LATENCY ANALYSER

TUTORIAL

1 Introduction Notes

This tutorial provides a brief guide to the steps involved in setting up a migration project within the Latency Analyser. The tutorial document should be read alongside the Latency Analyser User Guide.

The tutorial guides you through:
- Setting up the Latency Analyser
- Capturing some basic network traces
- Setting up a Project
- Loading the trace files
- Configuring the network location properties
- Using the Project pages

1.1 Tutorial Steps

Setup Application

1) Install Latency Analyser and activate licences(s) as per instructions in User Guide section 'Preliminaries'

Capture Network Trace

2) Using Wireshark (or any other network trace tool available) start capturing a network trace.

3) Start up an internet web browser and navigate to website (either intranet or internet)

4) Navigate around a few pages

5) Stop tracing and save trace.

6) Capture a few more network traces from the same workstation

7) Make a note of the IP Address of the workstation (ipconfig.exe will provide this value).
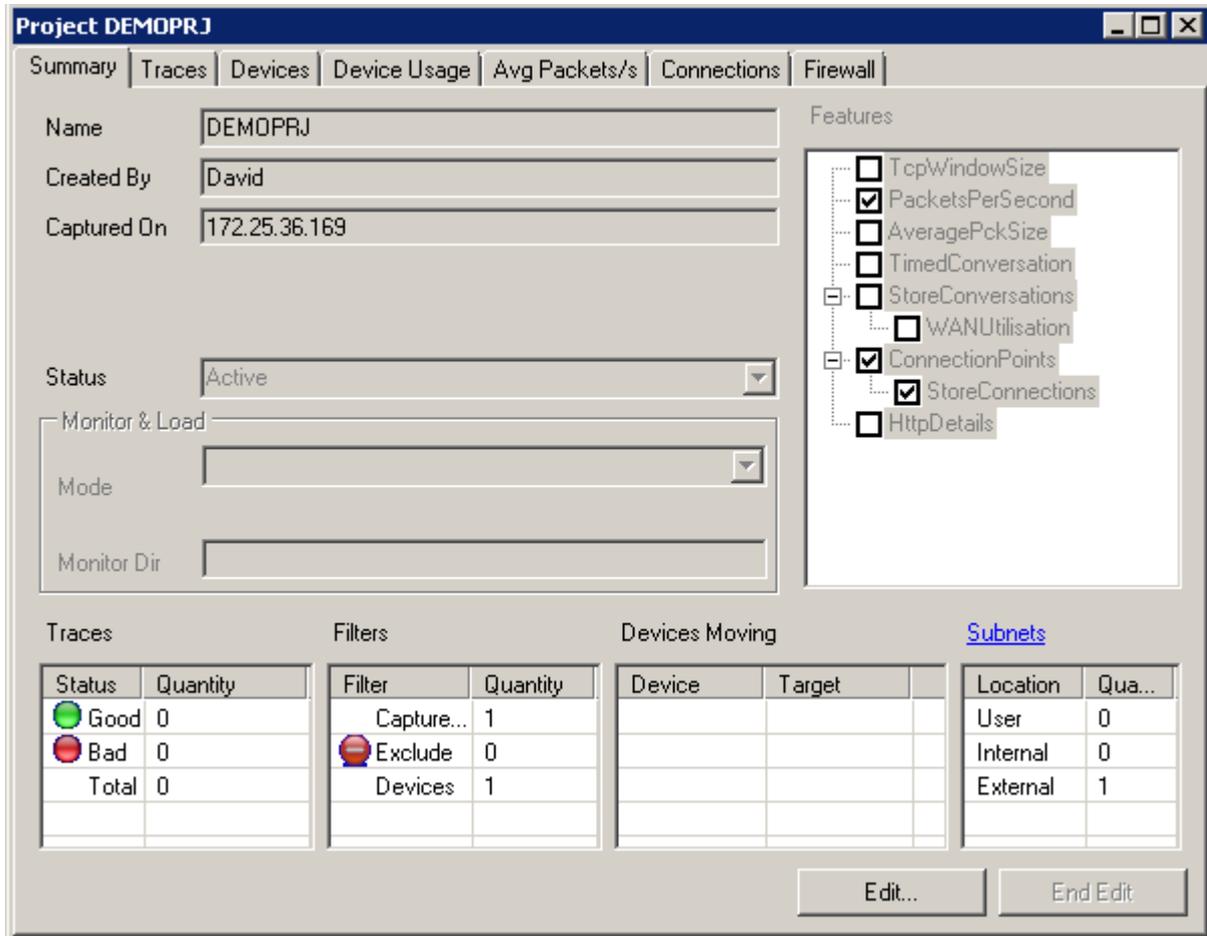
Project Setup

