# Troubleshooting UCSM Registration Issues with Central

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## Introduction

This document describes how to troubleshoot some of the common issues with UCSM registering with UCS Central

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Computing System (UCS)
- UCS Central

### Components Used

The information in this document is based on these software and hardware versions:

- Cisco Unified Computing System Manager (UCSM)
- Fabric Interconnect (FI)
- UCS central running on ESXi VM

## Troubleshooting methods

The troubleshooting is focused on self-signed certificate on UCSM and central and not 3rd party certificates

- Basic troubleshooting
- UCSM stuck registering state with central
- UCSM central status stuck in progress after upgrade
- UCSM lost-visibility with central
- Logs to check
- Troubleshooting commands

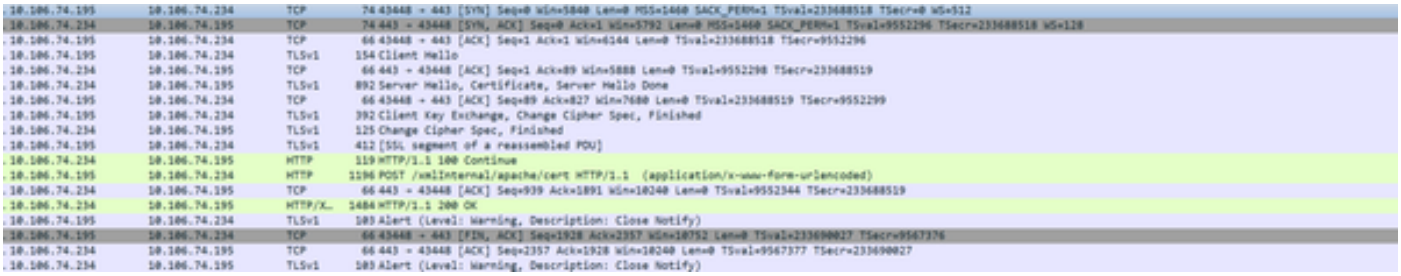
## Basic Troubleshooting

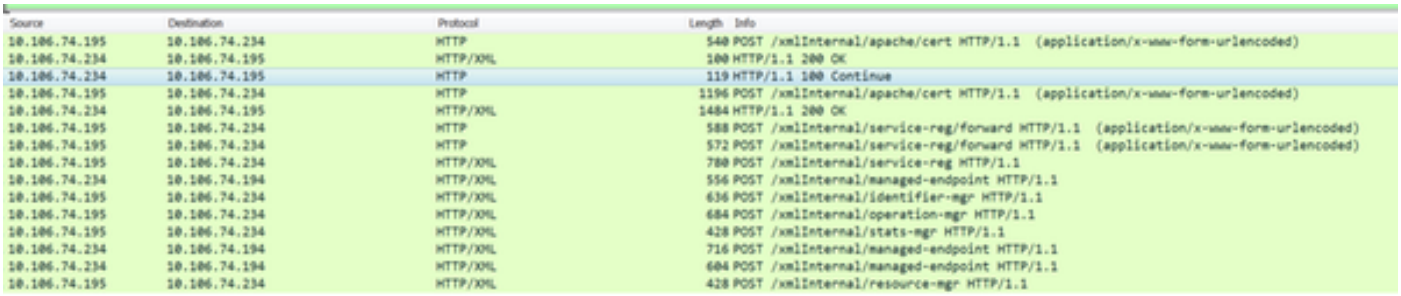
Please ensure these basic checks are completed:

- Shared secret mismatch.
- UCS Central device is not reachable.
- UCS Central GUID is different from the already registered UCS Central's GUID.
- Time is not in sync between UCSM and UCS Central.
- Expired certificate on UCSM.
- The default keyring certificate is not present. Though third party CAs can be used for HTTPS. UCSM registration uses the default keyring certificate and hence should not be deleted.
- Ensure UCSM is receiving the handshake request from the UCSC.

```
Central# connect local-mgmt
Central(local-mgmt)# test ucsm-connectivity <ucsm_ip>
```

Packet capture from UCSM registering successfully with Central Provider




DO NOT unregister the central from UCSM. When you unregister all global service-profiles will become local to the UCS domain. It is possible to make a local service-profile global again. However, it is a very complex process and has an impact on the service.

## UCSM Stuck Registering State with Central

If UCS Manager is registered to a UCS Central and that UCS Manager is being upgraded to 3.1.1, then the UCS Manager goes to registering state and is stuck there.

