Database Report Pack

Software Version: 1.21

HP Performance Insight 5.41

User Guide

November 2009

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The following table indicates changes made to this document since October 2007.

Chapter	Changes
Chapter 1	(a) Added note that says the latest upgrade “patch” package is available via download only, it is not available on CD. (b) Fixes to text about the impact of OVPA polling frequency on tablespace metrics. (c) Updates to package version history at end of chapter.
Chapter 2	Version number updates.
Chapter 3	Version number updates.
Chapter 4	Minor edits.

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Contents

1 Overview

This chapter covers the following topics:

Introducing HP Performance Insight

Performance Insight 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)
- Supports CODA/OVPA agents
- Multi-company security model
- Data warehousing
- Near Real Time reporting
- Forecasting
- Extensive aggregation options (by hour, 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 OVO/Operations Manager

Many reporting solutions have been created for Performance Insight and new solutions are added every year. The newest solutions, released October 2007, are Business Process Insight and SiteScope Integration. For a complete list of reporting solutions organized by technology, see Appendix A, PI Report Packs.

Data Collection for the Database Report Pack

The only datapipe used by the Database Report Pack is the Database Oracle SPI Datapipe. The Database Oracle SPI Datapipe collects data from the Embedded Performance Agent, a sub-agent that ships with OVOW 7.2+ and OVOU 7.2+. The Database Oracle SPI Datapipe does not collect data from earlier versions of OVOW or OVOU.

The Database Oracle SPI Datapipe polls the EPC data store once every 45 minutes. Because changing the polling frequency could interfere with the polling conducted by OVPI for the System Resource Report Pack, we recommend that you do not change the polling frequency.

The following table provides a list of metrics polled by the Database Oracle SPI Datapipe.

Metric	Description	metricid	objectid	valueid	value
E201_InstUptime	Availability	201	Instance name	1	Up = 5 Down = 0
E212_InstSize	Instance size	212	Instance name	1	Megabytes allocated
E212_InstSize	Instance size	212	Instance name	2	Megabytes free
E210_TblSpcSize	Tablespace size	210	Table space name	1	Megabytes allocated
E210_TblSpcSize	Tablespace size	210	Table space name	2	Megabytes free
E215_SegmntSize	Segment size	215	Segment name	1	Megabytes allocated
E213_TblSpcIO	Tablespace I/O	213	Table space name	1	Physical reads+writes since last collection
E037_USERLOGONCNT	User logons	NA	NA	NA	Number of user logons
NAE044_COMMITRATE	Transactions	NA	NA	NA	Number of transactions

Future releases of the Database Report Pack will provide datapipes designed for:

- Sybase
- Informix
- MS SQL Server
- MS Access

The Database Reports

The reports in the Database Report Pack perform a ranking function, allowing you to compare database instances, spot various kinds of problems before they become serious, and anticipate capacity issues. Reports provide easy access to the following information:

- Dynamic space usage over the previous week
- Daily fluctuations in instance-size-free vs. instance-size-used
- Logon activity for the last few hours, per instance
- Availability for the last few hours, per instance
- Number of transactions for the last few hours, per instance
- Details about each customer (uptime, downtime, instance size, logons)
- Details about each location (uptime, downtime, instance size, logons)
- Segment analysis (Oracle only)
- Tablespace analysis (Oracle only)

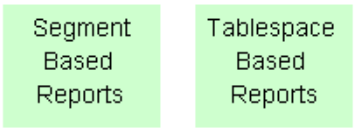
The Database SPI Report Pack offers the following features:

- Report linking
- Launch Point page
- Ad hoc selector reports
- Color-coded graphics in selection tables

Report linking means that navigating reports is more like navigating a website. You have numerous links to follow and investigating a specific area of interest is easier and more efficient. Use the links to move quickly between reports — there is no need to close the report you are viewing and then navigate folders. In addition to moving from one report to another report within the same report pack, you can link to reports in a different report pack. For example, there are links in Database reports that will open reports in the Device Resource Report Pack.

The Launch Point page groups reports into categories, providing a convenient overview of the package. The Database Report Pack includes two Launch Point pages, one for generic reports and one for Oracle reports. The generic Launch Point page offers the following choices:

The Oracle Launch Point page offers two choices:



The ad hoc selector option opens a report that lets you select specific devices and interfaces from a set of drop-down menus. Use the drop-down menus to pinpoint an item of interest. You will notice that the report displays quickly. Response time is good due to the limited number of database queries.

Categories and Reports

The following table provides a list of the reports in each category.

Category	**Reports**
Generic History	Instance Size Details Instance Size History
Generic NRT	Instance Availability NRT Instance Transactions NRT Instance Logons NRT
Customer and Location	Customer Summary Location Summary
Adhoc Selector and QuickView	Instance QuickView Ad hoc Instance Selector
Oracle Segment	Segment Size Details Segment Size History
Oracle Tablespace	Tablespace Size Used Top 20 Tablespace Size Allocated Top 20 Tablespace Size Percentage Used Top 20 Tablespace Size History Tablespace Physical I/O Top 20

Reports and Statistics

The following table outlines the statistics available in each report. For information about how each statistic is calculated, see Appendix B, Formulas.

Report	Statistics
Instance Size Details	Instance size allocated Average instance size used Average instance size free
Instance Size History	Instance size allocated Instance dynamic size usage Average instance size free
Instance Availability NRT	Total instance uptime Total instance downtime Total instance unknowntime
Instance Transactions NRT	Number of transaction Maximum transactions Minimum transactions Average transactions
Instance Logons NRT	Total logons Maximum logons Minimum logons Average logons
Customer Details	Total uptime Total downtime Total instance size free Total instance logons Average instance size percent used
Location Details	Total uptime Total downtime Total instance size free Total instance logons Average instance size percent used
Instance QuickView	Instance availability NRT details Instance size usage trend Average logon trend Average transaction trend
Adhoc Instance Selector	Average instance uptime Average instance logons Average instance transactions Average instance percentage size used

Report	Statistics
Segment Size Details	Total segment size allocated (MBs)
Segment Size History	Average size allocated Dynamic size allocation Segment size allocation details
Tablespace Size: Used Top 20	Average megabytes allocated Average megabytes used
Tablespace Size: Allocated Top 20	Average megabytes allocated Average megabytes used Average megabytes free
Tablespace Size: Percentage Used Top 20	Total space allocated Percent used Tablespace usage trend
Oracle Tablespace Size: History	Average size allocated Dynamic size usage Average size free
Oracle Tablespace: Physical I/O Top 20	Total physical I/O Maximum physical I/O Minimum physical I/O Average physical I/O

OVPA polls the following Tablespace metrics once a day:

- TblSpaceSizeAllocated
- TblSpaceSizeUsed
- TblSpaceSizeFree
- TblSpaceSizePercentUsed
- TblSpaceSizePercentFree
- TblSpacePhysicalIO

If the default polling interval is not changed, the values in daily report for total, average, maximum, and minimum will not be meaningful. To get meaningful data for total, average, maximum, and minimum, the OVPA polling frequency must be modified. For help with that step, refer to OVPA documentation.

