

Voice Log Translator (VLT) Usage to Read and Interpret CUCM Traces

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Introduction

This document describes how to read Cisco Unified Communications Manager (CUCM) traces with the use of the Cisco Voice Log Translator (VLT) software.

Prerequisites

Requirements

Cisco recommends that you have knowledge of CUCM.

Components Used

The information in this document is based on CUCM Versions 8.X and later and Cisco VLT.

Cisco VLT Installation

One of these Operating Systems that runs on an x86 hardware platform is required to support Cisco VLT:

- Microsoft Windows: Microsoft Windows 8, Microsoft Windows 8.1, Microsoft Windows 7, or

Microsoft Windows Vista, XP, 2003, or 2000

- Linux: Red Hat Linux Version 9 and Red Hat Enterprise Linux AS Version 3.0

On both Microsoft Windows and Linux Systems, the VLT software can run as a standalone application or as a plug-in in the trace collection tool, Real-Time Monitoring Tool (RTMT).

This document does not provide information on how to enable traces and collect them. You can refer to the [Set Up Cisco CallManager Traces for Cisco Technical Support](#) document section for Version 7.x for more information. The same applies to Version 8.x and later.

Cisco VLT software can be downloaded from [Cisco's software download site](#).

Supported Protocols

The Cisco VLT software supports these protocols:

- H.225 and H.245
- Java Telephony API (JTAPI)
- Media Gateway Control Protocol (MGCP) and Call Associated Signaling (CAS)
- Q.931
- Session Description Protocol (SDP)
- Simple Client Control Protocol (SCCP)
- Session Initiation Protocol (SIP)

