

Executive Summaries Report Pack

Software Version: 1.10

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:

- Device performance (resources and traffic volume) in a “single view”
- Folders and reports
- Statistics; applying constraints to a report; adding locations
- Sources for additional information

Device Performance in a “Single View”

HP Performance Insight is a performance management and reporting application. Long-term data collection, in-depth analysis, performance baselining, and automated web-based reporting are this application’s primary strengths.

The reports in the Executive Summaries Report Pack display the following statistics for devices:

- CPU utilization
- Buffer utilization
- Memory utilization
- Traffic volume on device interfaces

Previously, before these reports were created, you had to consult reports in two places to get this information, the Interface Reporting Report Pack and the Device Resource Report Pack. Executive Summaries puts this information in one place, hence the term *single view*.

The following table outlines enhancements to the Executive Summaries Report Pack.

Version	Date of Release	Features/Enhancements
1.00	April 2004	5 reports; no datapipe [not applicable] Supports Oracle only; does not support Sybase

Version	Date of Release	Features/Enhancements
1.10	April 2007	Location independent reporting UPGRADE_ES_to_11 <i>defectfixes:</i> <ul style="list-style-type: none"> • QXCR1000351403 • QXCR1000351536
1.10	October 2007	Prerequisites: <ul style="list-style-type: none"> • PI 5.30 • Common Property Tables 3.70
1.10	February 2009	Prerequisites: <ul style="list-style-type: none"> • PI 5.40 • Common Property Tables 3.90

Folders and Reports

Executive Summaries 1.10 contains device-oriented reports and location-oriented reports. The device-oriented reports roll-up (aggregate) traffic volume from the interface level to the device level. The location-oriented summary reports roll-up resource utilization and traffic volume for all the devices owned by one customer at one location. If you are logging into the PI Application Server, you will see two folders:

- Device
- Location

The Device folder contains two reports:

- Device Single View Summary
- Device Single View Top Ten

The Location folder contains three reports:

- Executive Summary
- Executive Summary Aggregate Availability & Traffic
- Executive Summary Top Ten

See [Chapter 5, Sample Reports](#) for a description of each report.

Types of Statistics

Executive Summaries tracks the following statistics:

CPU Statistics

- Average utilization
- Maximum utilization
- Busy hour

- Baseline busy hour
- F30/F60/F90 busy hour
- CPU percentage of exceptions



“percentage of exceptions” is calculated by dividing the number of exceptions by 96 (4 x 24 samples = 96 total samples) and multiplying the result by 100.

Memory Statistics

- Average utilization
- Maximum utilization
- Busy hour
- Baseline busy hour
- F30/F60/F90 busy hour
- Memory percentage of exceptions

Buffer Statistics

- Average utilization
- Maximum utilization
- Busy hour utilization
- Baseline busy hour
- F30/F60/F90 busy hour
- Buffer percentage of exceptions

Traffic Statistics

- Traffic volume per device
- Interface availability
- Frames (total for the day, across all devices)
- Errors (total for the day, across all devices)
- Discards (total for the day, across all devices)

Applying Constraints to a Report

Editing a parameter, or applying a constraint, eliminates data you are not interested in seeing. For example, if you edit the Customer Name parameter, only data for the customer you typed in the Customer Name field will appear in the report. Executive Summaries 1.10 supports the following constraints:


- Customer Name
- Customer ID
- Location Name
- Location ID
- Device Name

- Make
- Model

If you are using Report Viewer, follow these steps to apply a constraint:

- 1 Select **Edit > Parameter Values** from the menu bar.
- 2 When the Modify Parameter Values window appears, click the **Current Value** field.
- 3 Enter a new value.
- 4 Click **OK**.

If you are using the Web Access Server, follow these steps:

- 1 Click  (the Edit icon) at the bottom right-hand corner of the report.
- 2 When the Edit Parameters window opens, type the constraint in the appropriate field.
- 3 Click **Submit**.

Adding Locations to Reports

If you are already using Interface Reporting and Device Resource, and if you used Common Property Tables to import locations into those reports, you will not have to add your locations in order to see your locations in Executive Summaries. The reports in Executive Summaries 1.10 will inherit locations from Common Property Tables.

Sources for Additional Information

For information regarding the latest enhancements to this package and any known issues, refer to the *Executive Summaries Report Pack Release Notes*. You may also be interested in these documents:

- *Device Resource Report Pack User Guide*
- *Common Property Tables User Guide*
- *Interface Reporting Report Pack User Guide*
- *RMON Ethernet Statistics Report Pack User Guide*
- *PI Report Packs, CD-ROM Release Notes, February 2009*

Manuals for the core product, PI, and manuals for the reporting solutions and shared packages that run on PI can be downloaded from this site:

<http://h20230.www2.hp.com/selfsolve/manuals>

The user guides for PI are listed under **Performance Insight**. The user guides for report packs and datapipes are listed under **Performance Insight Report Packs**.

The manuals listed under **Performance Insight Report Packs** indicate the month and year of publication. If a manual is revised and reposted, the date will change. Since we post revised manuals on a regular basis, we recommend searching this site for updates before using the PDF that was copied to the Docs directory on the report pack CD-ROM.

2 Upgrading Executive Summaries Report Pack

This chapter covers the following topics:

- Guidelines for a smooth upgrade
- Upgrading to Executive Summaries 1.10
- Uninstalling Executive Summaries

Guidelines for a Smooth Upgrade

The report pack CD contains report packs, datapipes, and several shared packages. If you insert the report pack CD in the CD-ROM drive and launch the package extraction program, the install script will extract every package on the CD to the Packages directory on your system. When the extract finishes, the install script prompts you to launch PI and start Package Manager.

If the package extraction step has already taken place, all of the packages associated with Executive Summaries, including the latest upgrade package, are in the Packages directory on your system awaiting installation. To upgrade Executive Summaries, start Package Manager and follow the on-screen instructions. Before beginning the upgrade, be familiar with the following topics:

- Prerequisites for Executive Summaries
- Upgrading Executive Summaries in a distributed environment

Prerequisites for Executive Summaries

Make sure the following software is already installed/upgraded before upgrading Executive Summaries:

- Performance Insight 5.40
- All available service packs for PI 5.40
- Common Property Tables 3.90
- Device Resource Report Pack 3.40
 - At least one vendor-specific datapipe
- Interface Reporting Report Pack 5.50
 - Interface Discovery Datapipe 2.50
 - Interface Reporting ifEntry Datapipe 2.50

Distributed Systems

If you are running PI as a distributed system, every server must be running PI 5.40 and all the Service Packs available for PI 5.40. Here is an overview of the installation procedure for a distributed environment:

- 1 Verify that every server is running PI 5.40 and all available service packs.
- 2 Disable trendcopy on the central server.
- 3 If necessary, upgrade the following packages:
 - Interface Reporting (upgrade to version 5.50)
 - Device Resource (upgrade to version 3.40)
- 4 Install Executive Summaries on the central server and on every satellite server.
- 5 Re-enable trendcopy on the central server.
- 6 Reconfigure your central and satellite servers.

When you set up your distributed system the first time, you configured trendcopy pull commands from the central server and switched off hourly aggregations at each satellite server. These changes must be re-done by following the steps in [Chapter 4, Setting Up a Distributed System](#).