Thresholds and Integration with OVO

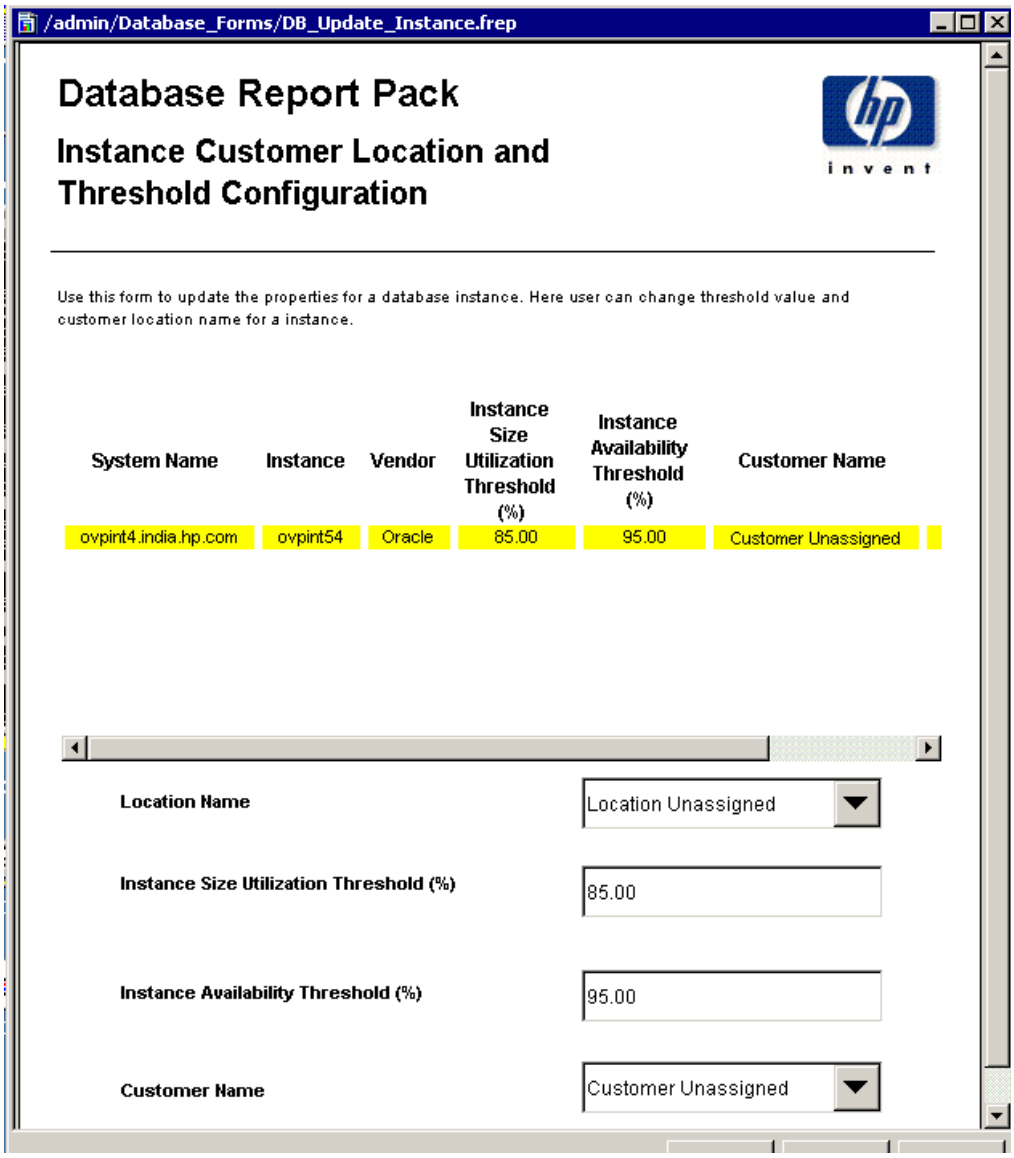
You can improve your ability to isolate faults and diagnose problems by installing the optional thresholds sub-package that comes with the Database Report Pack and configuring OVO as the destination for breach and clear traps generated by OVPI. If you install the optional thresholds sub-package, the Thresholds Module will monitor the OVPI database for breach conditions and respond to breaches by taking one of several possible actions, for example, sending breach and clear traps to OVO.

The thresholds sub-package provides the following defaults:

Instance Availability = 85%

Instance Size Used = 95%

To modify the defaults, open the Instance Customer Location and Threshold Configuration form. Enter new threshold values and save your changes.



Because Network Node Manager (NNM) is the default destination for traps, you must configure the Thresholds Module to send traps to OVO. Do this by opening the SNMP Trap Action Definition form. Fill in the necessary information and save your changes. In addition to using the SNMP Trap Action Definition form to configure a new destination for traps, your OVO administrator must prepare a trap template definition for OVO. The *Thresholds Module User Guide* contains the information needed to prepare the template.

Options for Customizing Reports

The contents of a report can be customized by editing parameters, by editing tables and graphs, and by modifying default thresholds. Since there are no customer-oriented reports or location-oriented reports in the Database Report Pack, you cannot use group filters to create customer-specific reports. For details about editing tables and graphs, see Appendix C, Editing Tables and Graphs.

Editing a parameter applies a constraint to the contents of the report, thereby eliminating the data you are not interested in seeing. The Database Reporting Report Pack supports the following parameters:

- Instance
- System
- Vendor
- Customer
- Location

If you are using Report Viewer, follow these steps to edit a parameter:

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

If you are viewing the report on the Web, follow these steps:

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

Sources for Additional Information

For information about the latest enhancements to this package, and any known issues, refer to the *Database Report Pack Release Notes*.

Manuals for the core product, Performance Insight, and manuals for the reporting solutions that run on Performance Insight can be downloaded from here:

http://ovweb.external.hp.com/lpe/doc_serv/

The user guides for PI are listed under **Performance Insight**. The user guides for report packs and datapipes are listed under **Performance Insight Report Packs**. Every entry indicates a publication date. If a manual is revised and reposted, the date will change. Since we post revised manuals on a regular basis, you should check this site for updates.

Package Version History

The following table provides a list of enhancements since Version 1.0.

