

Internet Services Report Pack

Software Version: 2.10

HP Performance Insight 5.40

User Guide

February 2009



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- Software Release Date, which indicates the release date of this version of the software.

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Contents

- 1 Overview 9
 - Performance Insight and Internet Service Reporting 9
 - Folders and Reports 10
 - Options for Customizing Reports 13
 - Sources for Additional Information..... 14
- 2 Upgrading the Report Pack 17
 - Guidelines for a Smooth Upgrade..... 17
 - Upgrading to Version 2.10..... 19
 - Removing Internet Services 21
- 3 Installing the Report Pack 23
 - Guidelines for a Smooth Installation 23
 - Installing Internet Services Report Pack 2.10 25
 - Adding IS as a Supported Database 26
 - Accessing Deployed Reports 28
 - Changes to the Object Model..... 28
 - Seeing Performance Data in Reports 29
 - Removing Internet Services 29
- 4 Setting Up a Distributed System 31
 - Verifying Correct Package Installation..... 32
 - Configuring the Central Server..... 32
 - Configuring Satellite Servers 34
 - Synchronizing System Clocks 35
- 5 Hot Spots 37
- 6 Summary Reports..... 41
- 7 Detail Reports 47
- 8 Forecast Reports..... 61
- A View Options for Tables and Graphs 67
 - Options for Tables 67
 - Options for Graphs..... 68
- Index 75

1 Overview

This chapter covers the following topics:

- PI and internet service reporting
- Folders and reports
- Data collection and daily processing; time periods
- Options for customizing reports
- Sources for additional information

Performance Insight and Internet Service Reporting

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
- Easy identification of bottlenecks
- Easy assessment of capacity trends
- Accurate and timely documentation for management
- Integration with NNM
- Integration with HP Operations/OM

The Internet Services Report Pack installs on PI and provides detailed information about the performance of IS probe types and IS services on a customer-by-customer basis. The reports in this package can help you spot problem areas, make comparisons, and anticipate a developing problem. For ranking information, go to the reports in the Hot Spots folder and the Detail folder. These reports highlight problem areas. Use the reports in the Summary folder when you want to see how yesterday's performance compares to last week's performance, a 30-day rolling baseline, and to performance over previous months.

In addition to ranking probes and services, generating a rolling baseline, and forecasting future performance, the Internet Services Report Pack serves as a centralized data warehouse for HP Internet Services (IS).

The following table outlines recent changes to the Internet Services Report Pack.

Version	Release Date	Changes
1.00	April 2004 [RNS 5.00]	20 reports Oracle support Internet Services Datapipe 1.00
2.00	March 2006	Launch point page report linking UPGRADE_Internet_Services_to_20.ap
2.00	May 2006	Defect fixes for the Internet Services Datapipe 1.10
2.00	April 2007	Location Independent Reporting (LIR) Copy Policies Internet Services Datapipe 1.20 UPGRADE_IS_to_20 <i>defect fixes:</i> <ul style="list-style-type: none"> • QXCR1000293040 • QXCR1000347546 • QXCR1000365069
2.00	October 2007	<i>Prerequisites:</i> <ul style="list-style-type: none"> • PI 5.30 • Common Property Tables 3.70
2.10	February 2008	Available via patch release only: <ul style="list-style-type: none"> • Copy Policy Enhancement • UPGRADE_IS_to_21.ap
2.10	February 2009	<i>Prerequisites:</i> <ul style="list-style-type: none"> • PI 5.40 • Common Property Tables 3.90 <i>upgrade datapipe package:</i> Internet_Services_Datapipe_Upgrade_11_to_13 <i>defect fix:</i> <ul style="list-style-type: none"> • QXCR1000748866 - OVISDP_Set_IDs.sql failed with ORA-01427

Folders and Reports

Internet Services includes twenty reports. If you are viewing reports from the web, you will see four report folders:

- Detail

- Hot Spots
- Forecasts
- Summary

The **detail folder** contains the following probe and service reports:

- Daily Probe Type Detail
- Monthly Probe Type Detail
- 30 Day Probe Type Detail
- Daily Service Detail
- Monthly Service Detail
- 30 Day Service Detail

The **hot spots folder** contains the following probe and service reports:

- Daily Probe Type Hot Spots
- Monthly Probe Type Hot Spots
- 30 Day Probe Type Hot Spots
- Daily Services Hot Spots
- Monthly Services Hot Spots
- 30 Day Services Hot Spots

The **forecast folder** contains the following probe and service reports:

- Probe Type Forecast
- Service Forecast

The **summary folder** contains the following probe and service reports:

- Daily Probe Type Summary
- Monthly Probe Type Summary
- 30 Day Probe Type Summary
- Daily Service Summary
- Monthly Service Summary
- 30 Day Service Summary

Data Collection and Daily Processing

The Internet Services Datapipe provides tables and routines responsible for collecting raw data from IS. The routines copy IS data into a flat file and move data from datapipe tables to report pack tables. The Internet Services Datapipe collects data from IS every 15 minutes. Data collection is controlled by directives in the Internet_Services_DP.pro file.

The Internet_Services_Daily.pro file is responsible for calculating averages and aggregating data by customer, service, and probe type. Because there are no hourly reports, all hourly processing is done once a day. If you need hourly reports, or if performance issues make it necessary to process hourly data in an incremental manner, throughout the day, you must modify the Internet_Services_Hourly.pro file.

Time Periods

Except for the forecast reports, every report fits into one of the following categories:

- Daily
- Monthly
- 30 day

The daily report begins with statistics for yesterday and allows you to compare yesterday's statistics to performance over the preceding 30 days. The tables at the top show data for the selected day, while the graphs below let you see a full 30 days of data.

The monthly report lets you see what the trend has been for the past 12 months. You will see two aggregations, one for month-to-date (the beginning of the current month until yesterday), and one for previous calendar months, up to a maximum of 12 months.

The 30 day report aggregates data for the preceding 30 days. The tables at the top show totals and averages for a rolling 30 day baseline, while the graphs below show data for each day within the rolling 30 day baseline.

Special Terms and Statistics

The following table defines special terms and statistics.

Term	Definition
Availability	The percentage of tests that were successful; serves as an estimate of service availability.
Customer	The customer as defined in the IS Server; the name of the customer for whom services are being monitored.
IS test	One execution of a simulated service from one probe system to one target.
Probe system	Also referred to as a probe. The system that contains software that initiates the simulated service, measures the results, and sends the results back to the IS server.
Probe type	Also referred to as Service Type or Service in the IS system. A simulated network business activity, such as HTTP, FTP, DNS, etc.
Response time	The response time measured by probe systems for successful IS tests. In a daily report, and in the graphs of 30 day reports, response time is the highest (worst) hourly average for each day. In a monthly report, and in the selection tables of 30 day reports, response time is the average of the highest hourly average for each day. The graphs in monthly reports also show the maximum of the daily highest hourly averages during the month.
Service	Also referred to as Service Group in the IS system. A grouping of measurements of a single service or probe type that have common service level objectives.

Term	Definition
Service level violation	The number of tests that exceeded a threshold as defined by the IS system user.
Target	The target of the simulated service. This could be a URL, a DNS server, an FTP server, etc.
Throughput	<p>The throughput measured by probe systems for successful IS tests. The throughput displayed in daily reports, and in the graphs of 30 day reports, is the lowest (worst) hourly average for each day.</p> <p>The throughput displayed in monthly reports, and in the selection tables of 30 day reports, is the average of the lowest hourly average for each day. The graphs in the monthly reports also show the minimum of the daily lowest hourly averages during the month.</p> <p>Note: Not all IS tests measure throughput.</p>

Provisioning

Provisioning this report pack is not necessary. PI uses customer information maintained by the IS Management Server to populate the appropriate table in the Common Property Tables package, then the Internet Services Report Pack uses the customer data in that table to populate reports with customers. As a result, PI knows which services belong to each customer, and PI knows which probe types are used by each customer

Integration with NNM

If you use NNM, you have the option of integrating PI and NNM. The steps required to integrate NNM and PI are covered in the *NNM/PI Integration Guide*. As explained in more detail in the user guide, integration entails running an integration script on NNM and launching the Integration Wizard on PI. (Installing various integration packages on NNM and PI is no longer necessary.) Once NNM and PI are integrated, you can launch reports in the Internet Services Report Pack directly from NNM. Because IS Management Servers are already integrated with NNM, the Internet Services Report Pack, unlike most report packs, does not include a separate thresholds sub-package.

Options for Customizing Reports

You can customize the contents of a report by applying group filters, by editing parameters, and by editing tables and graphs. While group filters are usually used by service providers to create customer-specific reports, any user can apply constraints to a report and edit tables and graphs. For details about options for viewing tables and graphs, see [Appendix A, View Options for Tables and Graphs](#).

Group Filters

If you intend to share reports with customers, you must configure PI to produce customer-specific reports. Configuring PI to produce customer-specific reports involves the following tasks:

- Importing custom property information (customer names and device locations) using Common Property Tables
- Creating a group account for all of the users affiliated with a particular customer
- Creating a group filter for the group account

For more information about group filters, refer to the *PI Administration Guide*.

Editing Parameters

Editing a parameter applies a constraint. The constraint eliminates data you are not interested in seeing. For example, if you edit the Customer Name parameter, data for every customer except the customer you typed in the Customer Name field would drop from the report. Internet Services supports the following parameters:

- Customer
- Service
- Probe Type
- Cust_id

If you are using the Web Access Server to view reports remotely, edit parameters by clicking the Edit Parameters icon at the bottom right-hand corner of the report. When the Edit Parameters window opens, enter the constraint in the field and click **Submit**.

If you are using Report Viewer, select **Edit > Parameter Values** from the menu bar. When the Modify Parameter Values window opens, click the **Current Value** field. Type a new value and click **OK**.

Sources for Additional Information

This user guide provides samples of some of the reports in the Internet Services Report Pack. The demo package that comes with Internet Services contains a sample of every report in the package. If you have access to the demo package and you want to see fully-populated reports, install the demo package. Like real reports, demo reports are interactive. Unlike real reports, demo reports are static.

The following documents are related to the Internet Services Report Pack:

- *Internet Services Report Pack 2.10 Release Notes*
- *Internet Services RP Datapipe Release Notes*
- *IS Custom Probes API Guide*
- *PI Report Packs, CD-ROM Release Notes, February 2009*

You can download manuals for PI and the reporting solutions that run on PI 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 Reporting Solutions**. Each document indicates the date. If a document is revised and reposted, the date will change. Since we post revised manuals on a regular basis, you should check this site for updates.

2 Upgrading the Report Pack

This chapter covers the following topics:

- [Guidelines for a Smooth Upgrade](#)
- [Upgrading to Version 2.10](#)
- [Removing Internet Services](#)

If you are installing the Internet Services Report Pack for the first time, this chapter does not apply to you. See [Chapter 3, Installing the Report Pack](#).

Guidelines for a Smooth Upgrade

When you insert the report pack 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 launch Performance Insight and start Package Manager. Before running Package Manager, review the following guidelines:

- [Prerequisites for the Internet Services Report Pack](#)
- [Upgrading Common Property Tables](#)
- [Datapipes and Remote Pollers](#)
- [Custom Table Views](#)
- [Upgrading Internet Services in a Distributed Environment](#)

Prerequisites for the Internet Services Report Pack

Make sure the following software is installed before upgrading to Internet Services 2.00:

- [PI 5.40](#)
- [All service packs available for PI 5.40](#)
- [Common Property Tables 3.90](#)

Upgrading Common Property Tables

If you are running an older version of Common Property Tables, you must upgrade that package to version 3.90 or higher. If you are not running any version of Common Property Tables, Package Manager will install the latest version of Common Property Tables for you, automatically.

Do not install an upgrade for Common Property Tables *and* other packages at the same time. Install the upgrade package for Common Property Tables and *only* the upgrade package for Common Property Tables. For more information about installing and using Common Property Tables, refer to the *Common Property Tables User Guide*.

Datapipes and Remote Pollers

If you uninstall an existing datapipe, the following information is lost:

- Single polling policy for a remote poller
- Cloned polling policies for multiple remote pollers
- Customized polling groups

To prevent this information from being lost, you can use the following commands to export existing polling policy configurations and customized polling groups:

- `collection_manager`
- `group_manager`

Exporting Polling Policy Configurations

If your environment contains polling policies for remote pollers, use the `collection_manager` command to export existing policy configurations to a file.

UNIX: As user `trendadm`, run the following command:

```
cd $DPIPE_HOME
./bin/collection_manager -export -file /tmp/savePollingPolicy.lst
```

Windows: As Administrator, launch a command window. Navigate to the PI install directory and run the following command:

```
bin\collection_manager -export -file \temp\savePollingPolicy.lst
```

Exporting Polling Group Configurations

If your environment contains customized polling groups, use the `group_manager` command to export groups to individual `.xml` files.

UNIX: As user `trendadm`, run the following command:

```
cd $DPIPE_HOME
./bin/group_manager -export_all -outfile /tmp/savePollingGroups
```

Windows: As Administrator, launch a command window, then navigate to the PI install directory and run the following command:

```
bin\group_manager -export_all -outfile \temp\savePollingGroups
```

Custom Table Views

If you are using table views you created yourself, the views you created may interfere with the report pack upgrade, causing the upgrade to fail. Whether or not your views interfere with the upgrade process depends on how you created them. If you used SQL to create them, the upgrade will succeed, however, your custom views will not be available once the upgrade is

complete. If you used Datapipe Manager to create them, the upgrade is likely to fail. To prevent the upgrade from failing, delete custom table views before you upgrade the report pack, then recreate those views after the report pack is upgraded.