Upgrading Executive Summaries

Perform the following tasks to upgrade to Executive Summaries 1.10:

- Task 1: Stop OVPI Timer and extract packages from the report pack CD
- Task 2: If necessary, upgrade Common Property Tables
- Task 3: If necessary, upgrade Interface Reporting and Device Resource Report Packs
- Task 4: Install ExecutiveSummary_Upgrade_to_11.
- Task 5: Restart OVPI Timer

Task 1: Stop OVPI Timer and extract packages from the report pack CD

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to terminate.

Windows: Select **Settings > Control Panel > Administrative Tools > Services**

UNIX: As root, type one of the following:

HP-UX: **sh /sbin/init.d/ovpi_timer stop**

Sun: **sh /etc/init.d/ovpi_timer stop**

- 3 Insert the report pack CD. On Windows, a Main Menu displays automatically; on UNIX, mount the CD if the CD does not mount automatically, navigate to the top level directory on the CD, and run the **./setup** command.
- 4 Type **1** in the choice field and press **Enter**. The install script displays a percentage complete bar. When the copy is complete, the install script starts Package Manager. The Package Manager welcome window opens.

Once the extract is finished, you have the option of navigating to the Packages directory on your system and seeing the following folders under the ExecutiveSummary folder:

- Docs
- ExecutiveSummary.ap
- UPGRADE_ES_to_11.ap

Task 2: Upgrade Common Property Tables

If you have not upgraded to Common Property Tables 3.70, do this now. Observe these rules:

- Do not install other packages at the same time; install the upgrade package for Common Property Tables and *only* the upgrade package for Common Property Tables.
- When the Report Deployment window opens, accept the default to Deploy Reports. If you don't deploy reports, you won't have access to the forms that come with Common Property Tables.
- When the install completes, click **Done** to return to the Management Console.

If you need help with the upgrade, refer to the *Common Property Tables User Guide*.

Task 3: Upgrade Device Resource and Interface Reporting

Refer to the following manuals for more information about upgrading these packages:

- *Device Resource Report Pack User Guide*
- *Interface Reporting Report Pack User Guide*

Task 4: Install ExecutiveSummary_Upgrade_to_11

- 1 Start Package Manager. The Package Manager welcome window opens.
- 2 Click **Next**. The Package Location window opens.
- 3 Click **Install**.
- 4 Click **Next**. The Report Deployment window opens. Accept the default for Deploy Reports; accept the defaults for application server name and port; type your user name and password for the application server.
- 5 Click **Next**. The Package Selection window opens.
- 6 Click the check box next to the following package:
ExecutiveSummary_Upgrade_to_11
- 7 Click **Next**. The Type Discovery window opens. Disable the default and click **Next**. The Selection Summary window opens.
- 8 Click **Install**. The Installation Progress window opens and the install begins. When the install finishes, the package installation complete message appears.
- 9 Click **Done**.

Task 5: Restart OVPI Timer

Windows: Select **Settings > Control Panel > Administrative Tools > Services**

UNIX: As root, type one of the following:

HP-UX: `sh /sbin/init.d/ovpi_timer start`

Sun: `sh /etc/init.d/ovpi_timer start`

Uninstalling Executive Summaries

Follow these steps to uninstall the Executive Summaries Report Pack:

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to stop running.
Windows: Do the following:
 - a From the Control Panel, select **Administrative Tools** → **Services**
 - b Select OVPI Timer from the list of services.
 - c From the Action menu, select **Start**.UNIX: As root, do one of the following:
 - HP-UX: `sh /sbin/init.d/ovpi_timer stop`
 - Sun: `sh /etc/init.d/ovpi_timer stop`
- 3 Start Package Manager.
 - a Launch Performance Insight and select **Management Console**.
 - b Select **Tools** → **Package Manager**The Welcome window opens.
- 4 Click **Next**. The Packages Location window opens.
- 5 Click **Uninstall**.
- 6 Click **Next**. The Report Undeployment window opens. Accept the default for Undeploy Reports; accept the defaults for application server name and port; enter your user name and password for the PI Application Server.
- 7 Click **Next**. The Package Selection window opens.
- 8 Click the check box next to the following packages:
 - *Executive Summaries*
 - *Executive Summaries Demo* (if installed)
- 9 Click **Next**. The Selection Summary window opens.
- 10 Click **Uninstall**. The Progress window opens. When the uninstall process is complete, a removal complete message appears.
- 11 Click **Done** to return to the Management Console.
- 12 Restart OVPI Timer.

Windows: Do the following:

- a From the Control Panel, select **Administrative Tools** → **Services**
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Start**.

UNIX: As root, do one of the following:

- HP-UX: `sh /sbin/init.d/ovpi_timer start`
- Sun: `sh /etc/init.d/ovpi_timer start`

3 Installing Executive Summaries Report Pack

This chapter covers the following topics:

- Guidelines for a smooth install
- Installing Executive Summaries
- Package removal

Guidelines for a Smooth Install

Our reporting solution have two ingredients, a report pack and a datapipe. Some reporting solutions have multiple datapipes. When you install a datapipe, you configure PI to collect a specific type of performance data at a specific interval. When you install a report pack, you configure PI to summarize and aggregate the data collected by the datapipe.



There are no datapipes for Executive Summaries. Executive Summaries uses data collected by Interface Reporting and Device Resource.

When you insert the report pack CD in the CD-ROM drive and launch the package extraction program, the install script extracts packages from the CD and copies the results to the Packages directory on your system. After the extraction process finishes, the install script prompts you to launch Performance Insight and start Package Manager.

If the packages on the report pack CD are already in the Packages directory awaiting installation, Executive Summaries is ready to install. If packages have not been extracted from the CD yet and you need assistance with that step, use the extract procedure later in this chapter. Before installing packages, review the following guidelines.

Prerequisites for Executive Summaries

Following is a list of prerequisites for Executive Summaries:

- Performance Insight 5.40
- All available service packs for PI 5.40
- Common Property Tables 3.90 or higher
- Device Resource Report Pack 3.40
 - one or more vendor-specific datapipes
- Interface Reporting Report Pack 5.50
 - Interface Discovery Datapipe 2.50
 - Interface Reporting ifEntry Datapipe 2.50

Common Property Tables

If you are running Common Property Tables, version 3.70 or earlier, upgrade to version 3.90. If you are not running any version of Common Property Tables, let Package Manager install the latest version of Common Property Tables for you. Do not install the upgrade for Common Property Tables *and* other packages at the same time. Install the upgrade for Common Property Tables and *only* the upgrade for Common Property Tables. For more information about installing and using Common Property Tables, refer to the *Common Property Tables User Guide*.

Interface Reporting and Device Resource

If you are running earlier versions of Interface Reporting or Device Resource, upgrade those packages before installing Executive Summaries. If you need help upgrading those packages, refer to the following manuals:

- *Device Resource Report Pack User Guide*
- *Interface Reporting Report Pack User Guide*

Distributed Systems

If you are installing Executive Summaries in a distributed environment, package installation is more complicated. Here is an outline of the procedure:

- 1 Verify that every server is running PI 5.40 and all available service packs.
- 2 Disable trendcopy on the central server.
- 3 Install Executive Summaries on the central server and on every satellite server.
- 4 Re-enable trendcopy on the central server.
- 5 Configure your central and satellite servers.

