



# Information About Cisco VLT

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Cisco VLT enables you to display and filter trace log message lists, display associated raw or translated message texts, and find specific information within those texts.

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## Cisco VLT Capabilities

This section contains information on these topics:

- [Signaling Protocols, on page 1](#)
- [Search Functions, on page 2](#)

## Signaling Protocols

Cisco VLT handles the following file types (in separate calls or in a single call):

- H.225 and H.245
- 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)

## Search Functions

Cisco VLT offers two search functions:

- The Filter function (see the [Filtering the Trace Log Message List](#)) uses the list of messages in the Messages upper pane and the associated raw messages in the Messages Translation lower pane.
- The Find in Messages Translation function (see the [Finding Information in Trace Log Message Text](#)) operates on the current message in the Messages Translation lower pane.

## Other Functions

You can do the following with Cisco VLT:

- Open trace log message files and display message lists and associated messages for all supported signaling protocols in the same window (see the [Displaying a List of Trace Log Messages](#)).
- Filter a trace log message list to do the following (see the [Finding Information in Trace Log Message Text](#) section):
  - Display or exclude keepalive messages.
  - Display messages for a particular call (as identified by its call reference) or for all calls involving a particular device IP address, direction (send or receive), protocol, command, message, or channel. For example, you can display all messages related to the T1 1/0:3 on gateway A.B.C.D.
  - Display messages for calls with specified criteria.
  - Display messages by call reference; each message contains show timestamp, protocol, calling number, and called number. For example, you can display all messages for a particular call leg (any supported protocol) or for both legs (SCCP side and MGCP/Q.931 side) of a call.
  - Display messages for calls whose device IP address, direction (send or receive), protocol, command, message, call reference, or channel contains a text string.
    - Specify a level of translation (raw, simple, or detailed) for the text of a trace log message (see [Finding Information in Trace Log Message Text](#)). You can copy the message text to the clipboard, export translated messages to a text file, and search for a specific test string in message text.




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**Note** If the signaling protocol for a message is invalid or not supported, you can display the message in raw format only.

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## Troubleshooting a Typical Cisco VLT Use Scenario

If you are an experienced administrator, familiar with Cisco products (including Cisco Unified Communications Manager, IOS command-line interface, and networking concepts and technologies) and are responsible for post-installation support of enterprise voice installations, use the following procedure to troubleshoot a scenario:

### Procedure

- 1 Receive notification of a problem with a Cisco Unified Communications Manager or JTAPI application.
- 2 Enable trace logging on relevant Cisco Unified Communications Manager servers or JTAPI clients.
- 3 Retrieve the following information about the problem call:
  - Time of call, including the minutes and seconds
  - Called-party and calling-party phone numbers
  - Nodes involved (Cisco Unified Communications Manager, gateway, JTAPI application, etc.)
  - Call flow (whether transfer, conference, or forward are involved; whether the call is internal or external; types of devices involved, etc.)
- 4 Collect trace log message files from the Cisco Unified Communications Manager or JTAPI client, usually several files surrounding the time of the event.
- 5 Open the file whose time stamp is closest to the reported trouble time. (Alternatively, depending on circumstances, open the entire collection of trace files at once.)
- 6 Search each file's translated message text (by using the Find in Messages Translation function) until you locate the called or calling phone number for the trouble-causing call. Note the call reference.
- 7 Filter the display based on call reference to display all messages that pertain to that call.
- 8 Troubleshoot as needed. Possible actions depend on the type of problem, but include the following:
  - Save the one or more trace log message translations that pertain to the call to a flat file, open them with a text editor, and locate the exact timestamp or other helpful information.
  - Compare two or more message translations (typically for different calls) by using the **Filter > by Highlighted Rows** function to display the translations together. Comparing the translations for a successful and a failed call is a useful troubleshooting technique.

