

# 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)

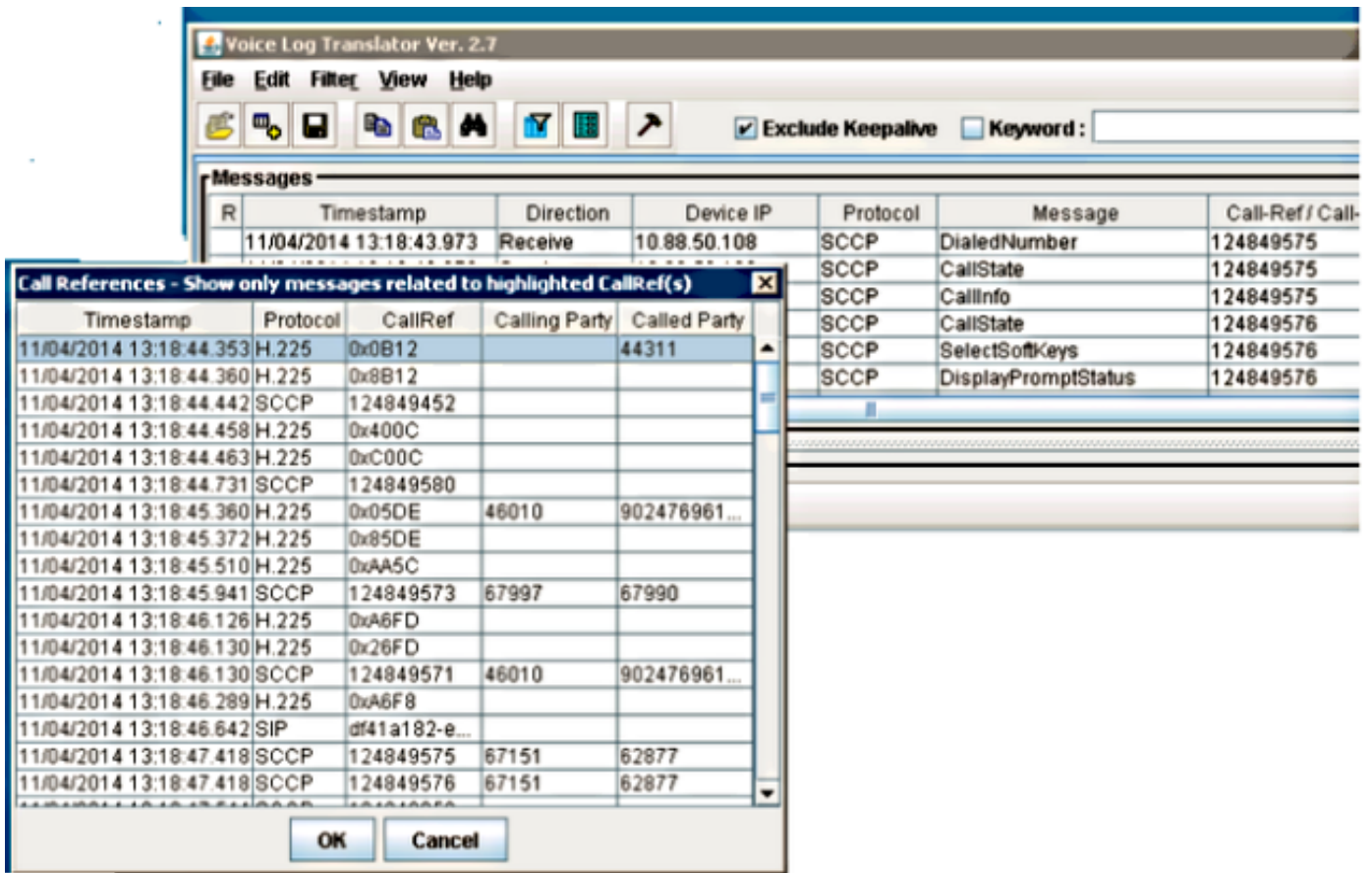
## Advantages of Cisco VLT Use

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:

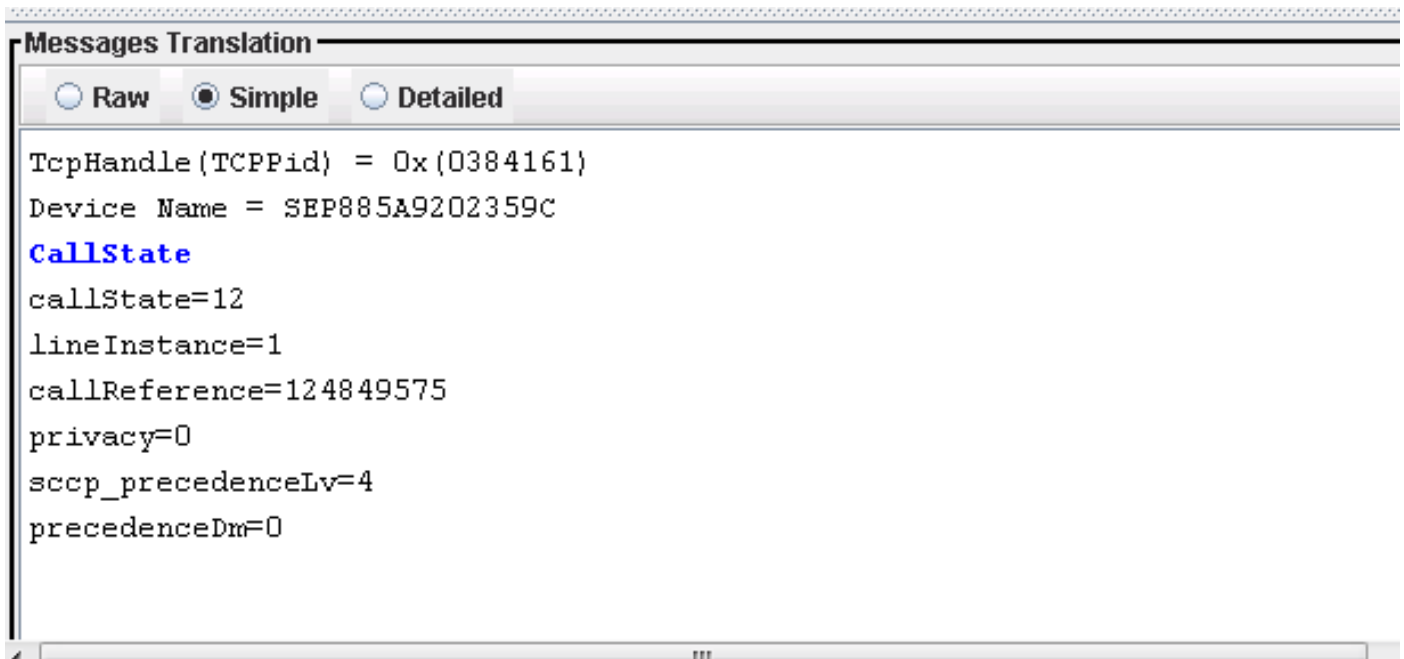


Traces can be analyzed with display set as:

- 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=A-NAC: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 00
  -- 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](#).