Version	Release Date	Enhancements
1.0	May 2006	16 reports; Database Oracle SPI Datapipe 1.0
1.1	April 2007	Location Independent Reporting (LIR) Database Oracle SPI Datapipe 1.1 UPGRADE_Database_to_11 UPGRADE_Database_Oracle_to_11 *defect fixes:* • QXCR1000351048 • QXCR1000351071 • QXCR1000367499 • QXCR1000368580 • QXCR1000386279 • QXCR1000386567
1.1	October 2007	Database Oracle SPI Datapipe 1.2 *defect fixes:* • QXCR1000427865 - Map procedure failed, cannot insert NULL into DSI_DPIPE.SRDBINST_SEGMENT • QXCM1000415912 - Oracle Database Report Pack not showing all the reports
1.2	February 2008	Copy Policy Enhancement UPGRADE_Database_to_12.ap UPGRADE_Database_Oracle_to_12.ap
1.21	September 2009	Database_Upgrade_to_121.ap

The upgrade packages dated February 2008 are not available on CD-ROM. Both must be downloaded. The next chapter of this guide contains several references to a report pack CD containing installable packages. Since there is no CD, you may ignore those references. If you need help downloading or installing the two upgrade packages released February 2008, refer to release notes.

2 The Upgrade Install

This chapter covers the following topics:

- Guidelines for a Smooth Upgrade
- Upgrading to Version 1.21
- Package Removal

If you are installing the Database Report Pack for the first time, this chapter does not apply to you. See Chapter 3, The New Install.

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 Database Report Pack
- Datapipes and Remote Pollers
- Custom Table Views
- Upgrading Common Property Tables
- Upgrading Database in a Distributed Environment

Prerequisites for the Database Report Pack

Make sure the following software is installed before upgrading to Database 1.21:

- Performance Insight 5.41
- All service packs available for Performance Insight 5.41
- Common Property Tables 3.91

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 OVPI install directory and execute 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, execute 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 OVPI install directory and execute 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 Common Property Tables

If you are running an older version of Common Property Tables, you must upgrade that package to version 3.91. 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*.

Upgrading Database in a Distributed Environment

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 3.91; deploy reports
   - Upgrade to Database 1.21 (including any sub-packages); deploy reports
3. For each satellite server:
   - Upgrade to Common Property Tables 3.91 or higher
   - Upgrade to Database 1.21 (including any sub-packages)
   - Remove Database Oracle SPI Datapipe 1.1
   - Install Database Oracle SPI Datapipe 1.2
4. Re-enable trendcopy on the central server.
5. Reconfigure your central and satellite servers.

When Database 1.0 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 just upgraded to Performance Insight 5.41, server configuration changes that were made when Database 1.0 was installed must be redone. For details, see Chapter 4, Setting Up a Distributed System.

Upgrading to Version 1.21

Perform the following tasks to upgrade from any earlier version to version 3.1:

- Task 1: Stop OVPI Timer and extract packages from the report pack CD
- Task 2: Upgrade to Common Property Tables 3.91
- Task 3: Install the Upgrade Packages
- Task 4: Remove Database Oracle SPI Datapipe 1.1
- Task 5: Install Database Oracle SPI Datapipe 1.2
- 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 Database folder:

- Database.ap
- Database_Threshold.ap
- Database_Oracle.ap
- Database_Sr_Integration.ap
- Database_Demo.ap
- Database_Upgrade_to_121.ap
- UPGRADE_Database_Oracle_to_12.ap

Task 2: Upgrade to Common Property Tables 3.91

Follow these rules:

- 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.

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 OVPI 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):

Database_Upgrade_to_121.ap

UPGRADE_Database_Oracle_to_12.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 *Database Report Pack 1.21*. This is not an error.

Task 4: Remove Database Oracle SPI Datapipe 1.1

The Database Oracle SPI Datapipe cannot be upgraded. You must remove Database Oracle SPI Datapipe 1.1. 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.

> It is possible that you are already running the latest datapipe, version 1.2. If you are, ignore this task.

Task 5: Install Database Oracle SPI Datapipe 1.2

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:

Database Oracle SPI Datapipe 1.2

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`

Package Removal

Follow these steps to uninstall the Database Reporting Report Pack:

1. Log in to the system. On UNIX systems, log in as *trendadm*.
2. Stop OVPI Timer and wait for processes to terminate.
3. Start Package Manager. The Package Manager welcome window opens.
4. Click **Next.** The Package Location window opens.
5. Click the **Uninstall** radio button.
6. Click **Next.** The Report Undeployment window opens.
7. If reports were deployed to the OVPI Application Server, accept the defaults for Undeploy Reports, Application Server Name, and Port. Otherwise, clear the check box and skip to step 9.
8. Type your username and password for the OVPI Application Server.
9. Click **Next.** The Package Selection window opens.
10. Click the check box next to the following packages:

    Database 1.21

    Database Demo
11. Click **OK.**
12. Click **Next.** The Selection Summary window opens.
13. Click **Uninstall.** The Progress window opens and the removal process begins. When the uninstall process is complete, a package removal complete message appears.
14. Click **Done** to return to the Management Console.
15. 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`**

3 The New Install

This chapter covers the following topics:

Guidelines for a Smooth Install

An PI reporting solution has two ingredients, a report pack and a datapipe. Some reporting solutions include multiple datapipes. When you install the datapipe, you configure OVPI to collect a specific type of data at a specific interval. When you install the report pack, you configure OVPI to summarize and aggregate performance data in accordance with specific processing directives issued by the report pack.

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

Software Prerequisites

Version 1.21 of the Database Reporting Report Pack has the following prerequisites:

- Performance Insight 5.41
- All service packs available for Performance Insight 5.41
- Common Property Tables 3.91
- SysRes OVPA Collection Datapipe 1.11
- OVO Management Server, version 7.2 or later
- Database Oracle Smart Plug-In (SPI):
  - Version B.09.01 for Windows
  - Version A.09.10 for UNIX

If you are not currently running any version of Common Property Tables, let Package Manager install version 3.91 for you. If you are running an earlier version of Common Property Tables, upgrade to version 3.91. Upgrading Common Property Tables is easy; however, if you need assistance with the upgrade, or if you want to know more about how this package operates, refer to the *Common Property Tables User Guide*.

Distributed Environments

If you intend to run Database Reporting in a distributed environment, installation is more complicated, since you must install the report pack multiple times, once on the central server, and once on each satellite server. Typically, you will not install the datapipe on the central server, since the central server is not polling. Where you install the thresholds sub-package depends on how you want to implement thresholding.

Here is an overview of package installation in a distributed environment.

1. Make sure that every server is running PI 5.41.
2. Make sure that every server is running all available service packs for PI 5.41.
3. Disable trendcopy on the central server.
4. Install the following packages on the central server:
   - Common Property Tables 3.91
   - SysRes OVPA Collection Datapipe 1.11
   - Database Report Pack
   - Oracle sub-package
   - Thresholds sub-package
5. Install the following packages on each satellite server:
   - Common Property Tables 3.91
   - SysRes OVPA Collection Datapipe 1.11
   - Database Report Pack
   - Oracle sub-package
   - Thresholds sub-package
   - Database Oracle SPI Datapipe 1.2
6. Re-enable trendcopy on the central server.