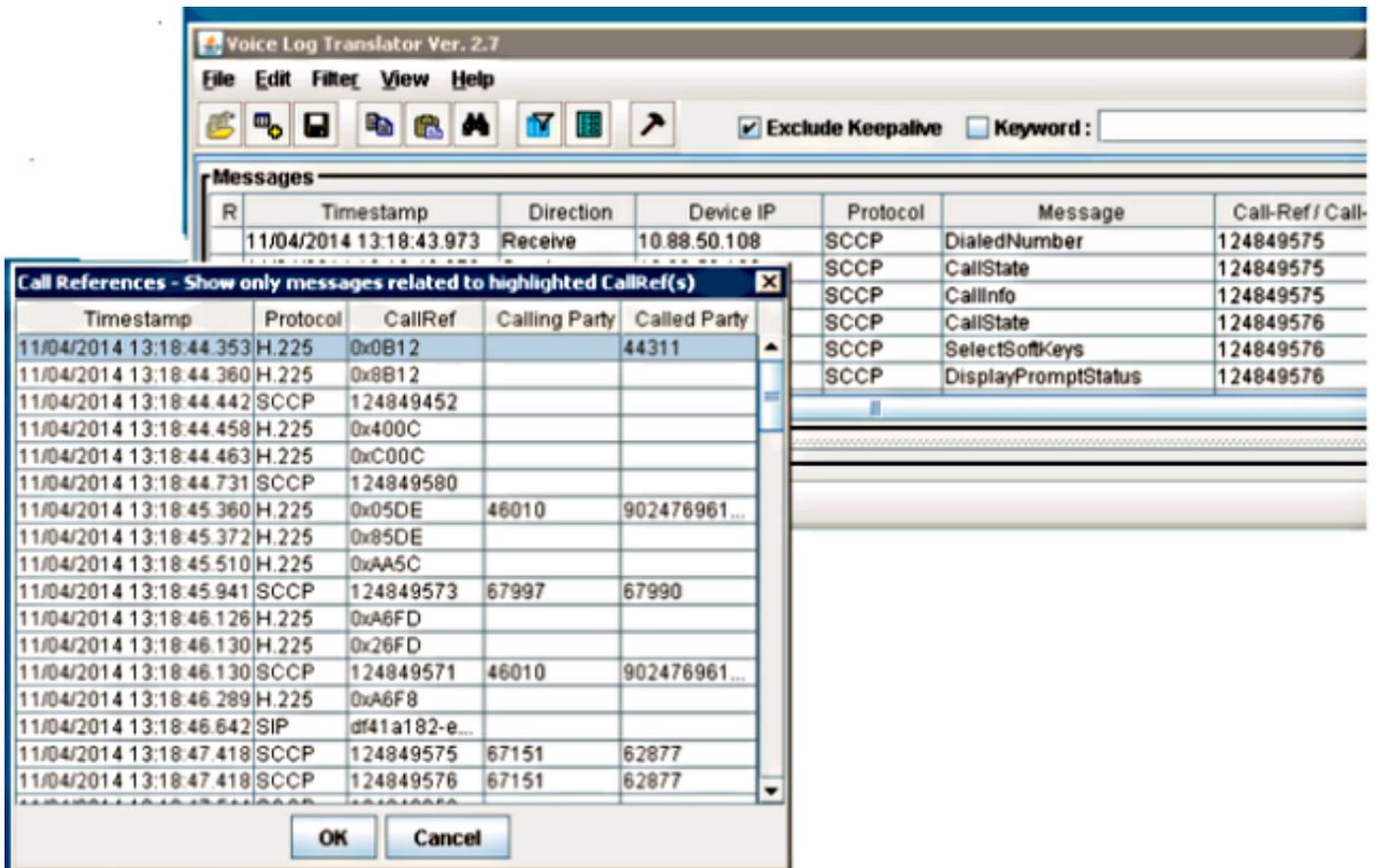
Advantages of Cisco VLT Use

Here are some of the advantages of Cisco VLT use:

- Messages are displayed in tabular form.
- You can display messages for a particular call (as identified by its call reference) or for all calls that involve a particular device IP address, direction (send or receive), protocol, command, message, or channel.
- You can display messages for calls with specified criteria.
- You can display messages by call reference; each message contains the show timestamp, protocol, calling number, and called number.
- You can display messages for calls whose device IP address, direction (send or receive), protocol, command, message, call reference, or channel contains a text string.

Analysis with Cisco VLT

Open the trace file with Cisco VLT. Here is a tabular display of the traces with Timestamp / Call Ref / Protocol / Calling and Called numbers:

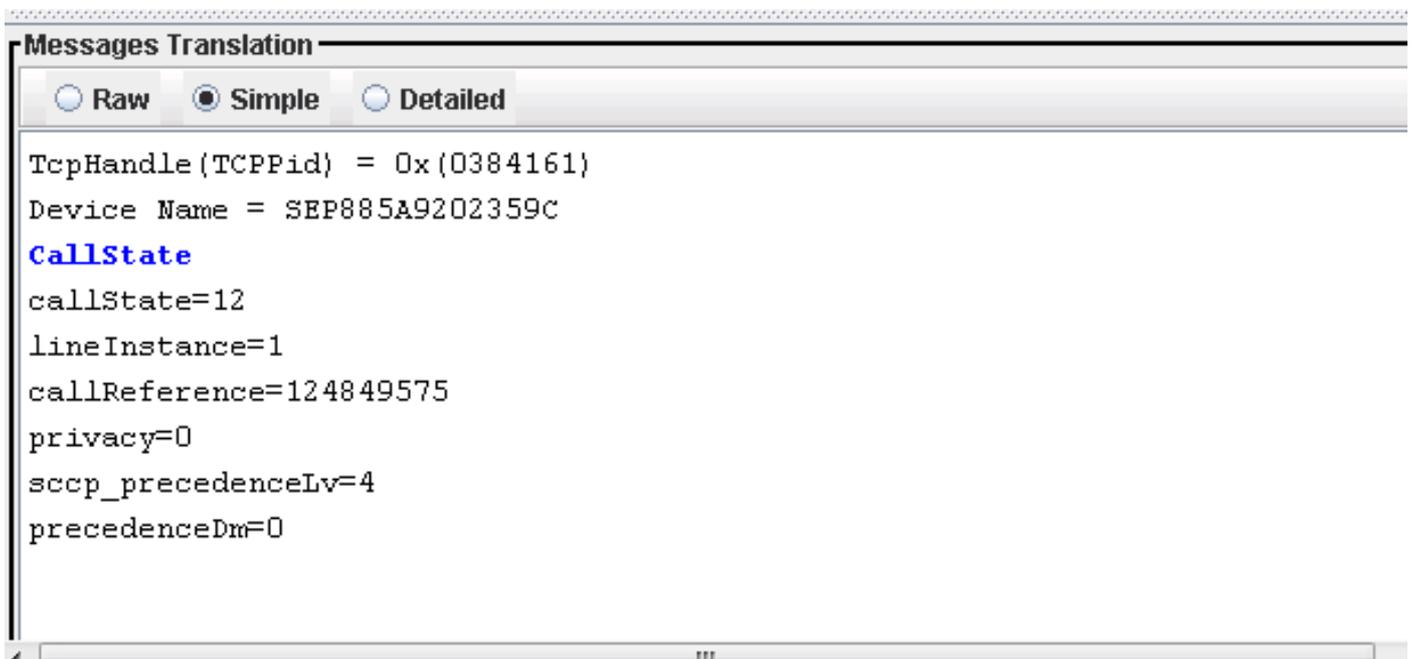


Traces can be analyzed with display set as:

- Raw: This displays the trace as it is in the file.
- Simple translation: This display rearranges the text and provides a simple translation.
- Detailed: This displays the text and also provides a detailed explanation for the display.

Raw Display

Here is a sample screenshot of the Raw display of the trace:



Detailed Explanation

Here is a display of the same text with a Detailed explanation:

```
Messages Translation
  Raw Simple Detailed
TcpHandle(TCPPid) = 0x(0384161)
Device Name = SEP885A9202359C
CallState
callState=12
  -- Proceed.
lineInstance=1
  -- LineInstance is 1
callReference=124849575
  -- CallReference.
privacy=0
  -- Call privacy = 0
sccp_precedenceLv=4
  -- Call Precedence Level = 4
precedenceDm=0
  -- Call Precedence Domain = 0
```

Here is a Detailed explanation of the SDP parameter and its interpretation:

```

Messages Translation
   Raw   Simple   Detailed
a=annexb:0
  -- other attribute's name
m=audio 16386 RTP/AVP 0 8 18 101
  -- Media mode: audio service
  -- Transport port: 16386
  -- Transport protocol: RTP with Audio/Video Profile
  -----
  -- Based on the following codec:
  -- 0: The 8kHz PCMU codec
  -- 8: The 8kHz PCMA codec
  -- 18: The 8kHz G729 codec
  -- 101: (Dynamic)
a=rtpmap:0 PCMU/8000
  -- The encoding of dynamic audio formats: 8 kHz PCMU codec
a=rtpmap:8 PCMA/8000
  -- The encoding of dynamic audio formats: 8 kHz PCMA codec
a=rtpmap:18 G729/8000
  -- The encoding of dynamic audio formats: 8 kHz G729 codec
a=fmtp:18 annexb=no
  -- other attribute's name
a=sendrecv
  -- The type of connection: both send and receive
a=rtpmap:101 telephone-event/8000
  -- The encoding of dynamic audio formats: 8 kHz telephone-event codec
a=fmtn:101 0-15

```

Here is a Detailed explanation of a H.225 SETUP:

11/04/2014 13:19:03.504	Receive	10.102.235.247	H.225	SETUP	0x8671	
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```

Messages Translation
   Raw   Simple   Detailed
00 02 00 16 03
  -- SETUP, pd = 8, callref = 0x0B12

Information Element(s)
04 03 80 90 A3
  -- Bearer Capability i = 0x0800900A3, ITU-T standard, Speech, Circuit mode, 64k, A-law
28 0A 41 6E 6F 6E 79 6D 6F 75 73 20
  -- Display i = 'Anonymous '
6C 02 00 A0
  -- Calling Party Number i - Plan: Unknown,Type: Unknown, Presentation Restricted,User-provided, not screened
70 06 80 34 34 33 31 31
  -- Called Party Number i - '44311' - Plan: Unknown,Type: Unknown
78 00
  -- User-User i - 0x502008060809104A0402800B500012040103C51000EFD0C002402D06305B0110E40BF50BB0B608A09305F08300CD01D082070A
1080

```

Note: For more detailed information, refer to the [Cisco VLT User Guide](#).