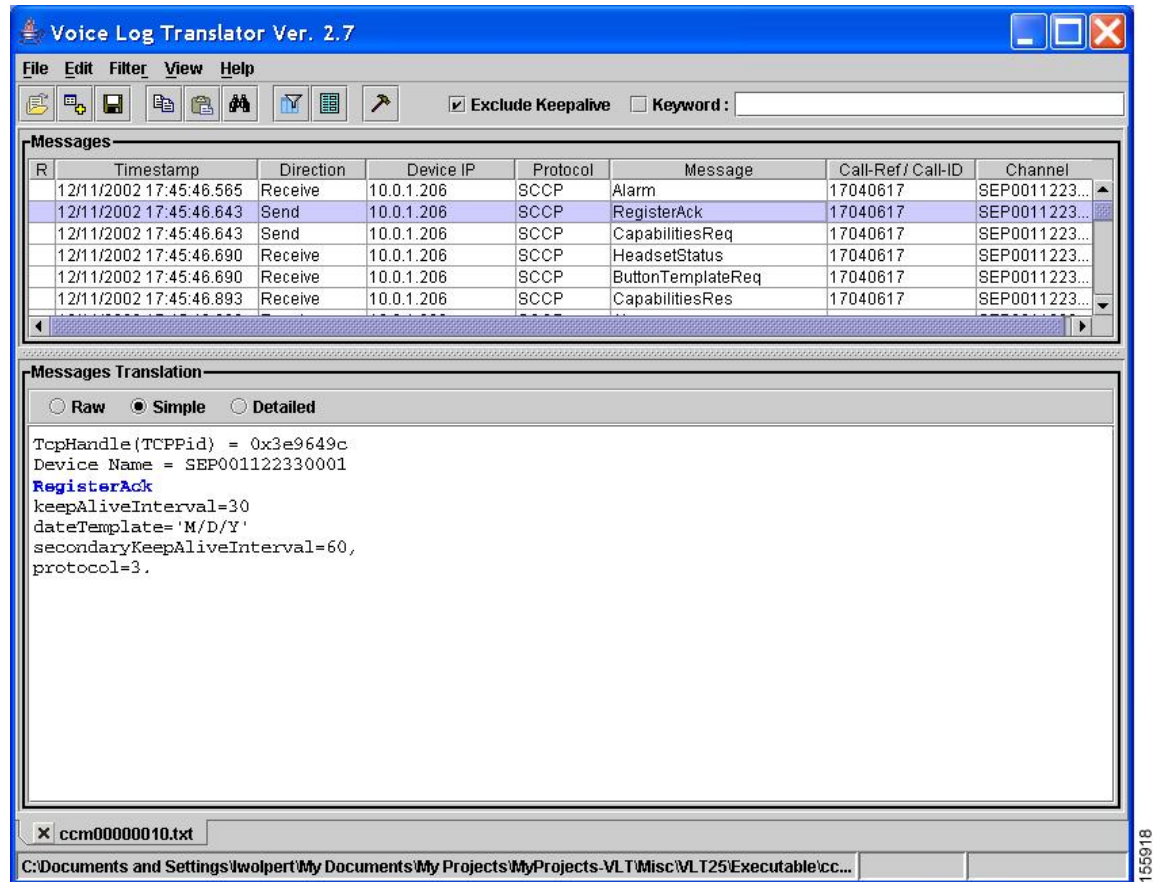
## Cisco VLT GUI Display and Navigation

The Cisco VLT user interface has a toolbar at the top, followed by two display panes ([Cisco VLT GUI Display and Navigation, on page 3](#) [standalone system] and [Cisco VLT GUI Display and Navigation, on page 3](#) [plug-in system]):