8) Follow user guide instructions to create a new project; set input fields to Name = 'DemoPrj', CaptuedOn = IP Address of trace device (from previous step).
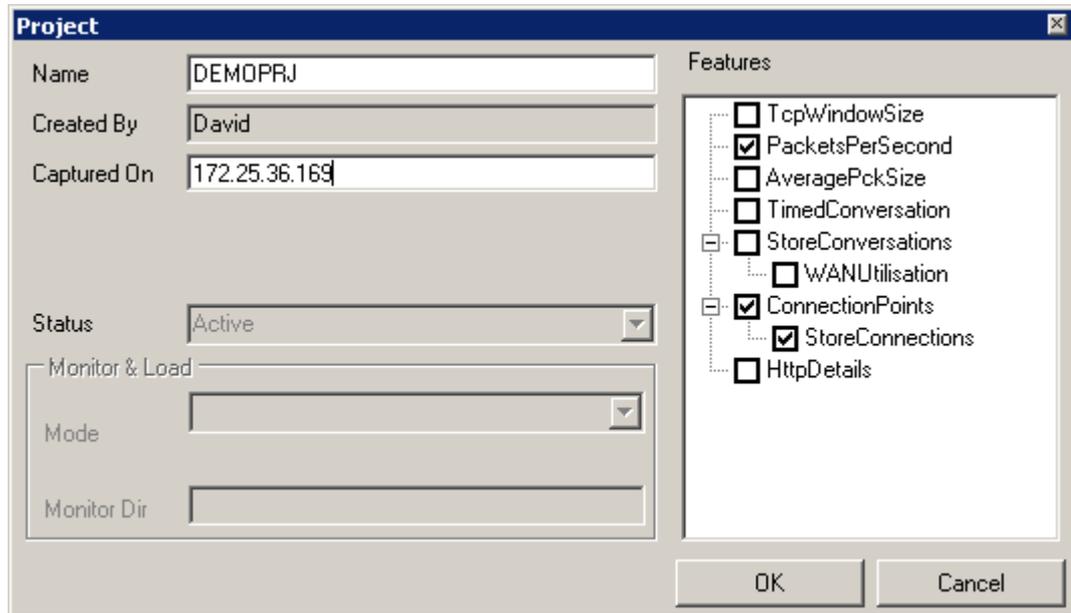
9) The check boxes on the right of the screen enable different types of calculations to be carried out. When processing large files it is often necessary to switch features off due to performance concerns. Not all features are available in the standard edition. Leave feature list at default values.

10) Press OK when complete. The following warning is shown because the location and subnet configuration has not been setup and therefore no current location match was possible for the IP Address.
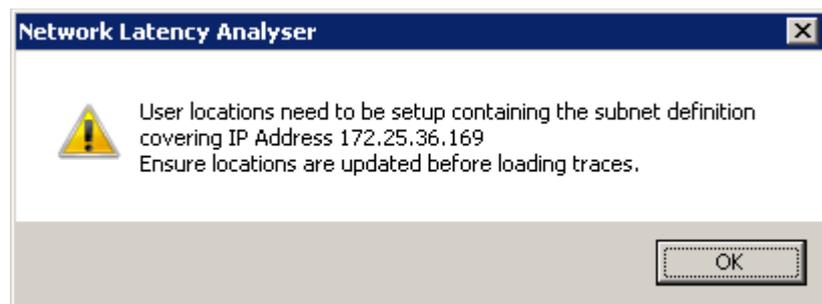
11) The Project Pages notebook is shown next. The project summary page shows: no traces have been loaded (Total row in Traces list is set to zero), no devices are moving (Devices Moving list is empty), and there is one IP Address missing from Subnet definitions (External count in Subnets list is set to 1).

