



QTrace[™] New Version User Guide

Valid from Version 8.00

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Session Viewer with QTrace

1

A**about This Guide**

The *QTrace User Guide* describes how to trace online test calls using the QTrace application. A familiarity with the QExpert and Omni-Q application is assumed.

Document Objectives

The purpose of this guide is to instruct Omni-Q users and administrators in how to use and configure the QTrace application.

In addition, the online help provides an easy method for accessing the information in this guide. To access the online help, select **Help** from the Help menu.

Document Conventions

The following icons appear throughout this guide:



NOTE

Provides additional information on the current topic.



TIP

Provides additional advice on how to implement the current topic.

Typographical Conventions

Italic is used for fields that appear in the software and to refer to other documents.

Boldface is used for operations that you must perform (e.g., name of a button to be clicked or option to be selected) or to emphasize a field or concept being described.

How This Guide is Organized

This guide is organized into the following chapters and appendices:

Chapter 1: Overview

This chapter provides an overview of QTrace and its benefits.

Chapter 2: Configuration

This chapter provides information on how to configure the QTrace application.

Chapter 3: Viewing Traces

This chapter provides information on how to view and save Traces.

Appendix A: Session Viewer

This chapter provides information on the Session Viewer application.

Further Information and Technical Support

Contact your local distributor for additional help with specific problems and questions.

Introduction

RADCOM's QTrace application provides online information on any designated call or link in the network. You can observe the call in real time and not just historically. Examples of use for QTrace are troubleshooting and network verification.

QTrace enables you to:

- Trace end-user calls to facilitate customer support.
- Run real-time call traces in parallel to probe monitoring.
- Use a pre-defined group or set customized trace filters.

The call trace relates to both the signaling and user-plane of the call.

The following topics are covered in this chapter:

- [Mode of Operation](#)
- [Installation](#)

Mode of Operation

QTrace consists of a client server configuration. The server is installed by RADCOM on a dedicated Windows system. You can install the client yourself. There can be more than one client opposite one server.

Installation

Install the system from the CD.

Follow the instructions from the CD to complete the installation.

Overview of Running QTrace

To run QTrace

1. Use the filters to define the Traces you want to view
2. Run the Traces
3. Export or save as required.

Prerequisite for Running the Application

- Your system must have .net 3.5 framework.
- You must be defined as an Omni-Q (QTrace, Administrator, QExpert Group or Enhanced) user on the QManager system (refer to your system administrator for details)

Running the Application

Click the QTrace icon on your desktop, the QTrace login box opens.

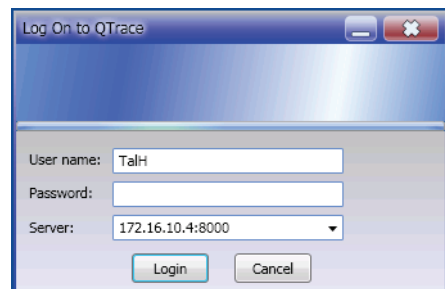


Figure 2-1: QTrace Login

1. Type your user name and password. Make sure you use your own user name, as Filters are stored according to user.
2. Use the drop down arrow to select the server to which you want to log in to. The default port is 8000, but if your system requires it, a different port may be used.
3. Click Login.

Defining the Traces to View

Using the QTrace you can follow certain calls or transactions between specific users, who may have a problem, or for whom you may want to see what is happening. You define the traces you want to view by defining filters.

When you open the application the following screen is displayed.