For details about the configuration steps, see [Chapter 4, Setting Up a Distributed System](#).

Installing Executive Summaries

To install Executive Summaries, perform these tasks:

- Stop OVPI Timer and extract packages from the report pack CD
- If necessary, upgrade Common Property Tables
- If necessary, upgrade Device Resource and Interface Reporting
- Install Executive Summaries
- Restart OVPI Timer

Task 1: Stop OVPI Timer and extract packages from the report pack CD

- 1 Log in to the system. On UNIX[®] systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to terminate.

Windows: Do the following:

- a From the Control Panel, select **Administrative Tools** → **Services**
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Stop**.

UNIX: As root, do one of the following:

- HP-UX: **sh /sbin/init.d/ovpi_timer stop**
- Sun: **sh /etc/init.d/ovpi_timer stop**

- 3 Insert the report pack CD in the CD-ROM drive.

Windows: The Main Menu opens automatically.

UNIX:

- a Mount the CD (if the CD does not mount automatically)
 - b Navigate to the top level directory on the CD
 - c Run **./setup**
- 4 Type **1** in the choice field and press **Enter**. The install script displays a percentage complete bar. When the copy is complete, the install script starts Package Manager. The Package Manager welcome window opens.

Task 2: Upgrade Device Resource and Interface Reporting

Refer to the following manuals for more information about upgrading these packages:

- *Device Resource Report Pack User Guide*
- *Interface Reporting Report Pack User Guide*

Task 3: Install Executive Summaries

- 1 Start Package Manager. The Package Manager welcome window opens.
- 2 Click **Next**. The Package Location window opens.
- 3 Click **Install**.
- 4 Approve the default installation directory or select a different directory if necessary. Use the browse feature to select a different directory.
- 5 Click **Next**. The Report Deployment window opens. Accept the default for Deploy Reports; enter your user name and password for the PI Application Server.
- 6 Click **Next**. The Package Selection window opens.
- 7 Click the check box next to the following packages:
 - *Executive_Summary*
 - *Executive_Summary_Demo* (optional)



Installing the Demo Package is optional. The Demo Package can be installed alone, or you can install it along with everything else.



If you are installing Common Property Tables, Device Resource, and Interface Reporting for the first time, click the check boxes next to these packages.

- 8 Click **Next**. The Type Discover window opens.

- 9 To run Discover immediately after package installation, accept the default and click **Next**. The Selection Summary window opens.
- 10 Click **Install**. The Installation Progress window opens. When installation is complete, a package installation complete message appears.
- 11 Click **Done** to return to the Management Console.

Task 4: Restart OVPI Timer

Windows: Do the following:

- 1 From the Control Panel, select **Administrative Tools → Services**
- 2 Select OVPI Timer from the list of services.
- 3 From the Action menu, select **Start**.

UNIX: As root, do one of the following:

- HP-UX: `sh /sbin/init.d/ovpi_timer start`
- Sun: `sh /etc/init.d/ovpi_timer start`

Uninstalling Executive Summaries

Follow these steps to uninstall the Executive Summaries Report Pack:

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to stop running.

Windows: Do the following:

- a From the Control Panel, select **Administrative Tools → Services**
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Start**.

UNIX: As root, do one of the following:

- HP-UX: `sh /sbin/init.d/ovpi_timer stop`
- Sun: `sh /etc/init.d/ovpi_timer stop`

- 3 Start Package Manager.
 - a Launch Performance Insight and select **Management Console**.
 - b Select **Tools → Package Manager**

The Welcome window opens.

- 4 Click **Next**. The Packages Location window opens.
- 5 Click **Uninstall**.
- 6 Click **Next**. The Report Undeployment window opens. Accept the default for Undeploy Reports; accept the defaults for application server name and port; enter your user name and password for the PI Application Server.
- 7 Click **Next**. The Package Selection window opens.
- 8 Click the check box next to the following packages:

- *Executive Summaries*
 - *Executive Summaries Demo* (if installed)
- 9 Click **Next**. The Selection Summary window opens.
 - 10 Click **Uninstall**. The Progress window opens. When the uninstall process is complete, a removal complete message appears.
 - 11 Click **Done** to return to the Management Console.
 - 12 Restart OVPI Timer.

Windows: Do the following:

- a From the Control Panel, select **Administrative Tools** → **Services**
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Start**.

UNIX: As root, do one of the following:

- HP-UX: `sh /sbin/init.d/ovpi_timer start`
- Sun: `sh /etc/init.d/ovpi_timer start`

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.

Check for Proper Package Installation

You want the following packages installed on the central server:

- Executive Summaries
- Interface Reporting 5.50
- Interface_Reporting_Device

- Interface_Reporting_Location
- Interface_Reporting_Protocol
- Interface_Reporting_Vlan (optional)
- Device Resource 3.40
- Device Resource Backplane 3.30 (optional)
- If you want to enable thresholding for *aggregated data only*, install the thresholds sub-package(s) and the Thresholds Module on the central server.

You want the following packages installed on each satellite server:

- Executive Summaries
- Interface Reporting 5.50
- Interface_Reporting_Device
- Interface_Reporting_Location
- Interface_Reporting_Protocol
- Interface_Reporting_Vlan (optional)
- Interface Discovery Datapipe 2.50
- Interface Reporting ifEntry Datapipe 2.50
- Cisco VLAN Datapipe 2.20 (optional)
- OPNET Export Datapipe 2.00 (optional)
- Device Resource 3.40
- Device Resource Backplane 3.30 (optional)

Install at least one Device Resource vendor-specific datapipe on each satellite server. If the Device Resource Backplane sub-package is installed, install one of the following datapipes:

- Alcatel Xylan Switch Datapipe
- Cisco Switch Datapipe

If you want to enable thresholding for *hourly data or rate data*, install the thresholds sub-package(s) and the Thresholds Module on satellite servers.

Split Polling and Avoid Duplicate Polling

You must decide how polling will take place, and then split the device groups accordingly. These are your options:

- Split polling between the central server, satellite servers, and remote pollers
- Split polling between satellite servers and remote pollers
- Split polling between multiple remote pollers

The situation you must avoid is *duplicate polling*, which arises when the device groups assigned to one server happen to be the same device groups assigned to a different server, or to a remote poller. To avoid this problem, make sure that you split the polling function properly. The polling function is split properly when:

- No two servers have the same polling policies and device group lists

- No two remote pollers have the same polling policies and device group lists
- Servers and remote pollers do not share polling policies and device group lists

For more information about polling policies and how to create them, refer to the *Interface Reporting ifEntry Datapipe 2.50 User Guide*.

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: Enable LIR
- Task 3: Add LIR mappings
- Task 4: Verify the automatically generated copy policies
- Task 5: Modify the `trendtimer.sched` file
- Task 6: Modify the `DeviceResourceReporting_Hourly.pro` file

Task 1: Register the satellite server by setting the database role

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Systems** icon in the navigation pane.
- 3 Navigate to the OVPI Databases folder and select the database system.
- 4 Click **Database Properties**.
- 5 From the Database Role list, select the Satellite Server role.
- 6 Enter any information necessary to configure the Satellite Server role.



