opc:Double"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="BrokerConnectionTransportDataType"
BaseType="tns:ConnectionTransportDataType">
  <opc:Field Name="ResourceUri" TypeName="opc:String" />
  <opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
</opc:StructuredType>
```

```
<opc:EnumeratedType Name="BrokerTransportQualityOfService" LengthInBits="32">
  <opc:EnumeratedValue Name="NotSpecified" Value="0" />
  <opc:EnumeratedValue Name="BestEffort" Value="1" />
  <opc:EnumeratedValue Name="AtLeastOnce" Value="2" />
  <opc:EnumeratedValue Name="AtMostOnce" Value="3" />
  <opc:EnumeratedValue Name="ExactlyOnce" Value="4" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="BrokerWriterGroupTransportDataType"
BaseType="tns:WriterGroupTransportDataType">
  <opc:Field Name="QueueName" TypeName="opc:String" />
  <opc:Field Name="ResourceUri" TypeName="opc:String" />
  <opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
  <opc:Field
Name="RequestedDeliveryGuarantee" TypeName="tns:BrokerTransportQualityOfService" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="BrokerDataSetWriterTransportDataType"
BaseType="tns:DataSetWriterTransportDataType">
```

```

<opc:Field Name="QueueName" TypeName="opc:String" />
<opc:Field Name="ResourceUri" TypeName="opc:String" />
<opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
<opc:Field Name="RequestedDeliveryGuarantee" TypeName="tns:BrokerTransportQualityOfService" />
<opc:Field Name="MetaDataQueueName" TypeName="opc:String" />
<opc:Field Name="MetaDataUpdateTime" TypeName="opc:Double" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="BrokerDataSetReaderTransportDataType"
BaseType="tns:DataSetReaderTransportDataType">
  <opc:Field Name="QueueName" TypeName="opc:String" />
  <opc:Field Name="ResourceUri" TypeName="opc:String" />
  <opc:Field Name="AuthenticationProfileUri" TypeName="opc:String" />
  <opc:Field Name="RequestedDeliveryGuarantee"
TypeName="tns:BrokerTransportQualityOfService" />
  <opc:Field Name="MetaDataQueueName" TypeName="opc:String" />
</opc:StructuredType>

```

```

<opc:EnumeratedType Name="DiagnosticsLevel" LengthInBits="32">
  <opc:EnumeratedValue Name="Basic" Value="0" />
  <opc:EnumeratedValue Name="Advanced" Value="1" />
  <opc:EnumeratedValue Name="Info" Value="2" />
  <opc:EnumeratedValue Name="Log" Value="3" />
  <opc:EnumeratedValue Name="Debug" Value="4" />
</opc:EnumeratedType>

```

```

<opc:EnumeratedType Name="PubSubDiagnosticsCounterClassification" LengthInBits="32">
  <opc:EnumeratedValue Name="Information" Value="0" />
  <opc:EnumeratedValue Name="Error" Value="1" />
</opc:EnumeratedType>

```

```

<opc:EnumeratedType Name="IdType" LengthInBits="32">
  <opc:Documentation>The type of identifier used in a node id.</opc:Documentation>
  <opc:EnumeratedValue Name="Numeric" Value="0" />
  <opc:EnumeratedValue Name="String" Value="1" />
  <opc:EnumeratedValue Name="Guid"
Value="2" />
  <opc:EnumeratedValue Name="Opaque" Value="3" />
</opc:EnumeratedType>

```

```

<opc:EnumeratedType Name="NodeClass" LengthInBits="32">
  <opc:Documentation>A mask specifying the class of the node.</opc:Documentation>
  <opc:EnumeratedValue Name="Unspecified" Value="0" />
  <opc:EnumeratedValue Name="Object" Value="1" />
  <opc:EnumeratedValue Name="Variable" Value="2" />
  <opc:EnumeratedValue Name="Method" Value="4" />
  <opc:EnumeratedValue Name="ObjectType" Value="8" />
  <opc:EnumeratedValue Name="VariableType" Value="16" />

```

```

<opc:EnumeratedValue Name="ReferenceType" Value="32" />
<opc:EnumeratedValue Name="DataType" Value="64" />
<opc:EnumeratedValue Name="View" Value="128" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="PermissionType" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="Browse" Value="1" />
  <opc:EnumeratedValue Name="ReadRolePermissions" Value="2"
/>
  <opc:EnumeratedValue Name="WriteAttribute" Value="4" />
  <opc:EnumeratedValue Name="WriteRolePermissions" Value="8" />
  <opc:EnumeratedValue Name="WriteHistorizing" Value="16" />
  <opc:EnumeratedValue Name="Read" Value="32" />
  <opc:EnumeratedValue Name="Write" Value="64" />
  <opc:EnumeratedValue Name="ReadHistory" Value="128" />
  <opc:EnumeratedValue Name="InsertHistory" Value="256" />
  <opc:EnumeratedValue Name="ModifyHistory" Value="512" />
  <opc:EnumeratedValue Name="DeleteHistory" Value="1024" />
  <opc:EnumeratedValue Name="ReceiveEvents" Value="2048" />
  <opc:EnumeratedValue Name="Call" Value="4096" />
  <opc:EnumeratedValue Name="AddReference" Value="8192" />
  <opc:EnumeratedValue Name="RemoveReference" Value="16384" />
  <opc:EnumeratedValue Name="DeleteNode" Value="32768" />
  <opc:EnumeratedValue Name="AddNode" Value="65536" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="AccessLevelType" LengthInBits="8" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="CurrentRead" Value="1" />
  <opc:EnumeratedValue Name="CurrentWrite" Value="2" />
  <opc:EnumeratedValue Name="HistoryRead" Value="4" />
  <opc:EnumeratedValue Name="HistoryWrite" Value="8" />
  <opc:EnumeratedValue Name="SemanticChange" Value="16" />
  <opc:EnumeratedValue Name="StatusWrite" Value="32" />
  <opc:EnumeratedValue Name="TimestampWrite" Value="64" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="AccessLevelExType" LengthInBits="32" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="CurrentRead" Value="1" />
  <opc:EnumeratedValue Name="CurrentWrite" Value="2" />
  <opc:EnumeratedValue Name="HistoryRead" Value="4" />
  <opc:EnumeratedValue Name="HistoryWrite" Value="8" />
  <opc:EnumeratedValue Name="SemanticChange" Value="16" />
  <opc:EnumeratedValue Name="StatusWrite" Value="32" />
  <opc:EnumeratedValue

```

```

Name="TimestampWrite" Value="64" />
  <opc:EnumeratedValue Name="NonatomicRead" Value="256" />
  <opc:EnumeratedValue Name="NonatomicWrite" Value="512" />
  <opc:EnumeratedValue Name="WriteFullArrayOnly" Value="1024" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="EventNotifierType" LengthInBits="8" IsOptionSet="true">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="SubscribeToEvents" Value="1" />
  <opc:EnumeratedValue Name="HistoryRead" Value="4" />
  <opc:EnumeratedValue Name="HistoryWrite" Value="8" />
</opc:EnumeratedType>

<opc:StructuredType Name="RolePermissionType" BaseType="ua:ExtensionObject">
  <opc:Field Name="RoleId" TypeName="ua:NodeId" />
  <opc:Field Name="Permissions" TypeName="tns:PermissionType" />
</opc:StructuredType>

<opc:EnumeratedType Name="AccessRestrictionType" LengthInBits="32">
  <opc:EnumeratedValue Name="SigningRequired" Value="0" />
  <opc:EnumeratedValue Name="EncryptionRequired" Value="1" />
  <opc:EnumeratedValue Name="SessionRequired" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="StructureType" LengthInBits="32">
  <opc:EnumeratedValue Name="Structure" Value="0" />
  <opc:EnumeratedValue Name="StructureWithOptionalFields" Value="1" />
  <opc:EnumeratedValue Name="Union" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="StructureField" BaseType="ua:ExtensionObject">
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="MaxStringLength" TypeName="opc:UInt32" />
  <opc:Field Name="IsOptional" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="StructureDefinition"
BaseType="tns:DataTypeDefinition">
  <opc:Field Name="DefaultEncodingId" TypeName="ua:NodeId" />
  <opc:Field Name="BaseDataType" TypeName="ua:NodeId" />
  <opc:Field Name="StructureType" TypeName="tns:StructureType" />
  <opc:Field Name="NoOfFields" TypeName="opc:Int32" />

```

```

    <opc:Field Name="Fields" TypeName="tns:StructureField" LengthField="NoOfFields" />
</opc:StructuredType>

<opc:StructuredType Name="EnumDefinition" BaseType="tns:DataTypeDefinition">
  <opc:Field Name="NoOfFields" TypeName="opc:Int32" />
  <opc:Field Name="Fields" TypeName="tns:EnumField" LengthField="NoOfFields" />
</opc:StructuredType>

<opc:StructuredType Name="Node" BaseType="ua:ExtensionObject">
  <opc:Documentation>Specifies the attributes which belong to all nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" />

  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
</opc:StructuredType>

<opc:StructuredType Name="InstanceNode" BaseType="tns:Node">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field
Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32"
/>
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />

```


</opc:StructuredType>

```
<opc:StructuredType Name="TypeNode" BaseType="tns:Node">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32"
/>
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ObjectNode" BaseType="tns:InstanceNode">
  <opc:Documentation>Specifies the attributes which belong to object nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask"
TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ObjectTypeNode" BaseType="tns:TypeNode">
  <opc:Documentation>Specifies the attributes which belong to object type nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
```

```

<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
<opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
<opc:Field Name="AccessRestrictions" TypeName="opc:UInt16"
SourceType="tns:Node" />
<opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
<opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="VariableNode" BaseType="tns:InstanceNode">
<opc:Documentation>Specifies the attributes which belong to variable nodes.</opc:Documentation>
<opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
<opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
<opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node"
/>
<opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
<opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
<opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
<opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
<opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
<opc:Field Name="Value" TypeName="ua:Variant" />
<opc:Field Name="DataType" TypeName="ua:NodeId" />
<opc:Field Name="ValueRank" TypeName="opc:Int32" />
<opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
<opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
<opc:Field Name="AccessLevel" TypeName="opc:Byte"
/>
<opc:Field Name="UserAccessLevel" TypeName="opc:Byte" />
<opc:Field Name="MinimumSamplingInterval" TypeName="opc:Double" />
<opc:Field Name="Historizing" TypeName="opc:Boolean" />
<opc:Field Name="AccessLevelEx" TypeName="opc:UInt32" />

```

</opc:StructuredType>

```
<opc:StructuredType Name="VariableTypeNode" BaseType="tns:TypeNode">
  <opc:Documentation>Specifies the attributes which belong to variable type nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32"
SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="Value" TypeName="ua:Variant" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="IsAbstract"
TypeName="opc:Boolean" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ReferenceTypeNode" BaseType="tns:TypeNode">
  <opc:Documentation>Specifies the attributes which belong to reference type nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field
Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
```

```

<opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
<opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
<opc:Field Name="Symmetric" TypeName="opc:Boolean" />
<opc:Field Name="InverseName" TypeName="ua:LocalizedText" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="MethodNode" BaseType="tns:InstanceNode">
  <opc:Documentation>Specifies the attributes which belong to method nodes.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName"
SourceTypes="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="Executable"
TypeName="opc:Boolean" />
  <opc:Field Name="UserExecutable" TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ViewNode" BaseType="tns:InstanceNode">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32"
/>
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />

```

```

<opc:Field Name="ContainsNoLoops" TypeName="opc:Boolean" />
<opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="DataTypeNode" BaseType="tns:TypeNode">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:Node" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" SourceType="tns:Node" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" SourceType="tns:Node" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:Node" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:Node"
/>
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:Node" />
  <opc:Field Name="NoOfRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="RolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfRolePermissions" />
  <opc:Field Name="NoOfUserRolePermissions" TypeName="opc:Int32" />
  <opc:Field Name="UserRolePermissions" TypeName="tns:RolePermissionType"
LengthField="NoOfUserRolePermissions" />
  <opc:Field Name="AccessRestrictions" TypeName="opc:UInt16" SourceType="tns:Node" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceNode" LengthField="NoOfReferences" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
  <opc:Field Name="DataTypeDefinition" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="ReferenceNode" BaseType="ua:ExtensionObject">
  <opc:Documentation>Specifies a reference which belongs to a node.</opc:Documentation>
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsInverse" TypeName="opc:Boolean" />
  <opc:Field Name="TargetId" TypeName="ua:ExpandedNodeId" />
</opc:StructuredType>

<opc:StructuredType Name="Argument" BaseType="ua:ExtensionObject">
  <opc:Documentation>An argument for a method.</opc:Documentation>
  <opc:Field Name="Name" TypeName="opc:String" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:StructuredType Name="EnumValueType" BaseType="ua:ExtensionObject">
  <opc:Documentation>A mapping between a value of an enumerated type
and a name and description.</opc:Documentation>
  <opc:Field Name="Value" TypeName="opc:Int64" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />

```