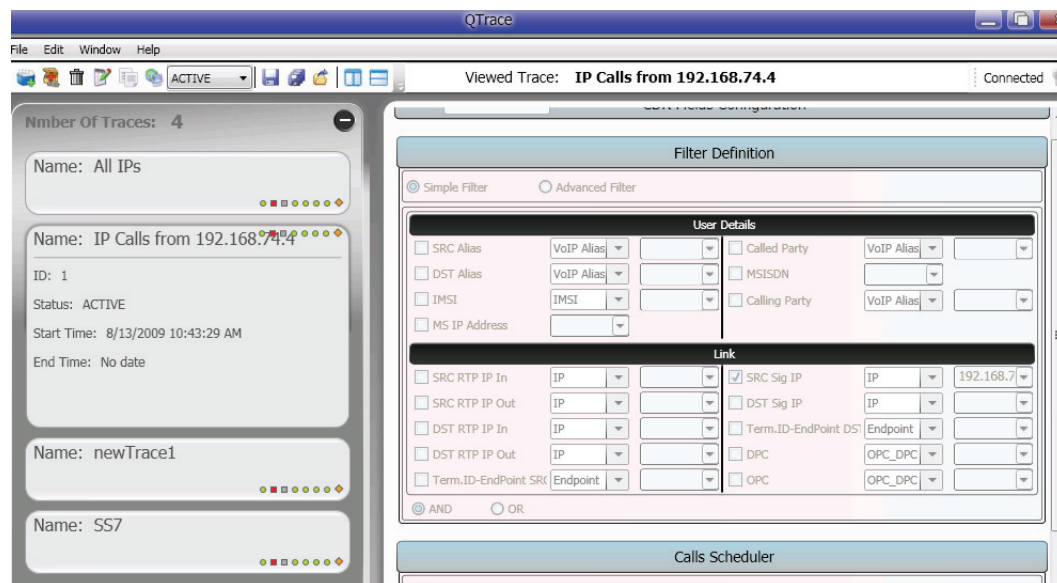


Figure 2-2: Main QTrace view

The right pane shows the open traces, use the Windows menu, or click the Trace box on the left pane to move between the open traces.

Use the CDR field configuration screen to define the data to view. The screen is comprised of 4 panes, CDR Field Configuration, Filter Definition, Calls Scheduler and General information.

Creating and Editing Traces

Creating a New Trace

To create a new trace click the New Session Trace button , or click the Load Trace button to Load an Existing Trace and edit it.

Editing Traces

1. Click the Load Trace button  to load an existing Trace.
2. Either click the duplicate Trace button  to edit a copy of this trace without changing the original trace. and then click Edit Trace

Or click the Edit Trace button  directly.

Defining the Fields to Appear

Use the CDR field definition pane to define the fields to appear on the Trace.

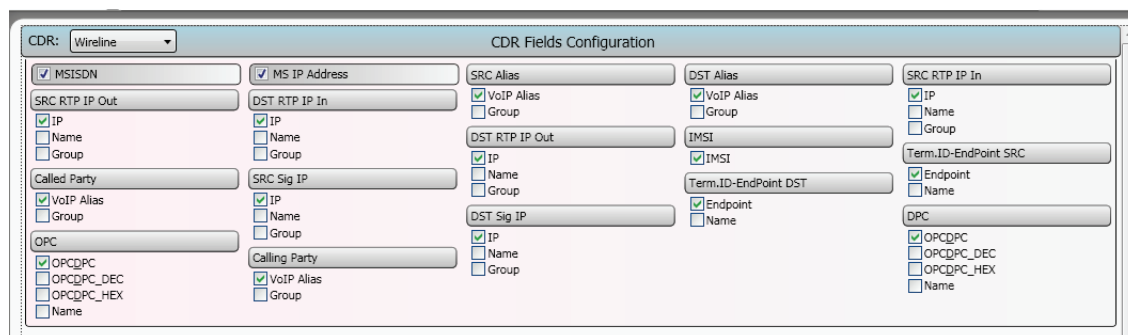


Figure 2-3: *Defining Fields to Appear*

When working in Edit mode this pane is active and you can select or deselect the fields that will appear on the Trace.

Defining Filters

1. Use the CDR box to define the technology.
2. Select a filter type, simple or advanced
3. Define the User Details and the link according to the technology with which you are working. Filter what and who you want to see by defining called and calling number or OPC and DPC depending on the technology; for instance if you are working with SS7 you will define DPC, OPC etc.

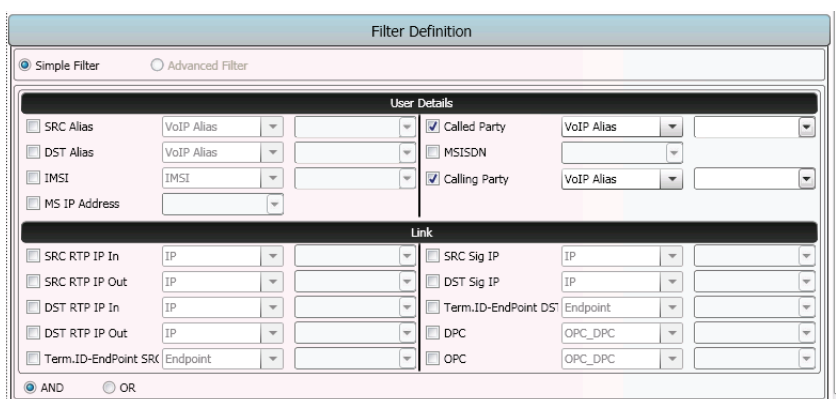


Figure 2-4: *Defining filters*

4. Click as many checkboxes as you require according to your technology. Then use the drop down arrows to choose available fields. Use the second drop down box to add specific parameters. You can use wildcards when defining parameters so that you can focus on a wider range of data.

