# VXMLゲートウェイから信号および音声分析のパ ケットキャプチャを取得する方法

### 内容

<u>概要 前提条件</u> <u>要件</u> <u>使用するコンポーネント</u> <u>VXMLゲートウェイでのパケットキャプチャの取得</u> <u>確認</u>

### 概要

このドキュメントでは、VXMLゲートウェイからパケットキャプチャ(pcap)を取得して、信号と音 声を分析する方法について説明します。

# 前提条件

#### 要件

次の項目に関する知識があることが推奨されます。

- Unified Customer Voice Portal ( CVP )
- Voice Extensible Markup Language Gateway(VXML GW)
- Whresharkツール

### 使用するコンポーネント

このドキュメントの内容は、特定のソフトウェアやハードウェアのバージョンに限定されるもの ではありません。

このドキュメントの情報は、特定のラボ環境にあるデバイスに基づいて作成されました。このド キュメントで使用するすべてのデバイスは、初期(デフォルト)設定の状態から起動しています 。本稼働中のネットワークでは、各コマンドによって起こる可能性がある影響を十分確認してく ださい。

## VXMLゲートウェイでのパケットキャプチャの取得

インターフェイスg0/0に関するこの手順を使用して、Cisco VXML GWからシグナリングとメディ アをチェックするpcapを取得できます。コマンドのインターフェイス名を適切なものに変更する 必要があります。 conf t ip traffic profile test mode capture bidirectional exit int g0/0 ip traffic apply test size 2000000 end traffic int g0/0 clear traffic int g0/0 start トラフィックをキャプチャするVXMLゲートウェイ。テストコールを発信し、パケットキャプチ ャを迅速に停止します。

traffic int g0/0 stop pcapをTFTPサーバにコピーするには、次のコマンドを入力します。

traffic int g0/0 copy tftp://x.x.x/g00.pcap pcapをFTPサーバにコピーするには、次のコマンドを入力します。

traffic int g0/0copy ftp://username:password@x.x.x.x/g00.pcap このスクリーンショットは、Wiresharkツールで開**かれたpcapファイル**port1.pcapを示しています