```

    <opc:Field Name="Description" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:StructuredType Name="EnumField" BaseType="tns:EnumValueType">
  <opc:Field Name="Value" TypeName="opc:Int64" SourceType="tns:EnumValueType" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:EnumValueType" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:EnumValueType" />
  <opc:Field Name="Name" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="OptionSet" BaseType="ua:ExtensionObject">
  <opc:Documentation>This abstract Structured DataType is the base DataType for all DataTypes representing a bit
mask.</opc:Documentation>
  <opc:Field Name="Value" TypeName="opc:ByteString" />
  <opc:Field Name="ValidBits" TypeName="opc:ByteString"
/>
</opc:StructuredType>

<opc:StructuredType Name="Union" BaseType="ua:ExtensionObject">
  <opc:Documentation>This abstract DataType is the base DataType for all union
DataTypes.</opc:Documentation>
</opc:StructuredType>

<opc:OpaqueType Name="NormalizedString">
  <opc:Documentation>A string normalized based on the rules in the unicode specification.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="DecimalString">
  <opc:Documentation>An arbitraty numeric value.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="DurationString">
  <opc:Documentation>A period of time formatted as defined in ISO 8601-2000.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="TimeString">
  <opc:Documentation>A time formatted as defined in ISO 8601-2000.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="DateString">
  <opc:Documentation>A date formatted as defined in ISO 8601-2000.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType
Name="Duration">
  <opc:Documentation>A period of time measured in milliseconds.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:OpaqueType Name="UtcTime">
  <opc:Documentation>A date/time value specified in Universal Coordinated Time (UTC).</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="LocaleId">
  <opc:Documentation>An identifier for a user locale.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="TimeZoneDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Offset" TypeName="opc:Int16" />
  <opc:Field Name="DaylightSavingInOffset" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:OpaqueType Name="Index">
  <opc:Documentation>This primitive data type is a UInt32 that identifies an element of an
array.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="IntegerId">
  <opc:Documentation>A numeric identifier for an object.</opc:Documentation>
</opc:OpaqueType>

<opc:EnumeratedType Name="ApplicationType"
LengthInBits="32">
  <opc:Documentation>The types of applications.</opc:Documentation>
  <opc:EnumeratedValue Name="Server" Value="0" />
  <opc:EnumeratedValue Name="Client" Value="1" />
  <opc:EnumeratedValue Name="ClientAndServer" Value="2" />
  <opc:EnumeratedValue Name="DiscoveryServer" Value="3" />
</opc:EnumeratedType>

<opc:StructuredType Name="ApplicationDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>Describes an application and how to find it.</opc:Documentation>
  <opc:Field Name="ApplicationUri" TypeName="opc:String" />
  <opc:Field Name="ProductUri" TypeName="opc:String" />
  <opc:Field Name="ApplicationName" TypeName="ua:LocalizedText" />
  <opc:Field Name="ApplicationType" TypeName="tns:ApplicationType" />
  <opc:Field Name="GatewayServerUri" TypeName="opc:String" />
  <opc:Field Name="DiscoveryProfileUri" TypeName="opc:String" />
  <opc:Field Name="NoOfDiscoveryUrls" TypeName="opc:Int32" />
  <opc:Field Name="DiscoveryUrls"
TypeName="opc:String" LengthField="NoOfDiscoveryUrls" />
</opc:StructuredType>

<opc:StructuredType Name="RequestHeader" BaseType="ua:ExtensionObject">
  <opc:Documentation>The header passed with every server request.</opc:Documentation>
  <opc:Field Name="AuthenticationToken" TypeName="ua:NodeId" />
  <opc:Field Name="Timestamp" TypeName="opc:DateTime" />

```

```

<opc:Field Name="RequestHandle" TypeName="opc:UInt32" />
<opc:Field Name="ReturnDiagnostics" TypeName="opc:UInt32" />
<opc:Field Name="AuditEntryId" TypeName="opc:String" />
<opc:Field Name="TimeoutHint" TypeName="opc:UInt32" />
<opc:Field Name="AdditionalHeader" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="ResponseHeader" BaseType="ua:ExtensionObject">
  <opc:Documentation>The header passed with every server response.</opc:Documentation>
  <opc:Field Name="Timestamp" TypeName="opc:DateTime" />
  <opc:Field Name="RequestHandle" TypeName="opc:UInt32"
/>
  <opc:Field Name="ServiceResult" TypeName="ua:StatusCode" />
  <opc:Field Name="ServiceDiagnostics" TypeName="ua:DiagnosticInfo" />
  <opc:Field Name="NoOfStringTable" TypeName="opc:Int32" />
  <opc:Field Name="StringTable" TypeName="opc:String" LengthField="NoOfStringTable" />
  <opc:Field Name="AdditionalHeader" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:OpaqueType Name="VersionTime">
</opc:OpaqueType>

<opc:StructuredType Name="ServiceFault" BaseType="ua:ExtensionObject">
  <opc:Documentation>The response returned by all services when there is a service level
error.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="SessionlessInvokeRequestType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfUrisVersion" TypeName="opc:Int32" />
  <opc:Field Name="UrisVersion" TypeName="opc:UInt32" LengthField="NoOfUrisVersion" />
  <opc:Field Name="NoOfNamespaceUris"
TypeName="opc:Int32" />
  <opc:Field Name="NamespaceUris" TypeName="opc:String" LengthField="NoOfNamespaceUris" />
  <opc:Field Name="NoOfServerUris" TypeName="opc:Int32" />
  <opc:Field Name="ServerUris" TypeName="opc:String" LengthField="NoOfServerUris" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="ServiceId" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="SessionlessInvokeResponseType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfNamespaceUris" TypeName="opc:Int32" />
  <opc:Field Name="NamespaceUris" TypeName="opc:String" LengthField="NoOfNamespaceUris" />
  <opc:Field Name="NoOfServerUris" TypeName="opc:Int32" />
  <opc:Field Name="ServerUris" TypeName="opc:String" LengthField="NoOfServerUris" />
  <opc:Field Name="ServiceId" TypeName="opc:UInt32" />
</opc:StructuredType>

```



```

<opc:StructuredType
Name="FindServersRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Finds the servers known to the discovery server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="NoOfServerUris" TypeName="opc:Int32" />
  <opc:Field Name="ServerUris" TypeName="opc:String" LengthField="NoOfServerUris" />
</opc:StructuredType>

<opc:StructuredType Name="FindServersResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Finds the servers known to the discovery server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfServers" TypeName="opc:Int32" />
  <opc:Field Name="Servers" TypeName="tns:ApplicationDescription" LengthField="NoOfServers"
/>
</opc:StructuredType>

<opc:StructuredType Name="ServerOnNetwork" BaseType="ua:ExtensionObject">
  <opc:Field Name="RecordId" TypeName="opc:UInt32" />
  <opc:Field Name="ServerName" TypeName="opc:String" />
  <opc:Field Name="DiscoveryUrl" TypeName="opc:String" />
  <opc:Field Name="NoOfServerCapabilities" TypeName="opc:Int32" />
  <opc:Field Name="ServerCapabilities" TypeName="opc:String" LengthField="NoOfServerCapabilities" />
</opc:StructuredType>

<opc:StructuredType Name="FindServersOnNetworkRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="StartingRecordId" TypeName="opc:UInt32" />
  <opc:Field Name="MaxRecordsToReturn" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfServerCapabilityFilter" TypeName="opc:Int32" />
  <opc:Field Name="ServerCapabilityFilter" TypeName="opc:String" LengthField="NoOfServerCapabilityFilter"
/>
</opc:StructuredType>

<opc:StructuredType Name="FindServersOnNetworkResponse"
BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="LastCounterResetTime" TypeName="opc:DateTime" />
  <opc:Field Name="NoOfServers" TypeName="opc:Int32" />
  <opc:Field Name="Servers" TypeName="tns:ServerOnNetwork" LengthField="NoOfServers" />
</opc:StructuredType>

<opc:OpaqueType Name="ApplicationInstanceCertificate">
  <opc:Documentation>A certificate for an instance of an application.</opc:Documentation>
</opc:OpaqueType>

```

```
<opc:EnumeratedType Name="MessageSecurityMode" LengthInBits="32">
  <opc:Documentation>The type of security to use on a message.</opc:Documentation>
  <opc:EnumeratedValue Name="Invalid" Value="0" />
  <opc:EnumeratedValue Name="None" Value="1" />
  <opc:EnumeratedValue Name="Sign" Value="2" />
  <opc:EnumeratedValue Name="SignAndEncrypt" Value="3" />
</opc:EnumeratedType>
```

```
<opc:EnumeratedType Name="UserTokenType" LengthInBits="32">
```

```
<opc:Documentation>The possible user token types.</opc:Documentation>
```

```
<opc:EnumeratedValue Name="Anonymous" Value="0" />
<opc:EnumeratedValue Name="UserName" Value="1" />
<opc:EnumeratedValue Name="Certificate" Value="2" />
<opc:EnumeratedValue Name="IssuedToken" Value="3" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="UserTokenPolicy" BaseType="ua:ExtensionObject">
```

```
<opc:Documentation>Describes a user token that can be used with a server.</opc:Documentation>
<opc:Field Name="PolicyId" TypeName="opc:String" />
<opc:Field Name="TokenType" TypeName="tns:UserTokenType" />
<opc:Field Name="IssuedTokenType" TypeName="opc:String" />
<opc:Field Name="IssuerEndpointUrl" TypeName="opc:String" />
<opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="EndpointDescription" BaseType="ua:ExtensionObject">
```

```
<opc:Documentation>The description of an endpoint that can be used to access a server.</opc:Documentation>
<opc:Field Name="EndpointUrl" TypeName="opc:String" />
<opc:Field Name="Server" TypeName="tns:ApplicationDescription" />
<opc:Field Name="ServerCertificate" TypeName="opc:ByteString" />
<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
<opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
<opc:Field Name="NoOfUserIdentityTokens" TypeName="opc:Int32" />
<opc:Field Name="UserIdentityTokens" TypeName="tns:UserTokenPolicy"
LengthField="NoOfUserIdentityTokens" />
<opc:Field Name="TransportProfileUri" TypeName="opc:String" />
<opc:Field Name="SecurityLevel" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="GetEndpointsRequest" BaseType="ua:ExtensionObject">
```

```
<opc:Documentation>Gets the endpoints used by the server.</opc:Documentation>
<opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
<opc:Field Name="EndpointUrl" TypeName="opc:String" />
<opc:Field Name="NoOfLocaleIds"
TypeName="opc:Int32" />
<opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
```

```

    <opc:Field Name="NoOfProfileUris" TypeName="opc:Int32" />
    <opc:Field Name="ProfileUris" TypeName="opc:String" LengthField="NoOfProfileUris" />
</opc:StructuredType>

<opc:StructuredType Name="GetEndpointsResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Gets the endpoints used by the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfEndpoints" TypeName="opc:Int32" />
  <opc:Field Name="Endpoints" TypeName="tns:EndpointDescription" LengthField="NoOfEndpoints" />
</opc:StructuredType>

<opc:StructuredType Name="RegisteredServer" BaseType="ua:ExtensionObject">
  <opc:Documentation>The information required to register a server with a discovery server.</opc:Documentation>
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="ProductUri" TypeName="opc:String" />
  <opc:Field Name="NoOfServerNames" TypeName="opc:Int32" />
  <opc:Field Name="ServerNames" TypeName="ua:LocalizedText" LengthField="NoOfServerNames" />
  <opc:Field Name="ServerType" TypeName="tns:ApplicationType" />
  <opc:Field Name="GatewayServerUri" TypeName="opc:String" />
  <opc:Field Name="NoOfDiscoveryUrls" TypeName="opc:Int32" />
  <opc:Field Name="DiscoveryUrls" TypeName="opc:String" LengthField="NoOfDiscoveryUrls" />
  <opc:Field Name="SemaphoreFilePath" TypeName="opc:String" />
  <opc:Field Name="IsOnline" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterServerRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers a server with the discovery server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="Server" TypeName="tns:RegisteredServer" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterServerResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers a server with the discovery server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="DiscoveryConfiguration" BaseType="ua:ExtensionObject">
  <opc:Documentation>A base type for discovery configuration information.</opc:Documentation>
</opc:StructuredType>