If you do not want local reporting (viewing reports on satellite servers), there is no need to deploy reports to the OVPI Application Server when you install packages on satellite servers. However, if you want local reporting, be sure to deploy reports (and forms) when you install packages on a satellite server.

When you finish installing packages, you have to set up a distributed system. This involves setting up connections with satellite server databases, configuring the central server to copy data from satellite servers, and switching off higher-level aggregations at the satellite servers. These steps are covered in Chapter 4, Setting Up a Distributed System.

Installing the Database Report Pack

Perform the following tasks to install Database Reporting on a stand-alone system:

- Task 1: Stop OVPI Timer and extract report packs from the report pack CD
- Task 2: If necessary, upgrade to Common Property Tables 3.91
- Task 3: Install the report pack and the Database Oracle SPI Datapipe

Task 1: Stop OVPI Timer and extract OVPI packages from the 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 **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. Insert the report pack CD in the CD-ROM drive. Do one of the following:
   - *Windows:* run the `setup.bat` command if auto run is disabled. If auto run is enabled, a Main Menu appears.
   - *UNIX:* mount the CD manually if the CD does not mount automatically, then run the `setup` command.
4. Type **1** to **s**elect OVPI report packs in the choice field and press **Enter**. The install script displays a percentage complete bar. When extraction 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 Database folder:
   - Database.ap
   - Database_Threshold.ap
   - Database_Oracle.ap
   - Database_Sr_Integration.ap
   - Database_Demo.ap
   - Database_Upgrade_to_12.ap
   - UPGRADE_Database_Oracle_to_12.ap

   You may ignore the upgrade packages. Installing the demo package is optional. You may install the demo package by itself, or you may install the demo package along with the report pack.

Task 2: Upgrade Common Property Tables

If you are running an older version of Common Property Tables, upgrade to Common Property Tables 3.91. Do not install the 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. When Package Manager indicates that the installation is complete, click **Done** to exit Package Manager and return to the Management Console.

Task 3: Installing Database Reporting

1. Start 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 settings for Deploy Reports; also accept the defaults for application server name and port in the same window.

5 Enter your username and password for the OVPI Application Server.

6 Click **Next**. The Package Selection window opens.

7 Select the check box next to the following packages:

Common Property Tables 3.91

SysRes OVPA Collection Datapipe 1.11

Database Report Pack 1.21

Database Oracle 1.2 sub-package

Database Oracle SPI Datapipe 1.2

Database Report Pack Demo

8 Click **Next**. The Type Discovery window opens.

9 To run Type Discovery immediately after package installation, keep the default and click **Next**. The Selection Summary window opens.

10 Click **Install**. The Installation Progress window opens and the install process begins. When the install process is complete, an installation complete message appears.

11 Click **Done**.

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`

Accessing Deployed Reports

When you installed the report pack, you enabled the Deploy Reports option. As a result, the reports in this package (as well as the thresholds form) were deployed to the OVPI Application Server. Once the reports reside on the OVPI Application Server, you have two ways to view them:

- OVPI client applications
- Web browser

If you have the client applications, you have access to Report Viewer, Report Builder, and the Management Console. If you do not have the client applications, using a web browser to view reports is the only way you can view reports. For more information about the clients, refer to the *OVPI Installation Guide*. For details about the Management Console, including how to use the Object/Property Management view to launch reports specific to a selected object, refer to the *OVPI Administration Guide*.

Package Removal

Follow these steps to uninstall the Database Reporting Report Pack:

1. Log in to the system. On UNIX systems, log in as *trendadm*.
2. Stop OVPI Timer and wait for processes to terminate.
3. Start Package Manager. The Package Manager welcome window opens.
4. Click **Next.** The Package Location window opens.
5. Click the **Uninstall** radio button.
6. Click **Next.** The Report Undeployment window opens.
7. If reports were deployed to the OVPI Application Server, accept the defaults for Undeploy Reports, Application Server Name, and Port. Otherwise, clear the check box and skip to step 9.
8. Type your username and password for the OVPI Application Server.
9. Click **Next.** The Package Selection window opens.
10. Click the check box next to the following packages:

    Database 1.21

    Database Demo
11. Click **OK.**
12. Click **Next.** The Selection Summary window opens.
13. Click **Uninstall.** The Progress window opens and the removal process begins. When the uninstall process is complete, a package removal complete message appears.
14. Click **Done** to return to the Management Console.
15. 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`**

4 Setting Up a Distributed System

Follow these steps when setting up a distributed system:

1. Decide whether you want local reporting or central reporting.
2. Install the right set of packages on each server (a central server that is not polling will not need datapipes; every satellite servers will need datapipes).
3. Verify that the system clocks in your environment are synchronized.
4. Register your satellite servers.
5. If you are not copying rate data to the central server, enable LIR on the central server.
6. If you enable LIR, add LIR mapping with the time type set to *rate*.
7. Verify that you have all the copy policies you need.
8. Configure the central server (manual edits to trendtimer.sched and .pro files).
9. 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 Database Report Pack comes with a copy policy import file. When you install the report pact, 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.

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 from satellites to the central server, enable LIR
- Task 3: If you enable LIR, add LIR mappings
- Task 4: Verify the automatically generated copy policies
- Task 5: Delete LIR mappings for rate tables
- Task 6: Modify the `trendtimer.sched` file
- Task 7: Modify the `Database_Hourly.pro` file

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

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

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

Task 2: Enable LIR

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

Task 3: Add LIR mappings

Configure LIR mappings for the following categories (for the database and Oracle sub-package you have installed): Database and Database_Oracle.

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 **Database** 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 Mapping** 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 that is defined in the generated copy policy (the type of data copied that is defined in the generated copy policy is for one greater than the data type selected in the LIR mapping). For example, if you select an hourly data type, a daily data copy policy is generated.

Task 4: Verify that copy policies were generated automatically

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

1 Start the Management Console (log on with Administrator privileges).

2 Click the **Copy Policy** icon in the navigation pane to start the Copy Policy Manager.

3 Find the following tables (for the database and sub-package you have installed) and verify the copy type is set to **Property and Data** for each table:

Database	Oracle Sub-package
SHDBINSTANCE	SHDBINST_SEGMENTS
SRDBINSTANCE	SHDBINST_TBLSPACES

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 the table 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**.

10 Repeat step 4 - step 9 for all missing tables.

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: Delete LIR Mappings for the SRDBINSTANCE rate table

Delete the LIR mappings for SRDBINSTANCE (the data is being copied to the central server).

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 Unselect the Rate check box for K_DBINSTANCE and KV_DBINSTANCE.