Upload the Network Trace Files

12) Select the Traces page from the project notebook.

Project DEMOPRJ						_ □ X

Summary | Traces | Devices | Device Usage | Avg Packets/s | Connections | Firewall

Status	StartTime	Filename	Duration	Packets	Ave Pc...	Ignored ...	
Totals							

Add... | Remove | Open... | Parse...
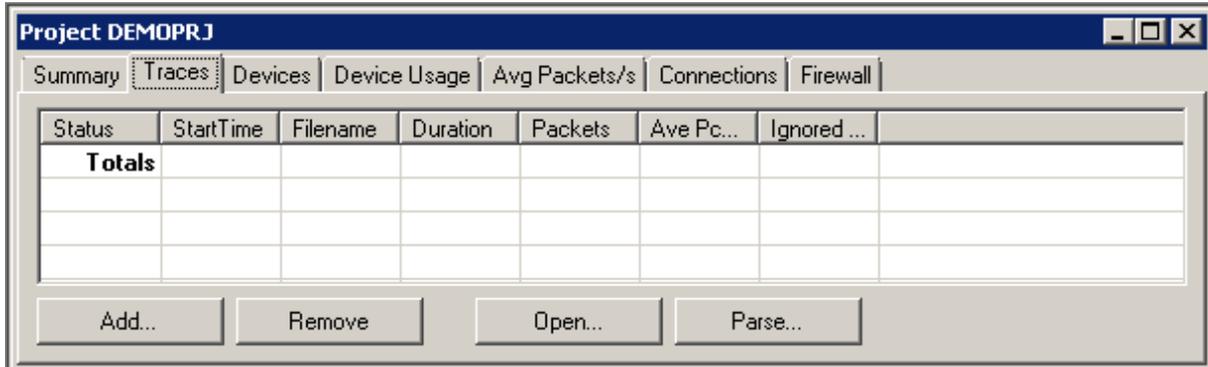
13) Press **Add…** and use the file open dialog to select trace files previously captured.

14) When the files have been parsed, reselect the project summary page. Notice that the number of traces files has increased, as has the number of devices missing from user defined subnets. These will need to be fixed before running latency calculations.

Traces

Status	Quantity
● Good	3
● Bad	0
Total	3

Filters

Filter	Quantity
Capture...	1
● Exclude	0
Devices	56

Devices Moving

Device	Target

Subnets

| Location	Quantity
User	0
Internal	53
External	3
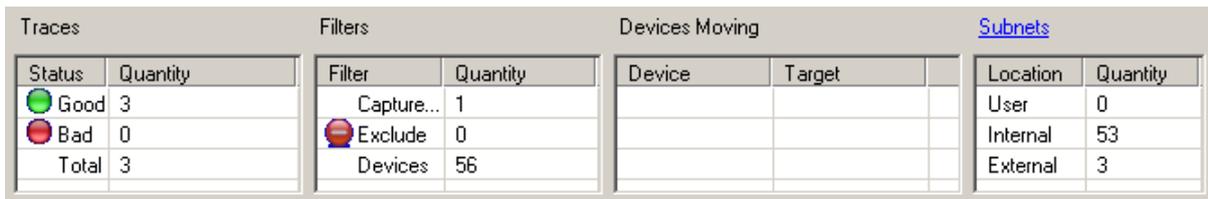
15) Select the Devices page and note down the IP addresses of the devices shown as having a current location of internal or external. The **Edit.SelectAll** and **Edit.Copy** facilities may be of assistance.