**NOTE**

Please note, QTrace is based on SQL coding. % represents the wildcard (*), while _ is the same as ? .

For example, to see all calls coming from a number that begins 03 646, enter the value 03 646 %

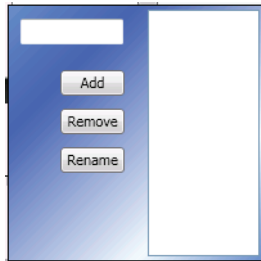


Figure 2-5: Adding parameters

Define the Link

The link definitions are also dependent on the technology in use. Currently you can define:

- SRC RTP IP in
- SRC RTP IP Out
- DST RTP IP in
- DST RTP IP Out
- Term ID-EndPoint SRC
- SRC SIG IP
- DST SIG IP
- Term ID EndPoint DST
- DPC
- OPC.

**TIP**

You can also use logical And or OR when defining the filters and link.

Scheduling Calls

Use the Call Scheduler pane to define the time the trace should be run.

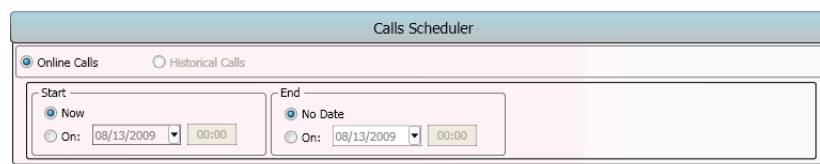


Figure 2-6: Defining when to run the trace

**NOTE**

The QTrace only stores call history of several minutes, depending on the available memory on the server

The general information pane summarizes the information defined for the trace.

Click Publish  to share your Trace with other users, i.e to make it available to anyone who logs on to this server.

Click Save or Trace View to open the Trace View screen.

V

iewing Traces

3

Running Traces

When you click View Traces the Call Trace View screen opens.

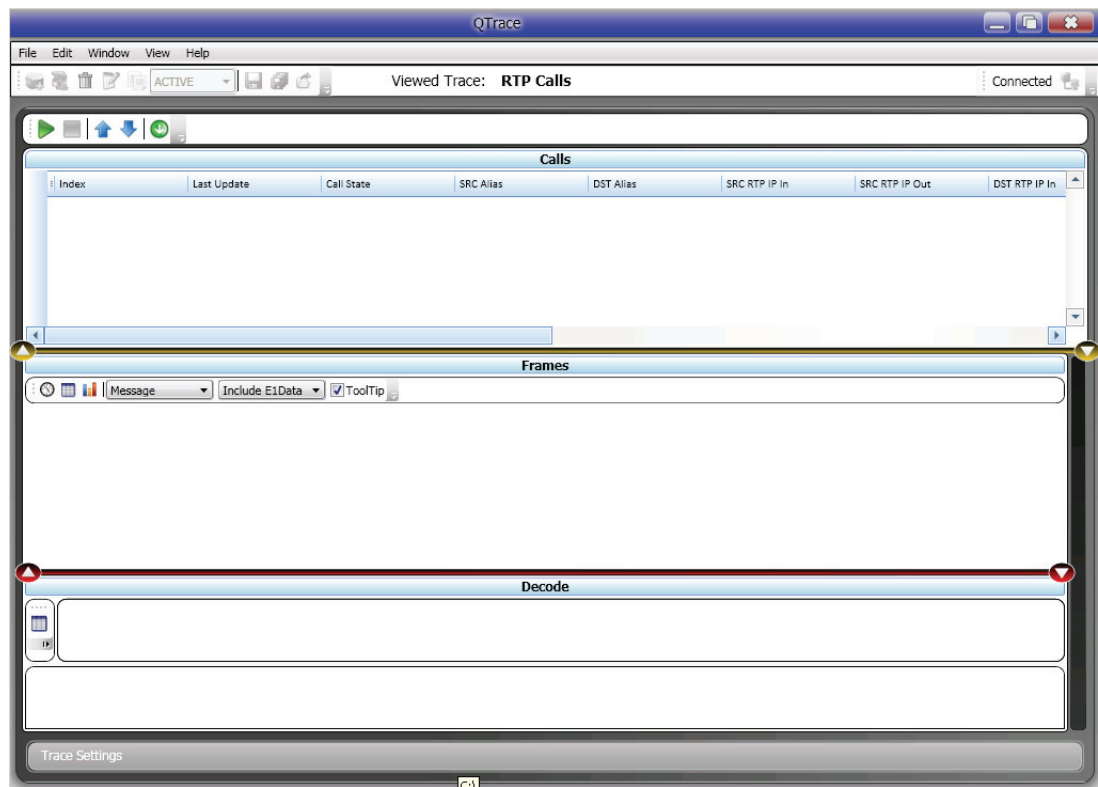


Figure 3-1: *Call Trace view*

Click the Run button on the Trace view to run the trace. The trace runs, displaying the defined call fields. For each call the application displays the

signaling data;, and for each signaling frame it displays the decoded message and the raw data, both with details and ASCII/Hex format.