Too many curl errors observed in the Central DME logs

```
  9603: [WARN][0x27699940][Apr  5 18:00:54.714][write:net]  write of 3752 bytes using curl
failed, code=7, error: 'Couldn't connect to server', ep:
https://10.106.74.195:443/xmlInternal/managed-endpoint
9604: [WARN][0x27699940][Apr  5 18:00:54.714][write:net]  non-critical curl write error.
```

From UCSM DME

```
[INFO][0x682ffb90][Nov  1 16:05:24.886][sam_sec:check_cert_val] X509_verify_cert_error_string -
ok
[INFO][0x682ffb90][Nov  1 16:05:24.886][sam_sec:X509VerifyCert] ErrorMsg:ok ErrorNo:0
[INFO][0x682ffb90][Nov  1 16:05:24.886][app_sam_dme:processKey] something wrong with KR-default
certificate, status - 18
```

The problem could be due to the UCSM using old MDS hash instead of SHA1 for the certificates

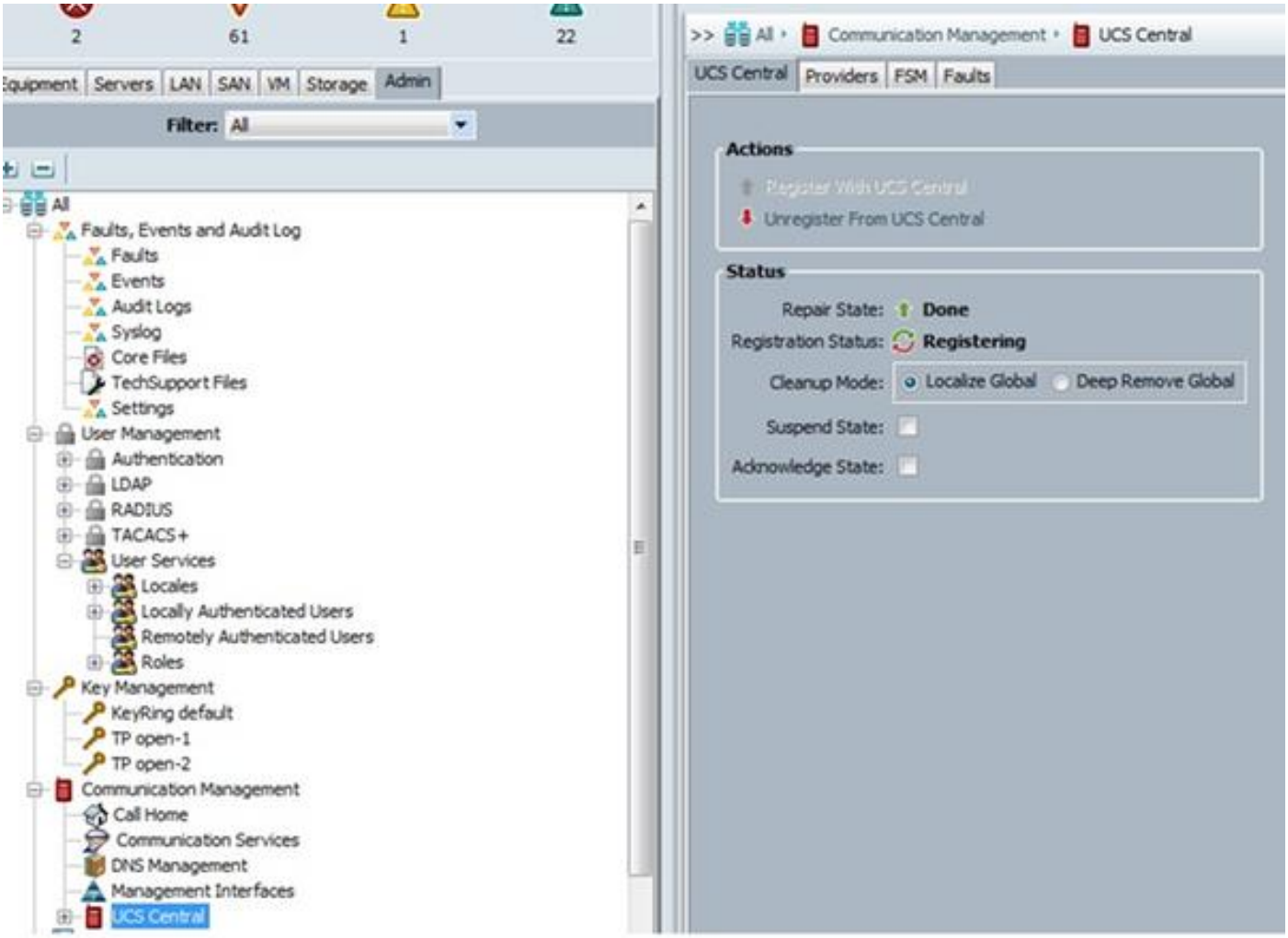
```
[WARN][0x674ffb90][Nov 22 19:11:49.227][net:write] write of 546 bytes using curl failed,
code=60, error: 'Peer certificate cannot be authenticated with given CA certificates(SSL
certificate problem: self signed certificate)', ep:
https://10.106.74.234:443/xmlInternal/service-reg
[INFO][0x674ffb90][Nov 22 19:11:49.227][net:certFailure] certificate is bad for connection to '
https://10.136.58.4:443/xmlInternal/service-reg';
```