To add a new database reference, you can use the Add Database Reference Wizard in the System and Network Administration application.

Task 2: Enable LIR

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Systems** icon in the navigation pane.
- 3 Navigate to the OVPI Databases folder and select the central server.
- 4 Click **LIR Configuration**.
- 5 Select the **LIR enabled** check box.

Task 3: Add LIR mappings

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Systems** icon in the navigation pane.
- 3 Navigate to the OVPI Databases folder and select the central server.
- 4 Click **LIR Configuration**.
- 5 Click **Add Mapping**.
- 6 From the Select Satellite Server list, select a satellite server to which to add a mapping.

- 7 Select the **Category** data table option.
- 8 Select **Interface Reporting** from the drop down list.
- 9 Select the **rate** data type.
- 10 Click **Add to List**.
- 11 Click **Add to list** and repeat [step 6](#) through [step 10](#) but select **DeviceResources** from the drop down list in [step 8](#).
- 12 Click **OK**.
- 13 Click **Apply**.

A copy policy is automatically generated for the hourly data and for each LIR mapping that you add. The data type selected when adding an LIR mapping (in step 10 above) determines the type of data copied (defined in the generated copy policy). The type of data copied is one summarization level greater than the data type selected in the LIR mapping. For example, if you select an hourly data type, you will generate a daily data copy policy.

Task 4: Verify the automatically generated copy policies

Verify that a copy policy has been generated for the following tables and that the copy type is set correctly (to Property and Data):

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Copy Policy** icon in the navigation pane to start the Copy Policy Manager.
- 3 Find the following tables and verify the copy type is set to Property and Data for each table:
 - SHDevRes_Device
 - SHDevRes_DeviceMem
 - SHDevRes_Card
 - SHIRDevPorts

If a copy policy has not been generated for a table, do the following:

- 1 Click the **New Copy Policy** icon or select **File > New Copy Policy** from the Copy Policy Manager. The Copy Policy Wizard displays.
- 2 Click **Next**. The Satellite Server and Copy Policy Selection Page displays.
- 3 Select a satellite server from the pull down list. This is the satellite server from which data is copied to the central server.
- 4 Select **Single Table** and select SHIRDevPorts from the pull down list.
- 5 Click **Next**. The Copy Type Selection Page displays.
- 6 Select **Property and Data**.
- 7 Click **Next**. The Summary page displays.
- 8 Verify the information in the summary window. If the information is not correct, you can modify it by clicking Back.
- 9 Click **Finish**.

If the copy type is not set to Property and Data, do the following:

- 1 Double-click the copy policy.
- 2 Select the **Property and Data** copy type.

3 Click **OK**.

Task 5: Modify the `trendtimer.sched` file

The `trendtimer.sched` file is found in the `{DPIPE_HOME}/lib/` directory where `{DPIPE_HOME}` is the directory in which PI is installed.

Make the following changes:

- Find and change the following line (modify the daily processing time):

```
24:00+4:00 - - {DPIPE_HOME}/bin/trend_proc -f  
{DPIPE_HOME}/scripts/IR_DevPort_DMF__Process.pro
```


to

```
24:00+3:00+40 - - {DPIPE_HOME}/bin/trend_proc -f  
{DPIPE_HOME}/scripts/IR_DevPort_DMF__Process.pro
```
- Find and comment out the following line (only if the central server is not a polling server):

```
1:00+20 - - {DPIPE_HOME}/bin/trend_proc -f  
{DPIPE_HOME}/scripts/IR_DevPor_Hourly_Process.pro
```
- Find and comment out the following line:

```
1:00+40 - - {DPIPE_HOME}/bin/trend_proc -f  
{DPIPE_HOME}/scripts/DeviceResourceReporting_Hourly.pro
```

Task 6: Modify the `DeviceResourceReporting_Hourly.pro` file

The `DeviceResourceReporting_Hourly.pro` file is found in the `{DPIPE_HOME}/scripts/` directory where `{DPIPE_HOME}` is the directory in which PI is installed.

Make the following change to this file:

- Comment out the `block1` section.

Configuring a Satellite Server

A satellite server can perform local reporting from the satellite database without the Location and Protocol modules. However, if you want a satellite server to perform full reporting, make sure that these modules are installed. If the Location and Protocol modules are installed, begin this procedure at [step 10](#).

Follow these steps to configure a satellite server:

- 1 Modify the `trendtimer.sched` file (found in the `{DPIPE_HOME}/lib/` directory where `{DPIPE_HOME}` is the directory in which PI is installed).
 - Find and change the following line (modify the daily processing time):

```
24:00+4:00 - - {DPIPE_HOME}/bin/trend_proc -f  
{DPIPE_HOME}/scripts/IR_DevPort_DMF__Process.pro
```


to

```
24:00+3:40 - - {DPIPE_HOME}/bin/trend_proc -f  
{DPIPE_HOME}/scripts/IR_DevPort_DMF__Process.pro
```
 - Find and comment out the following line:

```
24:00+3:00 - - {DPIPE_HOME}/bin/trend_proc -f
{DPIPE_HOME}/scripts/DeviceResourceReporting_Daily.pro
```

- 2 Modify the `IR_DevPort_DMF_Process.pro` file (found in the `{DPIPE_HOME}/scripts/` directory where `{DPIPE_HOME}` is the directory in which PI is installed).

Comment out the `IR_DMF1` block (comment out the `begin:IR_DMF1 wait` and `end:IR_DMF1` lines).

- 3 Modify the `IR_DevPort_Hourly_Process.pro` file (found in the `{DPIPE_HOME}/scripts/` directory where `{DPIPE_HOME}` is the directory in which PI is installed).

Uncomment the `IR_2` block (uncomment the `begin:IR_2 wait` and `end:IR_2` lines).

- 4 Modify the `DeviceResourceReporting_Hourly.pro` file:

The `DeviceResourceReporting_Hourly.pro` file is found in the `{DPIPE_HOME}/scripts/` directory where `{DPIPE_HOME}` is the directory in which PI is installed.

Make the following change to this file:

- Uncomment the `block2` section.
- 5 Using Table Manager, reduce the retention period of the `SHIRDevPorts` table from 4 days to 2 days.
 - 6 Configure any protocols that should not be monitored to *unmonitored*.
 - 7 Configure datapipe polling policies; make sure that each network device is polled by one satellite server only.
 - 8 If you are using remote pollers, avoid duplicate polling between remote pollers and duplicate polling between a satellite and a remote poller.
 - 9 If a satellite server has two or more remote pollers, create separate polling policies for each remote poller and use views and types to separate the devices.
 - 10 Configure polling policies for the `IR ifEntry Datapipe`, taking care that each node is polled from one system only. Follow these guidelines:
 - If remote pollers are being used, avoid duplicate polling by remote pollers, and duplicate polling by the satellite server and remote pollers.
 - If a satellite server has two or more remote pollers, create separate polling policies for each poller and use view groups to separate the devices.
 - Each poller must have 13 polling policies associated with it:
 - 1 for the `RIRRouterSystem` table
 - 8 for the `Interface Discovery Datapipe`
 - 4 for the `Interface Reporting ifEntry Datapipe`

If you need help configuring polling policies, refer to the *Interface Reporting ifEntry Datapipe User Guide*. See Chapter 3, *Datapipe Configuration*.