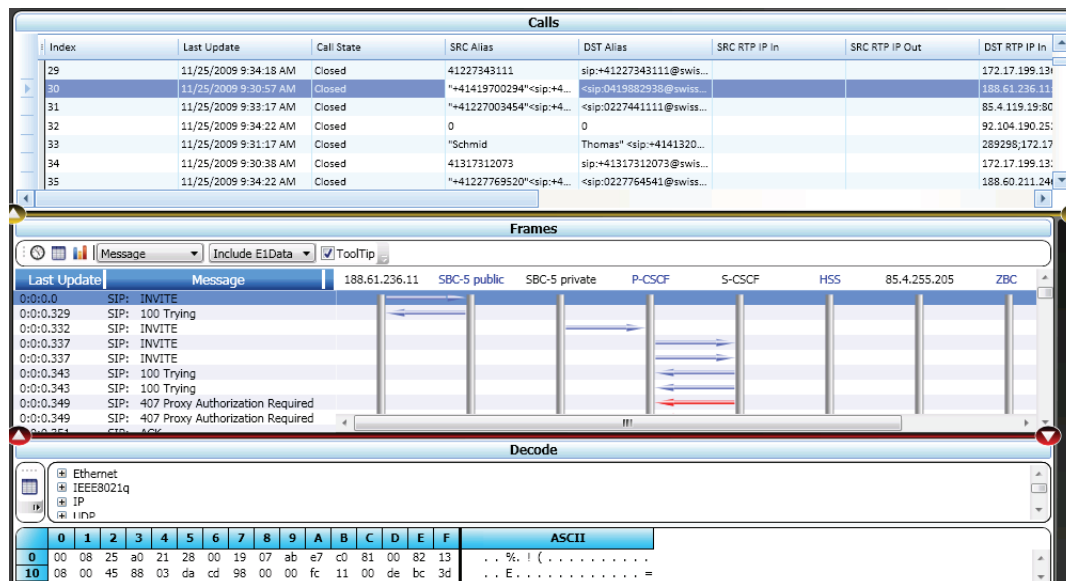


Figure 3-2: Results screen

Click on the arrows to expand or hide panes, click on Trace Settings to return to the configuration screen.

Viewing Calls

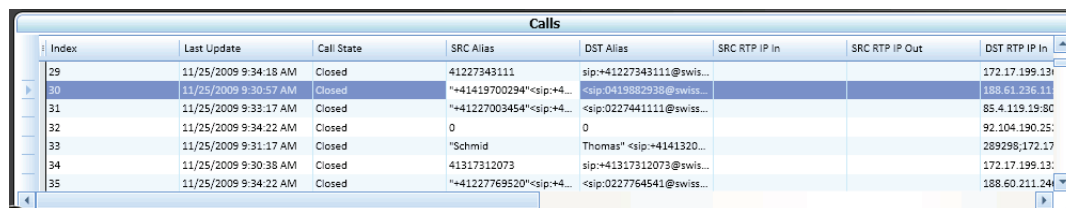


Figure 3-3: Calls pane

The calls pane displays data about the call. For each call, an index number, the last update (the time of the latest update received about the call) and the Call state (open or closed). The other fields that appear here are determined by the CDR.

Right click on the calls field header bar to define the fields that appear.

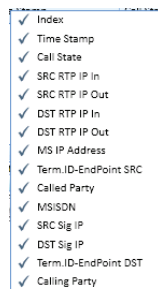


Figure 3-4: *Fields to display*

Select fields to display, and deselect fields that you want to hide. This is useful if, for instance, some of the fields are empty; it is easier to focus on the data if you simply remove these fields. You can also drag the field headers to change the order in which they appear.

Displaying Signaling Data

When you click on a call in the calls pane, the signaling data for that call is displayed in the Frames pane.