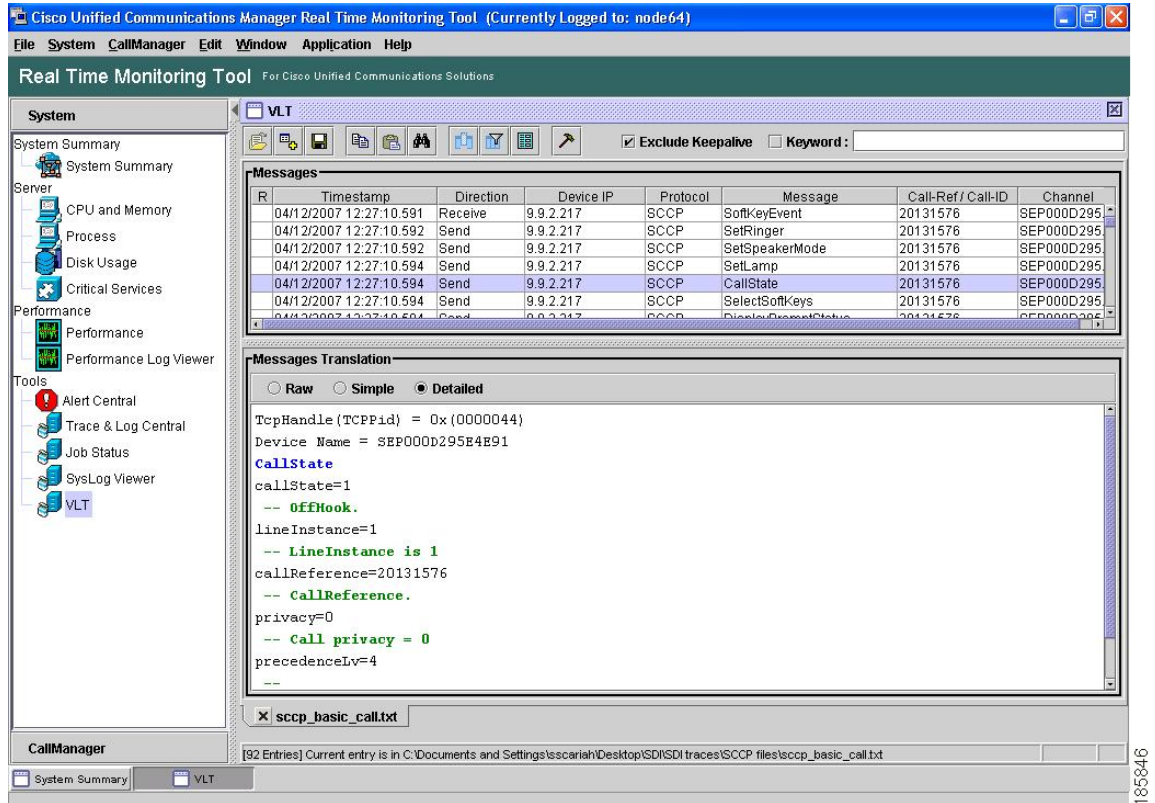
- Messages upper pane—Displays a list of trace log messages from one or more files.

- Messages Translation lower pane—Displays the raw or translated text of a highlighted message.

**Figure 1: Cisco VLT User Interface (Standalone System)**



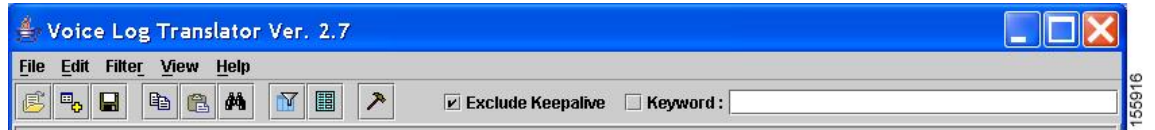
**Figure 2: Cisco VLT User Interface (Plug-In System)**



The window allows for typical GUI display control such as window resize, column resize, vertical and horizontal scroll, minimize, restore, and close. You can also grab and move the border between the Messages upper pane and the Messages Translation lower pane.

You navigate the Cisco VLT interface using the toolbar as shown in [Cisco VLT GUI Display and Navigation, on page 3](#).

