

RMON2 Traffic Profiling Report Pack

Software Version: 3.20

HP Performance Insight 5.40

User Guide

February 2009



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This guide's title page contains the following identifying information:

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1 Overview

This chapter covers the following topics

- PI and RMON2 Probes
- Enhancements in version 3.20
- Objects, reports, and groups
- Ways to customize reports
- Sources for additional information

PI and RMON2 Probes

HP Performance Insight is a performance management application that collects data from many sources, performs in-depth trend analysis, maintains performance baselines, and provides users with convenient, web-based reporting. Following is a partial list of product features:

- Distributed architecture
- Easy to scale (supports data collection from thousands of agents)
- CODA/PA agent support
- Multi-company security model
- Data warehousing
- Near Real Time reporting
- Forecasting
- Extensive aggregation (by day, week, month; by location, by customer)
- Thresholding and alerting
- Bottlenecks easy to spot; capacity trends easy to review
- Accurate and timely documentation for management

The RMON2 Traffic Profiling Report Pack installs on PI. Using processing directives supplied by this report pack, PI generates the following statistics:

- Utilization host-by-host
- Utilization application-by-application
- Percentage of total interface traffic associated with each host and each application
- Bytes
- Average bytes per packet

2 Package Installation

This chapter covers the following topics:

- [Guidelines for a Smooth Install](#)
- [Upgrading to Version 3.20](#)
- [Installing RMON2 Traffic Profiling](#)
- [Accessing Deployed Reports](#)
- [Package Removal](#)

Guidelines for a Smooth Install

Each reporting solution that runs on PI consists of a report pack and one datapipe, or sometimes a report pack and multiple datapipe. When you install the datapipe, you configure PI to collect a specific type of performance data at a specific polling interval. When you install the report pack, you configure PI to summarize and aggregate the performance data collected by the datapipe.

The report pack CD contains report packs, datapipe, and shared packages. When you insert the CD in the CD-ROM drive and launch the package extraction program, the install script extracts every package from the CD and copies the results to the Packages directory on your system. When the extract finishes, the install script prompts you to start Package Manager. Before using Package Manager, review the following guidelines.

Software Prerequisites

RMON2 Traffic Profiling has the following prerequisites:

- Performance Insight 5.40
- Any and all available service packs for PI 5.40
- Common Property Tables 3.90
- Interface Reporting Report Pack 5.50
- Interface Discovery Datapipe 2.50

If you are not currently running any version of the Interface Discovery Datapipe, or any version of Common Property Tables, you can install these packages when you install RMON2 Traffic Profiling.

If you are running earlier versions of Common Property Tables, version 3.70 or earlier, upgrade to version 3.90. Installing the upgrade package is no different from installing other upgrade packages; however, do not install the upgrade package and other packages at the same time. Install the upgrade package for Common Property Tables and *only* the upgrade package for Common Property Tables.

3 Polling Groups and MIB Values

This chapter covers the following topics:

- How to add RMON2 probes to polling groups
- How to set MIB values
- Command line options for configAlMatrix.pl

Adding Probes and Setting MIB Values

Follow these steps to add probes to Polling Groups:

- 1 Using Polling Policy Manager, do the following:
 - a Add each RMON2 probe node to the RMON2 polling group.
 - b Specify the Community String Profile for each node added to the RMON2 polling group. Typically, you use the default settings (Read: public; Write: private). However, if you configured an RMON2 probe to use a non-default community string profile, you must configure this non-default community string profile for each node.
- 2 Using the PI SNMP Tool `ConfigAlMatrix.pl` command (click the **Set Table** button), or a tool of your own choice, set the following MIB objects:

Table 1 Variables Under hlMatrixControlTable

MIB Object	OID	Value
hlMatrixControlNIMaxDesiredEntries	.1.3.6.1.2.1.16.15.1.1.6	6,000
hlMatrixControlAIMaxDesiredEntries	.1.3.6.1.2.1.16.15.1.1.10	12,000
hlMatrixControlStatus	.1.3.6.1.2.1.16.15.1.1.12	active