Viewing Frames

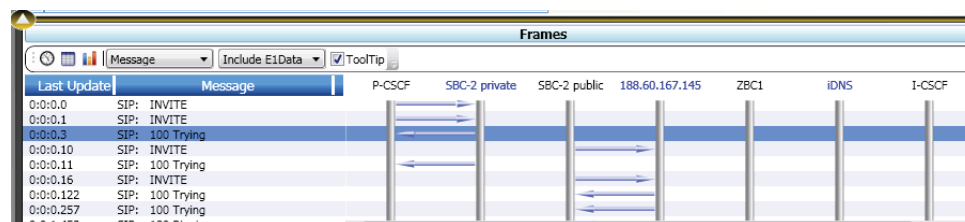


Figure 3-5: *Signaling data*

The Frames pane is divided into 2 sections, a table view and a graphic view. In this way you can directly see full details of the call and the signaling. Each of these panes are also displayed separately when you click the table, or graph button. Right click on the header row to add more fields to the table pane.

Customizing Tool Tips

Mouse over the arrows on the graph to display the call information. This is displayed in the graph pane of the full view, and in the graph display. When you mouse over the arrows on the frame field you can display the message, time stamp and measuring probe. It is possible to define additional fields to view in the “tool tip”; for instance the destination address. In this way you can focus on specific fields from the detailed decode.

To define fields to display.

1. Click the tool tip checkbox to enable this feature.
2. Right click on the arrow, a context menu appears. The fields that appear in this menu depend on the contents of the packet.

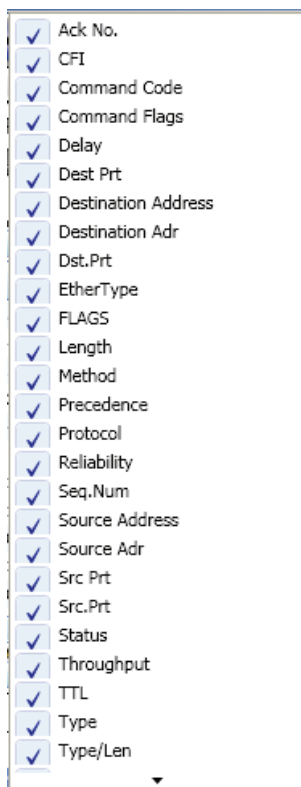


Figure 3-6: *Define tool tips*

3. Select the fields that you want to display in the tool tip.

When you mouse-over the arrows, details about the fields you selected are displayed.

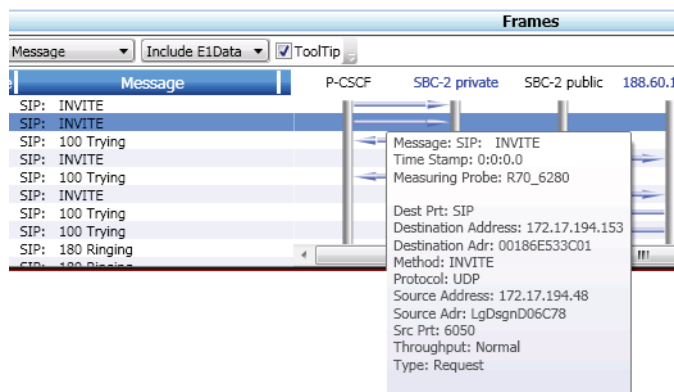
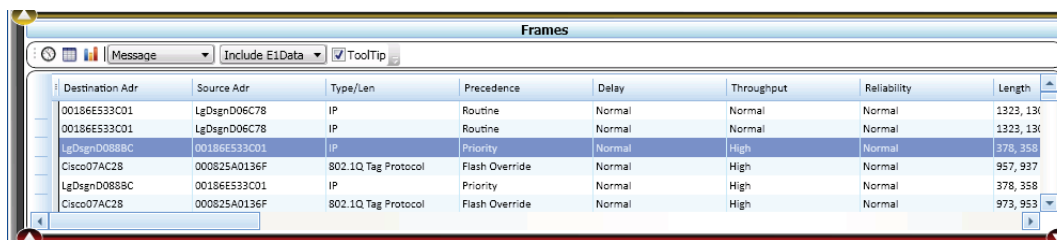


Figure 3-7: *Tool tip shows details about the fields selected*

Table View

Click the table button to display the signaling data as a table.



Destination Addr	Source Addr	Type/Len	Precedence	Delay	Throughput	Reliability	Length
00186E533C01	LgDagnD06C78	IP	Routine	Normal	Normal	Normal	1323, 13
00186E533C01	LgDagnD06C78	IP	Routine	Normal	Normal	Normal	1323, 13
LgDagnD0888C	00186E533C01	IP	Priority	Normal	High	Normal	378, 358
Cisco07AC28	000825A0136F	802.1Q Tag Protocol	Flash Override	Normal	High	Normal	957, 937
LgDagnD0888C	00186E533C01	IP	Priority	Normal	High	Normal	378, 358
Cisco07AC28	000825A0136F	802.1Q Tag Protocol	Flash Override	Normal	High	Normal	973, 953

Figure 3-8: *Displaying Frames as a table*

Displaying the Data in Graphic Format

Click the graph icon to display the data in graphic format.