<opc:StructuredType Name="MdnsDiscoveryConfiguration" BaseType="tns:DiscoveryConfiguration">
  <opc:Documentation>The discovery information needed for mDNS registration.</opc:Documentation>
  <opc:Field Name="MdnsServerName" TypeName="opc:String" />
  <opc:Field Name="NoOfServerCapabilities" TypeName="opc:Int32" />
  <opc:Field Name="ServerCapabilities" TypeName="opc:String" LengthField="NoOfServerCapabilities" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="RegisterServer2Request" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader"
/>
  <opc:Field Name="Server" TypeName="tns:RegisteredServer" />
  <opc:Field Name="NoOfDiscoveryConfiguration" TypeName="opc:Int32" />
  <opc:Field Name="DiscoveryConfiguration" TypeName="ua:ExtensionObject"
LengthField="NoOfDiscoveryConfiguration" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterServer2Response" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfConfigurationResults" TypeName="opc:Int32" />
  <opc:Field Name="ConfigurationResults" TypeName="ua:StatusCode"
LengthField="NoOfConfigurationResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:EnumeratedType Name="SecurityTokenRequestType" LengthInBits="32">
  <opc:Documentation>Indicates whether a token if being created or renewed.</opc:Documentation>

  <opc:EnumeratedValue Name="Issue" Value="0" />
  <opc:EnumeratedValue Name="Renew" Value="1" />
</opc:EnumeratedType>

<opc:StructuredType Name="ChannelSecurityToken" BaseType="ua:ExtensionObject">
  <opc:Documentation>The token that identifies a set of keys for an active secure channel.</opc:Documentation>
  <opc:Field Name="ChannelId" TypeName="opc:UInt32" />
  <opc:Field Name="TokenId" TypeName="opc:UInt32" />
  <opc:Field Name="CreatedAt" TypeName="opc:DateTime" />
  <opc:Field Name="RevisedLifetime" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="OpenSecureChannelRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Creates a secure channel with a server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ClientProtocolVersion" TypeName="opc:UInt32" />
  <opc:Field Name="RequestType" TypeName="tns:SecurityTokenRequestType" />
  <opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode"
/>
  <opc:Field Name="ClientNonce" TypeName="opc:ByteString" />
  <opc:Field Name="RequestedLifetime" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="OpenSecureChannelResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Creates a secure channel with a server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="ServerProtocolVersion" TypeName="opc:UInt32" />

```

```

    <opc:Field Name="SecurityToken" TypeName="tns:ChannelSecurityToken" />
    <opc:Field Name="ServerNonce" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSecureChannelRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Closes a secure channel.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSecureChannelResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Closes
a secure channel.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="SignedSoftwareCertificate" BaseType="ua:ExtensionObject">
  <opc:Documentation>A software certificate with a digital signature.</opc:Documentation>
  <opc:Field Name="CertificateData" TypeName="opc:ByteString" />
  <opc:Field Name="Signature" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:OpaqueType Name="SessionAuthenticationToken">
  <opc:Documentation>A unique identifier for a session used to authenticate requests.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="SignatureData" BaseType="ua:ExtensionObject">
  <opc:Documentation>A digital signature.</opc:Documentation>
  <opc:Field Name="Algorithm" TypeName="opc:String" />
  <opc:Field Name="Signature" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="CreateSessionRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Creates a new session with the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ClientDescription" TypeName="tns:ApplicationDescription" />
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="SessionName" TypeName="opc:String" />
  <opc:Field Name="ClientNonce" TypeName="opc:ByteString" />
  <opc:Field Name="ClientCertificate" TypeName="opc:ByteString" />
  <opc:Field Name="RequestedSessionTimeout" TypeName="opc:Double" />
  <opc:Field Name="MaxResponseMessageSize" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="CreateSessionResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Creates a new session with the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="SessionId" TypeName="ua:NodeId"

```

```

/>
  <opc:Field Name="AuthenticationToken" TypeName="ua:NodeId" />
  <opc:Field Name="RevisedSessionTimeout" TypeName="opc:Double" />
  <opc:Field Name="ServerNonce" TypeName="opc:ByteString" />
  <opc:Field Name="ServerCertificate" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfServerEndpoints" TypeName="opc:Int32" />
  <opc:Field Name="ServerEndpoints" TypeName="tns:EndpointDescription"
LengthField="NoOfServerEndpoints" />
  <opc:Field Name="NoOfServerSoftwareCertificates" TypeName="opc:Int32" />
  <opc:Field Name="ServerSoftwareCertificates" TypeName="tns:SignedSoftwareCertificate"
LengthField="NoOfServerSoftwareCertificates" />
  <opc:Field Name="ServerSignature" TypeName="tns:SignatureData" />
  <opc:Field Name="MaxRequestMessageSize" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="UserIdentityToken" BaseType="ua:ExtensionObject">
  <opc:Documentation>A base type for a user identity token.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="AnonymousIdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing an anonymous user.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
</opc:StructuredType>

<opc:StructuredType Name="UserNameIdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing a user identified by a user name and password.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
  <opc:Field Name="UserName" TypeName="opc:String" />
  <opc:Field Name="Password" TypeName="opc:ByteString" />
  <opc:Field Name="EncryptionAlgorithm" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="X509IdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing a user identified
by an X509 certificate.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
  <opc:Field Name="CertificateData" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="IssuedIdentityToken" BaseType="tns:UserIdentityToken">
  <opc:Documentation>A token representing a user identified by a WS-Security XML token.</opc:Documentation>
  <opc:Field Name="PolicyId" TypeName="opc:String" SourceType="tns:UserIdentityToken" />
  <opc:Field Name="TokenData" TypeName="opc:ByteString" />
  <opc:Field Name="EncryptionAlgorithm" TypeName="opc:String" />
</opc:StructuredType>

<opc:OpaqueType Name="RsaEncryptedSecret">

```

```

</opc:OpaqueType>

<opc:StructuredType Name="ActivateSessionRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Activates a session with the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ClientSignature"
  TypeName="tns:SignatureData" />
  <opc:Field Name="NoOfClientSoftwareCertificates" TypeName="opc:Int32" />
  <opc:Field Name="ClientSoftwareCertificates" TypeName="tns:SignedSoftwareCertificate"
  LengthField="NoOfClientSoftwareCertificates" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds" TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="UserIdentityToken" TypeName="ua:ExtensionObject" />
  <opc:Field Name="UserTokenSignature" TypeName="tns:SignatureData" />
</opc:StructuredType>

<opc:StructuredType Name="ActivateSessionResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Activates a session with the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="ServerNonce" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults"
  />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSessionRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Closes a session with the server.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="DeleteSubscriptions" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="CloseSessionResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Closes a session with the server.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:StructuredType Name="CancelRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Cancels an outstanding request.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field
  Name="RequestHandle" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="CancelResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Cancels an outstanding request.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />

```

```

    <opc:Field Name="CancelCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:EnumeratedType Name="NodeAttributesMask" LengthInBits="32">
  <opc:Documentation>The bits used to specify default attributes for a new node.</opc:Documentation>
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="AccessLevel" Value="1" />
  <opc:EnumeratedValue Name="ArrayDimensions" Value="2" />
  <opc:EnumeratedValue Name="BrowseName" Value="4" />
  <opc:EnumeratedValue Name="ContainsNoLoops" Value="8" />
  <opc:EnumeratedValue Name="DataType" Value="16" />
  <opc:EnumeratedValue Name="Description" Value="32" />
  <opc:EnumeratedValue Name="DisplayName" Value="64"
/>
  <opc:EnumeratedValue Name="EventNotifier" Value="128" />
  <opc:EnumeratedValue Name="Executable" Value="256" />
  <opc:EnumeratedValue Name="Historizing" Value="512" />
  <opc:EnumeratedValue Name="InverseName" Value="1024" />
  <opc:EnumeratedValue Name="IsAbstract" Value="2048" />
  <opc:EnumeratedValue Name="MinimumSamplingInterval" Value="4096" />
  <opc:EnumeratedValue Name="NodeClass" Value="8192" />
  <opc:EnumeratedValue Name="NodeId" Value="16384" />
  <opc:EnumeratedValue Name="Symmetric" Value="32768" />
  <opc:EnumeratedValue Name="UserAccessLevel" Value="65536" />
  <opc:EnumeratedValue Name="UserExecutable" Value="131072" />
  <opc:EnumeratedValue Name="UserWriteMask" Value="262144" />
  <opc:EnumeratedValue Name="ValueRank" Value="524288" />
  <opc:EnumeratedValue Name="WriteMask" Value="1048576" />
  <opc:EnumeratedValue Name="Value" Value="2097152" />
  <opc:EnumeratedValue Name="DataTypeDefinition" Value="4194304" />
  <opc:EnumeratedValue
Name="RolePermissions" Value="8388608" />
  <opc:EnumeratedValue Name="AccessRestrictions" Value="16777216" />
  <opc:EnumeratedValue Name="All" Value="33554431" />
  <opc:EnumeratedValue Name="BaseNode" Value="26501220" />
  <opc:EnumeratedValue Name="Object" Value="26501348" />
  <opc:EnumeratedValue Name="ObjectType" Value="26503268" />
  <opc:EnumeratedValue Name="Variable" Value="26571383" />
  <opc:EnumeratedValue Name="VariableType" Value="28600438" />
  <opc:EnumeratedValue Name="Method" Value="26632548" />
  <opc:EnumeratedValue Name="ReferenceType" Value="26537060" />
  <opc:EnumeratedValue Name="View" Value="26501356" />
</opc:EnumeratedType>

<opc:StructuredType Name="NodeAttributes" BaseType="ua:ExtensionObject">
  <opc:Documentation>The base attributes for all nodes.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />

```



```

    <opc:Field
Name="Description" TypeName="ua:LocalizedText" />
    <opc:Field Name="WriteMask" TypeName="opc:UInt32" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="ObjectAttributes" BaseType="tns:NodeAttributes">
    <opc:Documentation>The attributes for an object node.</opc:Documentation>
    <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
    <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
    <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>

<opc:StructuredType Name="VariableAttributes" BaseType="tns:NodeAttributes">
    <opc:Documentation>The
attributes for a variable node.</opc:Documentation>
    <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
    <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
    <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="Value" TypeName="ua:Variant" />
    <opc:Field Name="DataType" TypeName="ua:NodeId" />
    <opc:Field Name="ValueRank" TypeName="opc:Int32" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
    <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
    <opc:Field Name="AccessLevel" TypeName="opc:Byte" />
    <opc:Field Name="UserAccessLevel" TypeName="opc:Byte" />
    <opc:Field
Name="MinimumSamplingInterval" TypeName="opc:Double" />
    <opc:Field Name="Historizing" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="MethodAttributes" BaseType="tns:NodeAttributes">
    <opc:Documentation>The attributes for a method node.</opc:Documentation>
    <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
    <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
    <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
    <opc:Field Name="Executable" TypeName="opc:Boolean" />
    <opc:Field Name="UserExecutable" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="ObjectTypeAttributes" BaseType="tns:NodeAttributes">

```

```

<opc:Documentation>The attributes for an object type node.</opc:Documentation>
<opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
<opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
<opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="VariableTypeAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for a variable type node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes"
/>
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Value" TypeName="ua:Variant" />
  <opc:Field Name="DataType" TypeName="ua:NodeId" />
  <opc:Field Name="ValueRank" TypeName="opc:Int32" />
  <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
  <opc:Field Name="ArrayDimensions" TypeName="opc:UInt32" LengthField="NoOfArrayDimensions" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="ReferenceTypeAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for a reference type node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText"
SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
  <opc:Field Name="Symmetric" TypeName="opc:Boolean" />
  <opc:Field Name="InverseName" TypeName="ua:LocalizedText" />
</opc:StructuredType>

<opc:StructuredType Name="DataTypeAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for a data type node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />

  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="IsAbstract" TypeName="opc:Boolean" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ViewAttributes" BaseType="tns:NodeAttributes">
  <opc:Documentation>The attributes for a view node.</opc:Documentation>
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="ContainsNoLoops" TypeName="opc:Boolean" />
  <opc:Field Name="EventNotifier" TypeName="opc:Byte" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="GenericAttributeValue" BaseType="ua:ExtensionObject">
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="Value" TypeName="ua:Variant" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="GenericAttributes" BaseType="tns:NodeAttributes">
  <opc:Field Name="SpecifiedAttributes" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" SourceType="tns:NodeAttributes" />
  <opc:Field Name="WriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="UserWriteMask" TypeName="opc:UInt32" SourceType="tns:NodeAttributes" />
  <opc:Field Name="NoOfAttributeValues" TypeName="opc:Int32" />
  <opc:Field Name="AttributeValues" TypeName="tns:GenericAttributeValue" />
  LengthField="NoOfAttributeValues" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="AddNodesItem" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to add a node to the server address space.</opc:Documentation>
  <opc:Field Name="ParentNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="RequestedNewNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" />
  <opc:Field Name="NodeAttributes" TypeName="ua:ExtensionObject" />
  <opc:Field Name="TypeDefinition" TypeName="ua:ExpandedNodeId" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="AddNodesResult" BaseType="ua:ExtensionObject">
  <opc:Documentation>A result of an add node operation.</opc:Documentation>
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="AddedNodeId" TypeName="ua:NodeId" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="AddNodesRequest"

```