Table 2 Variables under alMatrixTopNControlTable

MIB Object	OID	Value
alMatrixTopNControlRateBase	.1.3.6.1.2.1.16.17.3.1.3	alMatrixTopNTerminalsPkts
alMatrixTopNControlTimeRemaining	.1.3.6.1.2.1.16.17.3.1.4	900
alMatrixTopNControlRequestedSize	.1.3.6.1.2.1.16.17.3.1.7	400
alMatrixTopNControlStatus	.1.3.6.1.2.1.16.17.3.1.11	active

4 Setting Up a Distributed System

These are the steps to follow when setting up a distributed system:

- Decide whether or not you want local reporting
- Install the right set of packages on each server (a central server that is not polling will not need datapipes; the satellite servers will need datapipes)
- Verify that the system clocks in your environment are synchronized
- Register your satellite servers
- If you are not copying rate data to the central server, enable LIR on the central server
- If you enable LIR, add LIR mapping with the time type set to rate
- Verify that you have all the copy policies you need
- Configure the central server (manual edits to trendtimer.sched and .pro files)
- Configure each satellite server (manual edits to trendtimer.sched and .pro files)

If you want to set up a distributed system, you can implement local reporting or you can implement centralized reporting. If you want local reporting, you need to deploy reports when you install the report pack on each satellite server, and you need to allow summarizations to run on each satellite server. If you do not want local reporting, then you do not need to deploy reports when you install a report pack on a satellite server and you can disable the scripts that run summarizations on each satellite server.

Before Location Independent Reporting (LIR) was available, our recommendation to anyone setting up a distributed system was to deploy reports on satellite servers, keep rate data on satellite servers, copy hourly data to the central server, and disable summarizations above the hourly level on satellite servers. The advantage to this approach was that it kept a large volume of rate data off the network and it decreased the processing load on the central server. The disadvantage is that the central server could not display a Near Real Time (NRT) report. The only NRT report was a local NRT report, on a satellite server. LIR overcomes this disadvantage. If you enable LIR, you can open an NRT report on the central server and drill-down on table selections. The selections you make cause the central server to query a satellite server for locally aggregated data. Of course, if you would rather copy rate data to the central server, you can. If you do that, then enabling LIR is not necessary.

Configuring the Central Server

To configure the central server, perform the following tasks:

- Task 1: Register the satellite server by setting the database role
- Task 2: If you are not copying rate data to the central server, enable LIR
- Task 3: If you enable LIR, add LIR mappings

5 Sample Reports

RMON2 Traffic Profiling includes 15 reports. The following reports are reproduced below:

- 1 Monthly Top Ten Summary
- 2 Hourly AlMatrix Summary
- 3 Hourly AlMatrix Detail
- 4 Daily Host Summary
- 5 Daily Host Detail

Top Ten reports serve as a starting point for in-depth analysis of traffic problems. They contain the following information:

- Hourly utilization (in the hourly report only)
- Busy hour utilization (daily and monthly reports)
- A list of applications generating the most traffic, sorted from most to least
- A list of hosts generating the most traffic, sorted from most to least

ALMATRIX reports display traffic information by protocol and by source/destination host. RMON2 Traffic Profiling includes summary reports for ALMATRIX and detail reports for ALMATRIX. The summary reports aggregate data by protocol and by host devices; the detail reports contain information about the traffic between specific source and destination nodes for a selected protocol.

Host reports display traffic information by source. RMON2 Traffic Profiling includes summary reports for hosts and detail reports for hosts. The summary reports display traffic information for source nodes (listed by IP address) that generate the most traffic on the probe; the detail reports display traffic information sent by a protocol/application to a destination node for a selected source node.