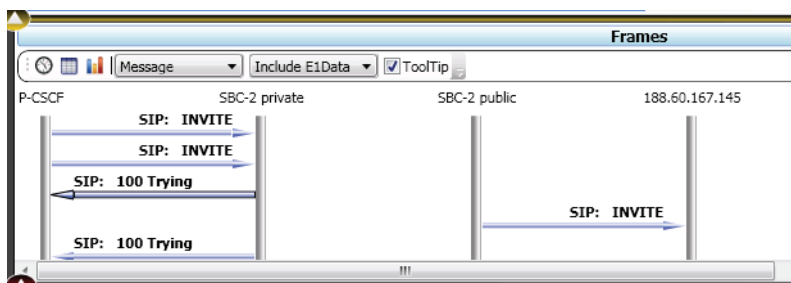


Figure 3-9: *Frame in graphical view*

Click the message drop down arrow to define whether to display the Message, the time stamp (appears above the line) or the name of the measuring probe from which the message was sent.

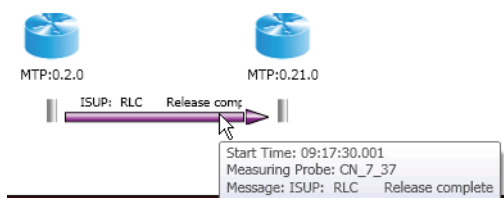


Figure 3-10: *Graphical view*

Customizing the Image and Name of the Network Element

You can customize the image and name of the network element, by adding your own image for each element, and changing the element names to more meaningful names.

To replace the images:

Copy the images you want to use to the directory StationImages which is located in ProgramFiles/RADCOM/QTraceClient/config.

The images may be of any graphic format. It is recommended that their height and width be between 15 and 50 pixels. 30x30 or 40x40 are most successful.

To implement the new definitions open the xml file ImageIPMapping.xml located in ProgramFiles/RADCOM/QTraceClient/config

Text similar to this appears:

```
StationImageMap Name="Shai" ImagePath="Phone.jpg" IpList="5-10-7" />
  <StationImageMap Name="Tal" ImagePath="MobilePhone.jpg"
IpList="192.168.70.5 192.168.70.226" />
```

Use any xml/text editor to define the parameters as follows:

StationImageMap Name	The name that will appear next to the station
ImagePath	The name of the graphic file that will appear
IpList	Type the IP address for which this image and name will be used. Separate IP addresses with one space

Save the file. The next time signals from the IP addresses you defined appear, the name and icon you defined will be displayed in the Frames pane.

Viewing the Decode

The decode pane displays the full decode of the call in text, as well as in ASCII and hexadecimal format. When you select a row in the decode table it is displayed in ASCII and hex too.

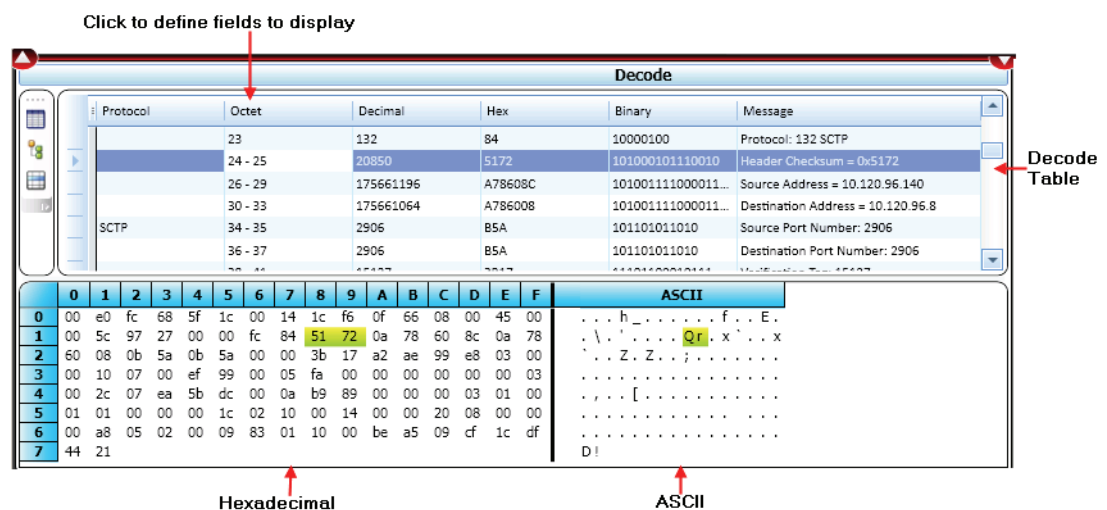


Figure 3-11: Decode View

Click on the top row to define the fields to display in the table view.