```

BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more nodes to the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToAdd" TypeName="opc:Int32" />
  <opc:Field Name="NodesToAdd" TypeName="tns:AddNodesItem" LengthField="NoOfNodesToAdd" />
</opc:StructuredType>

<opc:StructuredType Name="AddNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more nodes to the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:AddNodesResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="AddReferencesItem"
BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to add a reference to the server address space.</opc:Documentation>
  <opc:Field Name="SourceNodeId" TypeName="ua:NodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean" />
  <opc:Field Name="TargetServerUri" TypeName="opc:String" />
  <opc:Field Name="TargetNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="TargetNodeClass" TypeName="tns:NodeClass" />
</opc:StructuredType>

<opc:StructuredType Name="AddReferencesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more references to the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfReferencesToAdd" TypeName="opc:Int32" />
  <opc:Field Name="ReferencesToAdd" TypeName="tns:AddReferencesItem"
LengthField="NoOfReferencesToAdd" />
</opc:StructuredType>

<opc:StructuredType
Name="AddReferencesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Adds one or more references to the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteNodesItem" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to delete a node to the server address space.</opc:Documentation>
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />

```

```

    <opc:Field Name="DeleteTargetReferences" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteNodesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete
one or more nodes from the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToDelete" TypeName="opc:Int32" />
  <opc:Field Name="NodesToDelete" TypeName="tns>DeleteNodesItem" LengthField="NoOfNodesToDelete" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete one or more nodes from the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteReferencesItem" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to delete a node from the server address space.</opc:Documentation>
  <opc:Field Name="SourceNodeId" TypeName="ua:NodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean" />
  <opc:Field Name="TargetNodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="DeleteBidirectional" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteReferencesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete one or more references from the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfReferencesToDelete" TypeName="opc:Int32" />
  <opc:Field Name="ReferencesToDelete" TypeName="tns>DeleteReferencesItem"
LengthField="NoOfReferencesToDelete" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteReferencesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Delete one or more references from the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:EnumeratedType Name="AttributeWriteMask" LengthInBits="32" IsOptionSet="true">
  <opc:Documentation>Define bits used to indicate which attributes are writable.</opc:Documentation>

```

```

<opc:EnumeratedValue Name="None" Value="0" />
<opc:EnumeratedValue Name="AccessLevel" Value="1" />
<opc:EnumeratedValue Name="ArrayDimensions" Value="2" />
<opc:EnumeratedValue Name="BrowseName" Value="4" />
<opc:EnumeratedValue Name="ContainsNoLoops" Value="8" />
<opc:EnumeratedValue
Name="DataType" Value="16" />
<opc:EnumeratedValue Name="Description" Value="32" />
<opc:EnumeratedValue Name="DisplayName" Value="64" />
<opc:EnumeratedValue Name="EventNotifier" Value="128" />
<opc:EnumeratedValue Name="Executable" Value="256" />
<opc:EnumeratedValue Name="Historizing" Value="512" />
<opc:EnumeratedValue Name="InverseName" Value="1024" />
<opc:EnumeratedValue Name="IsAbstract" Value="2048" />
<opc:EnumeratedValue Name="MinimumSamplingInterval" Value="4096" />
<opc:EnumeratedValue Name="NodeClass" Value="8192" />
<opc:EnumeratedValue Name="NodeId" Value="16384" />
<opc:EnumeratedValue Name="Symmetric" Value="32768" />
<opc:EnumeratedValue Name="UserAccessLevel" Value="65536" />
<opc:EnumeratedValue Name="UserExecutable" Value="131072" />
<opc:EnumeratedValue Name="UserWriteMask" Value="262144" />
<opc:EnumeratedValue Name="ValueRank" Value="524288" />
<opc:EnumeratedValue Name="WriteMask"
Value="1048576" />
<opc:EnumeratedValue Name="ValueForVariableType" Value="2097152" />
<opc:EnumeratedValue Name="DataTypeDefinition" Value="4194304" />
<opc:EnumeratedValue Name="RolePermissions" Value="8388608" />
<opc:EnumeratedValue Name="AccessRestrictions" Value="16777216" />
<opc:EnumeratedValue Name="AccessLevelEx" Value="33554432" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="BrowseDirection" LengthInBits="32">
<opc:Documentation>The directions of the references to return.</opc:Documentation>
<opc:EnumeratedValue Name="Forward" Value="0" />
<opc:EnumeratedValue Name="Inverse" Value="1" />
<opc:EnumeratedValue Name="Both" Value="2" />
<opc:EnumeratedValue Name="Invalid" Value="3" />
</opc:EnumeratedType>

<opc:StructuredType Name="ViewDescription" BaseType="ua:ExtensionObject">
<opc:Documentation>The view to browse.</opc:Documentation>
<opc:Field Name="ViewId" TypeName="ua:NodeId" />
<opc:Field Name="Timestamp" TypeName="opc:DateTime"
/>
<opc:Field Name="ViewVersion" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="BrowseDescription" BaseType="ua:ExtensionObject">

```

```

<opc:Documentation>A request to browse the the references from a node.</opc:Documentation>
<opc:Field Name="NodeId" TypeName="ua:NodeId" />
<opc:Field Name="BrowseDirection" TypeName="tns:BrowseDirection" />
<opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
<opc:Field Name="IncludeSubtypes" TypeName="opc:Boolean" />
<opc:Field Name="NodeClassMask" TypeName="opc:UInt32" />
<opc:Field Name="ResultMask" TypeName="opc:UInt32" />
</opc:StructuredType>

```

```

<opc:EnumeratedType Name="BrowseResultMask" LengthInBits="32">
  <opc:Documentation>A bit mask which specifies what should be returned in a browse
response.</opc:Documentation>

```

```

  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="ReferenceTypeId" Value="1" />
  <opc:EnumeratedValue Name="IsForward"
Value="2" />
  <opc:EnumeratedValue Name="NodeClass" Value="4" />
  <opc:EnumeratedValue Name="BrowseName" Value="8" />
  <opc:EnumeratedValue Name="DisplayName" Value="16" />
  <opc:EnumeratedValue Name="TypeDefinition" Value="32" />
  <opc:EnumeratedValue Name="All" Value="63" />
  <opc:EnumeratedValue Name="ReferenceTypeInfo" Value="3" />
  <opc:EnumeratedValue Name="TargetInfo" Value="60" />
</opc:EnumeratedType>

```

```

<opc:StructuredType Name="ReferenceDescription" BaseType="ua:ExtensionObject">
  <opc:Documentation>The description of a reference.</opc:Documentation>
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean" />
  <opc:Field Name="NodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="BrowseName" TypeName="ua:QualifiedName" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field Name="NodeClass" TypeName="tns:NodeClass" />
  <opc:Field Name="TypeDefinition"
TypeName="ua:ExpandedNodeId" />
</opc:StructuredType>

```

```

<opc:OpaqueType Name="ContinuationPoint">
  <opc:Documentation>An identifier for a suspended query or browse operation.</opc:Documentation>
</opc:OpaqueType>

```

```

<opc:StructuredType Name="BrowseResult" BaseType="ua:ExtensionObject">
  <opc:Documentation>The result of a browse operation.</opc:Documentation>
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
  <opc:Field Name="NoOfReferences" TypeName="opc:Int32" />
  <opc:Field Name="References" TypeName="tns:ReferenceDescription" LengthField="NoOfReferences" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="BrowseRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Browse the references for one or more nodes from the server address
space.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="View" TypeName="tns:ViewDescription"
/>
  <opc:Field Name="RequestedMaxReferencesPerNode" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfNodesToBrowse" TypeName="opc:Int32" />
  <opc:Field Name="NodesToBrowse" TypeName="tns:BrowseDescription" LengthField="NoOfNodesToBrowse"
/>
</opc:StructuredType>

```

```

<opc:StructuredType Name="BrowseResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Browse the references for one or more nodes from the server address
space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:BrowseResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="BrowseNextRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Continues
one or more browse operations.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ReleaseContinuationPoints" TypeName="opc:Boolean" />
  <opc:Field Name="NoOfContinuationPoints" TypeName="opc:Int32" />
  <opc:Field Name="ContinuationPoints" TypeName="opc:ByteString" LengthField="NoOfContinuationPoints" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="BrowseNextResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Continues one or more browse operations.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:BrowseResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="RelativePathElement"
BaseType="ua:ExtensionObject">
  <opc:Documentation>An element in a relative path.</opc:Documentation>
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsInverse" TypeName="opc:Boolean" />
  <opc:Field Name="IncludeSubtypes" TypeName="opc:Boolean" />
  <opc:Field Name="TargetName" TypeName="ua:QualifiedName" />

```



```

</opc:StructuredType>

<opc:StructuredType Name="RelativePath" BaseType="ua:ExtensionObject">
  <opc:Documentation>A relative path constructed from reference types and browse names.</opc:Documentation>
  <opc:Field Name="NoOfElements" TypeName="opc:Int32" />
  <opc:Field Name="Elements" TypeName="tns:RelativePathElement" LengthField="NoOfElements" />
</opc:StructuredType>

<opc:StructuredType Name="BrowsePath" BaseType="ua:ExtensionObject">
  <opc:Documentation>A request to translate a path into a node id.</opc:Documentation>
  <opc:Field Name="StartingNode" TypeName="ua:NodeId" />
  <opc:Field Name="RelativePath"
TypeName="tns:RelativePath" />
</opc:StructuredType>

<opc:StructuredType Name="BrowsePathTarget" BaseType="ua:ExtensionObject">
  <opc:Documentation>The target of the translated path.</opc:Documentation>
  <opc:Field Name="TargetId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="RemainingPathIndex" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="BrowsePathResult" BaseType="ua:ExtensionObject">
  <opc:Documentation>The result of a translate operation.</opc:Documentation>
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfTargets" TypeName="opc:Int32" />
  <opc:Field Name="Targets" TypeName="tns:BrowsePathTarget" LengthField="NoOfTargets" />
</opc:StructuredType>

<opc:StructuredType Name="TranslateBrowsePathsToNodeIdsRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Translates one or more paths in the server address space.</opc:Documentation>
  <opc:Field Name="RequestHeader"
TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfBrowsePaths" TypeName="opc:Int32" />
  <opc:Field Name="BrowsePaths" TypeName="tns:BrowsePath" LengthField="NoOfBrowsePaths" />
</opc:StructuredType>

<opc:StructuredType Name="TranslateBrowsePathsToNodeIdsResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Translates one or more paths in the server address space.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:BrowsePathResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterNodesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers one or more nodes for repeated use within a session.</opc:Documentation>

```

```

    <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
    <opc:Field Name="NoOfNodesToRegister" TypeName="opc:Int32" />
    <opc:Field Name="NodesToRegister" TypeName="ua:NodeId" LengthField="NoOfNodesToRegister" />
</opc:StructuredType>

<opc:StructuredType Name="RegisterNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Registers one or more nodes for repeated use within a session.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfRegisteredNodeIds" TypeName="opc:Int32" />
  <opc:Field Name="RegisteredNodeIds" TypeName="ua:NodeId" LengthField="NoOfRegisteredNodeIds" />
</opc:StructuredType>

<opc:StructuredType Name="UnregisterNodesRequest" BaseType="ua:ExtensionObject">
  <opc:Documentation>Unregisters one or more previously registered nodes.</opc:Documentation>
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToUnregister"
TypeName="opc:Int32" />
  <opc:Field Name="NodesToUnregister" TypeName="ua:NodeId" LengthField="NoOfNodesToUnregister" />
</opc:StructuredType>

<opc:StructuredType Name="UnregisterNodesResponse" BaseType="ua:ExtensionObject">
  <opc:Documentation>Unregisters one or more previously registered nodes.</opc:Documentation>
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
</opc:StructuredType>

<opc:OpaqueType Name="Counter">
  <opc:Documentation>A monotonically increasing value.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="NumericRange">
  <opc:Documentation>Specifies a range of array indexes.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="Time">
  <opc:Documentation>A time value specified as HH:MM:SS.SSS.</opc:Documentation>
</opc:OpaqueType>

<opc:OpaqueType Name="Date">
  <opc:Documentation>A date value.</opc:Documentation>
</opc:OpaqueType>

<opc:StructuredType Name="EndpointConfiguration"
BaseType="ua:ExtensionObject">
  <opc:Field Name="OperationTimeout" TypeName="opc:Int32" />
  <opc:Field Name="UseBinaryEncoding" TypeName="opc:Boolean" />
  <opc:Field Name="MaxStringLength" TypeName="opc:Int32" />
  <opc:Field Name="MaxByteStringLength" TypeName="opc:Int32" />
  <opc:Field Name="MaxArrayLength" TypeName="opc:Int32" />

```

```

<opc:Field Name="MaxMessageSize" TypeName="opc:Int32" />
<opc:Field Name="MaxBufferSize" TypeName="opc:Int32" />
<opc:Field Name="ChannelLifetime" TypeName="opc:Int32" />
<opc:Field Name="SecurityTokenLifetime" TypeName="opc:Int32" />
</opc:StructuredType>