portt.pcap įvviresna	rk 1.10.3 (SVN Rev 53022	2 from /trunk-1.10)]		
ile <u>E</u> dit <u>V</u> iew <u>G</u> o	Capture Analyze Sta	atistics Telephony <u>T</u> ools	ernals <u>H</u> elp	
	🕒 🖬 🗙 🔁 🗆	् 👳 🔿 주 👱	J 🗐 🔍 Q, Q, 🗹 🛛 👹 🕅 🥵 % 🛛 📓	
ilter:			Expression Clear Apply Save	
. Time	Source	Destination	Protocol Lenath Info	
1 0.000000	10.251.93.10	10.251.62.208	SSH 92 Encrypted response packet len=52	
2 0.000183	10.251.93.10	10.251.100.50	TACACS+ 217 Q: Accounting	
3 0.003746	10.251.100.50	10.251.93.10	TACACS+ 57 R: Accounting	
4 0.107792	10.251.93.10	10.251.100.50	TCP 40 35576 > tacacs [ACK] Seq=1 Ack=1 win=3984 Len=0	
5 0.203785	10.251.93.10	10.251.100.50	TCP 40 63840 > tacacs [ACK] Seq=178 Ack=18 win=3785 Len=0	
6 0.251243	10.251.62.208	10.251.93.10	TCP 40 58357 > ssh [ACK] seq=1 Ack=53 win=65288 Len=0	
7 1.000105	10.251.93.10	10.251.100.21	Syslog 143 LOCAL7.NOTICE: 48: 058316: Apr 6 20:58:28.410: %RITE-5-CAPTURE_START: Started IP traffic capture for	r inter
8 1.000125	10.251.93.10	10.251.132.13	Syslog 143 LOCAL7.NOTICE: 48: 058316: Apr 6 20:58:28.410: %RITE-5-CAPTURE_START: Started IP traffic capture for	r inter
9 5.037823	10.251.93.33	10.251.93.10	SIP 508 Request: OPTIONS sip:10.251.93.10	
10 5.038359	10.251.93.10	10.251.93.33	SIP/SDF 1007 Status: 200 OK	
11 5.703503	10.251.93.56	10.251.93.255	BROWSEF 229 Host Announcement USQLCAWS1, Workstation, Server, SQL Server, NT Workstation, NT Server	
12 7.201722	10.250.93.57	10.251.93.10	SIP 1358 Request: INVITE sip:5555522222221362@VXMLGw1A.omnicare.com;transport=udp	
13 7.203454	10.251.93.10	10.250.93.57	SIP 493 Status: 100 Trying	
14 7.203494	10.251.93.10	10.250.93.57	SIP/SDF 1100 Status: 200 OK	
15 7.236543	10.250.93.57	10.251.93.10	SIP/SDF 804 Request: ACK s1p:555522222221362@10.251.93.10:5060	
16 7.264140	10.251.93.10	10.250.93.57	TCP 44 63536 > 1rdm1 [SYN] Seq=0 win=4128 Len=0 MSS=536	
17 7.265260	10.250.93.57	10.251.93.10	TCP 44 1rdm1 > 63536 [SYN, ACK] Seq=0 AcK=1 W1n=8192 Len=0 MSS=1460	
18 7.265297	10.251.93.10	10.250.93.57	TCP 40.63536 > 1rdm1 [ACK] Sed=1 ACK=1 W1n=4128 Len=0	
19 7.265345	10.251.93.10	10.250.93.57	ICP 5/6 [ICP segment of a reassembled PD0]	
Transmission Co SSH Protocol	ol Version 4, Sr ontrol Protocol,	c: 10.251.93.10 (10 Src Port: ssh (22),	11.93.10), Dst: 10.251.62.208 (10.251.62.208) ;t Port: \$8357 (\$8357), Seq: 1, Ack: 1, Len: 52	
000 45 c0 00 5c 010 0a fb 3e d0 020 50 18 10 20 030 87 61 14 3f	39 58 00 00 ff 00 16 e3 f5 a5 5a 49 00 00 74 83 53 05 66 ea a3 f0 e1 5e 74	06 cf b3 0a fb 5d 5 d1 b6 82 9f 4b be 6 b5 3d a1 5f 93 f1 a 27 3c 64 5e 99 84 b9 9d 77 55 a8 cd	E\9X]. 	
50 55 4b 36 71	3e Oc 6b 16 9c	: c6 40 0c	UK6q>.k@.	

確認

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パケットキャプチャが有効であることを確認するには、次の手順を使用します。