6 Click **Apply**.

Task 6: Modify the trendtimer.sched file

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

If you installed the Oracle sub-package, make the following change to this file:

- Find and comment out the following line:

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

Task 7: Modify the Database_Hourly.pro file

The `Database_Hourly.pro` file is found in the *`{DPIPE_HOME}`*`/scripts/` directory where *`{DPIPE_HOME}`* is the directory in which OVPI is installed.

Make the following change to this file:

- Comment out the DB_1 block section.
- Comment out the DB_2 block section.

Configuring a Satellite Server

Follow these steps to configure a satellite server.

1 Disable aggregations at the daily level and above.

   a Open the `{DPIPE_HOME}/lib/trendtimer.sched` file (where *`{DPIPE_HOME}`* is the directory in which OVPI is installed)

   b Find and comment out the following lines:

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

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

2 Modify the *`{DPIPE_HOME}`*`/scripts/Database_Hourly.pro` file (where *`{DPIPE_HOME}`* is the directory in which OVPI is installed):

- Comment out the DB_3 block, including the begin and end lines.

3 If you installed the Oracle sub-package, modify the *{DPIPE_HOME}*/scripts/Database_Oracle_Hourly.pro file:

- Uncomment the DB_1 block, including the begin and end lines.

System Clocks

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

5 Generic History Reports

There are two generic history reports in Database Reporting:

1. Instance Size History
2. Instance Size Details Top 20

Instance Size History

This report looks at dynamic space usage over the previous week, and allows you to spot instances with the highest dynamic space usage. The building block in this report is a daily average for instance-size-used and a daily average for instance-size-free. The daily averages are rolled up, producing averages for the week that appear in the top selection table.

The top selection table sorts instances by dynamic space usage, most to least. The data in the usage details table below the selection table shows the daily fluctuation in average instance-size-free vs. average instance-size-used. The tabbed graph below the usage details table displays a daily bar chart and a monthly bar chart. Both charts show the fluctuation in free vs. used, allowing you to see historic trends.

Instance Size Details Top 20

This report reveals which database instances are using the most instance size. It measures instance size three ways:

- As a percentage
- In megabytes
- In megabytes allocated

Each selection table on the left looks at yesterday's data. Each graph to the right shows what the trend has been over the previous 7 days.

Database Report Pack
Instance Size History Report

This report shows top 20 instances which had the most dynamic space usage over the previous week. The instances were selected using the standard deviation of the amount of space used. The graph show historical trends for the space usage on daily and monthly basis.

Top 20 Instance

Sorted Based On Most Dynamic Space Usage (MB)

Mon, Mar 28, 2005 - Mon, Mar 28, 2005

System Name	Instance Name	Vendor	Instance Size Allocated	Instance Dynamic Size Usage	Average Instance Size Free
ovpint4	Ovpint54	Oracle	1024.00	70.90	520.95
ovpihpt3	Ovpihpt3	Oracle	1024.00	35.89	500.02

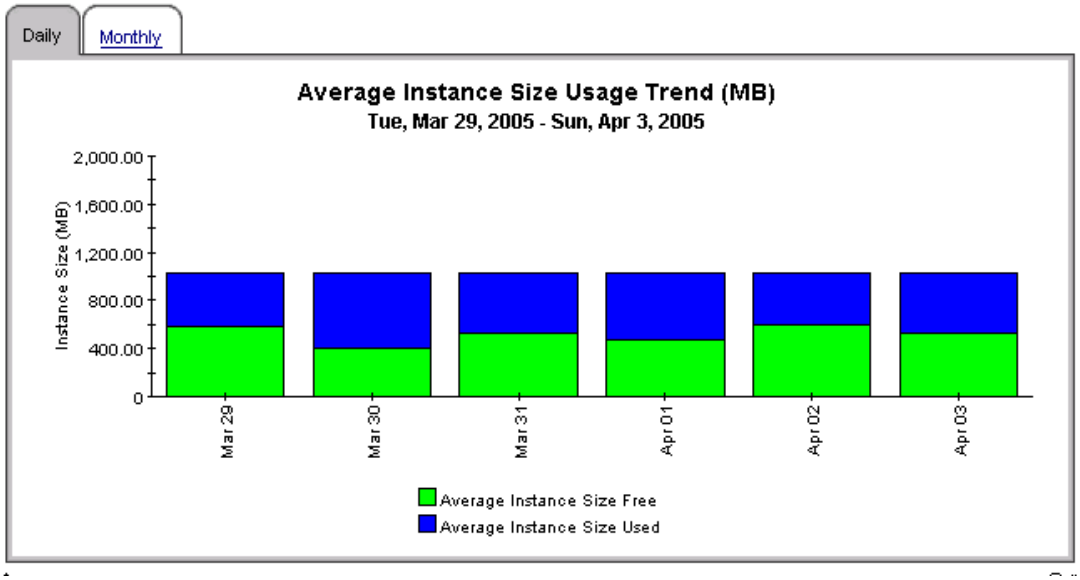
Customer Name	Location Name
Customer Unassigned	Location Unassigned

Instance Size Usage Details

Tue, Mar 29, 2005 - Sat, Apr 2, 2005

Date	Instance Size Allocated	Average Instance Size Used	Average Instance Size Free
Tue, Mar 29 12:00 AM	1024.00	444.59	579.41
Wed, Mar 30 12:00 AM	1024.00	616.23	407.77
Thu, Mar 31 12:00 AM	1024.00	493.70	530.30
Fri, Apr 1 12:00 AM	1024.00	547.97	476.03
Sat, Apr 2 12:00 AM	1024.00	420.99	603.01

Daily | Monthly



Database Report Pack
Instance Size Details Top 20 Report

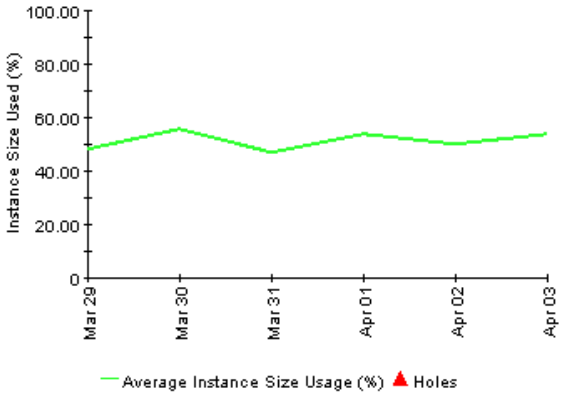
This report shows top 20 Instances sorted based on megabytes allocated, megabytes used and percentage used with one table and a corresponding graph for each category.