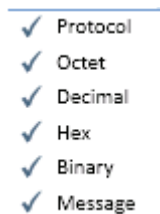


Figure 3-12: *Select fields to display in Table view*

Click the buttons to move between the display of the decode, You can see Table view, Row View and Tree View.

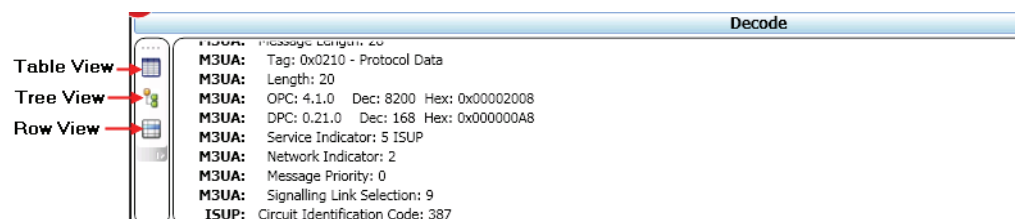


Figure 3-13: *Decode Rows*

Tree View

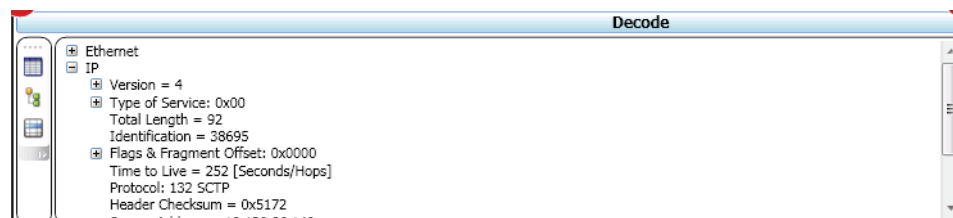


Figure 3-14: *Decode Tree View*

The decode tree view displays the decode according to the protocol stacks. Click on the + and - signs to expand and contract the decode rows.

Locating Specific Text

You can search for specific text in a packet in the detailed decode. It is possible to find any string in the context of the decode, either in a message or a decode.

To search for text

1. From the Edit menu chose Find or press Ctrl F. The Find dialog box opens.

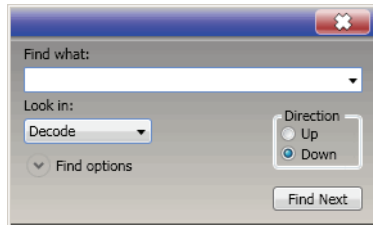


Figure 3-15: *Find*

2. Chose whether to search in the call frames list or in the frame's detailed decode data. You can also define whether the search is case sensitive.
3. Click **Find Now**.

The required text is marked in the decode.

Saving and Exporting Traces

Saving Traces



Click on the Save button to save the Traces or Chose Save from the File menu. You can save a specific traces or all Traces . This is saved on the server.

Saving in HTML Format.

You can save the call trace as an HTML file. This enables users without access to the QTrace application to open the call trace and view the output using any browser. The html file contains detailed data of a single call with links to the decode. .

To save as HTML from the File menu Choose **Save as HTML** .

Table of content

- [Session Flow Diagram](#)
- [Decoded Messages](#)

Session Flow Diagram

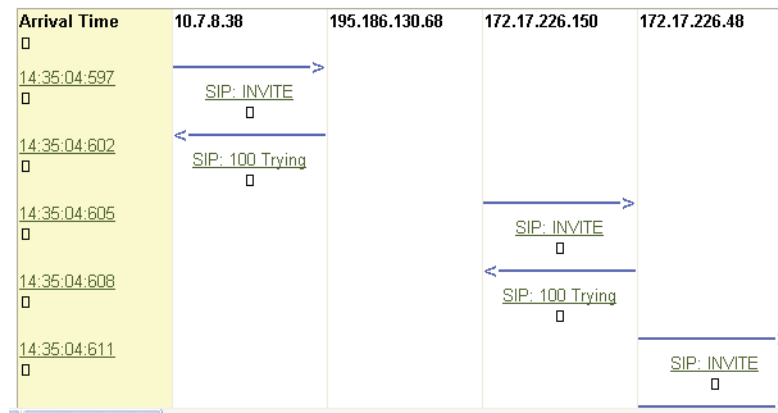


Figure 3-16: QTrace exported to an HTML file

Click on the links to navigate through the file.