### ステップ1:sipシグナリングをフィルタします。

#### [フィルタ]テキストボックスにsipキーワードを入力します。

📕 por	1.pcap [Wiresha	rk 1.10.3 (SVN Rev 5	3022 from /trunk-1.10)]		
Eile B	dit <u>V</u> iew <u>G</u> o	Capture Analyze	Statistics Telephony Tools	Internals Help	
• •	A = A	🖻 🖪 🗙 🔗	। ् ० ० २ ७ ७ ४	EE Q Q Q T   # M 🥵 %   12	
Filter:	sip			Expression Clear Apply Save	
No.	Time	Source	Destination	Protocol Length Info	*
	9 5.037823	10.251.93.33	10.251.93.10	SIP 508 Request: OPTIONS sip:10.251.93.10	1
1	0 5.038359	10.251.93.10	10.251.93.33	SIP/SDF 1007 Status: 200 OK	
1	.2 7.201722	10.250.93.57	10.251.93.10	SIP 1358 Request: INVITE sip:55555222222221362@VXMLGw1A.omnicare.com;transport=udp	
1	.3 7.203454	10.251.93.10	10.250.93.57	SIP 493 Status: 100 Trying	
1	4 7.203494	10.251.93.10	10.250.93.57	SIP/SDF 1100 Status: 200 OK	
1	5 7.236543	10.250.93.57	10.251.93.10	SIP/SDF 804 Request: ACK sip:555552222222221362@10.251.93.10:5060	
4	6 10.045310	10.251.93.33	10.251.93.10	SIP 508 Request: OPTIONS sip:10.251.93.10	
43	7 10.045836	10.251.93.10	10.251.93.33	SIP/SDF 1007 Status: 200 OK	
71	1 11.870965	10.250.93.57	10.251.93.10	SIP 498 Request: BYE s1p:555552222222221362@10.251.93.10:5060	
71	4 11.872078	10.251.93.10	10.250.93.57	SIP 561 Status: 200 OK	-
7:	2 15.053366	10.251.93.33	10.251.93.10	SIP 508 Request: OPTIONS 51p:10.251.93.10	-
/:	13 15.053/3/	10.251.93.10	10.251.93.33	SIP/SDF 1008 Status: 200 OK	
7:	4 20.123097	10.251.93.33	10.251.93.10	SIP 508 Request: OPTIONS s1p:10.251.93.10	
/:	5 20.123454	10.251.93.10	10.251.93.33	SIP/SDF 1008 Status: 200 0K	
7:	6 25.130902	10.251.93.33	10.251.93.10	SIP 508 Request: OPTIONS s1p:10.251.93.10	
7:	7 25.131482	10.251.93.10	10.251.93.33	SIP/SDF 100/ Status: 200 OK	
/:	8 27.719707	10.251.93.5/	10.251.93.10	SIP/SDF 1284 Request: INVITE SIP:SSSS222222221363@VXMLGWIA.omnicare.com;transport=udp	
/:	9 27.721307	10.251.93.10	10.251.93.57	SIP 481 Status: 100 Irying	
14	0 27.721345	10.251.93.10	10.251.93.57	STP/SDF 1022 Status: 200 0K	
101	5 27.8/4125	10.251.93.57	10.251.93.10	SIP 488 Request: ACK SIP:5555222222222222303@10.251.93.10:5000	
101	1 30.2008/3	10.251.93.33	10.251.93.10	510 500 Reduest: 0011005 510:10.251.93.10	
101	2 35 208587	10.251.93.10	10.251.93.33	STP/SDF 1000 Status: 200 0K   STP/SDF closed 0 251 03 10	
151	4 35.20808/	10.251.93.33	10.251.93.10	51P 508 Reduest: 001005 510:10.251.93.10	
101	4 33.209031	10.251.95.10	10.251.93.33	S1P/S0F 1008 Status: 200 K	-
4					•
<ul> <li>● Fra</li> <li>● Raw</li> <li>● Int</li> <li>● Use</li> </ul>	me 9: 508 by packet data ernet Protoc	vtes on wire ( a col Version 4, erotocol Src	4064 bits), 508 bytes src: 10.251.93.33 (10	captured (4064 bits) .251.93.33), Dst: 10.251.93.10 (10.251.93.10) st. Rott: sin (5060)	
⊕ Ses	sion Initiat	tion Protocol	(OPTIONS)		