Upgrading Internet Services in a Distributed Environment

The following is an overview of the installation procedure for a distributed environment:

- 1 Disable trendcopy on the central server.
- 2 For the central server:
 - Upgrade to Common Property Tables 3.90; deploy reports
 - Upgrade to Internet Services 2.10; deploy reports
- 3 For each satellite server:
 - Upgrade to Common Property Tables 3.90
 - Upgrade to Internet Services 2.10
 - Remove Internet Services Datapipe 1.20.
 - Install Internet Services Datapipe 1.30
- 4 Re-enable trendcopy on the central server.

When Internet Services was installed, the person who installed that version had to set up connections with satellite server databases, configure trendcopy commands, and switch off aggregations above the hourly level at each satellite server. If you recently upgraded to PI 5.40, server configuration changes that were made when Internet Services was installed must be redone. Reconfigure the central server and each satellite server. For details, see [Chapter 4, Setting Up a Distributed System](#).

Upgrading to Version 2.10

Perform the following tasks to upgrade to version 2.10:

- Task 1: [Stop OVPI Timer and extract packages from the report pack CD](#)
- Task 2: [Upgrade to Common Property Tables 3.90](#)
- Task 3: [Install the Upgrade Packages](#)
- Task 4: [Remove Internet Services Datapipe 1.10](#)
- Task 5: [Install Internet Services Datapipe 1.30](#)
- Task 6: [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.

On Windows, do the following:

- a Select **Control Panel > Administrative Tools > Services**.
- b Select OVPI Timer from the list of services.

- c From the Action menu, select **Stop**.

On 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. On Windows, a Main Menu opens 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.

If you navigate to the Packages directory on your system, you will see the following folders under the Internet Services folder:

- Internet_Services.ap
- Internet_Services_Demo.ap
- UPGRADE_IS_to_21.ap

Task 2: [Upgrade to Common Property Tables 3.90](#)

Follow these rules to update Common Property Tables:

- Do not install any other package with the Common Property Tables upgrade package; install the Common Property Tables upgrade package and *only* the Common Property Tables upgrade package.
- When prompted to accept or disable the option to Deploy Reports, accept the default. If you do not deploy reports, you will not deploy the change forms that come with Common Property Tables.
- When the install finishes, click **Done** to return to the Management Console.

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

Task 3: [Install the Upgrade Packages](#)

- 1 From the Management Console, select **Tools > 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 defaults for Deploy Reports, Application Server, and Port. Type your user name and password for the PI Application Server.
- 5 Click **Next**. The Package Selection window opens.
- 6 Click the check box next to the following packages (depending on which packages you are upgrading):

```
UPGRADE_IS_to_21.ap
```
- 7 Click **Next**. The Type Discovery window opens. Disable the default.
- 8 Click **Next**. The Selection Summary window opens
- 9 Click **Install**. The Installation Progress window opens and the install begins. When the install finishes, a package install complete message appears.

10 Click **Done**.



Do not be surprised if the UPGRADE package you just installed disappears from view. Package Manager will display what you just installed as *Internet Services Report Pack 2.10*. This is not an error

Task 4: Remove Internet Services Datapipe 1.10

The Internet Services Datapipe cannot be upgraded. You must remove the existing datapipe and then install Internet Services Datapipe 1.30. Start Package Manager and follow the on-screen instructions for package removal. When Package Manager tells you that removal is complete, click **Done** to return to the Management Console.

Task 5: Install Internet Services Datapipe 1.30

- 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; disable the default for Deploy Reports.
- 5 Click **Next**. The Package Selection window opens.
- 6 Click the check box next to the following package:
Internet Services Datapipe 1.3
- 7 Click **Next**. The Type Discovery window opens.
- 8 Click **Next**. The Selection Summary window opens.
- 9 Click **Install**. The Installation Progress window opens and the install begins. When the install finishes, the package installation complete message appears.
- 10 Click **Done**.

Task 6: Restart OVPI Timer

On Windows, do the following:

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

On 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
```

Removing Internet Services

Follow the steps under Task 1 to uninstall Internet Services. Removing Internet Services will automatically remove the datapipe. Task 2 tells you how to remove an IS system defined as a Generic Supported Database. Removing the IS system is not mandatory; this step is recommended.

Task 1: Uninstalling the Internet Services Report Pack

- 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, 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. The Package Manager welcome window opens.
- 4 Click **Next**. The Package Location window opens.
- 5 Click **Uninstall**.
- 6 Click **Next**. The Report Undeployment window opens.
- 7 If Internet Services reports were deployed from this server, accept the defaults for Undeploy Reports, Application Server Name, and Port. If Internet Services reports were **not** deployed from this server, clear the check box and skip to step 9.
- 8 Type the username and password for the PI Application Server.
- 9 Click **Next**. The Package Selection window opens.
- 10 Click the check box next to the following package:
Internet Services Report Pack
- 11 Click **Next**. The Selection Summary window opens.
- 12 Click **Uninstall**. The Progress window opens and the removal process begins. When the uninstall process is complete, a package removal complete message appears.
- 13 Click **Done** to return to the Management Console.
- 14 Restart OVPI Timer.

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

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`

Task 2: Removing an IS system defined as a Generic Supported Database

- 1 Click the **Systems** icon on the left-hand side of the Management Console.
- 2 Select the local system. PI and generic databases appear in the main window.
- 3 Right-click the IS system and select **Delete System...**
- 4 Click **Yes** in the pop-up window.

The IS system is now removed.

3 Installing the Report Pack

This chapter covers the following topics:

- Guidelines for a smooth installation
- Installing the Internet Services Report Pack
- Adding the HP Internet Services (IS) database to PI (defining an IS collection)
- Accessing deployed reports
- Changes to the object model
- Seeing performance data in reports
- Package removal and IS system removal

Guidelines for a Smooth Installation

A PI reporting solution has at least two ingredients, a report pack and a datapipe. Some reporting solutions offer multiple, vendor-specific datapipes. When you install the datapipe, you configure PI to collect performance data from a MIB or from a flat file at a specific interval. When you install the report pack, you configure PI to calculate averages (hourly, daily, monthly) and aggregate the averages in some manner—by device, by location, or by customer.

The report pack CD-ROM contains report packs, datapipes, and shared packages. If you, or someone else, extracted packages from the report pack CD, the Internet Services Report Pack is available for installation. To install the package, start Package Manager and follow the on-screen directions. If the package extract step has not taken place yet, follow the procedure for extracting packages in this chapter. Before installing any software, review the information below about prerequisites and running IS and PI on the same server.

IS and PI on the Same Server

Although you may install PI on the same server that is running IS, we recommend installing PI and IS on separate servers. If you decide to install PI and IS on the same system, you must indicate an alternate hostname by adding a new line to the system hosts file. The path to the file is:

Windows:

```
\windows\system32\drivers\etc\hosts
```

UNIX:

```
/etc/hosts
```

The line you add to the hosts file must contain two pieces of information:

- An IP address for the IS system
- An alternate hostname for the IS system

For example:

```
192.192.192.192 ovisnode
```

You will use the alternate hostname when you define IS collections.

Prerequisites for the Report Pack

Make sure the following software is already installed before installing the Internet Services Report Pack:

- Performance Insight 5.40
- Any and all service packs available for PI 5.40
- Common Property Tables 3.90

If you are running an older version of Common Property Tables, upgrade to the latest version by installing the upgrade package. If you are not running any version of Common Property Tables, do nothing. Package Manager will install the latest version of Common Property Tables for you, automatically.

If you need to install the upgrade for Common Property Tables, do this first, before upgrading or installing anything else, and 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.

Distributed Systems

If your system is distributed, the installation procedure is more complicated. Following is a summary of the installation procedure for a distributed system:

Central Server

- 1 Disable trendcopy on the central server.
- 2 If you are not running version 3.90, upgrade to version 3.90.
- 3 Install Internet Services Report Pack 2.10.

Satellite Servers

- 1 If you are not running version 3.90, upgrade.
- 2 Install these packages:
 - Internet Services Report Pack 2.10
 - Internet Services Report Pack Datapipe 1.30

When you finish installing packages on the satellite servers, re-enable trendcopy on the central server. After you re-enable trendcopy, configure the central server and each satellite server. These steps are covered in [Chapter 4, Setting Up a Distributed System](#).

Installing Internet Services Report Pack 2.10

This section covers the following tasks:

- Task 1: Extract packages from the report pack CD
- Task 2: If necessary, upgrade Common Property Tables
- Task 3: Install these packages:
 - Internet Services Report Pack 2.10
 - Internet Services Datapipe 1.30

Task 1: 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 in the CD-ROM drive. On a Windows operating system, a Main Menu opens automatically; on Unix, mount the CD, navigate to the top-level directory for the CD drive, and type the setup command.
- 4 Extract PI report packs to the Packages directory on your system by typing **1** in the choice field and pressing **Enter**. A completion bar shows progress. When the extract finishes, the install script starts Package Manager. The Package Manager welcome window opens.

If you want to confirm that packages on the CD are now in the Packages directory on your system, navigate to the Packages directory. You will see the following folders under the Internet Services folder:

- Internet_Services.ap
- Internet_Services_Demo.ap
- UPGRADE_Internet_Services_to_21.ap
- Docs

You may ignore the upgrade package. Installing the demo package is optional. You may install the demo package and only the demo package, or you may install the demo package along with the report pack.

Task 2: Upgrade to Common Property Tables 3.90

If you are running version 3.80 or earlier, upgrade to version 3.90. 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 prompted to accept or disable the option to Deploy Reports, accept the default. If you do not deploy reports, you will not have access to the forms that come with Common Property Tables.
- When the install finishes, 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: Install the report pack and the datapipe

- 1 From the Management Console select **Tools > Package Manager**. The Package Manager welcome window opens.
- 2 Click **Next**. The Package Location window opens.
- 3 Click **Install**. Approve the default installation directory or use the browse feature to select a different directory if necessary.
- 4 Click **Next**. The Report Deployment window opens. Accept the default for Deploy Reports; accept the default for application server name and port. Type your username and password for the PI Application Server.
- 5 Click **Next**. The Package Selection window opens.
- 6 Click the check box next to the following package:
 - Internet Services 2.1*
 - Internet Services Datapipe 1.3*
 - Internet Services Demo (optional)*
- 7 Click **Next**. The Type Discovery window opens.
- 8 Disable the default to run Type Discovery immediately after package installation. (If you are installing other report packs in addition to Internet Services, you may need to run Type Discovery for those packages.)
- 9 Click **Next**. The Selection Summary window opens.
- 10 Click **Install**. The Installation Progress window opens and the install process begins. When the install finishes, a package install complete message appears.
- 11 Click **Done** to return to the Management Console.
- 12 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`

Once the Internet Services Report Pack and the Internet Services Report Pack Datapipe are installed, your next task is to add the IS system as a supported database.

Adding IS as a Supported Database

You cannot collect data from IS until PI recognizes IS as a supported database. Follow these steps to add IS as a supported database:

- 1 Determine which port the IS system is using. The default for an IS system installed on Oracle is port 1521. If for some reason port 1521 is not available, discuss this with your Oracle system administrator. To determine the port for an IS system installed on SQL server, follow these steps:
 - a From the command line, type: `svrnetcn.exe`
 - b The SQL Server Network Utility opens. Under **Enabled protocols** select TCP/IP.
 - c Click **Properties**. The port number appears in the pop-up window.

- 2 Start Performance Insight and open the Management Console.
- 3 Click the **Systems** icon located on the left-hand side of the Management Console.
- 4 Expand the information under the PI system by clicking “+”.
- 5 Right-click the Databases folder.
- 6 Select **Add Database**. The Add Database Wizard opens.
- 7 Click **Next**.
- 8 Select **Generic Supported Database** and click **Next**.
- 9 The Database Connection Information window opens. Add the following information:
 - Hostname – Either the hostname or the IP address of the IS server
 - ▶ If PI and IS are installed on the same platform, use of the alternate hostname/IP address you added to the system hosts file. (See [page 24](#) for details.)
 - Port – The TCP/IP port number
 - Description – Must include either “OVIS” or “ovis” to enable collection of IS data
 - Vendor – Select the database vendor for the IS system
 - Database Instance – Specify OVOPS for SQL server; reporter for Oracle
 - Database Username – Username with access to the IS database
 - Password – Database password
- 10 Click **Finish**.

Add Database Wizard

Database Connection Information
Enter the database connection information

HP
invent

Hostname:

Port:

Description:

Vendor:

Windows Authentication

Domain:

Database Instance:

Database Username:

Password:

< Back Next > Cancel

- 11 Click **Next**.
- 12 Type a unique, identifying System name. Do not use spaces or numbers in the name. Typing a description is optional.
- 13 Click **Next**. The Summary window opens.

You can test the connection you just defined without having to wait for the next scheduled collection of data. Follow these steps to test the connection:

- 1 Expand the system tree.
- 2 Select the IS database.
- 3 Click **Test Connection**.

If the connection is good, the Internet Services Datapipe will begin collecting data from the IS system at the next scheduled collection. The next scheduled collection will take place in 15 minutes or less. Because an IS system will store data for several days (the default is 7 days), the first collection can take a long time to complete. Subsequent collections will be much faster since there will be much less data to collect.

To verify that the collection worked as expected, open Table Manager from the Management Console and look for data in these tables:

- ROVISDP (a data table)
- K_OVISDP (a property table)

There are two ways to stop collecting data from an IS system:

- Delete the IS system as a supported database
- Edit the database description, removing any references to *OVIS* or *ovis*

Accessing Deployed Reports

When you installed the Internet Services Report Pack, you enabled the Deploy Reports option. As a result, the reports in this package (as well as any forms that come with it) were deployed to the PI Application Server. Once reports reside on the PI Application Server, you have two ways to view them:

- PI client applications
- Web browser

If the client applications are installed on your system, you have access to Report Viewer, Report Builder, and the Management Console. If the client applications are not installed on your system, using a web browser is the only way you can view reports.

For details about the clients applications, see the *PI Installation Guide*. For details about the Management Console, including the Object/Property Management view and how to launch reports and forms specific to a selected object, see the *PI Administration Guide*.

Changes to the Object Model

Installing the Internet Services Report Pack modifies the object model maintained by PI. The following objects are added to the customer view:

- Service
- IS Probe type

IS customers are viewable from the Management Console by doing the following:

Select **Objects > View > Change View > Customers**

You can view any report in the package by highlighting a customer and selecting one of the reports listed under Object Specific Reports. For example:

Customer XYZ > Object Specific Reports > Daily Probe Type Hot Spots

The report that opens will be constrained, containing data for customer XYZ only. You can launch summary or detail reports by selecting a specific probe type or service, as follows:

XYZ > Probe Type N > Daily Probe Type Detail Report

Customer XYZ > Service N > Daily Service Summary Report

The report that opens will be constrained, containing data for N probe type, or N service, for customer XYZ only.

Seeing Performance Data in Reports

If you are familiar with other PI reports, you know that Near Real Time reports are the first reports to populate with data. Since there are no NRT reports in this package, you will not see data right away. Processing occurs at night, so tomorrow is the soonest that data will appear in reports.

In the days immediately following installation, you will see some data in daily reports, 30 day reports, and monthly reports, specifically:

- In daily reports, totals and averages for each day for which you have data
- In the 30 day reports, aggregated data representing all the days for which you have data
- In the monthly reports, month-to-date aggregations in selection tables

If the data you collected includes data for any part of the previous calendar month, the graphs in monthly reports will be populated. If the data you collected has no data for the previous month, the graphs in monthly reports will be empty. These graphs will remain empty until you begin collecting data on the first day of the next month.

Forecast reports are generated from a rolling baseline. Although forecast reports will contain some data before the first rolling baseline (30 days) is complete, reliable forecasts will not be available until the first rolling baseline is complete.

Removing Internet Services

Follow the steps under Task 1 to uninstall Internet Services. Removing Internet Services will automatically remove the datapipe. Task 2 tells you how to remove an IS system defined as a Generic Supported Database. Removing the IS system is not mandatory.

Task 1: Uninstalling the Internet Services Report Pack

- 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, 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. The Package Manager welcome window opens.
- 4 Click **Next**. The Package Location window opens.
- 5 Click **Uninstall**.
- 6 Click **Next**. The Report Undeployment window opens.
- 7 If Internet Services reports were deployed from this server, accept the defaults for Undeploy Reports, Application Server Name, and Port. If Internet Services reports were **not** deployed from this server, clear the check box and skip to step 9.
- 8 Type the username and password for the PI Application Server.
- 9 Click **Next**. The Package Selection window opens.
- 10 Click the check box next to the following package:
Internet Services Report Pack 2.1
- 11 Click **Next**. The Selection Summary window opens.
- 12 Click **Uninstall**. The Progress window opens and the removal process begins. When the uninstall process is complete, a package removal complete message appears.
- 13 Click **Done** to return to the Management Console.
- 14 Restart OVPI Timer.

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

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**

Task 2: [Removing an IS system defined as a Generic Supported Database](#)

- 1 Click the Systems icon on the left-hand side of the Management Console.
- 2 Select the local system. PI and generic databases appear in the main window.
- 3 Right-click the IS system and select **Delete System...**
- 4 Click **Yes** in the pop-up window.

The IS system is now removed.

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 local reporting, you need to deploy reports when you install the report pack on each satellite server, and you also 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. This approach had two benefits. It kept a lot of rate data off the network, and it decreased the processing load on the central server. The problem with this approach 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 fixes this problem. 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, then enabling LIR is not necessary.

The Internet Services Report Pack comes with a copy policy import file. When you install the report pack, PI uses this file to generate copy policies. Creating these policies yourself, using the Management Console, is no longer necessary. Your only task is to verify that you have the copy policies you need.

Because you are likely to have multiple satellite servers, we designed the hourly process files to be satellite-server friendly. This means that most of the time, most of the defaults are correct. But some defaults will be incorrect, or less than optimal, and to improve performance, you should change them. These manual edits, as well as the other steps listed above, are spelled out in detail in this chapter.

Verifying Correct Package Installation

If you intend to run Internet Services as a distributed system, you must configure all of the servers in the system. Before doing that, verify that you have the right packages installed on each server.

Packages on the Central Server

- Internet Services Report Pack; with reports deployed to the PI Application Server
- Common Property Tables; with forms deployed to the PI Application Server

Typically, the central server does not poll. If you want the central server in your system to poll, install the Internet Services Datapipe on the central server.

Packages on Each Satellite Server

- Internet Services Report Pack; reports deployed
- Common Property Tables; forms deployed
- Internet Services Report Pack Datapipe 1.3

If you need local reporting, that is, if you want to use the satellite server to see reports and forms, you must deploy reports to the PI Application Server when you install packages on a satellite server. If the central server is the only server you will use to view reports and forms, deploying reports is optional.

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 are enabling LIR, add LIR mappings
- Task 4: Verify the automatically generated copy policies
- Task 5: Modify the `Internet_Services_Hourly.pro` file
- Task 6: Modify the `Internet_Services_Daily.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 **Internet Services** from the drop down list.
- 9 Select the **rate** data type.
- 10 Click **Add to List**.
- 11 If you want to add additional LIR mappings, click **Add to list** and repeat [step 6](#) through [step 10](#).
- 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 9](#) above) determines the type of data copied (defined in the generated copy policy). The type of data copied (defined in the generated copy policy) 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 that copy policies were generated automatically

Verify that a copy policy has been generated for the SHOVIS table 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 SHOVIS table and verify the copy type is set to Property and Data.

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 SHOVIS 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 Internet_Services_Hourly.pro file](#)

The `Internet_Services_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:

- Find and uncomment the following lines:

```
begin:block1 wait
end:block1
```

Task 6: [Modify the Internet_Services_Daily.pro file](#)

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

Make the following changes:

- Find and comment out the following lines:

```
begin:block1 wait
end:Source:SHOVIS
```

Configuring Satellite Servers

Follow these steps to configure each 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). Do the following:

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

```
1:00+30 - - {DPIPE_HOME}/bin/trend_proc -f
{DPIPE_HOME}/scripts/Internet_Services_Hourly.pro

to

1:00+20 - - {DPIPE_HOME}/bin/trend_proc -f
{DPIPE_HOME}/scripts/Internet_Services_Hourly.pro
```

- Find and comment out the following line:

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

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

Uncomment the `block2` block (uncomment the `begin:block2` `wait` and `end:block2` lines).

Synchronizing System Clocks

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

5 Hot Spots

The Hot Spots reports make it easy for you to find out which probe types and services are experiencing the worst performance. Each report pinpoints the 10 probe types or 10 services that are reporting the highest service level violations, lowest availability, highest response time, and lowest throughput.

The Hot Spots folder contains three probe type reports and three service reports:

- 30 Day Probe Type Hot Spots
- Daily Probe Type Hot Spots
- Monthly Probe Type Hot Spots
- 30 Day Services Hot Spots
- Daily Services Hot Spots
- Monthly Services Hot Spots

If you want to watch for problem areas as they arise, use the daily reports. As soon as you spot a problem area, you can investigate further by using the summary and detail reports in the other folders.

The monthly reports show:

- Month-to-date totals for the current month
- Month-to-date averages for the current month
- Monthly totals for previous months
- Monthly averages for previous months

Use these reports to compare actual performance to monthly Service Level Agreements.

The 30 Day reports provide an aggregated view of recent performance. These reports smooth out daily anomalies, while crossing the boundary between two months.

See below for samples of these reports:

- 30 Day Probe Type Hot Spots
- 30 Day Services Hot Spots

Internet Services



30 Day Probe Type Hot Spots

The 30 Day Probe Type Hot Spots Report provides lists of probe types that had the worst performance (service level violations, availability, response time and throughput) for the preceding 30 days.

Customer

All Customers

ACME

Internet Services, Ltd.

Web Monitoring Corp.

Service Level Violations Most Service Level Violations

	Probe Type	Violations
1	HTTP	35,255
2	EXCHANGE	24,942
3	RADIUS	19,423
4	HTTP_TRANS	6,839
5	DHCP	2,276
6	ODBC	1,390
7	STREAMING_MEDIA	1,268
8	IMAP4	526
9	WAP	246
10	DNS	212

Availability Worst 30 Day Availability (Percent)

	Probe Type	Availability
1	ODBC	0.0
2	RADIUS	0.0
3	EXCHANGE	5.3
4	DHCP	53.4
5	HTTPS	53.9
6	IMAP4	62.1
7	HTTP_TRANS	68.8
8	HTTP	78.9
9	WAP	82.3
10	MAILROUNDTRIP	98.9

Response Time Worst 30 Day Average (Seconds)

	Probe Type	Response Time
1	STREAMING_MEDIA	22.91
2	HTTP	15.04
3	WAP	6.81
4	MAILROUNDTRIP	6.34
5	HTTP_TRANS	4.02
6	SAP_BASIS	1.37
7	SCRIPT	1.34
8	POP3	1.27
9	IMAP4	1.13
10	FTP	1.02

Response time displayed is the average of the daily maximum hourly averages over the previous 30 days.

Throughput Worst 30 Day Average (Bytes / Second)

	Probe Type	Throughput
1	NTP	0.23
2	ICMP	0.41
3	NNTP	0.69
4	DHCP	0.97
5	IMAP4	2.08
6	STREAMING_MEDIA	2.57
7	WAP	2.70
8	SMTP	4.78
9	HTTPS	16.39
10	HTTP	39.04

Throughput displayed is the average of the daily minimum hourly averages over the previous 30 days.



Internet Services



30 Day Services Hot Spots

The 30 Day Services Hot Spots Report provides lists of services that had the worst performance (service level violations, availability, response time and throughput) for the preceding 30 days.

Customer

ACME

Internet Services, Ltd.

Web Monitoring Corp.

XYZ, Incorporated

Service Level Violations Most Service Level Violations

	Service	Violations
1	ACME HTTP1	25,147
2	ACME DHCP	2,276
3	ACME HTTP2	233
4	ACME DNS	188
5	WINSAT5 FTP	66
6	ACME ICMP	0
7	ACME ODBC	0
8	Smith DHCP	0

Availability Worst 30 Day Availability (Percent)

	Service	Availability
1	ACME ODBC	0.0
2	Smith DHCP	26.2
3	ACME DHCP	72.8
4	ACME HTTP2	97.2
5	ACME HTTP1	97.3
6	ACME DNS	99.9
7	ACME ICMP	99.9
8	WINSAT5 FTP	99.9

Response Time Worst 30 Day Average (Seconds)

	Service	Response Time
1	ACME HTTP2	18.04
2	ACME HTTP1	17.72
3	WINSAT5 FTP	1.54
4	Smith DHCP	0.95
5	ACME DHCP	0.77
6	ACME DNS	0.49
7	ACME ICMP	0.03

Throughput Worst 30 Day Average (Bytes / Second)

	Service	Throughput
1	ACME ICMP	0.29
2	Smith DHCP	0.57
3	ACME DHCP	0.85
4	ACME HTTP2	4.20
5	ACME HTTP1	4.61
6	WINSAT5 FTP	114.00

Response time displayed is the average of the daily maximum hourly averages over the previous 30 days.

Throughput displayed is the average of the daily minimum hourly averages over the previous 30 days.

6 Summary Reports

The reports in the summary folder provide statistics at the service and probe type level. The summary folder contains the following reports:

- 30 Day Probe Type Summary
- Daily Probe Type Summary
- Monthly Probe Type Summary
- 30 Day Service Summary
- Daily Service Summary
- Monthly Service Summary

Summary reports provide a historical context for hot spots reports. For example, if a report in the Hot Spots folder has just alerted you to a problem, you can use the corresponding summary report to find out whether you are dealing with an unusual situation that could not have been predicted or a trend that has been steadily worsening over time.

In a summary report, you drill down from a customer to a list of services or probe types associated with the customer. For each probe type or service, you have the following aggregated statistics:

- Service level violations
- Availability
- Response time
- Throughput

The figures in the probe type/service selection table aggregate data for every probe type/target associated with each probe type or service. Beneath the probe type/service table are graphs for service violations, availability, response time, and throughput. Use these graphs to see what the trend has been like for the past 30 days and the past 12 months.

See below for two sample reports, the Daily Probe Type Summary and the Daily Service Summary.

Internet Services



Daily Probe Type Summary

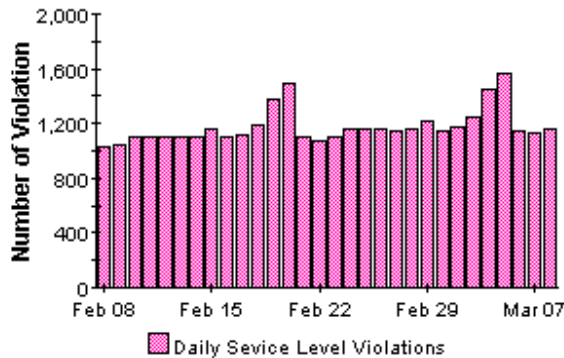
The Probe Type Summary Report presents performance statistics for probe types associated with a given customer for the selected day. By selecting a particular probe type, the user can see its service level violations, availability, response time and throughput over the preceding 30 days.

Customer	Day
All Customers	March 8, 2004
ACME	March 7, 2004
Internet Services, Ltd.	March 6, 2004
Web Monitoring Corp.	March 5, 2004

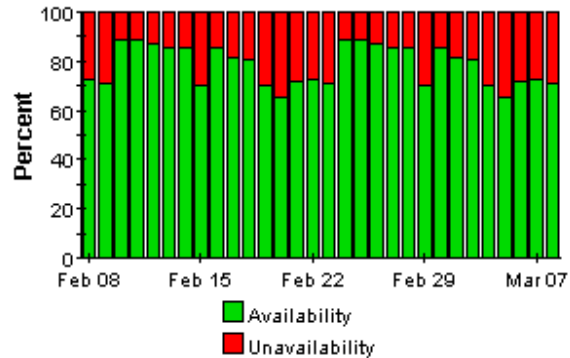
Probe Type Performance Sorted by number of service level violations

Probe Type	Service Level Violations	Availability	Response Time	Throughput
HTTP	1,154	71.28	20.97	61.68
EXCHANGE	864	0.00		
RADIUS	576	0.00		
HTTP_TRANS	289	74.91	2.37	74.55
DHCP	78	49.65	0.70	1.02
DNS	10	99.88	0.65	
FTP	4	100.00	1.14	56.42
ODBC	0	0.00		
HTTPS	0	50.00	0.61	17.48
STREAMING MEDIA	0	100.00	22.62	

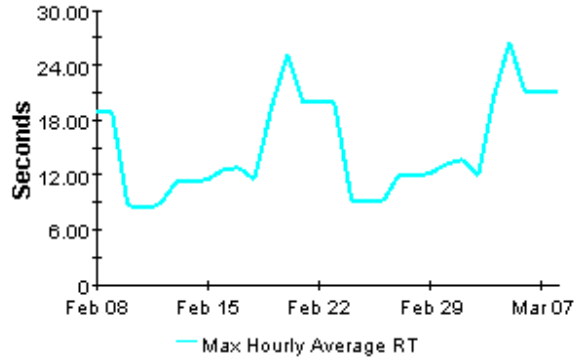
**Service Level Violation
HTTP**



**Availability
HTTP**

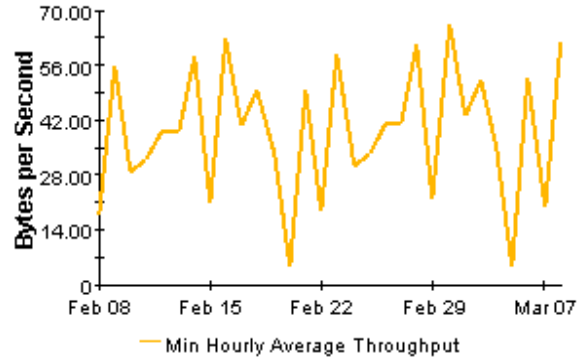


**Response Time
HTTP**



Response time displayed is the maximum hourly average per day.

**Throughput
HTTP**



Throughput displayed is the minimum hourly average per day.

Internet Services



Daily Services Summary

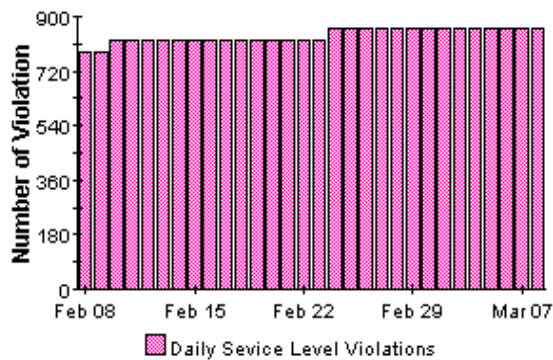
The Services Summary Report presents performance statistics for services associated with a given customer for the selected day. By selecting a particular service, the user can see its service level violations, availability, response time and throughput over the last 30 days.

Customer	Day
ACME	March 8, 2004
Internet Services, Ltd.	March 7, 2004
Web Monitoring Corp.	March 6, 2004
XYZ, Incorporated	March 5, 2004

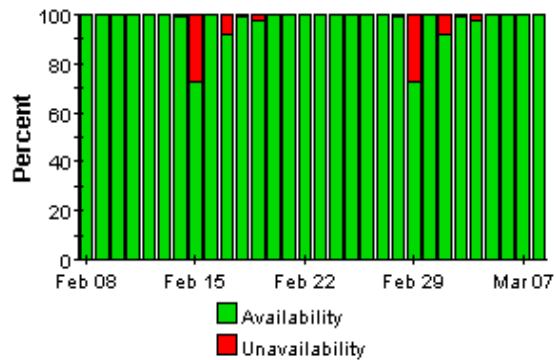
Service Performance Sorted by number of service level violations

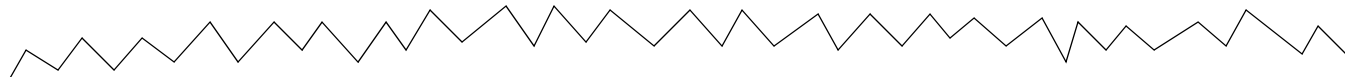
Service	Service Level Violations	Availability	Response Time	Throughput
ACME HTTP1	864	99.88	18.67	4.51
ACME DHCP	78	72.92	0.73	0.97
ACME DNS	9	100.00	0.95	
WINSAT5 FTP	4	100.00	1.81	89.07
ACME HTTP2	2	99.31	18.06	4.72
ACME ODBC	0	0.00		
Smith DHCP	0	26.39	1.08	0.52
ACME ICMP	0	100.00	0.03	0.34

Service Level Violation
ACME HTTP1

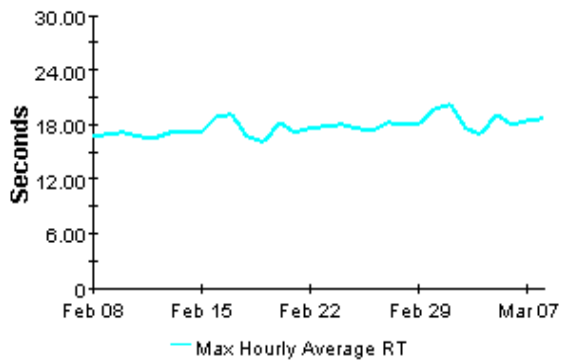


Availability
ACME HTTP1



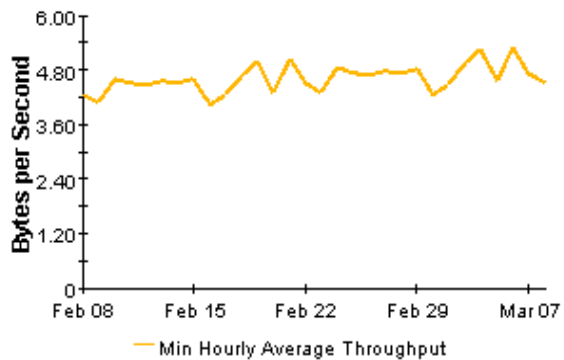


**Response Time
ACME HTTP1**



Response time displayed is the maximum hourly average per day.

**Throughput
ACME HTTP1**



Throughput displayed is the minimum hourly average per day.

7 Detail Reports

The reports in the detail folder allow you to find out which IS tests are experiencing problems and whether or not the problem is typical or unusual compared to past performance. The detail folder contains the following probe type and service reports:

- 30 Day Probe Type Detail
- Daily Probe Type Detail
- Monthly Probe Type Detail
- 30 Day Service Detail
- Daily Service Detail
- Monthly Service Detail

All detail reports begin with a list of customers. Select a customer to display a list of services/probe types, sorted by violations highest to lowest, with data for the following statistics aggregated over all IS tests:

- Service level violations
- Availability
- Response time
- Throughput

By selecting a particular service or probe type, you can display:

- The associated probe system/target combinations, sorted by violations highest to lowest
- Performance data for each combination

The graphs below the second table are linked to the item selected in the second table. These graphs provide test-level trending analysis, allowing you see whether violations, availability, response time, and throughput are improving or getting worse.



All IS tests calculate response time, but not all IS tests calculate throughput. If `Null` appears in a table or graph showing throughput, none of the IS tests that target this particular service calculates throughput.