Saving and Opening Files in XML Format

You can save the call trace to an XML file. Saving files to XML means that you can send a complete call to another QTrace user and they will be able to open the call in their own instance of QTrace. This format is compatible with the QTrace format; you can double-click on such a file to open directly in QTrace.

To save in the QTrace Proprietary format (.xsif), from the File menu chose **Save as XML**. . Select a location and name for the file in the *Save as* dialog box.

Export to PCAP Format

You can save the call trace to a *.pcap format file. The files are saved as *.pcap files which can later be opened using applications that support this format for further examination and analysis.

1. From the file menu click **Save as PCAP**. The Save as dialog box opens.
2. Type a name and select a location for the file you want to save.

Click Exit to close the application.

Session Viewer with QTrace

When you have a QTrace client installed on your system, when you double click a file ending opz,. in opens in the QTrace client interface.

Currently only the signaling file is displayed.

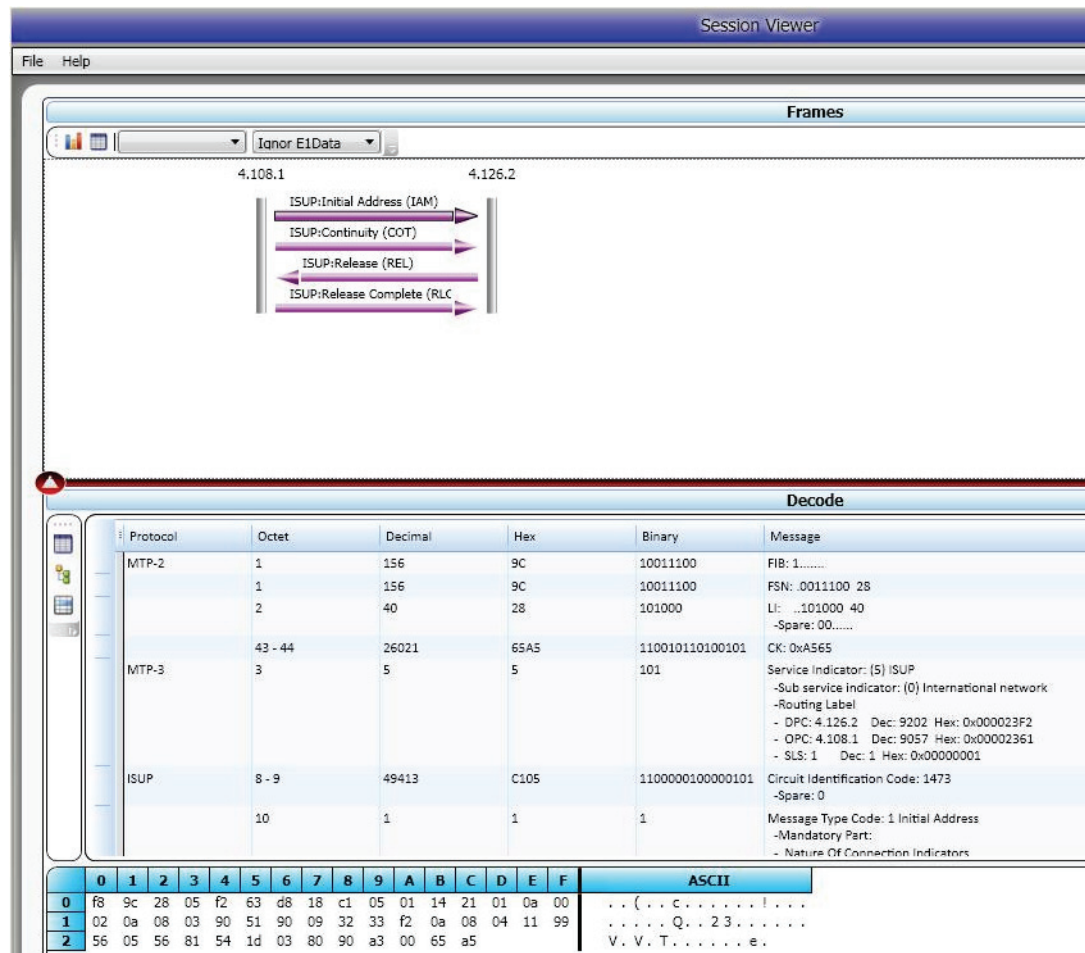


Figure 4-1: Session Viewer

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