Top 20 Instances
Sorted Based on Average % Used

Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Instance Size Allocated	Average Instance Size Used (%)	Average Instance Size Free (%)
ovpihpt3	Ovpihpt3	Oracle	1024.00	53.35	46.65
ovpint4	Ovpint54	Oracle	1024.00	48.32	51.68

Instance Size Usage Trend (%)
Tue, Mar 29, 2005 - Sun, Apr 3, 2005

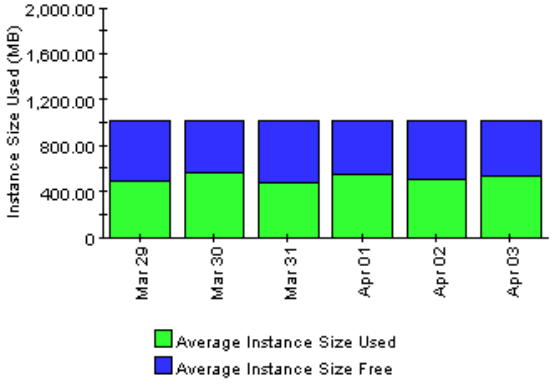


Top 20 Instances
Sorted Based on MegaBytes Used

Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Instance Size Allocated	Average Instance Size Used	Average Instance Size Free
ovpihpt3	Ovpihpt3	Oracle	1024.00	546.30	477.70
ovpint4	Ovpint54	Oracle	1024.00	494.84	529.16

Instance Size Usage Trend (MB)
Tue, Mar 29, 2005 - Sun, Apr 3, 2005

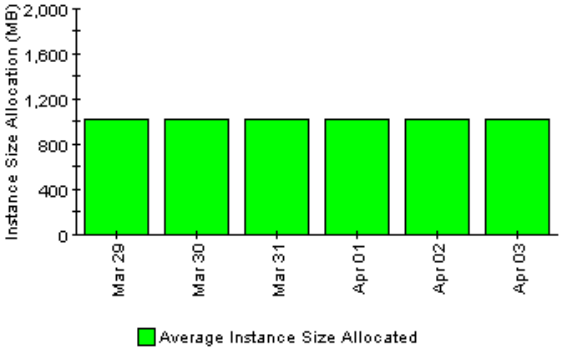


Top 20 Instances
Sorted Based on MegaBytes Allocated

Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Instance Size Allocated	Average Instance Size Used	Average Instance Size Free
ovpihpt3	Ovpihpt3	Oracle	1024.00	546.30	477.70
ovpint4	Ovpint54	Oracle	1024.00	494.84	529.16

Instance Size Allocation Trend (MB)
Tue, Mar 29, 2005 - Sun, Apr 3, 2005



6 Generic NRT Reports

There are three generic NRT reports in the Database Report Pack:

1. Instance Availability in Near Real Time
2. Number of Transactions in Near Real Time
3. Number of logons in Near Real Time

Availability NRT

Contains one selection table and one tabbed graph. The selection table looks at actual sample data collected over the previous six hours, not hourly averages. The selection table shows:

- Total Instance Uptime in minutes
- Total Instance Downtime in minutes
- Total Instance Unknowntime in minutes

The selection table sorts instances by Total Instance Uptime, most to least. Use the graph below the selection table to see trending on an hourly, daily, and monthly basis.

Logons NRT

Contains one selection table and one tabbed graph. The selection table looks at actual sample data collected over the previous six hours, not hourly averages. The selection table shows:

- Total logons
- Maximum logons (per hour)
- Minimum logons (per hour)
- Average logons (per hour)

The selection table sorts instances by Total Instance Uptime, most to least. Use the tabbed graph below the selection table to see trending on an hourly, daily, and monthly basis.

Transactions NRT

Contains one selection table and one tabbed graph. The selection table looks at actual sample data collected over the previous six hours, not hourly averages. The selection table shows:

- Total transactions
- Maximum transactions (per hour)
- Minimum transactions (per hour)
- Average transactions (per hour)

The selection table sorts instances by Total Instance Uptime, most to least. Use the tabbed graph below the selection table to see trending on an hourly, daily, and monthly basis.

Database Report Pack
Instance Availability Near Real Time Report

This report shows database instances sorted based on total uptime minutes of the instance. The report also shows total downtime and total unknown time for each instance. In addition it displays hourly, daily and monthly trends for uptime, downtime and unknown time. The daily and monthly trends are in terms of percentages.

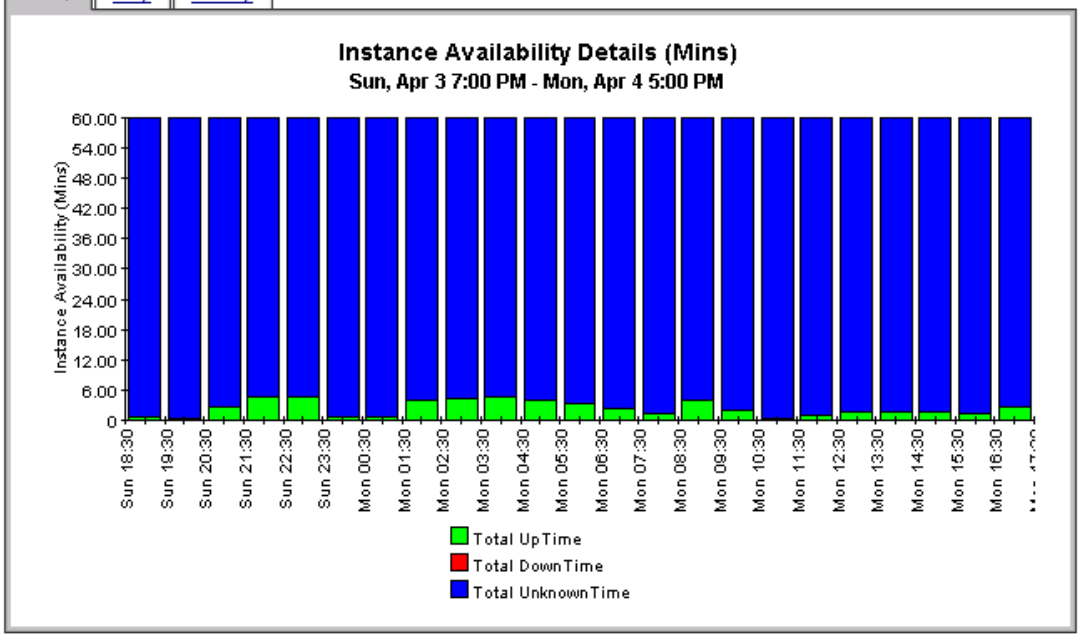
Top 20 Instances

Sorted Based On Total Uptime (Mins) For the Previous 6 Hours

System Name	Instance	Vendor	Total Instance UpTime	Total Instance DownTime	Total Instance UnknownTime
ovpint4	Ovpint54	Oracle	10.27	0.00	349.73
ovpihpt3	Ovpihpt3	Oracle	13.83	0.00	346.17