Synchronizing System Clocks

Make sure that the system clock on each satellite server is synchronized with the system clock on the central server.

5 Sample Reports

Executive Summaries 1.10 contains five reports:

- 1 Device Single View Summary
- 2 Device Single View Top Ten Summary
- 3 Executive Summary
- 4 Executive Summary Aggregate Availability and Traffic
- 5 Executive Summary Top Ten

Report 1: Device Single View Summary [see sample below]

This report creates a single view of device performance by combining traffic volume statistics with resource utilization statistics. The traffic data comes from Interface Reporting, while the resource data comes from Device Resource. The term *summary* in the title refers to the fact that traffic volume for each interface on the device is being rolled up to the device level.

Use the table at the top of the report to spot high busy hours. The graphs below provide hourly and daily views of resource utilization and traffic volume. Use the graphs to:

- View hourly data for yesterday (showing the busy hour in context)
- Compare yesterday's performance to performance throughout the preceding week
- Track average utilization, maximum utilization, and the percentage of exceptions

Is there a correlation between traffic volume and resource utilization? Usually not. If traffic volume is up, resource utilization could be up or it could be down. If traffic volume is down, resource utilization should be down also. If traffic volume is low, but resource utilization is high, this could indicate that a resource is not functioning properly.

Report 2: Device Single View Top Ten Summary [see sample below]

Like the preceding report, this report combines traffic volume statistics with resource utilization statistics. This report looks at yesterday's performance and estimates for future performance. Use it to see which devices ranked worst yesterday and which devices are likely to see poor performance in the near future.

The tables on the left provide statistics for average utilization and yesterday's busy hour. Table entries sort by average utilization, highest to lowest. The tables on the right provide statistics for baseline busy hour, F30, F60, and F90. Table entries sort by F90 value, highest to lowest. Most of the time you will not see the same device listed in both tables, left and right. If the same device appears in both tables, yesterday's performance is probably not an isolated incident; it is instead part of a longer-term trend that may require your attention.

Report 3: Executive Summary [see sample below]

This is a location-oriented, single view report. After you select a location, the table at the top profiles each customer in terms of yesterday's percentage of exceptions. Use this report to get a sense of how customers compare to each other at each location. The graphs below the table allow you to look at hourly details on a customer-by-customer basis, and you can also compare yesterday's performance to performance during the preceding week.

Report 4: Executive Summary Aggregate Availability and Traffic [see sample below]

This report provides aggregated information for the day, as opposed to aggregated information for a particular location or customer. The top table gives you daily figures for availability and traffic, and covers the preceding week. The bottom chart provides the same information for each of the previous 30 days. Use the top table to find out if availability and traffic volume are stable, improving, or worsening. Use the bottom table to see whether this week's figures deviate from or align with historic performance.

Report 5: Executive Summary Top Ten Report [see sample below]

This report highlights exceptions on a customer-by-customer basis and ranks the locations that belong to the selected customer. Use this report to find out:

- Which customers are seeing the most exceptions
- Which locations had the worst performance yesterday
- Which locations are expected to have poor performance in the future

The selection table at the top sorts customers by total exceptions, highest to lowest. The tables along the left sort locations by yesterday's average resource utilization, worst to best, while the tables along the right sort locations by F90 value, worst to best.

Most of the time you will not see the same location listed in both tables, left and right. If the same location appears in both tables, yesterday's performance is probably not an isolated incident; it is instead part of a longer-term trend that may require your attention.

Device Single View Summary



The Single View Summary Report provides the network management staff with detailed information on key metrics for individual devices with the highest CPU, Buffer, Memory Utilization, and Traffic Volume.

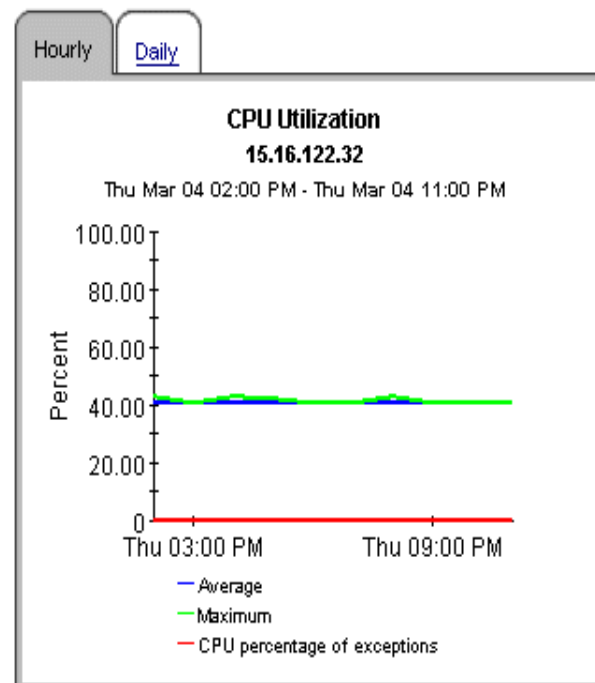
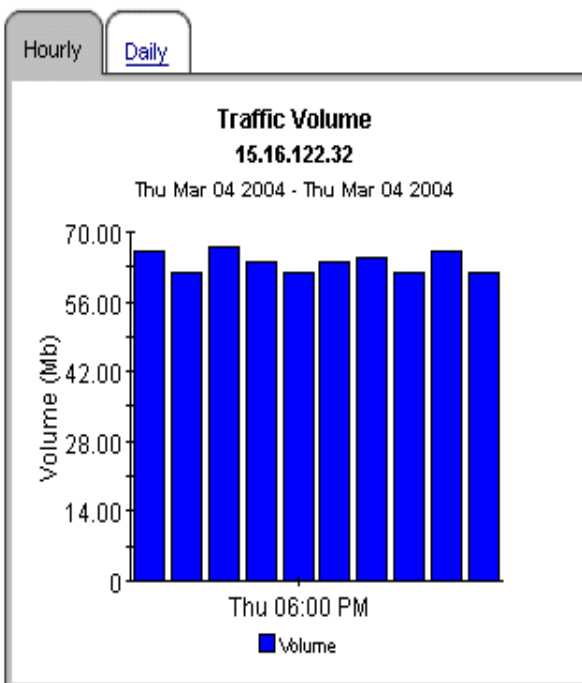
Location Unassigned ▼