0000	45 00 01 fc 77 29 00 00	7f 11 f2 a6 0a fb 5d 21	Ew)]!		
0010	0a fb 5d 0a e5 b0 13 c4	01 e8 d5 49 4f 50 54 49	]IOPTI		-
0020	4f 4e 53 20 73 69 70 3a	31 30 2e 32 35 31 2e 39	ON5 sip: 10.251.9		
0030	33 2e 31 30 20 53 49 50	2f 32 2e 30 0d 0a 56 69	3.10 SIP /2.0vi		
0040	61 3a 20 53 49 50 2f 32	2e 30 2f 55 44 50 20 31	a: SIP/2 .0/UDP 1		
0050	30 2e 32 35 31 2e 39 33	2e 33 33 3a 35 38 38 30	0.251.93 .33:5880		
0060	30 3b 62 72 61 6e 63 68	3d 7a 39 68 47 34 62 4b	0; branch =z9hG4bK		
0070	2d 64 38 37 35 34 7a 2d	63 62 37 38 64 61 31 39	-d8754z- cb78da19		
0080	35 63 36 31 62 39 30 66	2d 31 2d 2d 2d 64 38 37	5c61b90f -1d87		
0090	35 34 7a 2d 3b 72 70 6f	72 74 0d 0a 4d 61 78 2d	54z-; rpo rtMax-		
00a0	46 6f 72 77 61 72 64 73	3a 20 37 30 0d 0a 43 6f	Forwards : 70Co		+
0.1	File "Ci) sustement hand nost a san" 3	00 LP Dacketer 1727 Displayed 29	(1.6%) Lond time 0.00	Profile: Default	-