<opc:StructuredType Name="QueryDataDescription" BaseType="ua:ExtensionObject">
  <opc:Field Name="RelativePath" TypeName="tns:RelativePath" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="NodeTypeDescription" BaseType="ua:ExtensionObject">
  <opc:Field Name="TypeDefinitionNode" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="IncludeSubTypes" TypeName="opc:Boolean" />
  <opc:Field Name="NoOfDataToReturn" TypeName="opc:Int32" />
  <opc:Field Name="DataToReturn" TypeName="tns:QueryDataDescription" LengthField="NoOfDataToReturn"
/>
</opc:StructuredType>

<opc:EnumeratedType Name="FilterOperator" LengthInBits="32">
  <opc:EnumeratedValue Name="Equals" Value="0" />
  <opc:EnumeratedValue Name="IsNull" Value="1" />
  <opc:EnumeratedValue Name="GreaterThan" Value="2" />
  <opc:EnumeratedValue Name="LessThan" Value="3" />
  <opc:EnumeratedValue Name="GreaterThanOrEqual" Value="4" />
  <opc:EnumeratedValue Name="LessThanOrEqual" Value="5" />
  <opc:EnumeratedValue Name="Like" Value="6" />
  <opc:EnumeratedValue Name="Not" Value="7" />
  <opc:EnumeratedValue Name="Between" Value="8" />
  <opc:EnumeratedValue Name="InList" Value="9" />
  <opc:EnumeratedValue Name="And" Value="10" />
  <opc:EnumeratedValue
Name="Or" Value="11" />
  <opc:EnumeratedValue Name="Cast" Value="12" />
  <opc:EnumeratedValue Name="InView" Value="13" />
  <opc:EnumeratedValue Name="OfType" Value="14" />
  <opc:EnumeratedValue Name="RelatedTo" Value="15" />
  <opc:EnumeratedValue Name="BitwiseAnd" Value="16" />
  <opc:EnumeratedValue Name="BitwiseOr" Value="17" />
</opc:EnumeratedType>

<opc:StructuredType Name="QueryDataSet" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="TypeDefinitionNode" TypeName="ua:ExpandedNodeId" />
  <opc:Field Name="NoOfValues" TypeName="opc:Int32" />
  <opc:Field Name="Values" TypeName="ua:Variant" LengthField="NoOfValues" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="NodeReference" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="ReferenceTypeId" TypeName="ua:NodeId" />
  <opc:Field Name="IsForward" TypeName="opc:Boolean"
/>
  <opc:Field Name="NoOfReferencedNodeIds" TypeName="opc:Int32" />
  <opc:Field Name="ReferencedNodeIds" TypeName="ua:NodeId" LengthField="NoOfReferencedNodeIds" />
</opc:StructuredType>

<opc:StructuredType Name="ContentFilterElement" BaseType="ua:ExtensionObject">
  <opc:Field Name="FilterOperator" TypeName="tns:FilterOperator" />
  <opc:Field Name="NoOfFilterOperands" TypeName="opc:Int32" />
  <opc:Field Name="FilterOperands" TypeName="ua:ExtensionObject" LengthField="NoOfFilterOperands" />
</opc:StructuredType>

<opc:StructuredType Name="ContentFilter" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfElements" TypeName="opc:Int32" />
  <opc:Field Name="Elements" TypeName="tns:ContentFilterElement" LengthField="NoOfElements" />
</opc:StructuredType>

<opc:StructuredType Name="FilterOperand" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="ElementOperand" BaseType="tns:FilterOperand">
  <opc:Field Name="Index" TypeName="opc:UInt32"
/>
</opc:StructuredType>

<opc:StructuredType Name="LiteralOperand" BaseType="tns:FilterOperand">
  <opc:Field Name="Value" TypeName="ua:Variant" />
</opc:StructuredType>

<opc:StructuredType Name="AttributeOperand" BaseType="tns:FilterOperand">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="Alias" TypeName="opc:String" />
  <opc:Field Name="BrowsePath" TypeName="tns:RelativePath" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="SimpleAttributeOperand" BaseType="tns:FilterOperand">
  <opc:Field Name="TypeDefinitionId" TypeName="ua:NodeId" />
  <opc:Field Name="NoOfBrowsePath" TypeName="opc:Int32" />
  <opc:Field Name="BrowsePath" TypeName="ua:QualifiedName" LengthField="NoOfBrowsePath" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String"

```

```

/>
</opc:StructuredType>

<opc:StructuredType Name="ContentFilterElementResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfOperandStatusCodes" TypeName="opc:Int32" />
  <opc:Field Name="OperandStatusCodes" TypeName="ua:StatusCode" LengthField="NoOfOperandStatusCodes"
/>
  <opc:Field Name="NoOfOperandDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="OperandDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfOperandDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="ContentFilterResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfElementResults" TypeName="opc:Int32" />
  <opc:Field Name="ElementResults" TypeName="tns:ContentFilterElementResult"
LengthField="NoOfElementResults" />
  <opc:Field Name="NoOfElementDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="ElementDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfElementDiagnosticInfos"
/>
</opc:StructuredType>

<opc:StructuredType Name="ParsingResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfDataStatusCodes" TypeName="opc:Int32" />
  <opc:Field Name="DataStatusCodes" TypeName="ua:StatusCode" LengthField="NoOfDataStatusCodes" />
  <opc:Field Name="NoOfDataDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DataDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfDataDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="QueryFirstRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="View" TypeName="tns:ViewDescription" />
  <opc:Field Name="NoOfNodeTypes" TypeName="opc:Int32" />
  <opc:Field Name="NodeTypes" TypeName="tns:NodeTypeDescription" LengthField="NoOfNodeTypes" />
  <opc:Field Name="Filter" TypeName="tns:ContentFilter" />
  <opc:Field Name="MaxDataSetsToReturn"
TypeName="opc:UInt32" />
  <opc:Field Name="MaxReferencesToReturn" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:StructuredType Name="QueryFirstResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfQueryDataSets" TypeName="opc:Int32" />
  <opc:Field Name="QueryDataSets" TypeName="tns:QueryDataSet" LengthField="NoOfQueryDataSets" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />

```

```
<opc:Field Name="NoOfParsingResults" TypeName="opc:Int32" />
<opc:Field Name="ParsingResults" TypeName="tns:ParsingResult" LengthField="NoOfParsingResults" />
<opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
<opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
<opc:Field Name="FilterResult" TypeName="tns:ContentFilterResult" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="QueryNextRequest"
BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="ReleaseContinuationPoint" TypeName="opc:Boolean" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="QueryNextResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfQueryDataSets" TypeName="opc:Int32" />
  <opc:Field Name="QueryDataSets" TypeName="tns:QueryDataSet" LengthField="NoOfQueryDataSets" />
  <opc:Field Name="RevisedContinuationPoint" TypeName="opc:ByteString" />
</opc:StructuredType>
```

```
<opc:EnumeratedType Name="TimestampsToReturn" LengthInBits="32">
  <opc:EnumeratedValue Name="Source" Value="0" />
  <opc:EnumeratedValue Name="Server" Value="1" />
  <opc:EnumeratedValue Name="Both" Value="2" />
  <opc:EnumeratedValue Name="Neither" Value="3" />
  <opc:EnumeratedValue Name="Invalid" Value="4" />
/>
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="ReadValueId" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="DataEncoding" TypeName="ua:QualifiedName" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ReadRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="MaxAge" TypeName="opc:Double" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />
  <opc:Field Name="NoOfNodesToRead" TypeName="opc:Int32" />
  <opc:Field Name="NodesToRead" TypeName="tns:ReadValueId" LengthField="NoOfNodesToRead" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ReadResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
```

```

/>
  <opc:Field Name="Results" TypeName="ua:DataValue" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadValueId" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="DataEncoding" TypeName="ua:QualifiedName" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="ContinuationPoint" TypeName="opc:ByteString" />
  <opc:Field Name="HistoryData" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadDetails" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="ReadEventDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="NumValuesPerNode" TypeName="opc:UInt32" />
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
  <opc:Field Name="Filter" TypeName="tns:EventFilter" />
</opc:StructuredType>

<opc:StructuredType Name="ReadRawModifiedDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="IsReadModified" TypeName="opc:Boolean" />
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
  <opc:Field Name="NumValuesPerNode" TypeName="opc:UInt32" />
  <opc:Field Name="ReturnBounds" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="ReadProcessedDetails" BaseType="tns:HistoryReadDetails">
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
/>
  <opc:Field Name="ProcessingInterval" TypeName="opc:Double" />
  <opc:Field Name="NoOfAggregateType" TypeName="opc:Int32" />
  <opc:Field Name="AggregateType" TypeName="ua:NodeId" LengthField="NoOfAggregateType" />
  <opc:Field Name="AggregateConfiguration" TypeName="tns:AggregateConfiguration" />
</opc:StructuredType>

<opc:StructuredType Name="ReadAtTimeDetails" BaseType="tns:HistoryReadDetails">

```

```

<opc:Field Name="NoOfReqTimes" TypeName="opc:Int32" />
<opc:Field Name="ReqTimes" TypeName="opc:DateTime" LengthField="NoOfReqTimes" />
<opc:Field Name="UseSimpleBounds" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryData" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfDataValues" TypeName="opc:Int32" />
  <opc:Field Name="DataValues" TypeName="ua:DataValue" LengthField="NoOfDataValues" />
</opc:StructuredType>

<opc:StructuredType Name="ModificationInfo" BaseType="ua:ExtensionObject">
  <opc:Field Name="ModificationTime"
TypeName="opc:DateTime" />
  <opc:Field Name="UpdateType" TypeName="tns:HistoryUpdateType" />
  <opc:Field Name="UserName" TypeName="opc:String" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryModifiedData" BaseType="tns:HistoryData">
  <opc:Field Name="NoOfDataValues" TypeName="opc:Int32" />
  <opc:Field Name="DataValues" TypeName="ua:DataValue" LengthField="NoOfDataValues" />
  <opc:Field Name="NoOfModificationInfos" TypeName="opc:Int32" />
  <opc:Field Name="ModificationInfos" TypeName="tns:ModificationInfo"
LengthField="NoOfModificationInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryEvent" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfEvents" TypeName="opc:Int32" />
  <opc:Field Name="Events" TypeName="tns:HistoryEventFieldList" LengthField="NoOfEvents" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader"
/>
  <opc:Field Name="HistoryReadDetails" TypeName="ua:ExtensionObject" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />
  <opc:Field Name="ReleaseContinuationPoints" TypeName="opc:Boolean" />
  <opc:Field Name="NoOfNodesToRead" TypeName="opc:Int32" />
  <opc:Field Name="NodesToRead" TypeName="tns:HistoryReadValueId" LengthField="NoOfNodesToRead" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryReadResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:HistoryReadResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

```



```

<opc:StructuredType Name="WriteValue" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
  <opc:Field Name="AttributeId" TypeName="opc:UInt32" />
  <opc:Field Name="IndexRange" TypeName="opc:String" />
  <opc:Field Name="Value" TypeName="ua:DataValue" />
</opc:StructuredType>

<opc:StructuredType Name="WriteRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfNodesToWrite" TypeName="opc:Int32" />
  <opc:Field Name="NodesToWrite" TypeName="tns:WriteValue" LengthField="NoOfNodesToWrite" />
</opc:StructuredType>

<opc:StructuredType Name="WriteResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateDetails" BaseType="ua:ExtensionObject">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" />
</opc:StructuredType>

<opc:EnumeratedType Name="HistoryUpdateType" LengthInBits="32">
  <opc:EnumeratedValue Name="Insert" Value="1" />
  <opc:EnumeratedValue Name="Replace" Value="2" />
  <opc:EnumeratedValue Name="Update" Value="3" />
  <opc:EnumeratedValue Name="Delete" Value="4" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="PerformUpdateType" LengthInBits="32">
  <opc:EnumeratedValue Name="Insert" Value="1" />
  <opc:EnumeratedValue Name="Replace" Value="2" />
  <opc:EnumeratedValue Name="Update" Value="3" />
  <opc:EnumeratedValue Name="Remove" Value="4" />
</opc:EnumeratedType>

<opc:StructuredType Name="UpdateDataDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />

  <opc:Field Name="PerformInsertReplace" TypeName="tns:PerformUpdateType" />
  <opc:Field Name="NoOfUpdateValues" TypeName="opc:Int32" />
  <opc:Field Name="UpdateValues" TypeName="ua:DataValue" LengthField="NoOfUpdateValues" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="UpdateStructureDataDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="PerformInsertReplace" TypeName="tns:PerformUpdateType" />
  <opc:Field Name="NoOfUpdateValues" TypeName="opc:Int32" />
  <opc:Field Name="UpdateValues" TypeName="ua:DataValue" LengthField="NoOfUpdateValues" />
</opc:StructuredType>