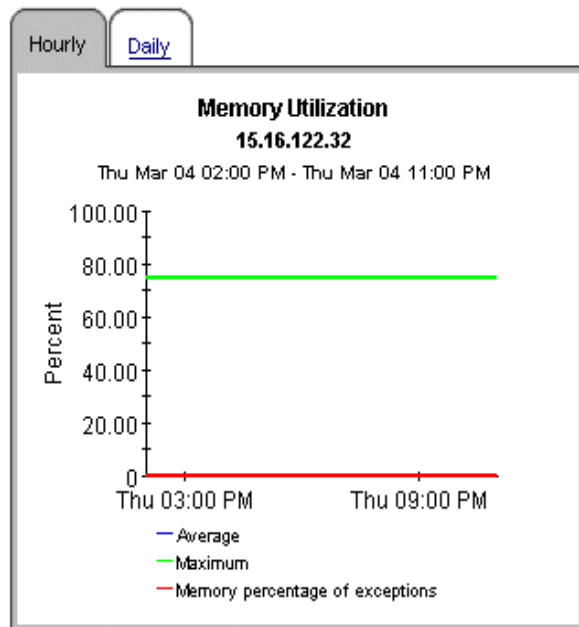
Device Summary

Thu Mar 04 2004

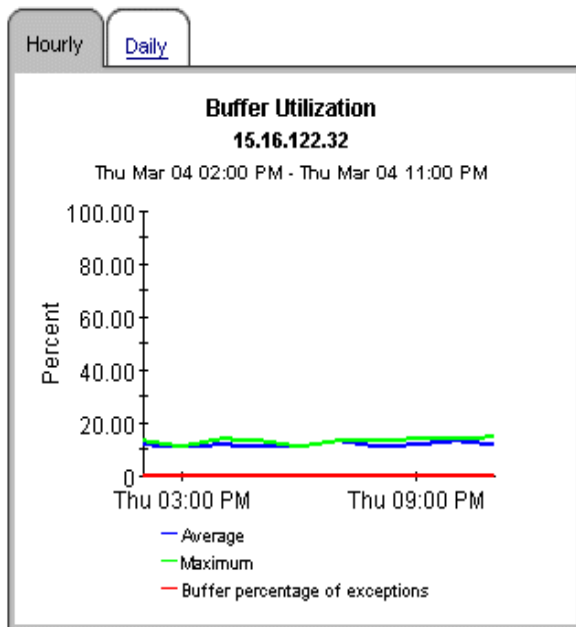
Device	Busy Hour CPU Util	Busy Hour Memory Util	Busy Hour Buffer Util	
15.16.122.32	41	75	13	
15.24.115.2	1	62	0	
15.128.164.163		41	0	
15.128.9.129		30	0	
15.128.9.130		16	5	
15.6.96.1		9	0	

Device	Vendor	Model	Customer
15.16.122.32			Customer Unassigned





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Device Single View Top Ten



The Device Single View Top Ten Report provides the network manager and other members of the network management staff a list of the top ten devices based on various criteria.

Customer Summary

Thu Mar 04 2004

Customer	Average CPU Util	Average Memory Util	Average Buffer Util
Customer Unassigned	21	39	3

Highest Average CPU Utilization

Thu Mar 04 2004

Device	Average CPU Util	Busy Hour CPU Util
15.6.96.1		
15.128.164.163		
15.128.9.130		
15.128.9.129		
15.16.122.32	41	41
15.24.115.2	1	1

CPU Utilization Forecast

Sorted by Highest 90 Day Forecasted Value

Device	Baseline	30th Day	60th Day	90th Day
15.6.96.1				
15.128.164.163				
15.128.9.129				
15.128.9.130				
15.16.122.32	45	38	37	36
15.24.115.2	1	0	0	0

Highest Average Memory Utilization

Thu Mar 04 2004

Device	Average Memory Util	Busy Hour Memory Util
15.16.122.32	75	75
15.24.115.2	62	62
15.128.164.163	41	41
15.128.9.129	30	30
15.128.9.130	16	16
15.6.96.1	9	9

Memory Utilization Forecast

Sorted by Highest 90 Day Forecasted Value

Device	Baseline	30th Day	60th Day	90th Day
15.16.122.32	99	70	68	65
15.24.115.2	62	62	62	62
15.128.164.163	41	41	41	41
15.128.9.129	30	30	30	30
15.128.9.130	16	16	16	16
15.6.96.1	9	9	10	10





Highest Average Buffer Utilization

Thu Mar 04 2004

Device	Average Buffer Util	Busy Hour Buffer Util
15.16.122.32	12	13
15.128.9.130	5	5
15.24.115.2	0	0
15.128.9.129	0	0
15.6.96.1	0	0
15.128.164.163	0	0

Buffer Utilization Forecast

Sorted by Highest 90 Day Forecasted Value

Device	Baseline	30th Day	60th Day	90th Day
15.16.122.32	33	11	7	3
15.128.9.129	9	2	2	2
15.128.9.130	14	4	3	2
15.128.164.163	5	1	1	1
15.24.115.2	2	1	1	1
15.6.96.1	0	0	0	0

Highest Traffic Volume


Thu Mar 04 2004

Device	Volume	Availability
15.6.96.1	4.72 Gb	95
15.16.122.32	645.28 Mb	39
15.128.9.130	163.97 Mb	66
15.128.164.163	52.59 Mb	100
15.24.115.2	36.29 Mb	27

Traffic Volume Forecast

Sorted by Highest 90 Day Forecasted Value

Device	Baseline	30th Day	60th Day	90th Day
15.16.122.32	3	5	6	8
15.6.96.1	13	10	8	6
15.6.96.1	13	10	8	5
15.16.122.32	3	4	5	5
15.6.96.1	14	10	7	5
15.16.122.32	3	3	3	3
15.6.96.1	12	8	5	2
15.16.122.32	3	2	2	2
15.16.122.32	3	2	2	1
15.6.96.1	14	8	5	1

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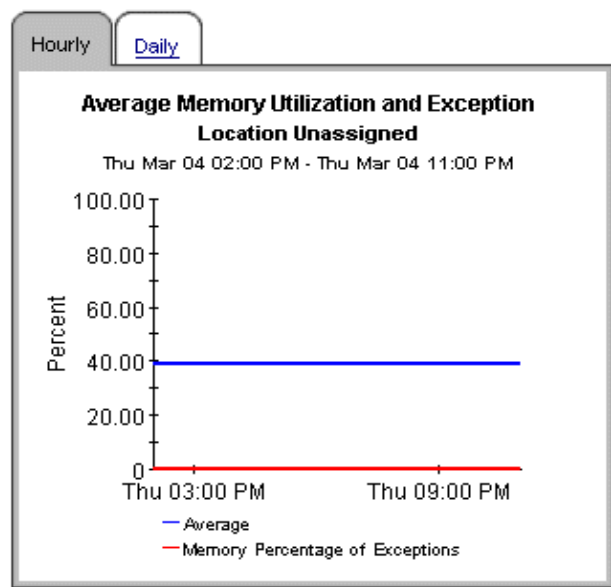
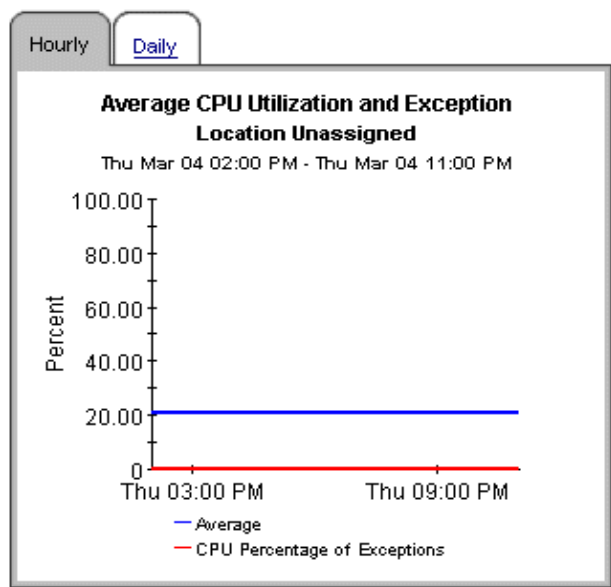
Executive Summary