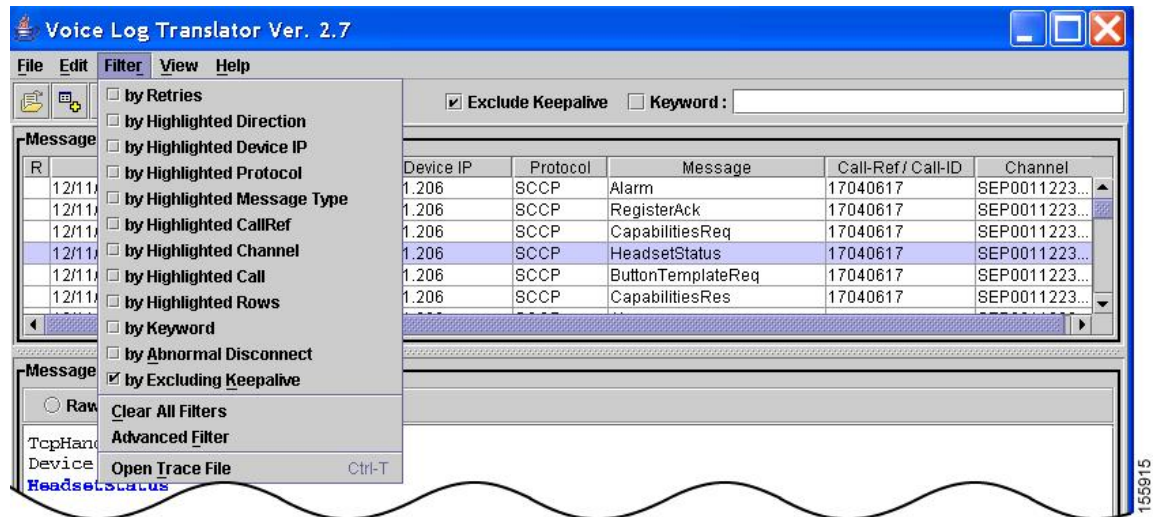
**Figure 3: Cisco VLT Toolbar**



The toolbar has both a top line (with text) and a bottom line (with icons).

To navigate using the top line, choose one of the displayed choices—File, Edit, Filter, View, or Help. These selections open a successive context-sensitive display of new choices, as shown in [Cisco VLT GUI Display and Navigation](#), on page 3.

**Figure 4: Cisco VLT Toolbar: Successive Display of Choices**



Alternatively, you can navigate using the icons on the bottom line. Icons for Open Log Files, Open and Add Log Files into Current Log Panel, Save Translated Messages, Copy, Paste, Find in Translated Message, Advanced Filter, and Call References duplicate most of the text options for the top line.

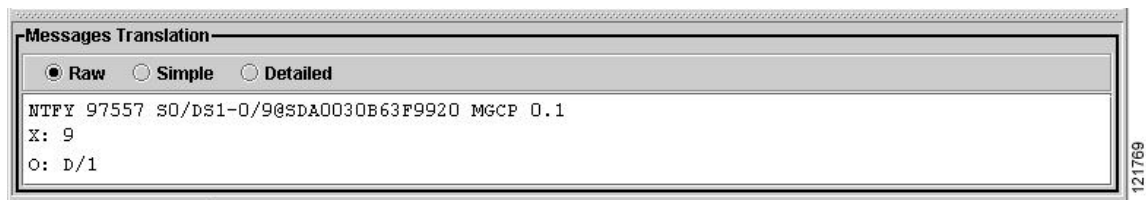
## Cisco VLT Message Translations

Cisco VLT allows you to view message (raw) text at one of two translation levels. Examples of raw and translated messages, and how they display the same information (in this case, the code word X in an MGCP NTFY message), are as follows:

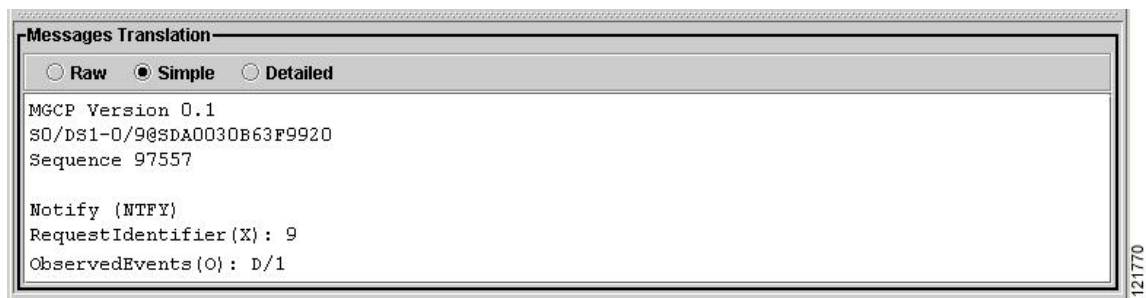
- Raw message ([Cisco VLT Message Translations](#), on page 6)—Displays the code word as X:9
- Simple translation ([Cisco VLT Message Translations](#), on page 6)—Displays the code word as RequestIdentifier(X): 9

- Detailed translation ([Cisco VLT Message Translations, on page 6](#))—Displays the code word as X: 9  
-- Request ID is 9

**Figure 5: Cisco VLT Raw Message**



**Figure 6: Cisco VLT Simple Translation**



**Figure 7: Cisco VLT Detailed Translation**