Perform these workaround as it causes the UCS Manager to register successfully to UCS Central and fix the certificate error

The default keyring can be regenerated from the UCS Central CLI under the device profile section.

```
connect policy-mgr
scope org
scope device-profile
scope security
scope keyring default
set regenerate yes
commit-buffer
```

If the workaround does not resolve please raise a case with Cisco TAC to validate further




If at any time the UCS Manager have been registered to UCS Central initially at a version of 2.1.3 or below. Then during the upgrade to 3.1.1 the registration problem mentioned above is still seen.

For this TAC involvement is needed as UCS 2.1.3 and earlier releases, UCSM doesn't split certificate. TAC need to rehash the certificate so that creates the right softlinks to the certificate.

## UCSM central status stuck in progress after upgrade

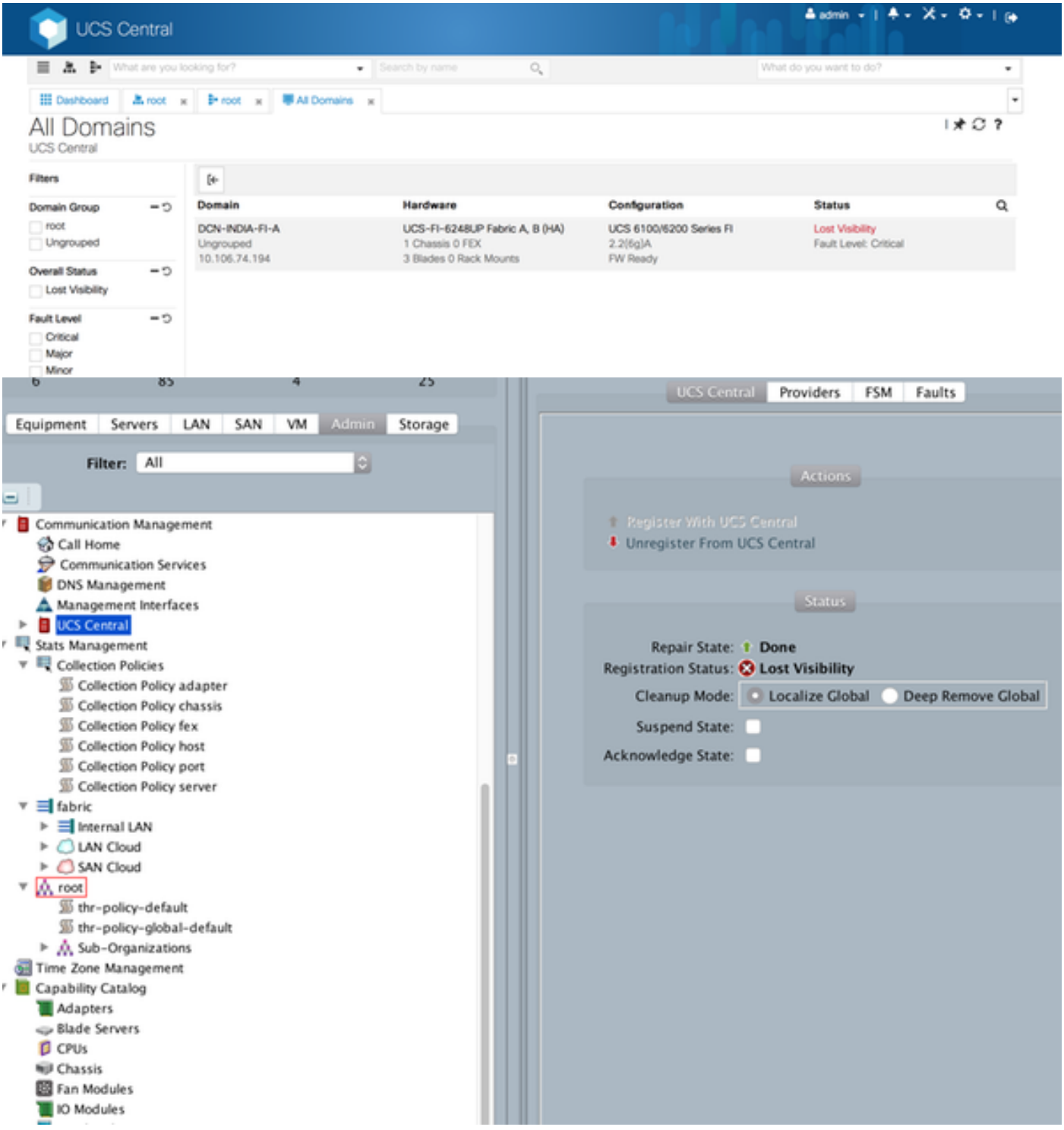
The issue is due to database goes out of sync between central and UCS