Filter	Device	Byte Total	Packet Total	Current	Target	Type	▲
Captured	172.25.36.169	331203	65356371	Internal			
	10.6.233.61	100809	41059914	Internal			
	10.6.184.76	44550	3335385	Internal			
	10.5.44.43	31113	3125133	Internal			
	10.6.184.78	20355	2881050	Internal			
	10.6.176.46	16785	1914084	Internal			
	10.6.180.55	8043	1012890	Internal			
	10.6.180.50	7896	1010889	Internal			
	10.6.180.54	7539	937860	Internal			
	10.6.180.112	7296	881943	Internal			
	10.254.191.244	5787	2792709	Internal			▼

Defining the Network Locations and Subnets

16) Change to the Project Summary page and press the **subnets** button to display the Locations (Latency and subnets) dialog.

17) Following the instructions in the 'Specifying the Network Architecture' section of the user guide to create a new location with subnets covering the IP Addresses identified in earlier step.
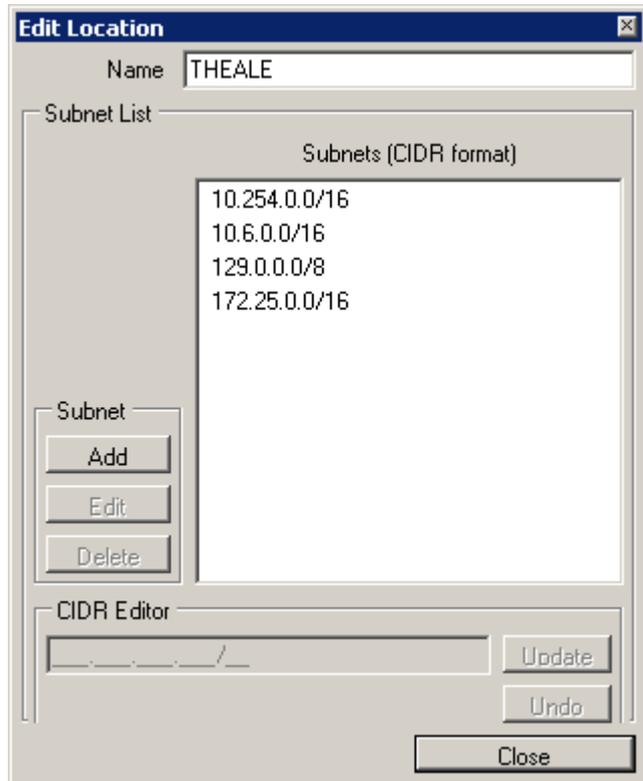
18) For the example trace file the location definition for Theale is as shown.

19) Create two additional locations called Bude and Reading. Subnet definitions are not required.

Edit Location

Name THEALE

Subnet List

Subnets (CIDR format)

10.254.0.0/16
10.6.0.0/16
129.0.0.0/8
172.25.0.0/16

Subnet

Add
Edit
Delete

CIDR Editor

___.___.___.___/__   Update
Undo
Close

20) Enter the latency and throughput of the connections between the different locations as shown.

The four numbers for each connection representing the latency and throughput at current and SLA values are described in the User Guide.

The completed form should appear similar to this image.

21) Close the locations screen.

	Theale			Bude		
Reading	1__	3__	ms	9__	18_	ms
	2000	500_	kbps	1500	500_	kbps
Bude	10_	20_	ms			
	1500	500_	kbps			

Set Project Migration Data

22) Back on the Project Devices page, press the **edit** button. Select the top device in the list (this should be the device marked with a Captured filter). Set the target location to Bude, press **update row**

23) Press **Reset Current Locations**, this will recalculate the current location of devices based upon the location and subnet configuration. Press **End Edit**.