See below for samples of all six reports in the detail folder.

Internet Services



30 Day Probe Type Detail

The 30 Day Probe Type Detail Report presents performance statistics, calculated over the previous 30 days, for probe types associated with a given customer. By selecting a particular probe type, the user can see performance statistics of the probe and target combinations for tests of the selected type. By selecting a probe and target combination, the daily service level violations, availability, response time and throughput for the selected test will be displayed for the preceding 30 days.

Customer

ACME

Internet Services, Ltd.

Web Monitoring Corp.

XYZ, Incorporated

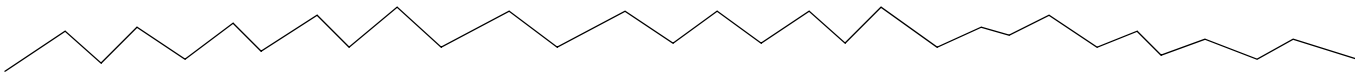
Probe Type Performance Sorted by number of service level violations

Probe Type	Service Level Violations	Availability	Response Time	Throughput
HTTP	25,380	97.3	17.70	4.52
DHCP	2,276	49.5	0.72	0.93
DNS	188	99.9	0.49	
FTP	66	99.9	1.54	114.00
ODBC	0	0.0		
ICMP	0	99.9	0.03	0.29

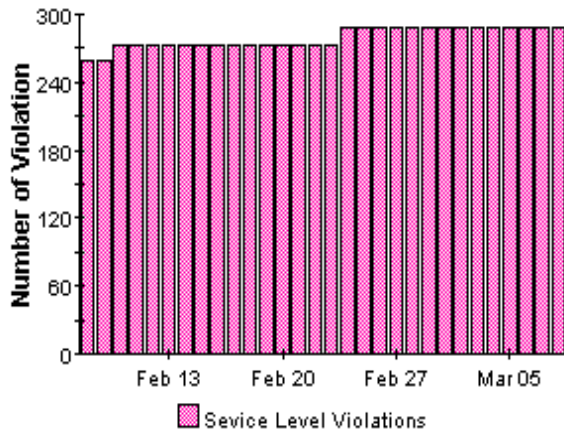
Probe System / Target Performance Breakdown Sorted by number of service level violations

Probe System	Short Target Name	Service Level Violations	Availability	Response Time	Throughput
winsat5.esr.hp.com	www.hp.com/	8,382	97.0	16.50	4.98
winsat5.esr.hp.com	www.msn.com/	8,382	97.2	24.45	3.84
winsat5.esr.hp.com	athp.hp.com/	8,380	97.6	14.03	4.73
winsat5.esr.hp.com	www.yahoo.com/	233	97.2	18.04	4.20
winsat5	athp.hp.com/	2	100.0	10.76	5.53
winsat5	www.yahoo.com/	0	100.0	5.82	12.37

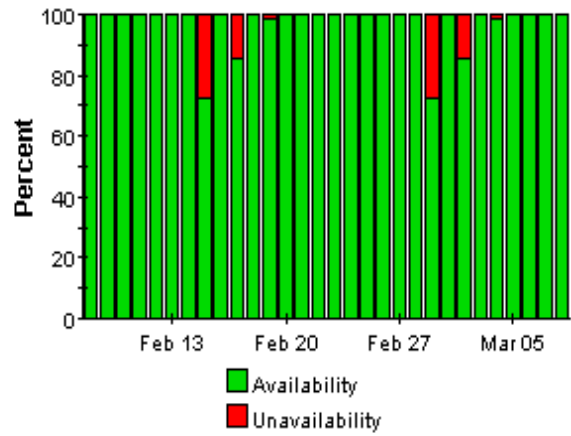




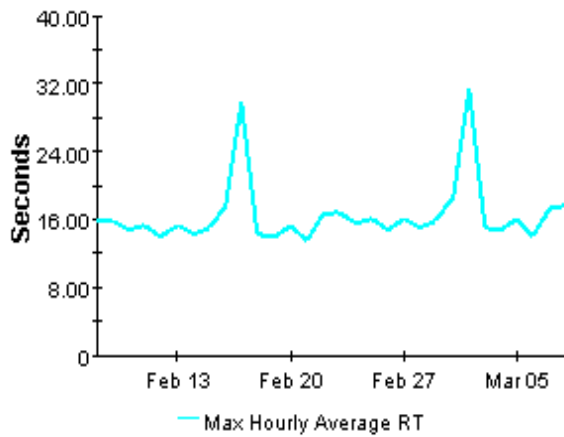
Service Level Violation



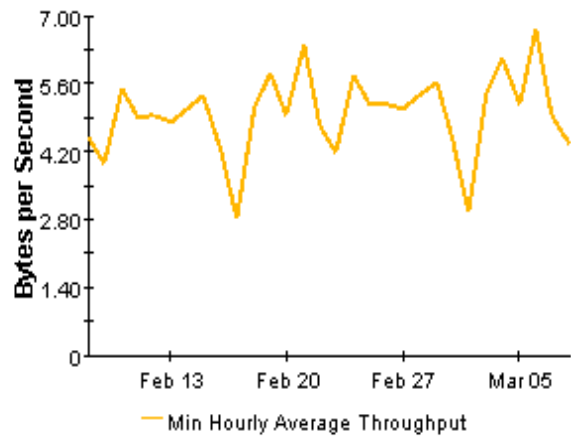
Availability



Response Time



Throughput



Response time displayed is the maximum hourly average per day.

Throughput displayed is the minimum hourly average per day.

Internet Services



Daily Probe Type Detail

The Probe Type Detail Report presents performance statistics for probe types associated with a given customer for the selected day. By selecting a particular probe type, the user can see performance statistics of the probe and target combinations for tests of the selected type. By selecting a probe and target combination, the service level violations, availability, response time and throughput for the selected test will be displayed for the preceding 30 days.

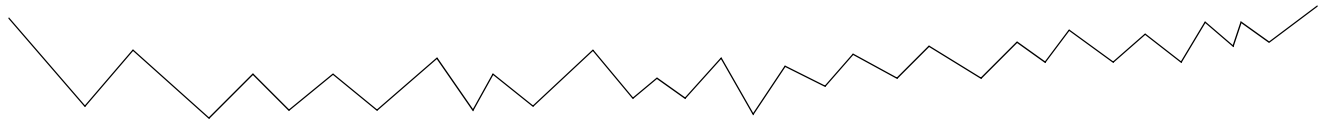
Customer	Day
ACME	March 8, 2004
Internet Services, Ltd.	March 7, 2004
Web Monitoring Corp.	March 6, 2004
XYZ, Incorporated	March 5, 2004

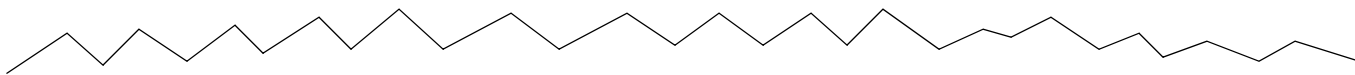
Probe Type Performance Sorted by number of service level violations

Probe Type	Service Level Violations	Availability	Response Time	Throughput
HTTP	866	99.7	18.52	4.56
DHCP	78	49.7	0.70	1.02
DNS	9	100.0	0.95	
FTP	4	100.0	1.81	89.07
ODBC	0	0.0		
ICMP	0	100.0	0.03	0.34

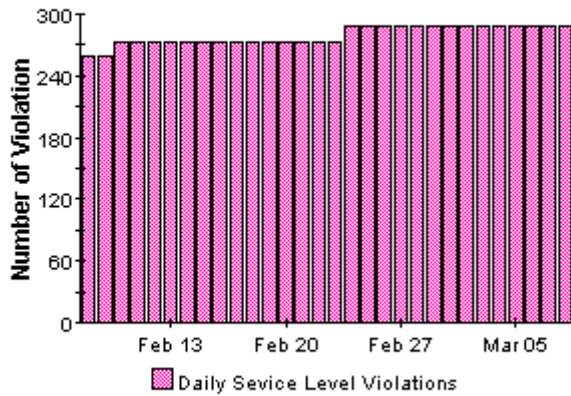
Probe System / Target Performance Breakdown Sorted by number of service level violations

Probe System	Short Target Name	Service Level Violations	Availability	Response Time	Throughput
winsat5.esr.hp.com	www.msn.com/	288	99.7	24.43	4.21
winsat5.esr.hp.com	www.hp.com/	288	100.0	17.58	4.37
winsat5.esr.hp.com	athp.hp.com/	288	100.0	16.08	4.90
winsat5.esr.hp.com	www.yahoo.com/	2	99.3	18.06	4.72

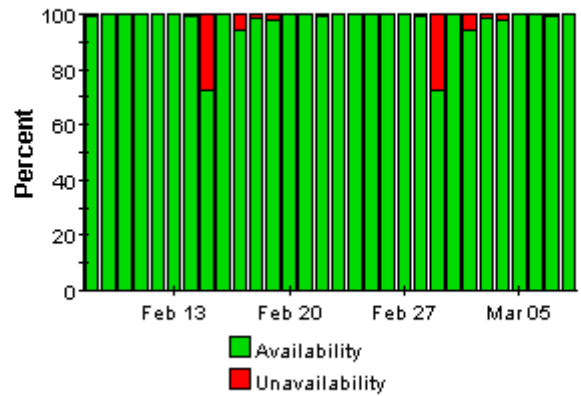




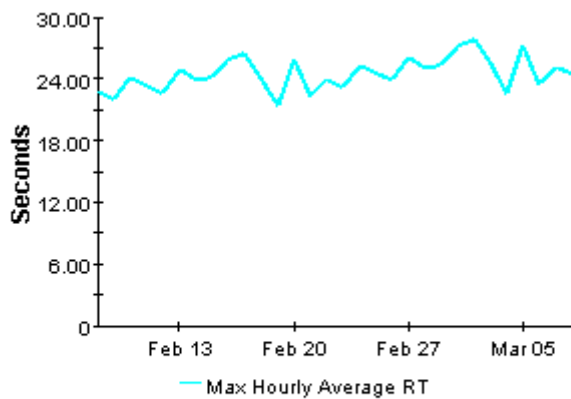
Service Level Violation



Availability

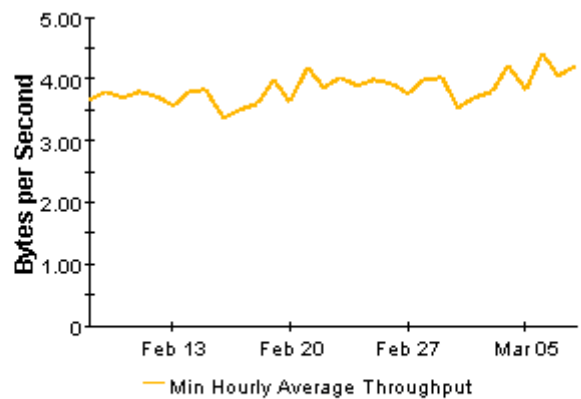


Response Time



Response time displayed is the maximum hourly average per day.

Throughput



Throughput displayed is the minimum hourly average per day.

Internet Services



Monthly Probe Type Detail

The Probe Type Detail Report presents performance statistics for probe types associated with a given customer for the selected month. By selecting a particular probe type, the user can see performance statistics of the probe and target combinations for tests of the selected type. By selecting a probe and target combination, the monthly service level violations, availability, response time and throughput for the selected test will be displayed for the preceding 12 months. Data for the current month covers results from the first of the month through yesterday.

Customer	Month
ACME	March, 2004
Internet Services, Ltd.	February, 2004
Web Monitoring Corp.	January, 2004
XYZ, Incorporated	December, 2003

Probe Type Performance Sorted by number of service level violations

Probe Type	Service Level Violations	Availability	Response Time	Throughput
HTTP	6,948	98.5	18.70	4.63
DHCP	636	49.2	0.74	0.93
DNS	58	100.0	0.55	
FTP	23	100.0	1.66	124.87
ODBC	0	0.0		
ICMP	0	100.0	0.03	0.29

Probe System / Target Performance Breakdown Sorted by number of service level violations

Probe System	Short Target Name	Service Level Violations	Availability	Response Time	Throughput
winsat5.esr.hp.com	www.hp.com/	2,304	97.9	18.09	5.02
winsat5.esr.hp.com	www.msn.com/	2,304	98.6	25.38	3.96
winsat5.esr.hp.com	athp.hp.com/	2,303	99.1	14.73	4.84
winsat5.esr.hp.com	www.yahoo.com/	36	98.4	19.52	4.24
winsat5	athp.hp.com/	1	100.0	11.03	5.67
winsat5	www.yahoo.com/	0	100.0	5.97	12.69