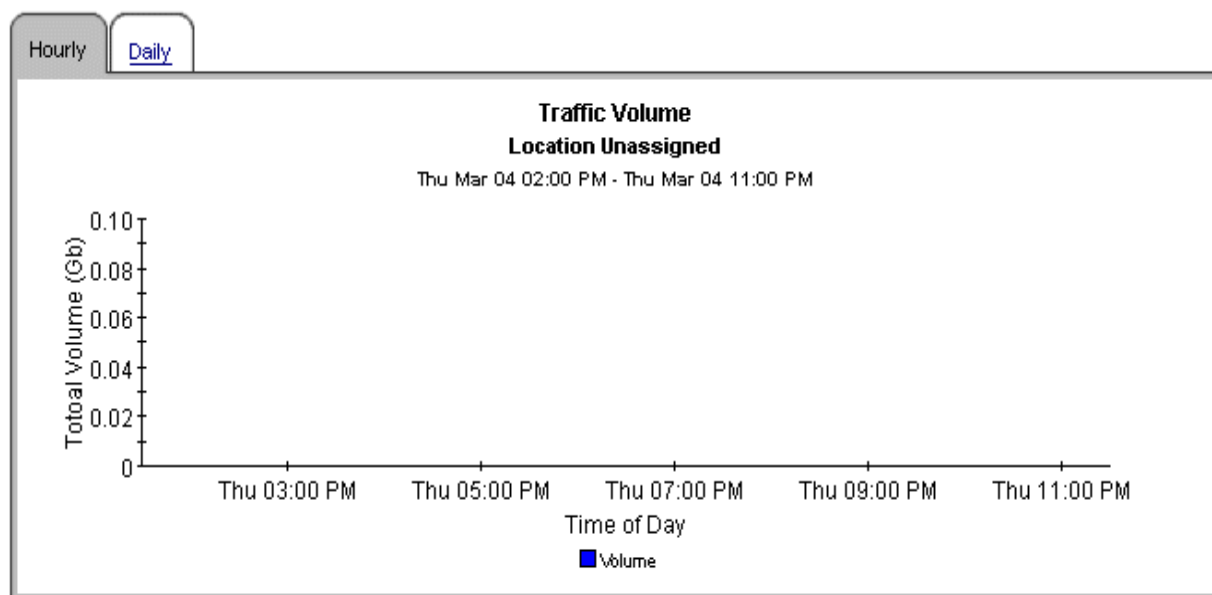
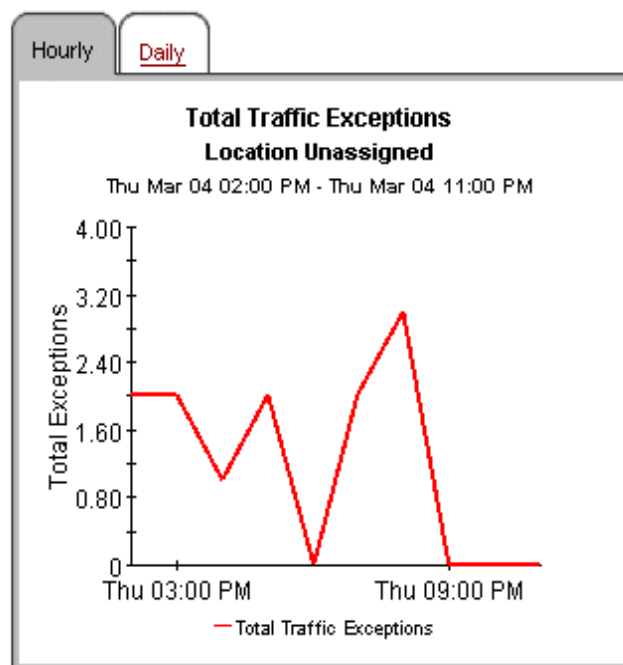
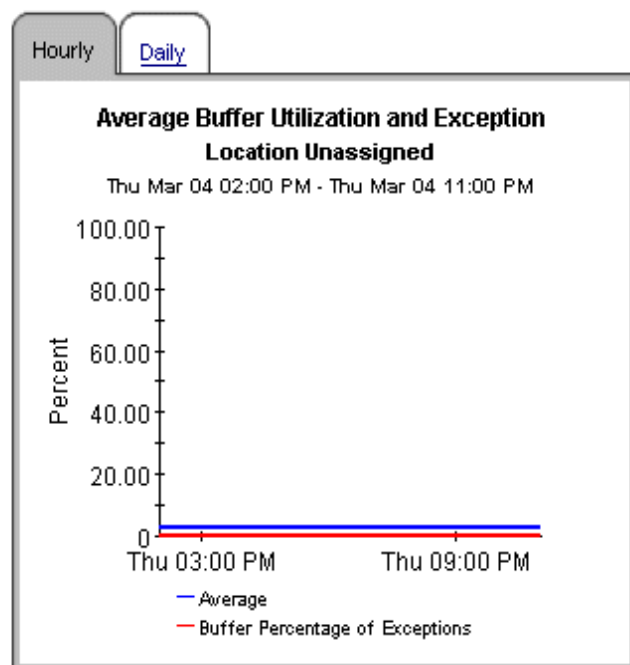


The Executive Summary Report provides CFOs, CIOs, and managers an overview of the performance of corporate devices in the critical areas of CPU/Memory/Buffer utilization, Network Traffic volume and percentage of exceptions by location/region.

Location Unassigned

Location Exceptions Report				
Thu Mar 04 2004				
Customer	CPU Util Exceptions	Total Exceptions	Memory Util Exceptions	Buffer Util Exceptions
All Customers	0	0	0	0
Customer Unassigned	0	0	0	0





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Executive Summary

Aggregate Availability & Traffic



This report is designed to display the overall availability for all managed interfaces on all managed devices across the entire enterprise. All devices for all customers are aggregated on a daily basis, and the availability of interfaces is calculated on an interface basis and brought forward in tabular and graphic form. Note: the graph on this report has its minimum y-axis artificially set to 50%, assuming this to be a worst-case basement value. Tune managed interfaces to ensure maximum accuracy of the report.