Customer Name	Location Name
Customer Unassigned	Location Unassigned

Hourly | Daily | Monthly



Database Report Pack
Instance Logons Near Real Time Report

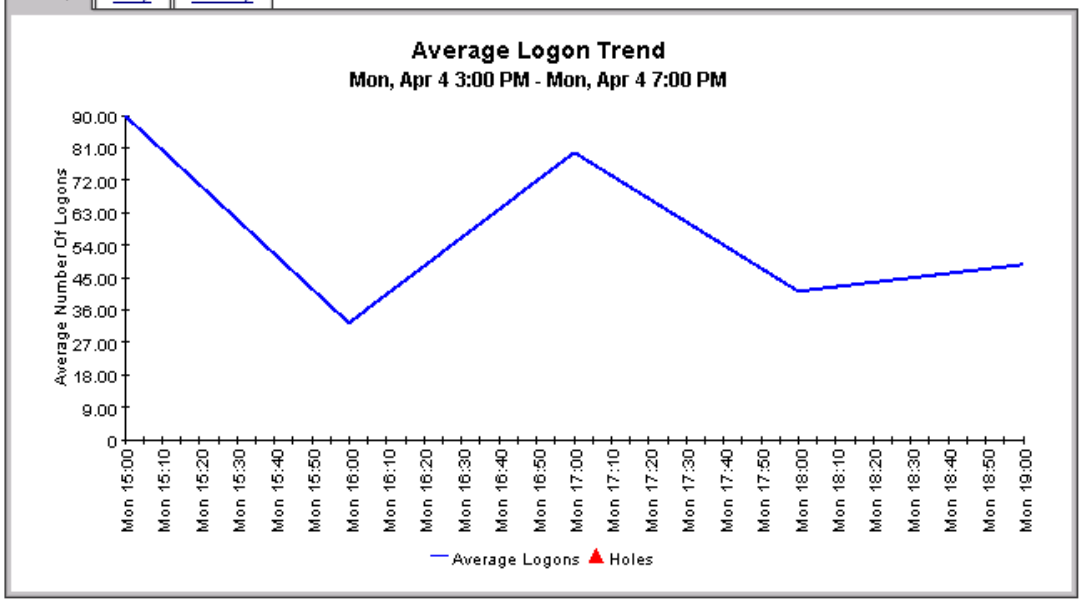
This report shows the number of user logons per instance over a period of last 6 hours. Selecting an instance from the top table gives the logon trend over the for hourly, daily and monthly.

Logon Details Per Instance For Previous 6 Hours

System Name	Instance	Vendor	Total Logons	Maximum Logons	Minimum Logons	Average Logons
ovpint4	Ovpint54	Oracle	359.93	89.86	32.19	59.99
ovpihpt3	Ovpihpt3	Oracle	247.31	86.15	22.13	41.22

Customer Name	Location Name
Customer Unassigned	Location Unassigned

Hourly | Daily | Monthly



Database Report Pack

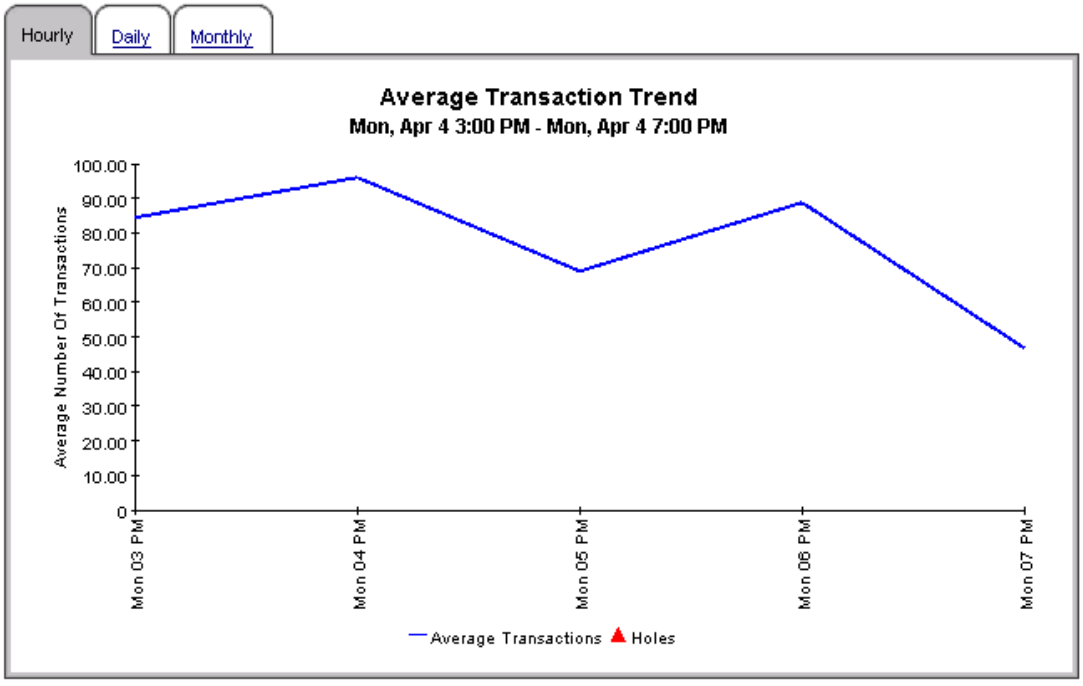
Instance Transactions Near Real Time Report

This report shows the number of transaction per instance over a period of last 6 hours. Selecting an instance from the top table gives the transaction hourly, daily and monthly trend.

Transaction Details Per Instance for Previous 6 Hours

System Name	Instance	Vendor	Total Transactions	Maximum Transactions	Minimum Transactions	Average Transactions
ovpint4	Ovpint54	Oracle	424.63	96.16	39.81	70.77
ovpihpt3	Ovpihpt3	Oracle	329.50	96.63	3.86	54.92

Customer Name	Location Name
Customer Unassigned	Location Unassigned



7 Aggregation Reports

There are two aggregations reports in the Database Report Pack:

- Customer Summary Report
- Location Summary Report

See below for samples of each.

Database Report Pack

Customer Summary Report

This report will give information about a Customer.Here user can select any customer from left panel and all aggregated information about that customer will be shown in three tables on the right.First table will provide last 2 hrs data. second one provide last day summarized data for one customer. Third one provide monthly summarized data for selected customer.