These errors observed in the resource-manager logs

```
[WARN][0xbbce9940][Aug 11 10:23:18.194][storeMo:mit_init] SQL error [SQLParamData failure: Error
while executing the query (non-fatal);
ERROR:  duplicate key value violates unique constraint "InstanceId2DN_dn_key"] stmt [INSERT INTO
"InstanceId2DN"("instanceId","dn","className","parent") VALUES (?,?,?,?)]
[INFO][0xbbce9940][Aug 11 10:23:18.194][report:exception_handl] FATAL[3|150]
/ramfs/buildsa/150407-104741-rev219791-
FCSa/resMgr/sam/src/lib/framework/core/sql/MitDbImpl.cc(1167):storeMo: Failed to connect to
database. Transaction aborted.
[INFO][0xbbce9940][Aug 11 10:23:18.201][report:exception_handl] ERROR[3|150]
/ramfs/buildsa/150407-104741-rev219791-
FCSa/resMgr/sam/src/lib/framework/core/proc/Doer.cc(795):exceptionCB: exception encountered
during processing: "Failed to connect to database. Transaction aborted." [150] Failed to connect
to database. Transaction aborted.
[INFO][0xbbce9940][Aug 11 10:23:18.201][failedCb:tx] TX FAILED
```

This is a database sync issue please raise a case with Cisco TAC to validate further

## UCSM Lost Visibility with Central




Check the Registration Status

If it shows "lost-visibility"  UCS Central cannot be reached on one or more required ports. If UCS Central is using the flash GUI (Flex) the following ports need to be open to Central: 443, 80, 843. HTML GUI only requires port 443.

## Logs to Check

UCSM

```
/var/sysmgr/sam_logs/pa_setup.log
svc_sam_dme.log files on FI
```

Central

Svc_dme_reg.log

Troubleshooting commands

```
Central# connect policy-mgr
Central# scope org
Central# scope device-profile
Central# scope security
Central# Show keyring detail UCSM# scope system
UCSM# scope security
UCSM# show keyring detail
connect local-mgmt
telnet <Central IP> <port>
^ (Shift+6) ] with no spaces to exit   FSM status
      scope system
      scope control-ep policy
      show fsm status Central# connect service-reg
Central(service-reg)# show fault
Central(service-reg)# show clients detail
Registered Clients:
   ID: 1008
   Registered Client IP: 10.106.74.194
   Registered Client IPV6: ::
   Registered Client Connection Protocol: Ipv4
   Registered Client Name: DCN-INDIA-FI-A
  Registered Client GUID: e832cfc2-548b-11e4-b8f2-002a6a6f6dc1
   Registered Client Version: 2.2(6g)
   Registered Client Type: Managed Endpoint
   Registered Client Capability: Policy Client Module
   Registered Client Last Poll Timestamp: 2016-12-08T12:33:36.417
   Registered Client Operational State: Registered
   Registered Client Suspend State: Off
   Registered Client License State: License Graceperiod
   Registered Client grace period used: 33
   Registered Client Network Connection State: Connected
```

# Known defects

- **Cisco Bug ID CSCuy07652** dwngarde-upgrade from ECMR6 to Delmar-mr2 makes domain "registering".
- **Cisco Bug ID CSCuv07227** UCSM re-registration failing while doing fw upgrade.
- **Cisco Bug ID CSCuu91088** Central unable to refresh inventory.
- **Cisco Bug ID CSCut72698** report-full-inventory-failed on classic ucs in low bandwidth environment.

# Related Information

Registering Cisco UCSM domain with UCS central

http://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/sw/gui/config/guide/2-2/b_UCSM_GUI_Configuration_Guide_2_2/registering_cisco_ucs_domains_with_cisco_ucs_central.html