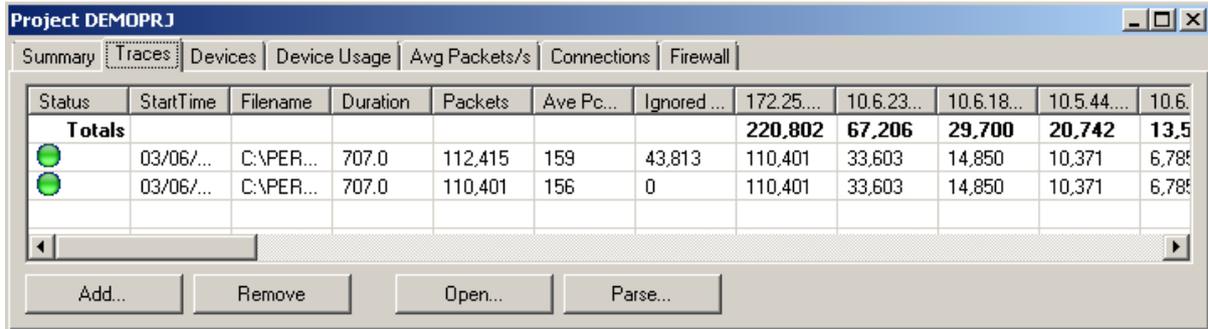24) The screen should now look similar to the following image.
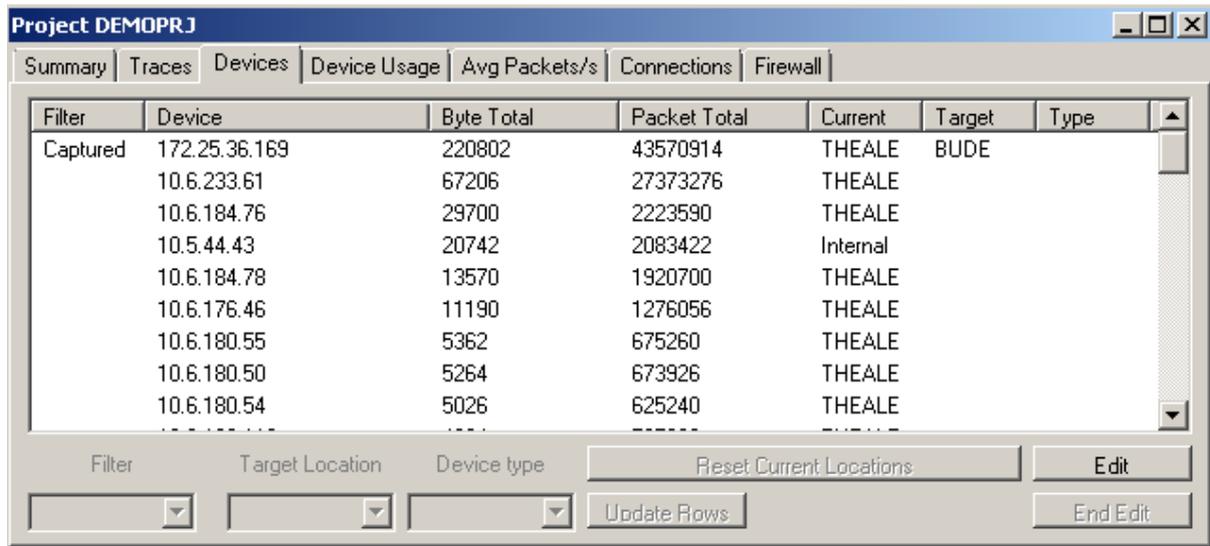
Reparse the trace files

25) Close and Reopen the project (this step is to ensure that the software and this tutorial script are kept in sync.

26) Navigate to the Traces page and note that the trace files are shown as invalid. Press the **parse** button to reparse the files.

27) If any of the trace files are not invalid then check that the edit activity has been correctly undertaken.

28) The lists at the bottom of the project summary page are now showing health information.
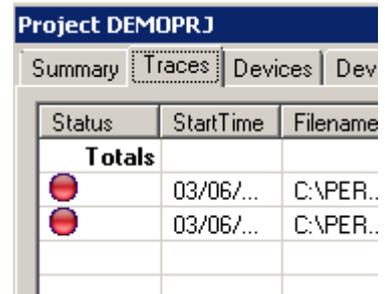
29) The network traces are now parsed and ready for analysis

1.2 Project Pages

1. The Project notebook contains information about all uploaded network traces and is used to provide both an overview of the observed network traffic and to spot peaks in individual traces.