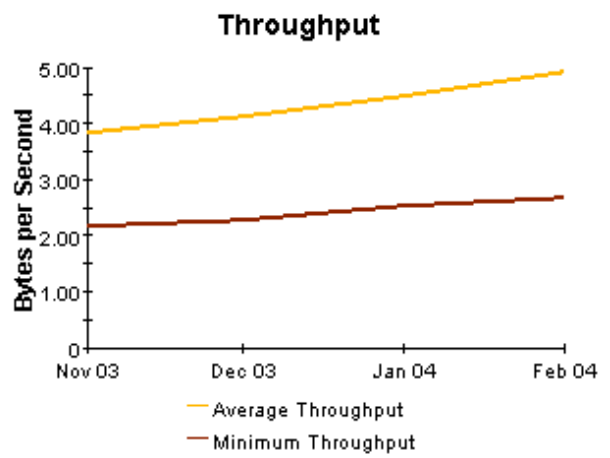
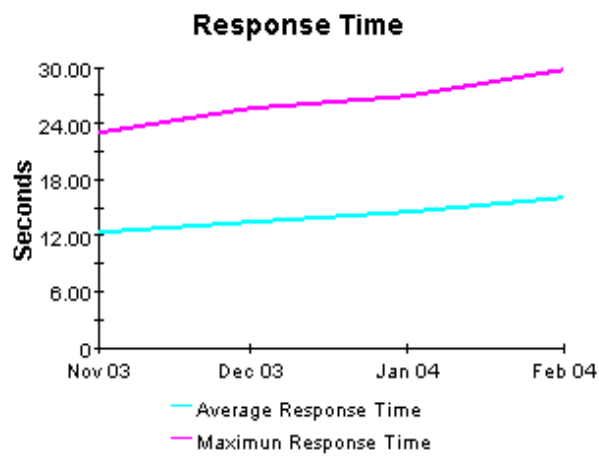
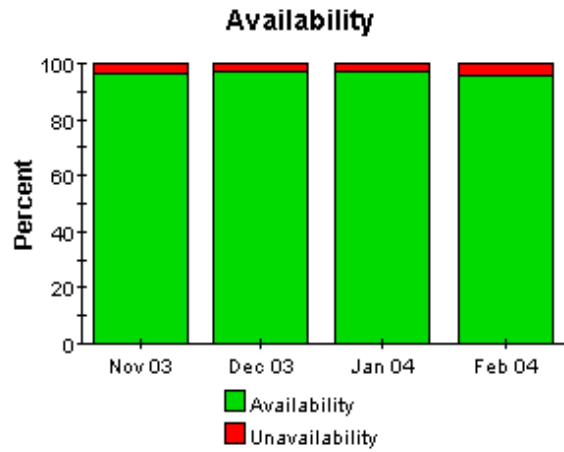
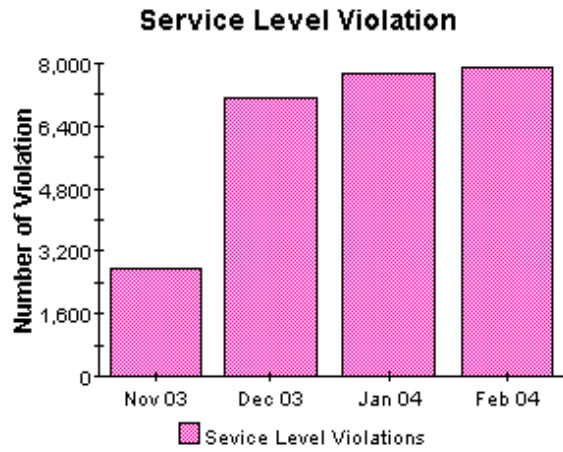
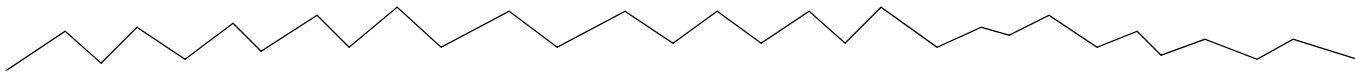
Service

ACME HTTP1

Full Target Name

www.hp.com/





Response times displayed are the monthly average and maximum of the daily maximum hourly average.

Throughput displayed are the monthly average and minimum of the daily minimum hourly averages.

Internet Services



30 Day Services Detail

The 30 Day Services Detail Report presents performance statistics, calculated over the previous 30 days, for services associated with a given customer. By selecting a particular service, the user can see performance statistics for the probe and target combinations that are part of the selected service. By selecting a probe and target combination, the daily service level violations, availability, response time and throughput for the selected test will be displayed for the preceding 30 days.

Customer

ACME

Internet Services, Ltd.
Web Monitoring Corp.
XYZ, Incorporated

Service Performance

Sorted by number of service level violations

Service	Service Level Violations	Availability	Response Time	Throughput
ACME HTTP1	25,147	97.3	17.72	4.61
ACME DHCP	2,276	72.8	0.77	0.85
ACME HTTP2	233	97.2	18.04	4.20
ACME DNS	188	99.9	0.49	
WINSAT5 FTP	66	99.9	1.54	114.00
ACME ODBC	0	0.0		

Probe System / Target Performance Breakdown

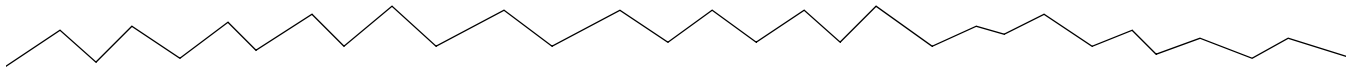
Sorted by number of service level violations

Probe System	Short Target Name	Service Level Violations	Availability	Response Time	Throughput
winsat5.esr.hp.com	www.hp.com/	8,382	97.0	16.50	4.98
winsat5.esr.hp.com	www.msn.com/	8,382	97.2	24.45	3.84
winsat5.esr.hp.com	athp.hp.com/	8,380	97.6	14.03	4.73
winsat5	athp.hp.com/	2	100.0	10.76	5.53

Full Target Name

www.hp.com/

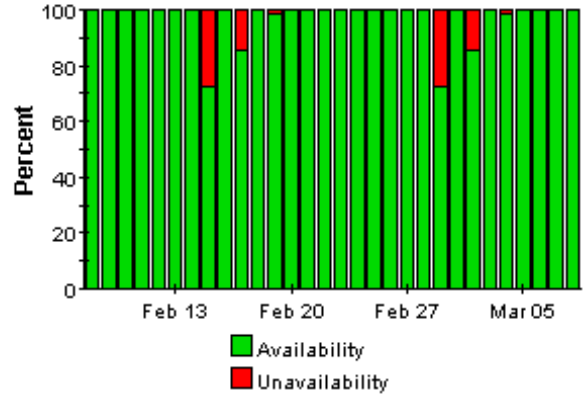




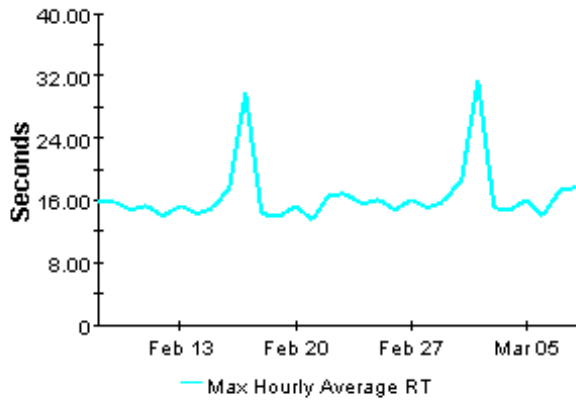
Service Level Violation



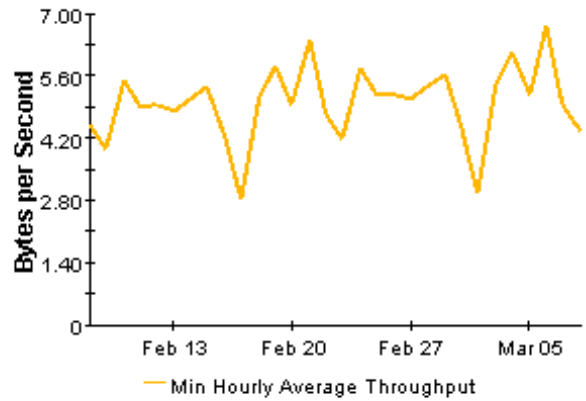
Availability



Response Time



Throughput



Response time displayed is the maximum hourly average per day.

Throughput displayed is the minimum hourly average per day.

Internet Services



Daily Services Detail

The Services Detail Report presents performance statistics for services associated with a given customer for the selected day. By selecting a particular service, the user can see performance statistics for the probe and target combinations that are part of the selected service. By selecting a probe and target combination, the service level violations, availability, response time and throughput for the selected test will be displayed for the last 30 days.

Customer	Day
ACME	March 8, 2004
Internet Services, Ltd.	March 7, 2004
Web Monitoring Corp.	March 6, 2004
XYZ, Incorporated	March 5, 2004

Service Performance Sorted by number of service level violations

Service	Service Level Violations	Availability	Response Time	Throughput
ACME HTTP1	864	99.9	18.67	4.51
ACME DHCP	78	72.9	0.73	0.97
ACME DNS	9	100.0	0.95	
WINSAT5 FTP	4	100.0	1.81	89.07
ACME HTTP2	2	99.3	18.06	4.72
ACME ODBC	0	0.0		

Probe System / Target Performance Breakdown Sorted by number of service level violations

Probe System	Short Target Name	Service Level Violations	Availability	Response Time	Throughput
winsat5.esr.hp.com	www.msn.com/	288	99.7	24.43	4.21
winsat5.esr.hp.com	www.hp.com/	288	100.0	17.58	4.37
winsat5.esr.hp.com	athp.hp.com/	288	100.0	16.08	4.90

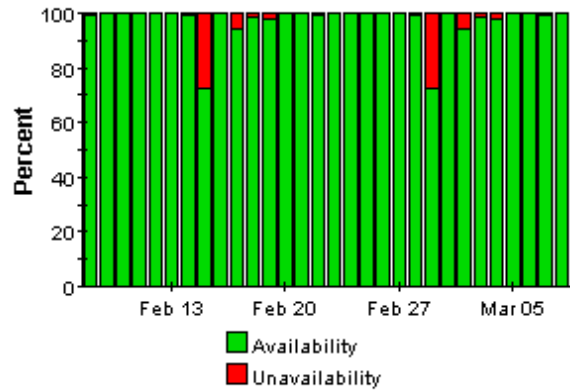




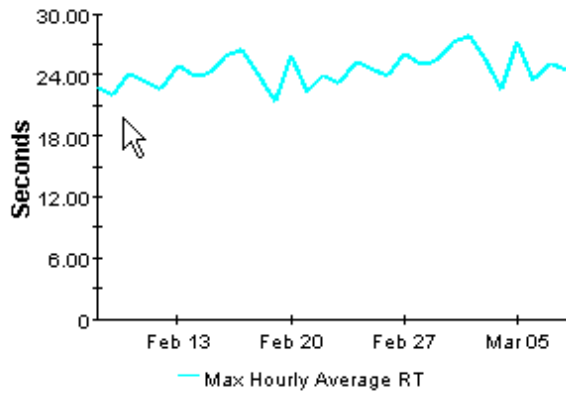
Service Level Violation



Availability

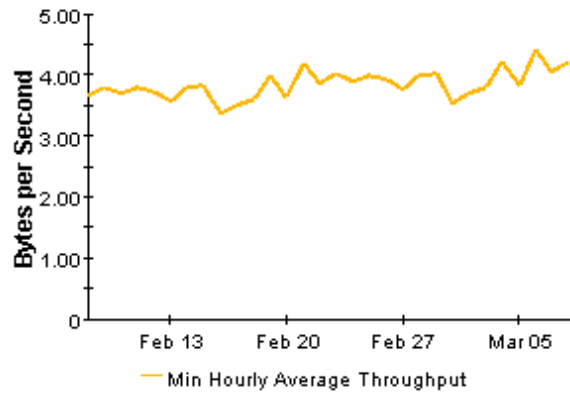


Response Time



Response time displayed is the maximum hourly average per day.

Throughput



Throughput displayed is the minimum hourly average per day.

Internet Services



Monthly Services Detail

The Services Detail Report presents performance statistics for services associated with a given customer for the selected month. By selecting a particular service, the user can see performance statistics for the probe and target combinations that are part of the selected service. By selecting a probe and target combination, the monthly service level violations, availability, response time and throughput for the selected test will be displayed for the preceding 12 months. Data for the current month covers results from the first of the month through yesterday.

Customer	Month
ACME	March, 2004
Internet Services, Ltd.	February, 2004
Web Monitoring Corp.	January, 2004
XYZ, Incorporated	December, 2003

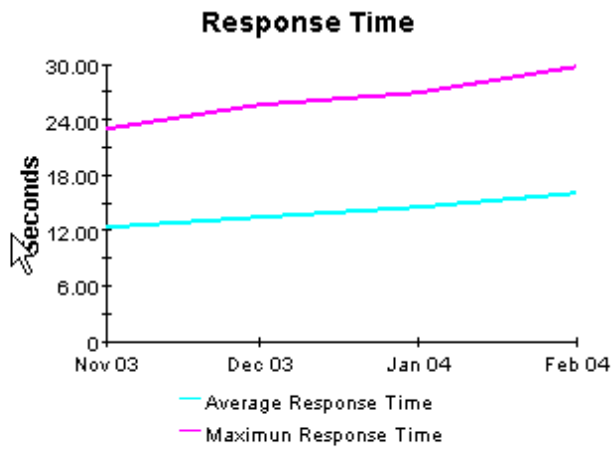
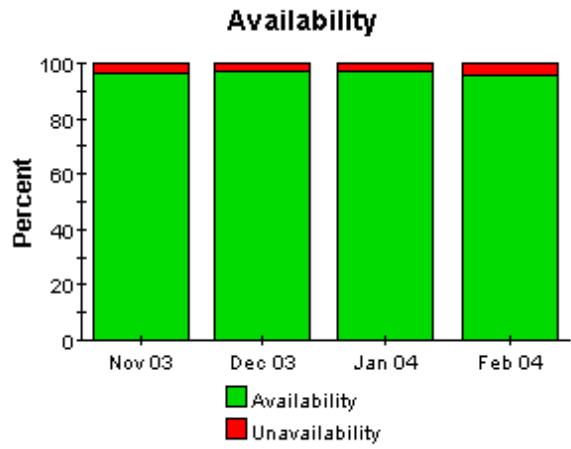
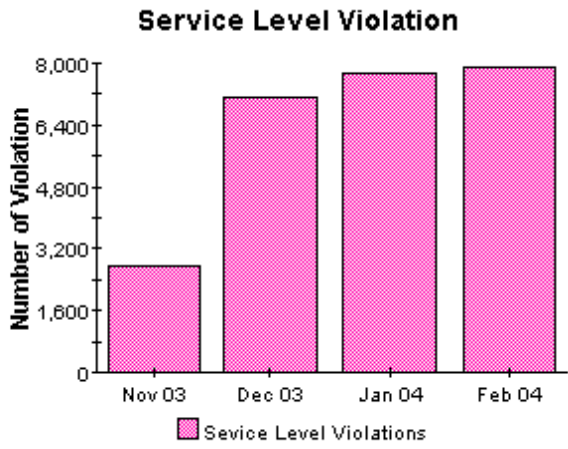
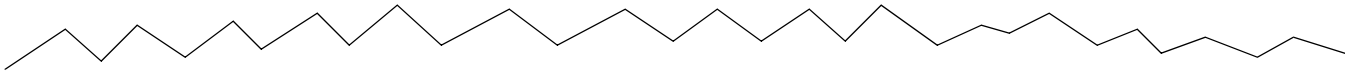
Service Performance Sorted by number of service level violations

Service	Service Level Violations	Availability	Response Time	Throughput
ACME HTTP1	6,912	98.5	18.56	4.75
ACME DHCP	636	72.4	0.79	0.86
ACME DNS	58	100.0	0.55	
ACME HTTP2	36	98.4	19.52	4.24
WINSAT5 FTP	23	100.0	1.66	124.87
ACME ODBC	0	0.0		

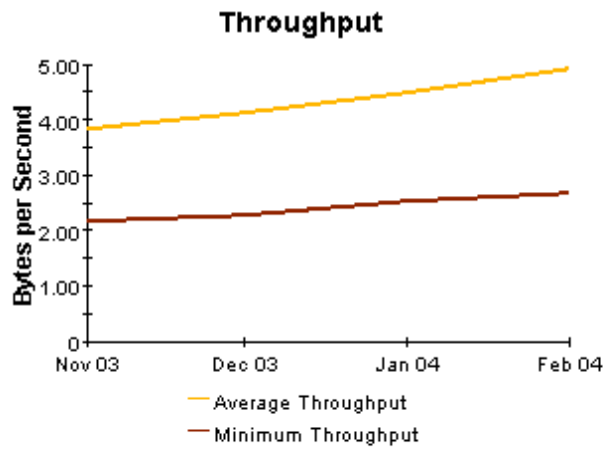
Probe System / Target Performance Breakdown Sorted by number of service level violations