#### ステップ2:Wireshark PlayerでRTPストリームを開きます。

### •[テレフォニー – Voipコール]に移動します

- •問題のコールを選択します
- プレーヤーの選択

File       Edit       Yiew       Go       Capture       Analyze       Statistics       Telephony       Tools       Internals       Help         Image: Statistics       Image: Statistics       Image: Statistics       Telephony       Tools       Image: Statistics       Telephony       Tools       Image: Statistics       Telephony       Tools       Image: Statistics       Telephony
Image: Space of the space
Filte:         sip         Expression         Clear         Apply         Save           No.         Time         Source         Destination         Protocol Length         Info           9 5.037823         10.251.93.33         10.251.93.10         SIP         SIP         508 Request: OPTIONS sip:10.251.93.10             10 5.038359         10.251.93.10         10.251.93.10         SIP/SDF 1007 Status: 200 0K             12 7.201722         10.250.93.57         0.1251.93.10         SIP         SIP 493 Status: 100 Trying             14 7.203494         10.251.93.10         10.250.93.57         SIP /SDF 1100 Status: 200 0K           Import_prop - VoIP Calls           15 7.236543         10.250.         grd1.prop - VoIP Calls         Import_prop - VoIP Calls         Import - VoIP Calls
No.         Time         Source         Destination         Protocol Length Info           9 5.037823         10.251.93.33         10.251.93.10         SIP         S08 Request: OPTIONS sip:10.251.93.10             10 5.038359         10.251.93.10         10.251.93.33         SIP/SDF 1007 Status: 200 0K             12 7.201722         10.250.93.57         10.251.93.10         SIP         IS58 Request: INVITE sip:55555222222221362@VXMLGw1A.omnicare.com;transport=udp             13 7.203454         10.251.93.10         10.250.93.57         SIP         493 Status: 100 Trying             14 7.203494         10.251.93.10         10.250.93.57         SIP/SDF 1100 Status: 200 0K             15 7.236543         10.250.         93.57         SIP/SDF 1100 Status: 200 0K             15 7.236543         10.250.         port1.pccp - VoIP Calls         Fort1.pccp - VoIP Calls
9 5.037823       10.251.93.33       10.251.93.10       SIP       508 Request: OPTIONS sip:10.251.93.10                 10 5.038359       10.251.93.10       10.251.93.33       SIP/SDF       1007 Status: 200 0K                   12 7.201722       10.250.93.57       10.251.93.10       10.250.93.57       SIP       1358 Request: INVITE sip:5555522222222222362@VXMLGwIA.omnicare.com;transport=udp           13 7.203454       10.251.93.10       10.250.93.57       SIP       493 Status: 100 Trying           14 7.203494       10.251.93.10       10.250.93.57       SIP/SDF       1100 Status: 200 0K           15 7.236543       10.250.       Incept - VoIP Calls       Incept - VoIP Calls
10 5.038359 10.251.93.10 10.251.93.33 SIP/SDF 1007 Status: 200 0K   12 7.201722 10.250.93.57 10.251.93.10 SIP 1358 Request: INVITE sip:55555222222221362@VXMLGwIA.omnicare.com;transport=udp   13 7.203454 10.251.93.10 10.250.93.57 SIP 493 Status: 100 Trying   14 7.203494 10.251.93.10 10.250.93.57 SIP/SDF 1100 Status: 200 0K   15 7.236543 10.250. 45 10.045310 10.251. 45 0.045310 10.251.
12 7.201722 10.250.93.57 10.251.93.10 SIP 1358 Request: INVITE sip:55555222222221362@VXMLGw1A.omnicare.com;transport=udp   13 7.203454 10.251.93.10 10.250.93.57 SIP 493 Status: 100 Trying   14 7.203494 10.251.93.10 10.250.93.57 SIP/SDF 1100 Status: 200 oK   15 7.236543 10.250. 436 10.045310 10.251.
13 7. 203454 10. 251. 93. 10 10. 250. 93. 57 SIP 493 Status: 100 Trying   14 7. 203494 10. 251. 93. 10 10. 250. 93. 57 SIP/SDF 1100 Status: 200 OK   15 7. 236543 10. 250. 436 10. 045310 10. 251. portL.pcap - VoIP Calls
14 7. 203494 10.251.93.10 10.250.93.57 SIP/SDF 1100 Status: 200 OK   15 7.236543 10.250. 436 10.045310 10.251. fortl.pcap - VoIP Calls
15 7.236543 10.250. 436 10.045310 10.251.
436 10.045310 10.251. • Foreigner von cum
437 10.045836 10.251.
711 11. 870965 10. 250. Detected 2 VoIP Calls. Selected 1 Call.
714 11.872078 10.251. Start Time A Ston Time A Initial Sneaker 4 From 4 To 4 Protocol 4 Packets 4 State 4 Comments 4
732 15.053366 10.251. 7 01722 11 97072 10 55 02 57 "USPVI Main AA - Vanda Lecim 5555522222222222222222222222222222222
733 15.053737 10.251. 1.0122 11.0120/8 10.203537 0300 Wall AA Valua (Sip.555522222222150 Sir
734 20.123097 10.251. 27.719707 36.979711 10.251.93.57 +18595471607 <sip+1859! 6="" <sip.555552222222136:="" completed<="" sip="" td=""></sip+1859!>
735 20.123454 10.251.
736 25.130902 10.251.
737 25.131482 10.251.
738 27.719707 10.251.
739 27.721307 10.251.
740 27.721345 10.251.
775 27.874125 10.251.
1010 30.200873 10.251.
1011 30.201266 10.251.
1513 35.208687 10.251.
1514 35.209051 10.251. · · · · · · · · · · · · · · · · · · ·
Total: Calls: 2 Start packets: 0 Completed calls: 2 Rejected calls: 0
🕀 Frame 9: 508 bytes on y
Prepare Filter Flow Player Select All Close
Raw packet data
Raw packet data     There Protocol Vers
B Raw packet data