2. The Device Usage page gives a graphical view of the network traffic. Normally IP Addresses are replaced with machine names. The device with the highest number of packets is always unchecked when viewing data, can you identify why?
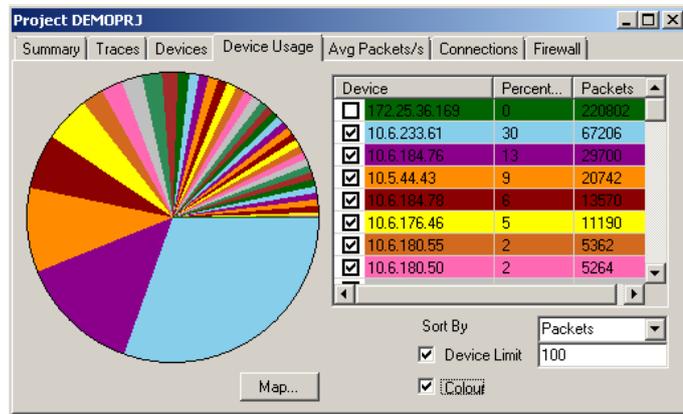
3. Pressing the **Map...** button in the professional edition will produce an image similar to this.
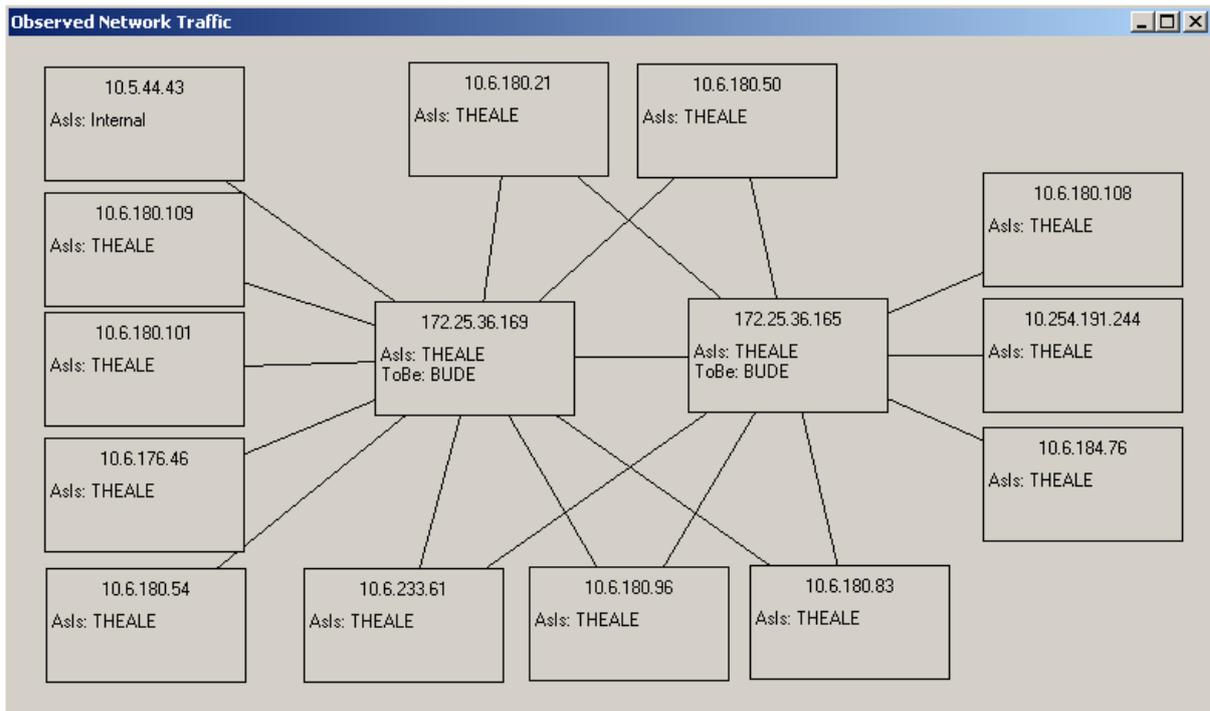
4. Return to the traces page and double click on the first trace file.