7-Day Availability History: All Interfaces on All Devices

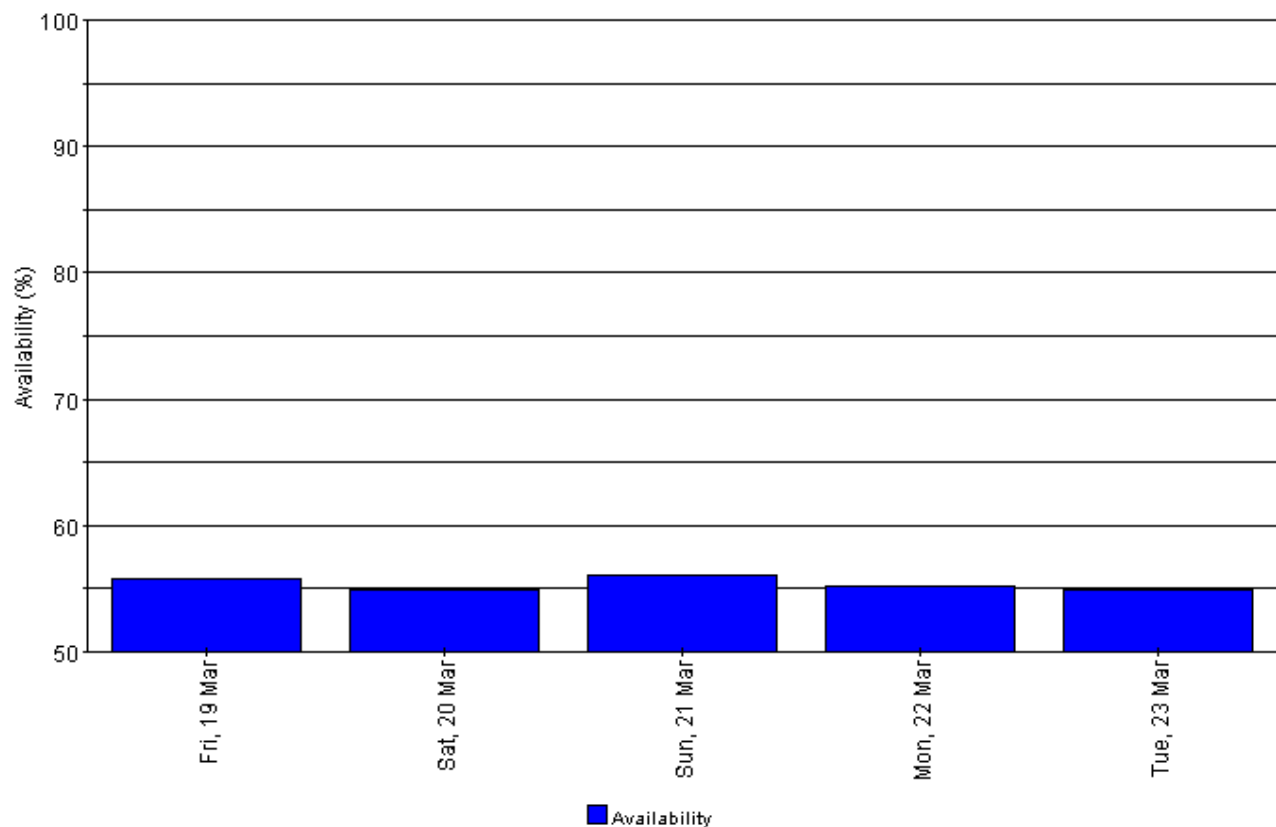
Previous 7 Days

(Availability Alert Rule: Yellow < 90, Red < 75)

Date	Five-Nines Availability (%)	Total Traffic	Total Interfaces	Total Frames	Total Errors	Total Discards
Tue, Mar 23, 2004	54.863	18757116685	70	73836975	243	0
Mon, Mar 22, 2004	55.142	6994959597	70	35499201	331	0
Sun, Mar 21, 2004	56.040	15830307084	70	80518118	712	1
Sat, Mar 20, 2004	54.914	35412656134	70	101276461	858	15
Fri, Mar 19, 2004	55.753	4769669902	70	16774901	124	35

30-Day Daily Availability History: All Interfaces on All Devices

Fri Mar 19 12:00 AM - Tue Mar 23 12:00 AM



Executive Summary

Top Ten



The Executive Summary Top Ten Report provides the network manager and other members of the network management staff a list of the top ten locations/regions based on various criteria.

Customer Exception Counts

Select a Customer for the Top Ten Locations

Thu Mar 04 2004

Customer	Total Exceptions	CPU Util Exceptions	Memory Util Exceptions	Buffer Util Exceptions
Customer Unassigned	0	0	0	0

Highest Average CPU Utilization

Thu Mar 04 2004

Location	Average CPU Util	Busy Hour CPU Util
Location Unassigned	21	21

CPU Utilization Forecast

Sorted by Highest 90 Day Forecasted Value

Location	Baseline	30th Day	60th Day	90th Day
Location Unassigned	39	21	20	20

Highest Average Memory Utilization

Thu Mar 04 2004

Location	Average Memory Util	Busy Hour Memory Util
Location Unassigned	39	39

Memory Utilization Forecast

Sorted by Highest 90 Day Forecasted Value

Location	Baseline	30th Day	60th Day	90th Day
Location Unassigned	62	68	83	99





Highest Average Buffer Utilization

Thu Mar 04 2004

Location	Average Buffer Util	Busy Hour Buffer Util
Location Unassigned	3	3

Buffer Utilization Forecast

Sorted by Highest 90 Day Forecasted Value

Location	Baseline	30th Day	60th Day	90th Day
Location Unassigned	6	7	9	11

Highest Traffic Volume


Thu Mar 04 2004

Location	Volume	Availability
Location Unassigned	5.6 Gb	56

Traffic Volume Forecast

Sorted by Highest 90 Day Forecasted Value

Location	Baseline	30th Day	60th Day	90thDay
No Data				

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Glossary

availability

The percentage of time the device is operational. Identifies device outages indicated by the sysuptime variable but does not account for periods of time the device could not be reached by PI.

average utilization

In an hourly graph, this is the average of four samples taken over a one-hour period. In a daily graph, this is the average of 96 samples taken over a 24-hour period.

baseline

The average of 91 busy hour readings over the baseline period.

baseline period

The previous 91 days. Forecasts for F30, F60, and F90 values are based on performance during the baseline period.

busy hour

Highest hourly average for the day, not a peak nor momentary event (actual utilization could be higher or lower during the course of that hour). The highest average hour among 24 hourly averages.

Common Property Tables

Locations and customer names appear in reports if you have imported this information using the Common Property Tables package. Refer to the Common Property Tables user guide for more information about importing this information. If you do not import customer names, data for all customers rolls up under the “All Customers” name. If you do not import locations, data for all locations rolls up under the “All Locations” name.

daily

A view of performance that compares average utilization to busy hour utilization. The number of days that you can see in this view depends on the number of days that data has been collected. The maximum number of days is the baseline period (91 days). Daily views also include performance data from yesterday, the same data visible in the hourly view, rolled up as one average and one busy hour.

device

A router or switch, not a server. In selection tables, devices are listed by IP addresses or hostname.

exception

An event that occurs when utilization exceeds the allowable threshold.

F30 / F60 / F90

The level where utilization or volume is expected to be 30, 60, or 90 days from now. Values are calculated by applying linear regression to busy hour levels over the baseline period.

hourly

An average derived from four collections taken once every 15 minutes. Or, a graph showing yesterday's hourly increases and decreases.

summary

An aggregation of multiple samples. In an hourly graph, an average based on multiple samples collected during one hour. In a daily graph, an average based on multiple samples collected over the course of each day. In customer and location reports, an aggregation of multiple averages for multiple devices across the same hour, day, or month.

threshold

The point at which the acceptable percentage of traffic errors/failures becomes abnormal and may impact response time. The default threshold values for buffer, CPU, and memory utilization is 85%.

utilization

The value of the metric in used divided by the total available resources for that metric, multiplied by 100 (measured as a percentage).

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