ort1.pcap [Wireshark 1.10.3 (SVN Rev 53022 from /trunk-1.10)]									
<u>File Edit View Go C</u> apture <u>A</u> nalyze <u>S</u> tatistics Telephony <u>T</u> ools Internals <u>H</u> elp									
C C port1.pcap - VolP - RTP Player									
Filter: S View as time of day									
No. Jitter buffer [ms] 50 🚆 🔲 Use RTP timestamp Decode Play Pause Stop Close									
2@vxMLGwIA.omnicare.com;transport=udp									
16 7 202404 10 251 03 10 10 250 03 57 STP/SDE 110 Statue: 200 Ny Ng									
15 7.23654 10.2516 10.									
436 10.045310 10.251 / Port1.pcap - VoIP Calls	8								
437 10.045836 10.251.									
711 11.870965 10.250. Detected 2 VolP Calls. Selected 1 Call.									
714 11.872078 10.251. Start Time + Ston Time + Initial Sneaker + From + To + Protocol + Packete + State + Comments									
732 15.053366 10.251. July 11 97079 11									
733 15.053737 10.251. 7.201722 11.672076 10.2009517 05KVL Main AA Valua (15)55552222222150 SP									
734 20.123097 10.251. 27.719707 36.979711 10.251.93.57 +18595471607 <sip:+1859! 6="" <sip:555522222222136:sip="" completed<="" th=""><th></th></sip:+1859!>									
735 20.123454 10.251.									
736 25.130902 10.251.									
/3/ 23.131482 10.231.									
/38 2/./19/0/ 10.251.									
730 27.721345 10.251									
775 27 874125 10 251									
1010 30 200873 10 251									
1011 30.201266 10.251									
1513 35.208687 10.251.									
1514 35.209051 10.251. ·	1								
1600 26 070672 10 251									
Total: Calls: 2 Start packets: 0 Completed calls: 2 Rejected calls: 0									
B Frame 9: 508 bytes on Pranze Eilder Elow Diaver Select All Close									
Raw packet data									
Internet Protocol Vers									

#### ステップ4:録音を再生します。

### 録音された会話を再生するには、該当するコールのデコードされたグラフを選択し、[再生]を**選択** します。

📕 port1.	ocap [Wireshark	1.10.3 (SVN Rev	53022 from /trunk-1	.10)]							
<u>Eile E</u> dit	<u>V</u> iew <u>G</u> o <u>C</u>	apture <u>A</u> nalyz	e <u>S</u> tatistics Telep	hony <u>T</u> ools Inte	ernals <u>H</u> elp						
• •	📕 port1.pcap -	VoIP - RTP Playe	er						]		
Filter:			++						2@VXMLGW1A.	omnicare.com;transport	=udp
1	28 s	29 s	30 s	31 s	32 s	33 s	34 s	35 s			
1 43 43	< From 10.25	1.93.177:20798 to	10.251.93.10:18902	III Duration:9.08 Dro	p by Jitter Buff:0(0.0	)%) Out of Seq: (	0(0.0%) Wrong Tir	mestamp: 0(0.0%)		c	
71:											
73									I • Packets	State     Comments     COMPLETED	
73							and the second second			6 COMPLETED	
73	28 s	29 s	30 s	31 s	32 s	33 s	34 s	35 s			
73	From 10.25	1 02 10/19002 to	10 251 02 177-20709	Duration 0.20 Dra	n hu littor Puff 0/0 (	)%) Out of Som (	0(0.0%) Wrong Ti	*			
73	<b>10</b>	1.93.10.10902 10	10.231.93.177.20790	Duration.9.20 Dio	p by sitter Bull.0(0.c	(in the sequence of the sequen	(0.076) Wrong In	mestamp: 0(0.076)			
73				View	as time of day						
74						1					
101	Jitter buffer (m	s] 50 📮 🗖	Use RTP timestamp	Decode	<u>P</u> lay	P <u>a</u> use	Stop	Close			
151								14			
151-	<del></del>	10.2.51.					10				F
<	26 079677	10 251			То	tal: Calls: 2 Start	packets: 0 Comp	leted calls: 2 Rejected	calls: 0		
<ul> <li>Inter</li> </ul>	9: 508 byt acket data net Protoco	es on v	Prep	are Filter	Flow		Player		Select <u>A</u> ll	Close	
User     Sessi	Datagram Pr on Initiati	otocol, Sro	Port: 58800 (OPTIONS)	(58800), Dst	Port: sip (5	060)					

ここで説明する手順は、音声品質、片通話、または無音状態に関する問題のトラブルシューティングに使用できます。

これらのdebugコマンドは、追加の診断のためにVXMLゲートウェイで入力できます。

debug ccsip mess debug ccsip error debug voip ccapi inout debug voip dialpeer inout debug http client all debug voip application script debug voip application vxml debug voip rtp session named-events debug voip rtp sess nse debug voip rtp