Probe System	Short Target Name	Service Level Violations	Availability	Response Time	Throughput
winsat5.esr.hp.com	www.hp.com/	2,304	97.9	18.09	5.02
winsat5.esr.hp.com	www.msn.com/	2,304	98.6	25.38	3.96
winsat5.esr.hp.com	athp.hp.com/	2,303	99.1	14.73	4.84
winsat5	athp.hp.com/	1	100.0	11.03	5.67





Response times displayed are the monthly average and maximum of the daily maximum hourly average.



Throughput displayed are the monthly average and minimum of the daily minimum hourly averages.

8 Forecast Reports

The two reports in the forecast folder identify the services and probe types that are expected to see their performance deteriorating at the fastest rates in the weeks and months ahead. Use the forecast reports to spot:

- Probe types/services with the greatest rate of increase in service level violations
- Probe types/services with the greatest rate of increase in response time
- Probe types/services with the greatest rate of decrease in throughput

Forecast reports contain tables and charts. The tables perform the following functions:

- Calculate the 90-day forecast
- Calculate the baseline average
- Sort items by the rate of growth

The graphs perform the following functions:

- Display 30-day, 60-day, and 90-day forecasts (forecast tab)
- Compare the baseline average to 30/60/90 forecasts (forecast tab)
- Show the data in the baseline that was used to generate the forecast (history tab)

See below for samples of the Probe Type Forecast and the Services Forecast.

Internet Services



Probe Type Forecast

The Probe Type Forecast Report predicts future performance statistics for probe types associated with a given customer based on the previous 30 days of data. Each list of probe types is sorted by greatest rate of projected increase (decrease for throughput). By selecting a particular probe type, the user can see the baseline average and 30, 60 and 90 day forecast of the metric, on the Forecast tab and the data used to calculate the forecast on the History tab.

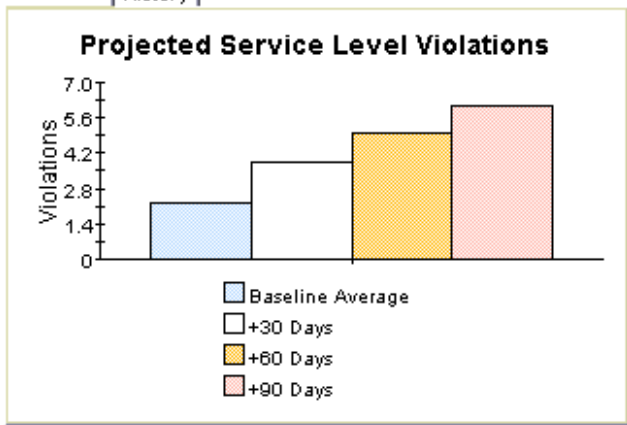
Customer

ACME
 Internet Services, Ltd.
 Web Monitoring Corp.

Service Level Violations

Probe Type	Baseline Average	90 Day Forecast
FTP	2.20	6.08
DNS	6.27	14.63
DHCP	75.88	110.64
HTTP	845.98	1,128.10
ICMP	0.00	0.00
ODBC	0.00	0.00

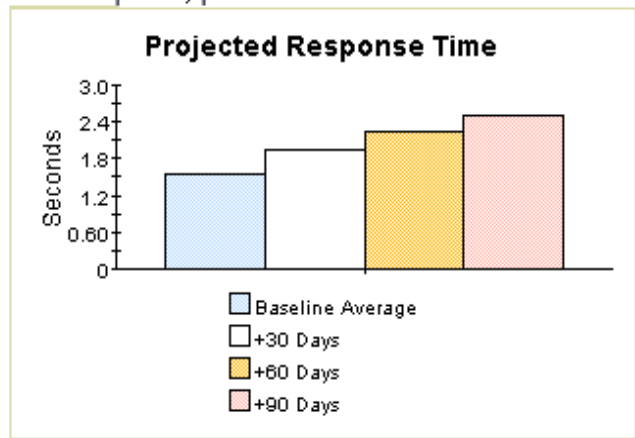
Forecast | History



Response Time

Probe Type	Baseline Average	90 Day Forecast
FTP	1.54	2.52
DNS	0.49	0.78
HTTP	17.70	25.24
DHCP	0.72	0.94
ODBC		
ICMP	0.03	0.02

Forecast | History

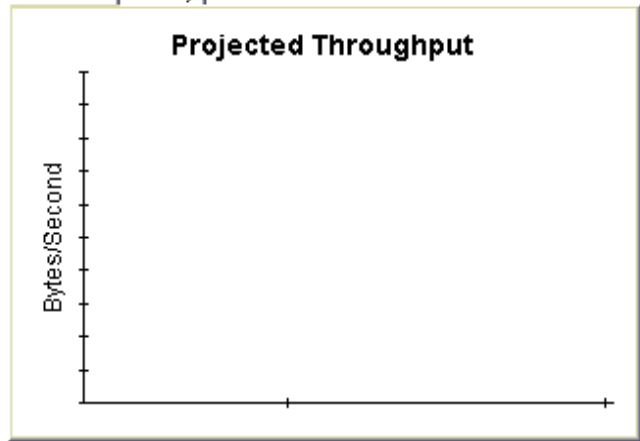




Throughput

Probe Type	Baseline Average	90 Day Forecast
DNS		
ODBC		
DHCP	0.93	1.16
HTTP	4.52	6.13
ICMP	0.29	0.50
FTP	114.00	207.58

Forecast | History



Internet Services



Services Forecast

The Services Forecast Report predicts future performance statistics for services associated with a given customer based on the previous 30 days of data. Each list of services is sorted by greatest rate of projected increase (decrease for throughput). By selecting a particular service, the user can see the baseline average and 30, 60 and 90 day forecast of the metric, on the Forecast tab and the data used to calculate the forecast on the History tab.

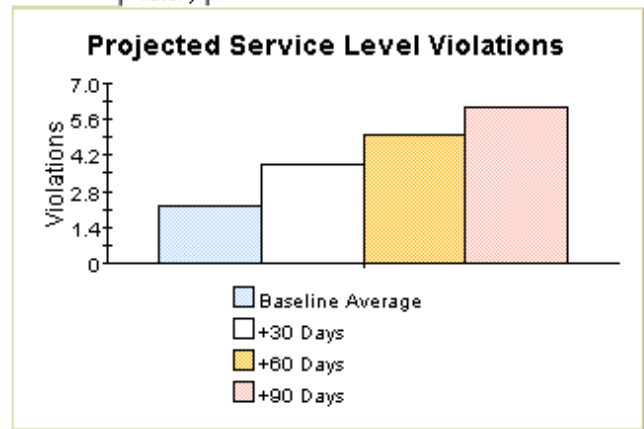
Customer

ACME
 Internet Services, Ltd.
 Web Monitoring Corp.

Service Level Violations

Service	Baseline Average	90 Day Forecast
WINSAT5 FTP	2.20	6.08
ACME DNS	6.27	14.63
ACME HTTP2	7.76	11.48
ACME DHCP	75.88	110.64
ACME HTTP1	838.22	1,116.62
ACME ICMP	0.00	0.00
ACME ODBC	0.00	0.00
Smith DHCP	0.00	0.00

Forecast | History



Response Time

Service	Baseline Average	90 Day Forecast
WINSAT5 FTP	1.54	2.52
ACME DNS	0.49	0.78
ACME HTTP2	18.04	28.43
Smith DHCP	0.95	1.47
ACME HTTP1	17.72	24.25
ACME DHCP	0.77	1.02
ACME ODBC		
ACME ICMP	0.03	0.02

Forecast | History

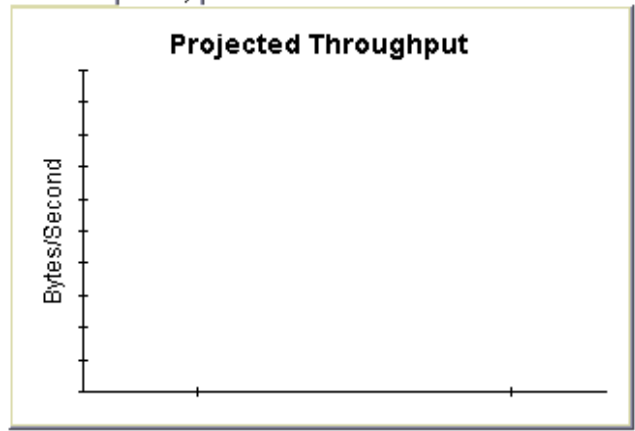




Throughput

Service	Baseline Average	90 Day Forecast
ACME DNS		
ACME ODBC		
Smith DHCP	0.57	0.63
ACME HTTP2	4.20	5.38
ACME DHCP	0.85	1.09
ACME HTTP1	4.61	6.40
ACME ICMP	0.29	0.50
WINSAT5 FTP	114.00	207.58

Forecast | History



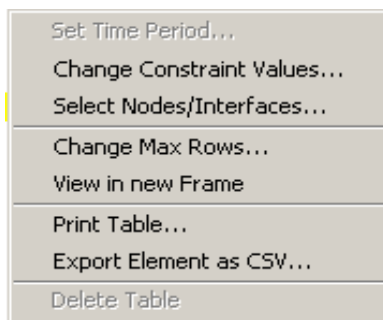
A View Options for Tables and Graphs

Any table or graph can be viewed in several ways. While 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.

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.

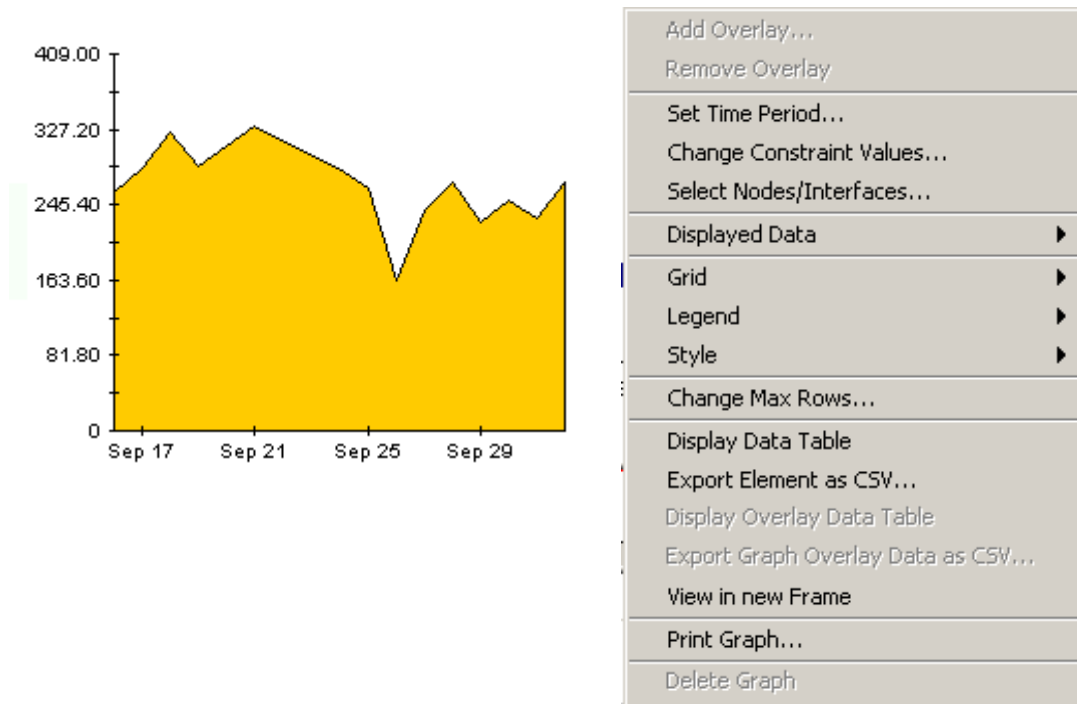
Change Max Rows increases or decreases the number of rows in a table. The default is 50. If you expand the default, the table may take more time to open. If you are trending a large network, using the default ensures that the table opens as quickly as possible.

View in new Frame opens the table in a Table Viewer window, shown below. If necessary, make the data in the table more legible by resizing the window.

Polled IP QoS Statistics Data - Input Over Previous 6 Hours					
Direction	IpPrecedence	Switched Bytes	Switched Pkts	Time Period	
Input	0	105,688	675	Tue Oct 29 07:00 AM	
Input	1	0	0	Tue Oct 29 07:00 AM	
Input	2	0	0	Tue Oct 29 07:00 AM	
Input	3	0	0	Tue Oct 29 07:00 AM	
Input	4	0	0	Tue Oct 29 07:00 AM	
Input	5	0	0	Tue Oct 29 07:00 AM	
Input	6	600	5	Tue Oct 29 07:00 AM	
Input	7	0	0	Tue Oct 29 07:00 AM	