<opc:StructuredType Name="UpdateEventDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="PerformInsertReplace" TypeName="tns:PerformUpdateType" />
  <opc:Field Name="Filter" TypeName="tns:EventFilter"
/>
  <opc:Field Name="NoOfEventData" TypeName="opc:Int32" />
  <opc:Field Name="EventData" TypeName="tns:HistoryEventFieldList" LengthField="NoOfEventData" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteRawModifiedDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="IsDeleteModified" TypeName="opc:Boolean" />
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="EndTime" TypeName="opc:DateTime" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteAtTimeDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="NoOfReqTimes" TypeName="opc:Int32" />
  <opc:Field Name="ReqTimes" TypeName="opc:DateTime" LengthField="NoOfReqTimes" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteEventDetails" BaseType="tns:HistoryUpdateDetails">
  <opc:Field Name="NodeId" TypeName="ua:NodeId" SourceType="tns:HistoryUpdateDetails" />
  <opc:Field Name="NoOfEventIds" TypeName="opc:Int32" />
  <opc:Field Name="EventIds" TypeName="opc:ByteString" LengthField="NoOfEventIds" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfOperationResults" TypeName="opc:Int32" />
  <opc:Field Name="OperationResults" TypeName="ua:StatusCode" LengthField="NoOfOperationResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfHistoryUpdateDetails" TypeName="opc:Int32"
/>
  <opc:Field Name="HistoryUpdateDetails" TypeName="ua:ExtensionObject"

```

```

LengthField="NoOfHistoryUpdateDetails" />
</opc:StructuredType>

<opc:StructuredType Name="HistoryUpdateResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:HistoryUpdateResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="CallMethodRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="ObjectId" TypeName="ua:NodeId" />
  <opc:Field Name="MethodId" TypeName="ua:NodeId" />
  <opc:Field Name="NoOfInputArguments" TypeName="opc:Int32" />
  <opc:Field Name="InputArguments" TypeName="ua:Variant" LengthField="NoOfInputArguments" />
</opc:StructuredType>

<opc:StructuredType Name="CallMethodResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfInputArgumentResults" TypeName="opc:Int32" />
  <opc:Field Name="InputArgumentResults" TypeName="ua:StatusCode"
LengthField="NoOfInputArgumentResults" />
  <opc:Field Name="NoOfInputArgumentDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="InputArgumentDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfInputArgumentDiagnosticInfos" />
  <opc:Field Name="NoOfOutputArguments" TypeName="opc:Int32" />
  <opc:Field Name="OutputArguments" TypeName="ua:Variant" LengthField="NoOfOutputArguments" />
</opc:StructuredType>

<opc:StructuredType Name="CallRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfMethodsToCall" TypeName="opc:Int32" />
  <opc:Field Name="MethodsToCall" TypeName="tns:CallMethodRequest"
LengthField="NoOfMethodsToCall" />
</opc:StructuredType>

<opc:StructuredType Name="CallResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:CallMethodResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:EnumeratedType Name="MonitoringMode" LengthInBits="32">
  <opc:EnumeratedValue Name="Disabled" Value="0" />
  <opc:EnumeratedValue Name="Sampling" Value="1" />

```

```

    <opc:EnumeratedValue Name="Reporting" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="DataChangeTrigger" LengthInBits="32">
  <opc:EnumeratedValue Name="Status" Value="0" />
  <opc:EnumeratedValue Name="StatusValue" Value="1" />
  <opc:EnumeratedValue
Name="StatusValueTimestamp" Value="2" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="DeadbandType" LengthInBits="32">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue Name="Absolute" Value="1" />
  <opc:EnumeratedValue Name="Percent" Value="2" />
</opc:EnumeratedType>

<opc:StructuredType Name="MonitoringFilter" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="DataChangeFilter" BaseType="tns:MonitoringFilter">
  <opc:Field Name="Trigger" TypeName="tns:DataChangeTrigger" />
  <opc:Field Name="DeadbandType" TypeName="opc:UInt32" />
  <opc:Field Name="DeadbandValue" TypeName="opc:Double" />
</opc:StructuredType>

<opc:StructuredType Name="EventFilter" BaseType="tns:MonitoringFilter">
  <opc:Field Name="NoOfSelectClauses" TypeName="opc:Int32" />
  <opc:Field Name="SelectClauses" TypeName="tns:SimpleAttributeOperand" LengthField="NoOfSelectClauses"
/>
  <opc:Field Name="WhereClause" TypeName="tns:ContentFilter"
/>
</opc:StructuredType>

<opc:StructuredType Name="AggregateConfiguration" BaseType="ua:ExtensionObject">
  <opc:Field Name="UseServerCapabilitiesDefaults" TypeName="opc:Boolean" />
  <opc:Field Name="TreatUncertainAsBad" TypeName="opc:Boolean" />
  <opc:Field Name="PercentDataBad" TypeName="opc:Byte" />
  <opc:Field Name="PercentDataGood" TypeName="opc:Byte" />
  <opc:Field Name="UseSlopedExtrapolation" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="AggregateFilter" BaseType="tns:MonitoringFilter">
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="AggregateType" TypeName="ua:NodeId" />
  <opc:Field Name="ProcessingInterval" TypeName="opc:Double" />
  <opc:Field Name="AggregateConfiguration" TypeName="tns:AggregateConfiguration" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="MonitoringFilterResult" BaseType="ua:ExtensionObject">
</opc:StructuredType>

<opc:StructuredType Name="EventFilterResult"
BaseType="tns:MonitoringFilterResult">
  <opc:Field Name="NoOfSelectClauseResults" TypeName="opc:Int32" />
  <opc:Field Name="SelectClauseResults" TypeName="ua:StatusCode" LengthField="NoOfSelectClauseResults"
/>
  <opc:Field Name="NoOfSelectClauseDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="SelectClauseDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfSelectClauseDiagnosticInfos" />
  <opc:Field Name="WhereClauseResult" TypeName="tns:ContentFilterResult" />
</opc:StructuredType>

<opc:StructuredType Name="AggregateFilterResult" BaseType="tns:MonitoringFilterResult">
  <opc:Field Name="RevisedStartTime" TypeName="opc:DateTime" />
  <opc:Field Name="RevisedProcessingInterval" TypeName="opc:Double" />
  <opc:Field Name="RevisedAggregateConfiguration" TypeName="tns:AggregateConfiguration" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoringParameters" BaseType="ua:ExtensionObject">
  <opc:Field Name="ClientHandle"
TypeName="opc:UInt32" />
  <opc:Field Name="SamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="Filter" TypeName="ua:ExtensionObject" />
  <opc:Field Name="QueueSize" TypeName="opc:UInt32" />
  <opc:Field Name="DiscardOldest" TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemCreateRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="ItemToMonitor" TypeName="tns:ReadValueId" />
  <opc:Field Name="MonitoringMode" TypeName="tns:MonitoringMode" />
  <opc:Field Name="RequestedParameters" TypeName="tns:MonitoringParameters" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemCreateResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="MonitoredItemId" TypeName="opc:UInt32" />
  <opc:Field Name="RevisedSamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="RevisedQueueSize" TypeName="opc:UInt32" />
  <opc:Field Name="FilterResult"
TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="CreateMonitoredItemsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn" />

```

```

    <opc:Field Name="NoOfItemsToCreate" TypeName="opc:Int32" />
    <opc:Field Name="ItemsToCreate" TypeName="tns:MonitoredItemCreateRequest"
LengthField="NoOfItemsToCreate" />
</opc:StructuredType>

<opc:StructuredType Name="CreateMonitoredItemsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:MonitoredItemCreateResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemModifyRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="MonitoredItemId" TypeName="opc:UInt32" />
  <opc:Field Name="RequestedParameters" TypeName="tns:MonitoringParameters" />
</opc:StructuredType>

<opc:StructuredType Name="MonitoredItemModifyResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="RevisedSamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="RevisedQueueSize" TypeName="opc:UInt32" />
  <opc:Field Name="FilterResult" TypeName="ua:ExtensionObject" />
</opc:StructuredType>

<opc:StructuredType Name="ModifyMonitoredItemsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="TimestampsToReturn" TypeName="tns:TimestampsToReturn"
/>
  <opc:Field Name="NoOfItemsToModify" TypeName="opc:Int32" />
  <opc:Field Name="ItemsToModify" TypeName="tns:MonitoredItemModifyRequest"
LengthField="NoOfItemsToModify" />
</opc:StructuredType>

<opc:StructuredType Name="ModifyMonitoredItemsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:MonitoredItemModifyResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="SetMonitoringModeRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="MonitoringMode" TypeName="tns:MonitoringMode"

```

```

/>
  <opc:Field Name="NoOfMonitoredItemIds" TypeName="opc:Int32" />
  <opc:Field Name="MonitoredItemIds" TypeName="opc:UInt32" LengthField="NoOfMonitoredItemIds" />
</opc:StructuredType>

<opc:StructuredType Name="SetMonitoringModeResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="SetTriggeringRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="TriggeringItemId" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfLinksToAdd"
TypeName="opc:Int32" />
  <opc:Field Name="LinksToAdd" TypeName="opc:UInt32" LengthField="NoOfLinksToAdd" />
  <opc:Field Name="NoOfLinksToRemove" TypeName="opc:Int32" />
  <opc:Field Name="LinksToRemove" TypeName="opc:UInt32" LengthField="NoOfLinksToRemove" />
</opc:StructuredType>

<opc:StructuredType Name="SetTriggeringResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfAddResults" TypeName="opc:Int32" />
  <opc:Field Name="AddResults" TypeName="ua:StatusCode" LengthField="NoOfAddResults" />
  <opc:Field Name="NoOfAddDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="AddDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfAddDiagnosticInfos" />
  <opc:Field Name="NoOfRemoveResults" TypeName="opc:Int32" />
  <opc:Field Name="RemoveResults" TypeName="ua:StatusCode" LengthField="NoOfRemoveResults" />
  <opc:Field Name="NoOfRemoveDiagnosticInfos" TypeName="opc:Int32"
/>
  <opc:Field Name="RemoveDiagnosticInfos" TypeName="ua:DiagnosticInfo"
LengthField="NoOfRemoveDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteMonitoredItemsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfMonitoredItemIds" TypeName="opc:Int32" />
  <opc:Field Name="MonitoredItemIds" TypeName="opc:UInt32" LengthField="NoOfMonitoredItemIds" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteMonitoredItemsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />

```

```
<opc:Field Name="NoOfResults" TypeName="opc:Int32" />
<opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
<opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
<opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="CreateSubscriptionRequest" BaseType="ua:ExtensionObject">
<opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
<opc:Field Name="RequestedPublishingInterval" TypeName="opc:Double" />
<opc:Field Name="RequestedLifetimeCount" TypeName="opc:UInt32" />
<opc:Field Name="RequestedMaxKeepAliveCount" TypeName="opc:UInt32" />
<opc:Field Name="MaxNotificationsPerPublish" TypeName="opc:UInt32" />
<opc:Field Name="PublishingEnabled" TypeName="opc:Boolean" />
<opc:Field Name="Priority" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="CreateSubscriptionResponse" BaseType="ua:ExtensionObject">
<opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
<opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
<opc:Field Name="RevisedPublishingInterval" TypeName="opc:Double" />
<opc:Field Name="RevisedLifetimeCount" TypeName="opc:UInt32"
/>
<opc:Field Name="RevisedMaxKeepAliveCount" TypeName="opc:UInt32" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ModifySubscriptionRequest" BaseType="ua:ExtensionObject">
<opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
<opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
<opc:Field Name="RequestedPublishingInterval" TypeName="opc:Double" />
<opc:Field Name="RequestedLifetimeCount" TypeName="opc:UInt32" />
<opc:Field Name="RequestedMaxKeepAliveCount" TypeName="opc:UInt32" />
<opc:Field Name="MaxNotificationsPerPublish" TypeName="opc:UInt32" />
<opc:Field Name="Priority" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="ModifySubscriptionResponse" BaseType="ua:ExtensionObject">
<opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
<opc:Field Name="RevisedPublishingInterval" TypeName="opc:Double" />
<opc:Field Name="RevisedLifetimeCount" TypeName="opc:UInt32" />
<opc:Field
Name="RevisedMaxKeepAliveCount" TypeName="opc:UInt32" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="SetPublishingModeRequest" BaseType="ua:ExtensionObject">
<opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
<opc:Field Name="PublishingEnabled" TypeName="opc:Boolean" />
<opc:Field Name="NoOfSubscriptionIds" TypeName="opc:Int32" />
```



```

    <opc:Field Name="SubscriptionIds" TypeName="opc:UInt32" LengthField="NoOfSubscriptionIds" />
  </opc:StructuredType>

  <opc:StructuredType Name="SetPublishingModeResponse" BaseType="ua:ExtensionObject">
    <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
    <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
    <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
    <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
    <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
  </opc:StructuredType>