5. The individual network trace file will be processed resulting in a number of tab pages available for review. The selection of tab pages is dependent on the features set of the projects dialog.

6. The Devices page provides a summary of network traffic for each of the device. The location column provides details of the current and target location of the servers. In this example the traced device is moving from Theale to Bude.

7. The Conversations page lists every observed network conversation. Included in this information is the expected latency at current and SLA ratings.

8. The latency page provides a graphical representation of the forecast latency.

9. Move the zoom control to hide conversations with low latency.

10. Right click on the graph for a contextual menu or select an area (using mouse movement and left button) to focus in on an area.
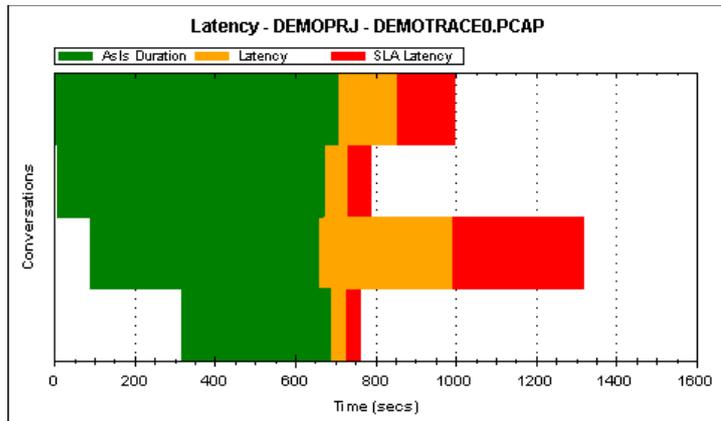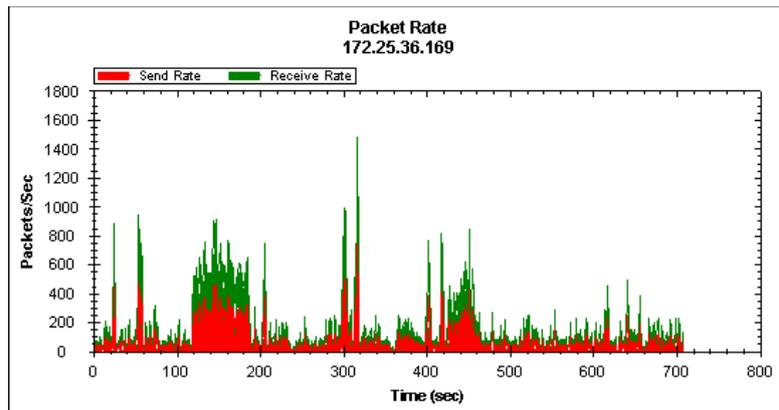

11. Examine the Increase page and check the SLA Latency control to see the effect on latency at SLA ratings.

12. The Conversation Rate page sometimes answers the question of "How many concurrent users are using the system?" In this case approximately 50.
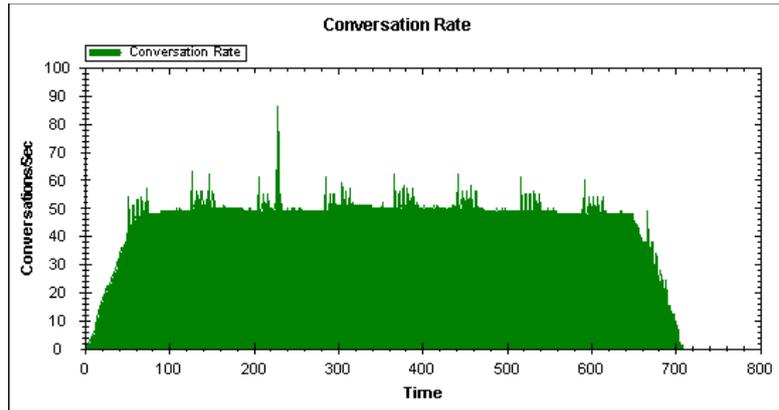
13. The Packet Rate page can also be helpful

14. Tutorial complete – time for a cup of coffee!

[End of Document]