Input	0	98,334	638	Tue Oct 29 06:45 AM	
Input	1	0	0	Tue Oct 29 06:45 AM	
Input	2	0	0	Tue Oct 29 06:45 AM	

Options for Graphs

Right-clicking a graph, or clicking the Edit Graph icon if you are using the Web Access Server, opens the following list of view options.

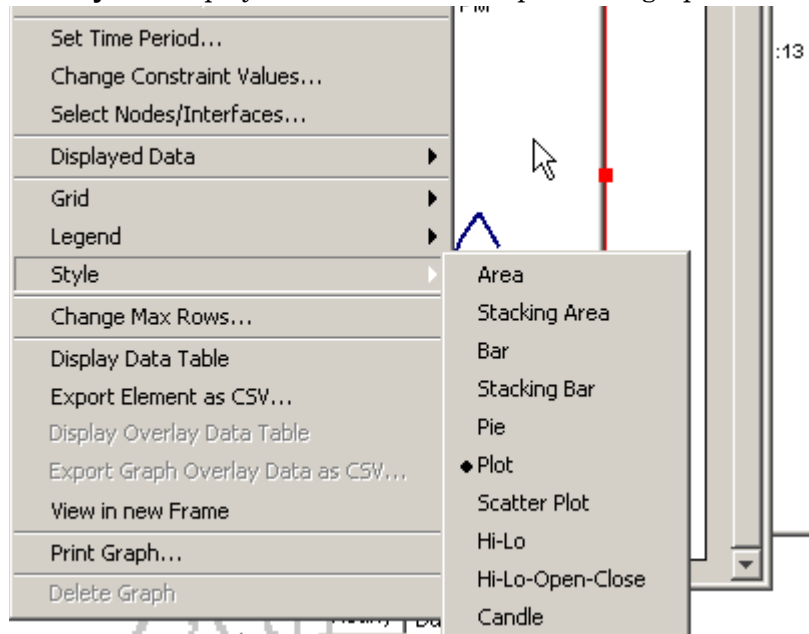


The following table provides details about each option.

Option	Function
Set Time Period	Same as the table option shown above.
Change Constraint Values	Same as the table option shown above.
Select Nodes/Interfaces	Same as the table option shown above.
Displayed Data	For every point on a graph, display data in a spreadsheet.
Grid	Add these to the graph: X axis grid lines Y axis grid lines X and Y axis grid lines
Legend	Delete or reposition the legend.
Style	See the illustrations below.
Change Max Rows...	Same as the table option shown above.
Display Data Table	See below.
Export Element as CSV...	Same as the table option shown above.
View in New Frame	Opens graph in a Graph Viewer window.
Print Graph	Same as the table option shown above.

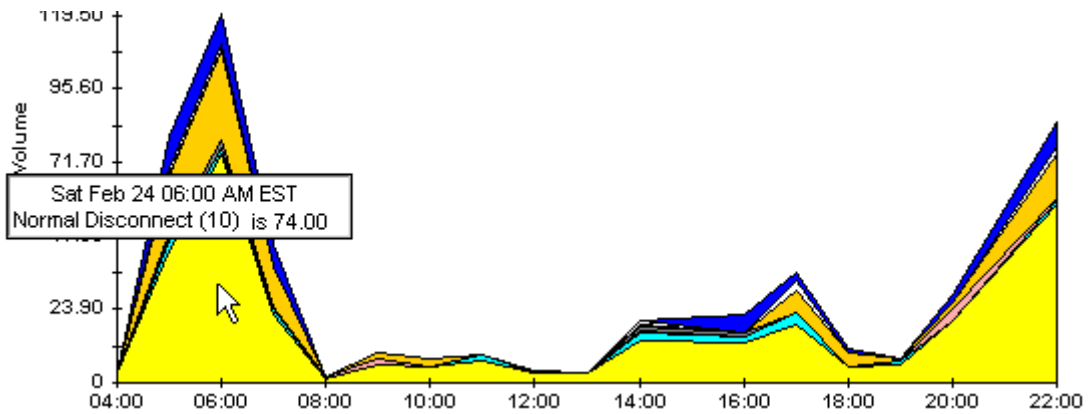
Style Options

Select **Style** to display a list of seven view options for graphs.



Style > Area

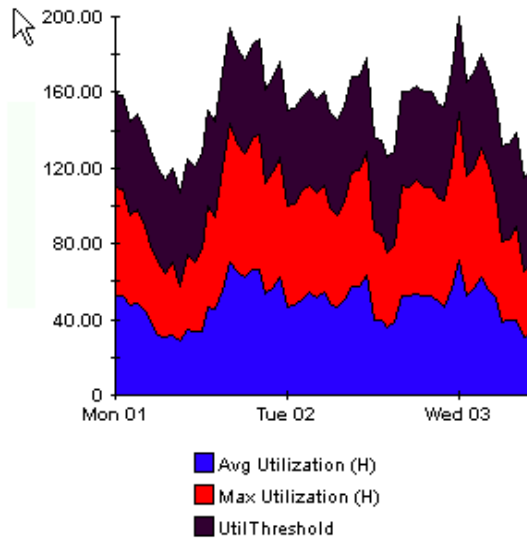
The plot or bar chart changes to an area graph. While relative values and total values are easy to view in this format, absolute values for smaller data types may be hard to see. Click anywhere within a band of color to display the exact value for that location



To shorten the time span of a graph, press SHIFT+ALT and use the left mouse button to highlight the time span you want to focus on. Release the mouse button to display the selected time span.

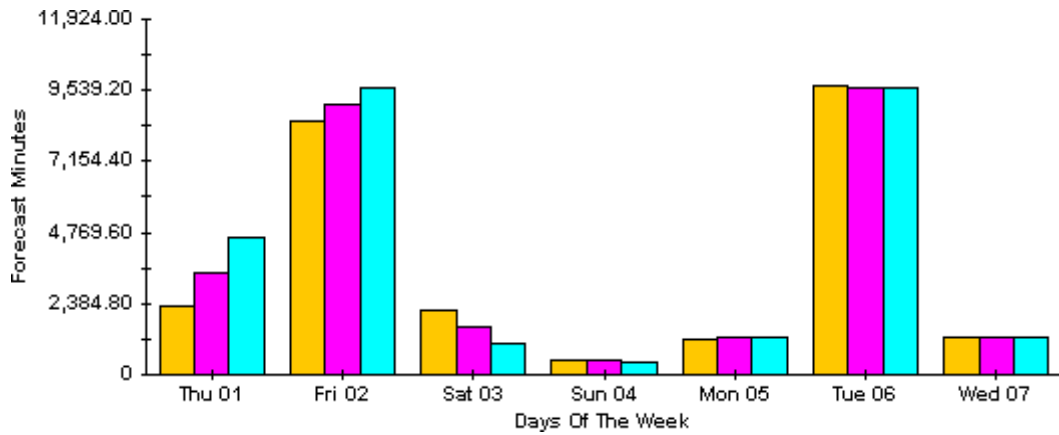
Style > Stacking Area

The area or plot graph changes to a stacking area graph. This view is suitable for displaying a small number of variables.



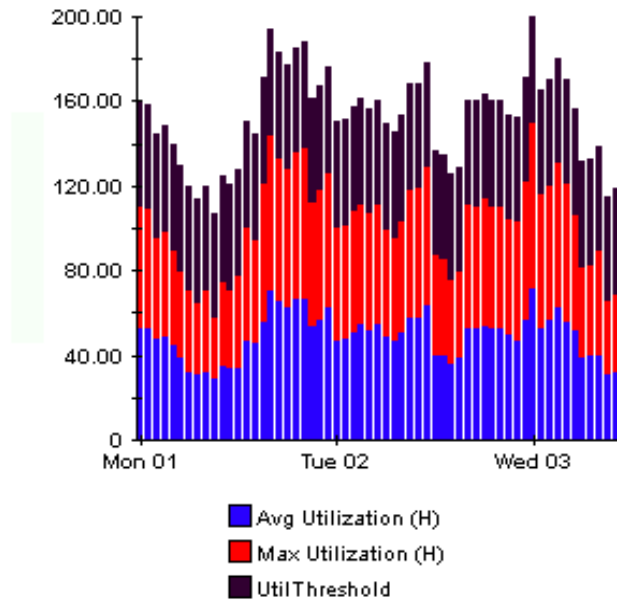
Style > Bar

The graph changes to a bar chart. This view is suitable for displaying relatively equal values for a small number of variables. There are three variables in the graph below.



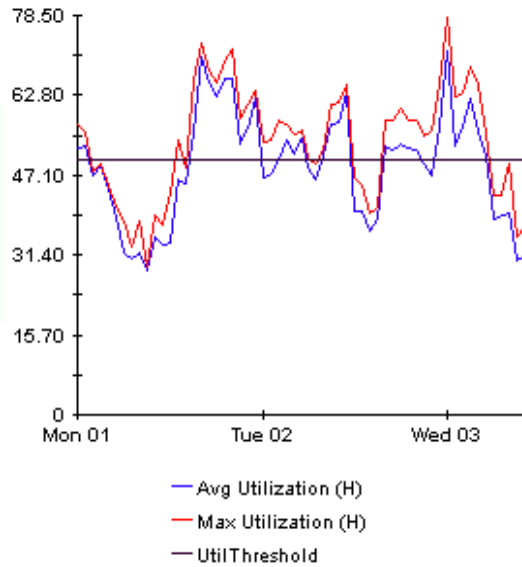
Style > Stacking Bar

The plot or area graph changes to a stacking bar chart. If you increase the width of the frame, the time scale becomes hourly. If you increase the height of the frame, the call volume shows in units of ten.



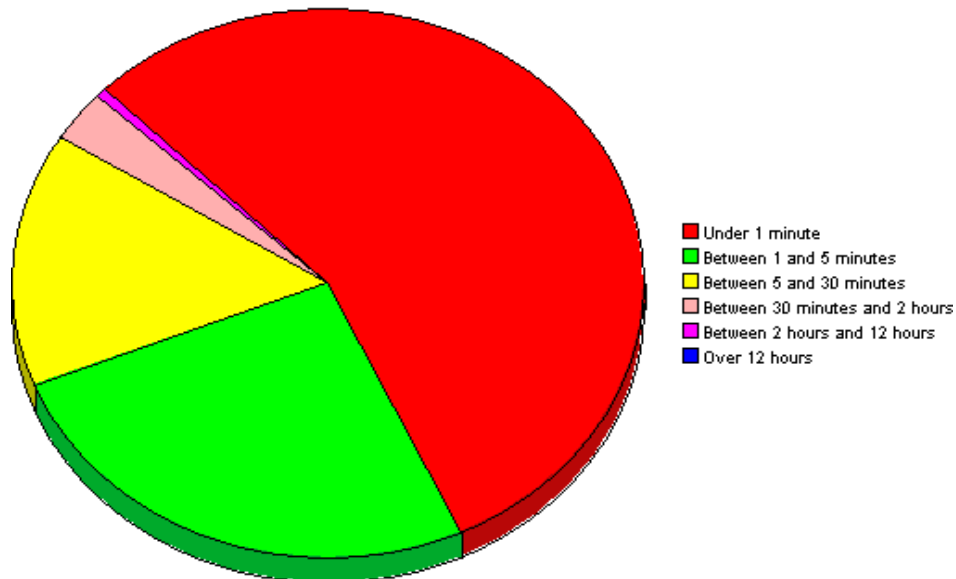
Style > Plot

Bands of color in an area graph change to lines. If you adjust the frame width, you can make the data points align with hour; if you adjust the frame height, you can turn call volume into whole numbers.



Style > Pie

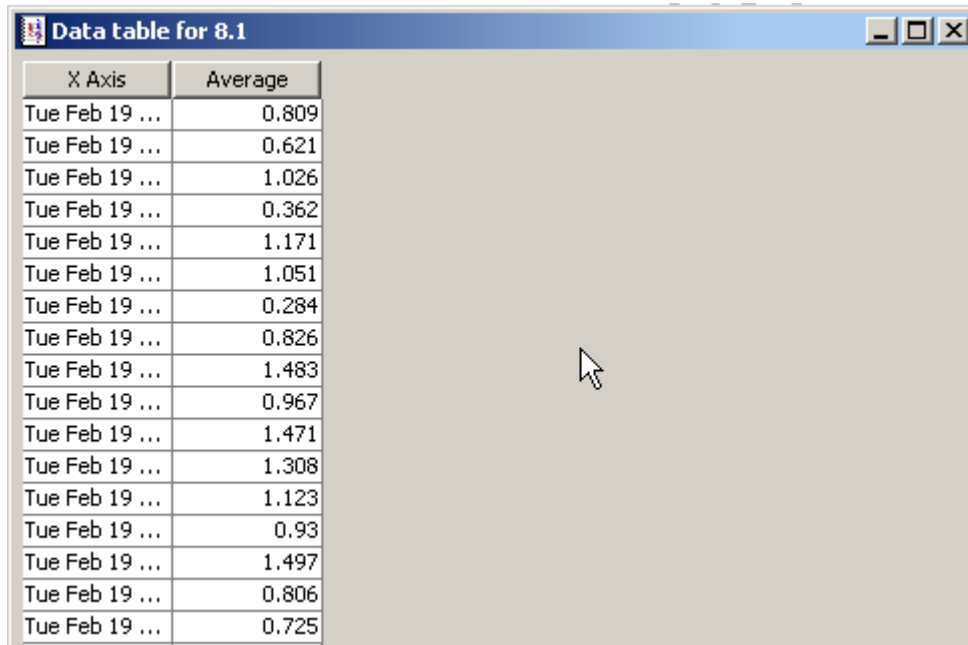
An area graph becomes a pie chart. Bands in an area graph convert to slices of a pie and the pie constitutes a 24-hour period. This view is helpful when a small number of data values are represented and you are looking at data for one day.



If you are looking at data for multiple days, you will see multiple pie graphs, one per day.

Display Data Table

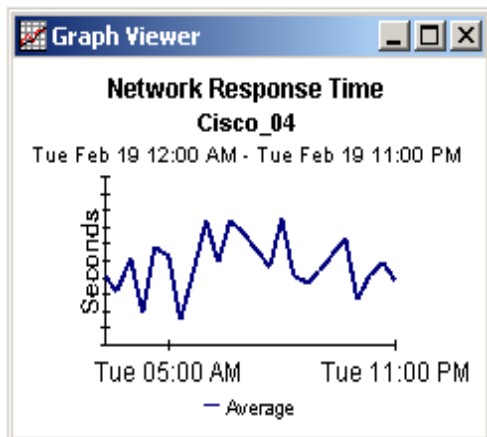
This option changes a graph into a spreadsheet.



X Axis	Average
Tue Feb 19 ...	0.809
Tue Feb 19 ...	0.621
Tue Feb 19 ...	1.026
Tue Feb 19 ...	0.362
Tue Feb 19 ...	1.171
Tue Feb 19 ...	1.051
Tue Feb 19 ...	0.284
Tue Feb 19 ...	0.826
Tue Feb 19 ...	1.483
Tue Feb 19 ...	0.967
Tue Feb 19 ...	1.471
Tue Feb 19 ...	1.308
Tue Feb 19 ...	1.123
Tue Feb 19 ...	0.93
Tue Feb 19 ...	1.497
Tue Feb 19 ...	0.806
Tue Feb 19 ...	0.725

View in New Frame

The graph opens in a Graph Viewer window. Improve legibility by resizing the window.



Index

A

Availability, 12

C

change max rows option, 69
collection_manager (command), 18
Common Property Tables, 20
 upgrading, 17
Customer, 12
customer-specific reports, 14
custom views of data or property tables, 18

D

Datapipe Manager, 19
defect fixes
 QXCR1000293040, 10
 QXCR1000347546, 10
 QXCR1000365069, 10
demo package, 14, 25
detail folder, 11
Display Data Table, 69
displayed data option, 69
distributed systems, 24
 central server configuration, 34
 defining IS collections, 24
 installation overview, 24

E

extracting packages from the distribution CD, 25

F

forecast folder, 11

G

grid options, 69
group_manager (command), 18
group filters, 14

H

hot spots folder, 11

I

Internet_Services_Daily.pro, 11
Internet_Services_DP.pro, 11
Internet_Services_Hourly.pro, 11
Internet_Services_Upgrade_to_21, 25
IS 6.00 Custom Probes API Guide, 14
IS and PI installed on the same server, 23
IS test, 12

L

launching reports from NNM, 13
legend options, 69
LIR Configuration, 10

N

Network Node Manager, 13

O

OVPI Timer, 26
 starting, 21
 stopping, 19

P

polling policies, 18
Probe system, 12
Probe type, 12
provisioning, 13

R

report parameters, 14
Response time, 12

S

Service, 12
Service (object model), 28
Service level violation, 13
style options for graphs, 69
summary folder, 11

T

Target, 13
thresholds, 13
Throughput, 13

U

upgrading Common Property Tables, 17, 25
Use Absolute Time, 67

V

version history, 10
view in new frame, 68

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