  <opc:StructuredType
  Name="NotificationMessage" BaseType="ua:ExtensionObject">
    <opc:Field Name="SequenceNumber" TypeName="opc:UInt32" />
    <opc:Field Name="PublishTime" TypeName="opc:DateTime" />
    <opc:Field Name="NoOfNotificationData" TypeName="opc:Int32" />
    <opc:Field Name="NotificationData" TypeName="ua:ExtensionObject" LengthField="NoOfNotificationData" />
  </opc:StructuredType>

  <opc:StructuredType Name="NotificationData" BaseType="ua:ExtensionObject">
  </opc:StructuredType>

  <opc:StructuredType Name="DataChangeNotification" BaseType="tns:NotificationData">
    <opc:Field Name="NoOfMonitoredItems" TypeName="opc:Int32" />
    <opc:Field Name="MonitoredItems" TypeName="tns:MonitoredItemNotification"
  LengthField="NoOfMonitoredItems" />
    <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
    <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
  </opc:StructuredType>

  <opc:StructuredType Name="MonitoredItemNotification"
  BaseType="ua:ExtensionObject">
    <opc:Field Name="ClientHandle" TypeName="opc:UInt32" />
    <opc:Field Name="Value" TypeName="ua:DataValue" />
  </opc:StructuredType>

  <opc:StructuredType Name="EventNotificationList" BaseType="tns:NotificationData">
    <opc:Field Name="NoOfEvents" TypeName="opc:Int32" />
    <opc:Field Name="Events" TypeName="tns:EventFieldList" LengthField="NoOfEvents" />
  </opc:StructuredType>

  <opc:StructuredType Name="EventFieldList" BaseType="ua:ExtensionObject">
    <opc:Field Name="ClientHandle" TypeName="opc:UInt32" />
    <opc:Field Name="NoOfEventFields" TypeName="opc:Int32" />
    <opc:Field Name="EventFields" TypeName="ua:Variant" LengthField="NoOfEventFields" />
  </opc:StructuredType>

  <opc:StructuredType Name="HistoryEventFieldList" BaseType="ua:ExtensionObject">

```

```
<opc:Field Name="NoOfEventFields" TypeName="opc:Int32" />
<opc:Field Name="EventFields" TypeName="ua:Variant" LengthField="NoOfEventFields" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="StatusChangeNotification" BaseType="tns:NotificationData">
  <opc:Field Name="Status" TypeName="ua:StatusCode" />
  <opc:Field Name="DiagnosticInfo" TypeName="ua:DiagnosticInfo" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="SubscriptionAcknowledgement" BaseType="ua:ExtensionObject">
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="SequenceNumber" TypeName="opc:UInt32" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="PublishRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfSubscriptionAcknowledgements" TypeName="opc:Int32" />
  <opc:Field Name="SubscriptionAcknowledgements" TypeName="tns:SubscriptionAcknowledgement"
LengthField="NoOfSubscriptionAcknowledgements" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="PublishResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader"
/>
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="NoOfAvailableSequenceNumbers" TypeName="opc:Int32" />
  <opc:Field Name="AvailableSequenceNumbers" TypeName="opc:UInt32"
LengthField="NoOfAvailableSequenceNumbers" />
  <opc:Field Name="MoreNotifications" TypeName="opc:Boolean" />
  <opc:Field Name="NotificationMessage" TypeName="tns:NotificationMessage" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="RepublishRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="RetransmitSequenceNumber" TypeName="opc:UInt32"
/>
</opc:StructuredType>
```

```
<opc:StructuredType Name="RepublishResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NotificationMessage" TypeName="tns:NotificationMessage" />
</opc:StructuredType>
```

```

<opc:StructuredType Name="TransferResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="NoOfAvailableSequenceNumbers" TypeName="opc:Int32" />
  <opc:Field Name="AvailableSequenceNumbers" TypeName="opc:UInt32"
LengthField="NoOfAvailableSequenceNumbers" />
</opc:StructuredType>

<opc:StructuredType Name="TransferSubscriptionsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfSubscriptionIds" TypeName="opc:Int32" />
  <opc:Field Name="SubscriptionIds" TypeName="opc:UInt32" LengthField="NoOfSubscriptionIds" />
  <opc:Field Name="SendInitialValues"
TypeName="opc:Boolean" />
</opc:StructuredType>

<opc:StructuredType Name="TransferSubscriptionsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="tns:TransferResult" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteSubscriptionsRequest" BaseType="ua:ExtensionObject">
  <opc:Field Name="RequestHeader" TypeName="tns:RequestHeader" />
  <opc:Field Name="NoOfSubscriptionIds" TypeName="opc:Int32" />
  <opc:Field Name="SubscriptionIds" TypeName="opc:UInt32" LengthField="NoOfSubscriptionIds" />
</opc:StructuredType>

<opc:StructuredType Name="DeleteSubscriptionsResponse" BaseType="ua:ExtensionObject">
  <opc:Field Name="ResponseHeader" TypeName="tns:ResponseHeader" />
  <opc:Field Name="NoOfResults" TypeName="opc:Int32" />
  <opc:Field Name="Results" TypeName="ua:StatusCode" LengthField="NoOfResults" />
  <opc:Field Name="NoOfDiagnosticInfos" TypeName="opc:Int32" />
  <opc:Field Name="DiagnosticInfos" TypeName="ua:DiagnosticInfo" LengthField="NoOfDiagnosticInfos" />
</opc:StructuredType>

<opc:StructuredType Name="BuildInfo" BaseType="ua:ExtensionObject">
  <opc:Field Name="ProductUri" TypeName="opc:String" />
  <opc:Field Name="ManufacturerName" TypeName="opc:String" />
  <opc:Field Name="ProductName" TypeName="opc:String" />
  <opc:Field Name="SoftwareVersion" TypeName="opc:String" />
  <opc:Field Name="BuildNumber" TypeName="opc:String" />
  <opc:Field Name="BuildDate" TypeName="opc:DateTime" />
</opc:StructuredType>

```

```

<opc:EnumeratedType Name="RedundancySupport" LengthInBits="32">
  <opc:EnumeratedValue Name="None" Value="0" />
  <opc:EnumeratedValue
Name="Cold" Value="1" />
  <opc:EnumeratedValue Name="Warm" Value="2" />
  <opc:EnumeratedValue Name="Hot" Value="3" />
  <opc:EnumeratedValue Name="Transparent" Value="4" />
  <opc:EnumeratedValue Name="HotAndMirrored" Value="5" />
</opc:EnumeratedType>

<opc:EnumeratedType Name="ServerState" LengthInBits="32">
  <opc:EnumeratedValue Name="Running" Value="0" />
  <opc:EnumeratedValue Name="Failed" Value="1" />
  <opc:EnumeratedValue Name="NoConfiguration" Value="2" />
  <opc:EnumeratedValue Name="Suspended" Value="3" />
  <opc:EnumeratedValue Name="Shutdown" Value="4" />
  <opc:EnumeratedValue Name="Test" Value="5" />
  <opc:EnumeratedValue Name="CommunicationFault" Value="6" />
  <opc:EnumeratedValue Name="Unknown" Value="7" />
</opc:EnumeratedType>

<opc:StructuredType Name="RedundantServerDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="ServerId" TypeName="opc:String" />
  <opc:Field Name="ServiceLevel" TypeName="opc:Byte" />
  <opc:Field
Name="ServerState" TypeName="tns:ServerState" />
</opc:StructuredType>

<opc:StructuredType Name="EndpointUrlListDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="NoOfEndpointUrlList" TypeName="opc:Int32" />
  <opc:Field Name="EndpointUrlList" TypeName="opc:String" LengthField="NoOfEndpointUrlList" />
</opc:StructuredType>

<opc:StructuredType Name="NetworkGroupDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="NoOfNetworkPaths" TypeName="opc:Int32" />
  <opc:Field Name="NetworkPaths" TypeName="tns:EndpointUrlListDataType"
LengthField="NoOfNetworkPaths" />
</opc:StructuredType>

<opc:StructuredType Name="SamplingIntervalDiagnosticsDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="SamplingInterval" TypeName="opc:Double" />
  <opc:Field Name="MonitoredItemCount" TypeName="opc:UInt32" />
  <opc:Field Name="MaxMonitoredItemCount" TypeName="opc:UInt32" />
  <opc:Field Name="DisabledMonitoredItemCount"
TypeName="opc:UInt32" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="ServerDiagnosticsSummaryDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="ServerViewCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="CumulatedSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="SecurityRejectedSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="RejectedSessionCount" TypeName="opc:UInt32" />
  <opc:Field Name="SessionTimeoutCount" TypeName="opc:UInt32" />
  <opc:Field Name="SessionAbortCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentSubscriptionCount" TypeName="opc:UInt32" />
  <opc:Field Name="CumulatedSubscriptionCount" TypeName="opc:UInt32" />
  <opc:Field Name="PublishingIntervalCount" TypeName="opc:UInt32" />
  <opc:Field Name="SecurityRejectedRequestsCount" TypeName="opc:UInt32" />
  <opc:Field Name="RejectedRequestsCount" TypeName="opc:UInt32" />
/>
</opc:StructuredType>

```

```

<opc:StructuredType Name="ServerStatusDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="StartTime" TypeName="opc:DateTime" />
  <opc:Field Name="CurrentTime" TypeName="opc:DateTime" />
  <opc:Field Name="State" TypeName="tns:ServerState" />
  <opc:Field Name="BuildInfo" TypeName="tns:BuildInfo" />
  <opc:Field Name="SecondsTillShutdown" TypeName="opc:UInt32" />
  <opc:Field Name="ShutdownReason" TypeName="ua:LocalizedText" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="SessionDiagnosticsDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="SessionId" TypeName="ua:NodeId" />
  <opc:Field Name="SessionName" TypeName="opc:String" />
  <opc:Field Name="ClientDescription" TypeName="tns:ApplicationDescription" />
  <opc:Field Name="ServerUri" TypeName="opc:String" />
  <opc:Field Name="EndpointUrl" TypeName="opc:String" />
  <opc:Field Name="NoOfLocaleIds" TypeName="opc:Int32" />
  <opc:Field Name="LocaleIds"
TypeName="opc:String" LengthField="NoOfLocaleIds" />
  <opc:Field Name="ActualSessionTimeout" TypeName="opc:Double" />
  <opc:Field Name="MaxResponseMessageSize" TypeName="opc:UInt32" />
  <opc:Field Name="ClientConnectionTime" TypeName="opc:DateTime" />
  <opc:Field Name="ClientLastContactTime" TypeName="opc:DateTime" />
  <opc:Field Name="CurrentSubscriptionsCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentMonitoredItemsCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentPublishRequestsInQueue" TypeName="opc:UInt32" />
  <opc:Field Name="TotalRequestCount" TypeName="tns:ServiceCounterDataType" />
  <opc:Field Name="UnauthorizedRequestCount" TypeName="opc:UInt32" />
  <opc:Field Name="ReadCount" TypeName="tns:ServiceCounterDataType" />
  <opc:Field Name="HistoryReadCount" TypeName="tns:ServiceCounterDataType" />
  <opc:Field Name="WriteCount" TypeName="tns:ServiceCounterDataType" />
  <opc:Field Name="HistoryUpdateCount" TypeName="tns:ServiceCounterDataType" />

```

```

/>
<opc:Field Name="CallCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="CreateMonitoredItemsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="ModifyMonitoredItemsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="SetMonitoringModeCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="SetTriggeringCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="DeleteMonitoredItemsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="CreateSubscriptionCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="ModifySubscriptionCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="SetPublishingModeCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="PublishCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="RepublishCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="TransferSubscriptionsCount" TypeName="tns:ServiceCounterDataType"
/>
<opc:Field Name="DeleteSubscriptionsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="AddNodesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="AddReferencesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="DeleteNodesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="DeleteReferencesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="BrowseCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="BrowseNextCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="TranslateBrowsePathsToNodeIdsCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="QueryFirstCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="QueryNextCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="RegisterNodesCount" TypeName="tns:ServiceCounterDataType" />
<opc:Field Name="UnregisterNodesCount" TypeName="tns:ServiceCounterDataType"
/>
</opc:StructuredType>

<opc:StructuredType Name="SessionSecurityDiagnosticsDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="SessionId" TypeName="ua:NodeId" />
<opc:Field Name="ClientUserIdOfSession" TypeName="opc:String" />
<opc:Field Name="NoOfClientUserIdHistory" TypeName="opc:Int32" />
<opc:Field Name="ClientUserIdHistory" TypeName="opc:String" LengthField="NoOfClientUserIdHistory" />
<opc:Field Name="AuthenticationMechanism" TypeName="opc:String" />
<opc:Field Name="Encoding" TypeName="opc:String" />
<opc:Field Name="TransportProtocol" TypeName="opc:String" />
<opc:Field Name="SecurityMode" TypeName="tns:MessageSecurityMode" />
<opc:Field Name="SecurityPolicyUri" TypeName="opc:String" />
<opc:Field Name="ClientCertificate" TypeName="opc:ByteString" />
</opc:StructuredType>