A Product History

Package Version	Release Date	Features/Enhancements
1.00	May 2003	15 reports RMON2 Traffic Profiling Datapipe 1.00 Sybase support
2.00	October 2003	PI Object Manager support RMON2 Traffic Profiling Datapipe 2.00
3.00	November 2004	Oracle support RMON2 Traffic Profiling Datapipe 3.00
3.00	June 2005	UPGRADE_RMON2_Traffic_Profiling_to_3.0
3.10	May 2006	QXCR1000243590 (map procedure appending "4")
3.10	April 2007	<i>new features:</i> <ul style="list-style-type: none"> • LIR Configuration • Copy Policies modified for LIR • SQL modified for node delete <i>new release of the datapipe:</i> RMON2 Traffic Profiling Datapipe 3.20 <i>new upgrade package:</i> UPGRADE_RMON2_Traffic_Profiling_to_31.ap <i>defect fixes:</i> <ul style="list-style-type: none"> • QXCR1000219262 • QXCR1000221988
3.10	October 2007	<i>new prerequisites:</i> <ul style="list-style-type: none"> • PI 5.30 • Common Property Tables 3.70
3.20	February 2009	<i>new prerequisites:</i> <ul style="list-style-type: none"> • PI 5.40 • Common Property Tables 3.90 <i>new upgrade package:</i> UPGRADE_RMON2_Traffic_Profiling_to_32.ap

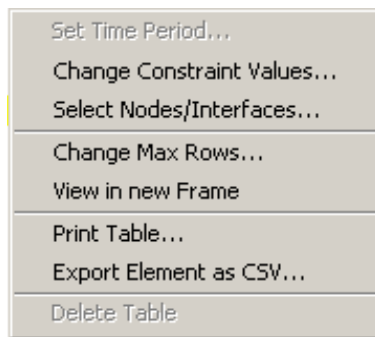
B Editing Tables and Graphs

Any table or graph can be viewed in several ways. Although the default view is usually adequate, you can easily change to a different view. If you are using Report Viewer, right-click the object to open a list of view options. If you are using the Web Access Server, follow these steps to change the default view of a table or graph:

- 1 Click **Preferences** on the links bar.
- 2 Expand **Reports** in the navigation frame.
- 3 Click **Viewing**.
- 4 Select the **Allow element editing** box.
- 5 Click **Apply**.
- 6 Click the Edit icon next to the table or graph.

View Options for Tables

Right-clicking a table, or selecting the Edit Table icon if you are using the Web Access Server, opens a list of table view options.



Select **Set Time Period** to alter the relative time period (relative to now) or set an absolute time period. The Set Time Period window opens.

You may shorten the period of time covered by the table from, for example, 42 days to 30 days or to 7 days. If you are interested in a specific period of time that starts in the past and stops *before* yesterday, click **Use Absolute Time** and select a Start Time and an End Time.

Select **Change Constraint Values** to loosen or tighten a constraint, thereby raising or lowering the number of elements that conform to the constraint. The Change Constraint Values window opens. To loosen a constraint, set the value lower; to tighten a constraint, set the value higher.

The **Select Nodes/Interfaces** allows you to change the scope of the table by limiting the table to specific nodes, specific interfaces, or a specific group of nodes or interfaces. The Select Node Selection Type window opens.

Glossary

average bytes per packet

The average number of bytes per packet passed by the host or application or passed between the source/destination.

busy hour utilization

The maximum hourly average for the day. Unlike the average for the day, this value does not smooth out daily peaks and valleys. Unlike daily maximum, or peak, this value represents a relatively persistent phenomenon, not a momentary condition. Note that since busy hour is an average, actual utilization may have been well above the average for a portion of that hour.

bytes

The number of bytes passed by the host or application or passed between the source/destination.

day

The day of the year for which the information was collected.

destination

Where the application/protocol traffic is going.

host

Where the application/protocol traffic is coming from.

hour

The hour for which the information was collected.

interface

The network interface number of the probe.

month

The month for which the information is collected.

packets

The total number of packets passed by the host or application or passed through the source/destination.

percentage of traffic

The percentage of traffic attributed to the host, application, or source/destination in relation to the total traffic passing through the interface.

probe

The name of an RMON2 probe.

protocol

The name of the protocol through which the network traffic is being routed.

source

See **host**.

utilization

The percentage of system resources used for one hour, beginning at the listed time.

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