<opc:StructuredType Name="ServiceCounterDataType" BaseType="ua:ExtensionObject">
<opc:Field Name="TotalCount" TypeName="opc:UInt32"
/>
<opc:Field Name="ErrorCount" TypeName="opc:UInt32" />
</opc:StructuredType>

```

```

<opc:StructuredType Name="StatusResult" BaseType="ua:ExtensionObject">
  <opc:Field Name="StatusCode" TypeName="ua:StatusCode" />
  <opc:Field Name="DiagnosticInfo" TypeName="ua:DiagnosticInfo" />
</opc:StructuredType>

<opc:StructuredType Name="SubscriptionDiagnosticsDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="SessionId" TypeName="ua:NodeId" />
  <opc:Field Name="SubscriptionId" TypeName="opc:UInt32" />
  <opc:Field Name="Priority" TypeName="opc:Byte" />
  <opc:Field Name="PublishingInterval" TypeName="opc:Double" />
  <opc:Field Name="MaxKeepAliveCount" TypeName="opc:UInt32" />
  <opc:Field Name="MaxLifetimeCount" TypeName="opc:UInt32" />
  <opc:Field Name="MaxNotificationsPerPublish" TypeName="opc:UInt32" />
  <opc:Field Name="PublishingEnabled" TypeName="opc:Boolean" />
  <opc:Field Name="ModifyCount" TypeName="opc:UInt32" />
  <opc:Field Name="EnableCount"
TypeName="opc:UInt32" />
  <opc:Field Name="DisableCount" TypeName="opc:UInt32" />
  <opc:Field Name="RepublishRequestCount" TypeName="opc:UInt32" />
  <opc:Field Name="RepublishMessageRequestCount" TypeName="opc:UInt32" />
  <opc:Field Name="RepublishMessageCount" TypeName="opc:UInt32" />
  <opc:Field Name="TransferRequestCount" TypeName="opc:UInt32" />
  <opc:Field Name="TransferredToAltClientCount" TypeName="opc:UInt32" />
  <opc:Field Name="TransferredToSameClientCount" TypeName="opc:UInt32" />
  <opc:Field Name="PublishRequestCount" TypeName="opc:UInt32" />
  <opc:Field Name="DataChangeNotificationsCount" TypeName="opc:UInt32" />
  <opc:Field Name="EventNotificationsCount" TypeName="opc:UInt32" />
  <opc:Field Name="NotificationsCount" TypeName="opc:UInt32" />
  <opc:Field Name="LatePublishRequestCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentKeepAliveCount" TypeName="opc:UInt32" />
  <opc:Field Name="CurrentLifetimeCount" TypeName="opc:UInt32"
/>
  <opc:Field Name="UnacknowledgedMessageCount" TypeName="opc:UInt32" />
  <opc:Field Name="DiscardedMessageCount" TypeName="opc:UInt32" />
  <opc:Field Name="MonitoredItemCount" TypeName="opc:UInt32" />
  <opc:Field Name="DisabledMonitoredItemCount" TypeName="opc:UInt32" />
  <opc:Field Name="MonitoringQueueOverflowCount" TypeName="opc:UInt32" />
  <opc:Field Name="NextSequenceNumber" TypeName="opc:UInt32" />
  <opc:Field Name="EventQueueOverFlowCount" TypeName="opc:UInt32" />
</opc:StructuredType>

<opc:EnumeratedType Name="ModelChangeStructureVerbMask" LengthInBits="32">
  <opc:EnumeratedValue Name="NodeAdded" Value="1" />
  <opc:EnumeratedValue Name="NodeDeleted" Value="2" />
  <opc:EnumeratedValue Name="ReferenceAdded" Value="4" />
  <opc:EnumeratedValue Name="ReferenceDeleted" Value="8" />
  <opc:EnumeratedValue Name="DataTypeChanged" Value="16" />
</opc:EnumeratedType>

```

```
<opc:StructuredType Name="ModelChangeStructureDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Affected" TypeName="ua:NodeId" />
  <opc:Field Name="AffectedType" TypeName="ua:NodeId" />
  <opc:Field Name="Verb" TypeName="opc:Byte" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="SemanticChangeStructureDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Affected" TypeName="ua:NodeId" />
  <opc:Field Name="AffectedType" TypeName="ua:NodeId" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="Range" BaseType="ua:ExtensionObject">
  <opc:Field Name="Low" TypeName="opc:Double" />
  <opc:Field Name="High" TypeName="opc:Double" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="EUInformation" BaseType="ua:ExtensionObject">
  <opc:Field Name="NamespaceUri" TypeName="opc:String" />
  <opc:Field Name="UnitId" TypeName="opc:Int32" />
  <opc:Field Name="DisplayName" TypeName="ua:LocalizedText" />
  <opc:Field Name="Description" TypeName="ua:LocalizedText" />
</opc:StructuredType>
```

```
<opc:EnumeratedType
Name="AxisScaleEnumeration" LengthInBits="32">
  <opc:EnumeratedValue Name="Linear" Value="0" />
  <opc:EnumeratedValue Name="Log" Value="1" />
  <opc:EnumeratedValue Name="Ln" Value="2" />
</opc:EnumeratedType>
```

```
<opc:StructuredType Name="ComplexNumberType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Real" TypeName="opc:Float" />
  <opc:Field Name="Imaginary" TypeName="opc:Float" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="DoubleComplexNumberType" BaseType="ua:ExtensionObject">
  <opc:Field Name="Real" TypeName="opc:Double" />
  <opc:Field Name="Imaginary" TypeName="opc:Double" />
</opc:StructuredType>
```

```
<opc:StructuredType Name="AxisInformation" BaseType="ua:ExtensionObject">
  <opc:Field Name="EngineeringUnits" TypeName="tns:EUInformation" />
  <opc:Field Name="EURange" TypeName="tns:Range" />
  <opc:Field Name="Title" TypeName="ua:LocalizedText" />
  <opc:Field Name="AxisScaleType" TypeName="tns:AxisScaleEnumeration" />
  <opc:Field
```



```

Name="NoOfAxisSteps" TypeName="opc:Int32" />
  <opc:Field Name="AxisSteps" TypeName="opc:Double" LengthField="NoOfAxisSteps" />
</opc:StructuredType>

<opc:StructuredType Name="XVType" BaseType="ua:ExtensionObject">
  <opc:Field Name="X" TypeName="opc:Double" />
  <opc:Field Name="Value" TypeName="opc:Float" />
</opc:StructuredType>

<opc:StructuredType Name="ProgramDiagnosticDataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="CreateSessionId" TypeName="ua:NodeId" />
  <opc:Field Name="CreateClientName" TypeName="opc:String" />
  <opc:Field Name="InvocationCreationTime" TypeName="opc:DateTime" />
  <opc:Field Name="LastTransitionTime" TypeName="opc:DateTime" />
  <opc:Field Name="LastMethodCall" TypeName="opc:String" />
  <opc:Field Name="LastMethodSessionId" TypeName="ua:NodeId" />
  <opc:Field Name="NoOfLastMethodInputArguments" TypeName="opc:Int32" />
  <opc:Field Name="LastMethodInputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodInputArguments"
/>
  <opc:Field Name="NoOfLastMethodOutputArguments" TypeName="opc:Int32" />
  <opc:Field Name="LastMethodOutputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodOutputArguments" />
  <opc:Field Name="LastMethodCallTime" TypeName="opc:DateTime" />
  <opc:Field Name="LastMethodReturnStatus" TypeName="tns:StatusResult" />
</opc:StructuredType>

<opc:StructuredType Name="ProgramDiagnostic2DataType" BaseType="ua:ExtensionObject">
  <opc:Field Name="CreateSessionId" TypeName="ua:NodeId" />
  <opc:Field Name="CreateClientName" TypeName="opc:String" />
  <opc:Field Name="InvocationCreationTime" TypeName="opc:DateTime" />
  <opc:Field Name="LastTransitionTime" TypeName="opc:DateTime" />
  <opc:Field Name="LastMethodCall" TypeName="opc:String" />
  <opc:Field Name="LastMethodSessionId" TypeName="ua:NodeId" />
  <opc:Field Name="NoOfLastMethodInputArguments" TypeName="opc:Int32" />
  <opc:Field Name="LastMethodInputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodInputArguments" />
  <opc:Field Name="NoOfLastMethodOutputArguments" TypeName="opc:Int32" />
  <opc:Field Name="LastMethodOutputArguments" TypeName="tns:Argument"
LengthField="NoOfLastMethodOutputArguments" />
  <opc:Field Name="NoOfLastMethodInputValues" TypeName="opc:Int32" />
  <opc:Field Name="LastMethodInputValues" TypeName="ua:Variant"
LengthField="NoOfLastMethodInputValues" />
  <opc:Field Name="NoOfLastMethodOutputValues" TypeName="opc:Int32" />
  <opc:Field Name="LastMethodOutputValues" TypeName="ua:Variant"
LengthField="NoOfLastMethodOutputValues" />
  <opc:Field Name="LastMethodCallTime" TypeName="opc:DateTime" />
  <opc:Field Name="LastMethodReturnStatus" TypeName="tns:StatusResult" />

```

</opc:StructuredType>

<opc:StructuredType Name="Annotation" BaseType="ua:ExtensionObject">

<opc:Field Name="Message" TypeName="opc:String" />

<opc:Field Name="UserName" TypeName="opc:String" />

<opc:Field Name="AnnotationTime"

TypeName="opc:DateTime" />

</opc:StructuredType>

<opc:EnumeratedType Name="ExceptionDeviationFormat" LengthInBits="32">

<opc:EnumeratedValue Name="AbsoluteValue" Value="0" />

<opc:EnumeratedValue Name="PercentOfValue" Value="1" />

<opc:EnumeratedValue Name="PercentOfRange" Value="2" />

<opc:EnumeratedValue Name="PercentOfEURange" Value="3" />

<opc:EnumeratedValue Name="Unknown" Value="4" />

</opc:EnumeratedType>

</opc:TypeDictionary>

/* This Source Code Form is subject to the terms of the Mozilla Public

* License, v. 2.0. If a copy of the MPL was not distributed with this

* file, You can obtain one at <http://mozilla.org/MPL/2.0/>.

*

* Copyright (c) 2020 Yannick Wallerer, Siemens AG

* Copyright (c) 2020 Thomas Fischer, Siemens AG

*/

<?xml version="1.0" encoding="utf-8" ?>

<!--

* Copyright (c) 2005-2018 The OPC Foundation, Inc. All rights reserved.

*

* OPC Foundation MIT License 1.00

*

* Permission is hereby granted, free of charge, to any person

* obtaining a copy of this software and associated documentation

* files (the "Software"), to deal in the Software without

* restriction, including without limitation the rights to use,

* copy, modify, merge, publish, distribute, sublicense, and/or sell

* copies of the Software, and to permit persons to whom the

* Software is furnished to do so, subject to the following

* conditions:

*

* The above copyright notice and this permission notice shall be

* included in all copies or substantial portions of the Software.

* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,

* EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES

* OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND

* NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR

COPYRIGHT

* HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,

* WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
* FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
* OTHER DEALINGS IN THE SOFTWARE.
*
* The complete license agreement can be found here:
* <http://opcfoundation.org/License/MIT/1.00/>
-->

```
<opc:TypeDictionary
  xmlns:opc="http://opcfoundation.org/BinarySchema/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:ua="http://opcfoundation.org/UA/"
  xmlns:tns="http://yourorganisation.org/test/"
  DefaultByteOrder="LittleEndian"
  TargetNamespace="http://yourorganisation.org/test/"
>
  <opc:Import Namespace="http://opcfoundation.org/UA/" Location="Opc.Ua.BinarySchema.bsd"/>

  <opc:StructuredType Name="Point" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
  </opc:StructuredType>

  <opc:StructuredType Name="NestedPoint" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
    <opc:Field Name="point1" TypeName="tns:Point" />
  </opc:StructuredType>

  <opc:StructuredType Name="PointWithArray" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
    <opc:Field Name="z" TypeName="opc:Double" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
    <opc:Field Name="array1" TypeName="opc:Double" LengthField="NoOfArrayDimensions" />
  </opc:StructuredType>

  <opc:StructuredType Name="PointWithPointArray" BaseType="ua:ExtensionObject">
    <opc:Field Name="x" TypeName="opc:Double" />
    <opc:Field Name="y" TypeName="opc:Double" />
    <opc:Field Name="z" TypeName="opc:Double" />
    <opc:Field Name="NoOfArrayDimensions" TypeName="opc:Int32" />
    <opc:Field Name="array1" TypeName="tns:Point" LengthField="NoOfArrayDimensions" />
  </opc:StructuredType>

</opc:TypeDictionary>
```

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

©2024 Cisco Systems, Inc. All rights reserved.