CUSTOMER NAME

Customer Unassigned

Customer Usage Details For Last 2 Hrs

Total Up Time	Total Down Time	Time Period
75.00	0.00	Mon, Apr 11 10:00 AM

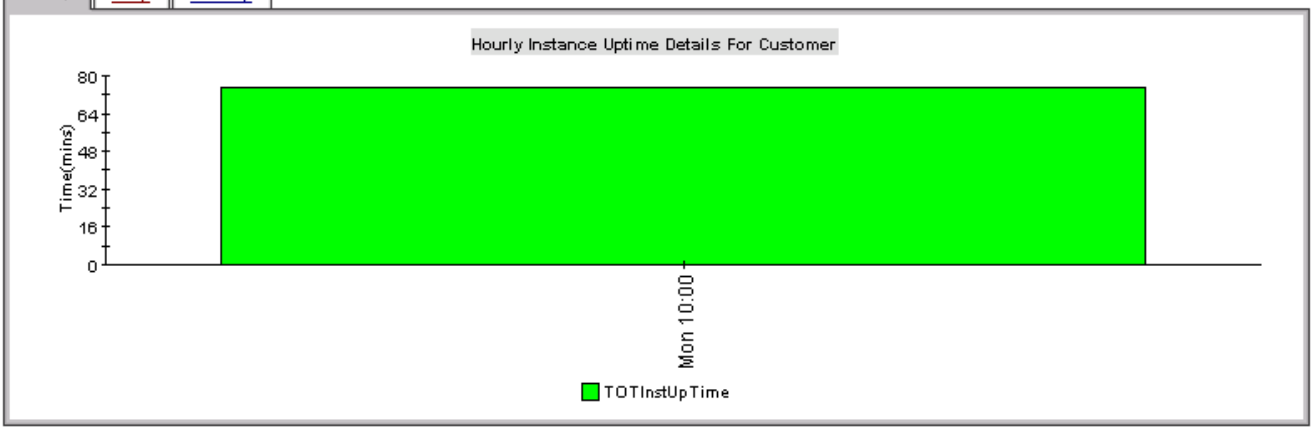
Customer Usage Details For Last Day

Percentage Instance Uptime	Average Down Time	Average Instance Size Free	Average Instance Logons	Average Instance Size % Used
100.00	0.00	694.10	10.00	60.88

Customer Usage Details For Last Month

Percentage Instance Uptime	Average Down Time	Average Instance Size Free	Average Instance Logons	Average Instance Size % Used
50.14	0.00	507.64	45.99	50.43

Hourly | Daily | Monthly



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Database Report Pack

Location Summary Report

This report will give information about a Location.Here user can select any Location from left panel and all aggregated information about that Location will be shown in three tables on the right.First table will provide last 2 hrs data. second one provide last day summarized data for one customer. Third one provide monthly summarized data for selected Location.

LOCATION NAME

Location Unassigned

Location Usage Details For Last 2 Hrs

Total UpTime	Total Down Time	Time Period
75.00	0.00	Mon, Apr 11 10:00 AM

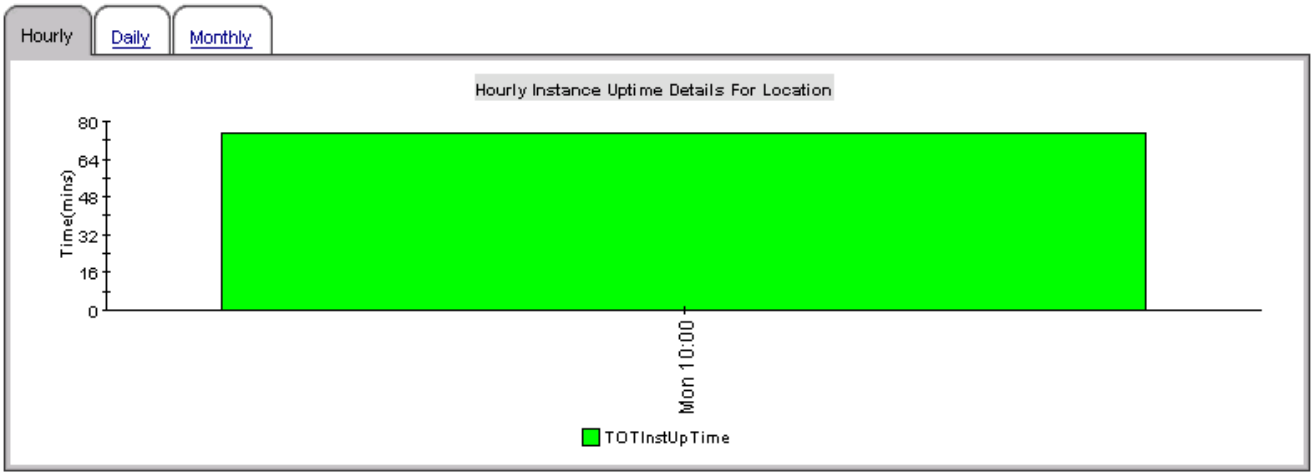
Location Usage Deatils For Last Day

Percentage Instance Uptime	Average Down Time	Average Size Free	Average Logons	Average Size % Used	Time Period
100.00	0.00	694.10	10.00	60.88	Sun, Apr 10 12:00 AM

Location Usage Details For Last Month

Percentage Instance Uptime	Average Down Time	Average Size Free	Average Logons	Average Size % Used
50.14	0.00	507.64	45.99	50.43

Hourly | Daily | Monthly



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8 Selector & QuickView

See below for samples of:

- Adhoc Instance Selector
- Instance QuickView

Database Report Pack

Adhoc Instance Selector

This report allows you to filter the entire database instance set by several common criteria. The table below will then refresh showing you which instance comply with the drop down selections. If you are accessing the report from the web interface you can then cross launch many other reports with information relating to the selected instance.

Choose System | Choose Customer | Choose Vendor

Choose Instance | Choose Location

Instance Details

Mon, Apr 25 12:00 AM [GMT+05:30]

System Name	Instance	Vendor	Customer	Location	Average Instance Uptime	Average Instance Logons	Average Instance Transactions	Average Instance Percentage Size Used
ovpihpt3	Ovpihpt3	Oracle	Customer Unassigned	Location Unassigned	2.45			53.3
ovpint4	Ovpint54	Oracle	Customer Unassigned	Location Unassigned	2.90			48.3

Database Report Pack

Instance Quickview Report

This report gives as quick graphical overview of database instances providing such details as logons, transactions, instance size usage and availability.

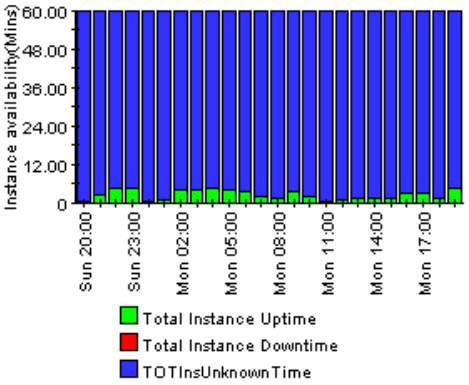
System Name: ovpint4 | **Vendor**: Oracle | **Instance Name**: Ovpint54

Customer: Customer Unassigned

Location: Location Unassigned

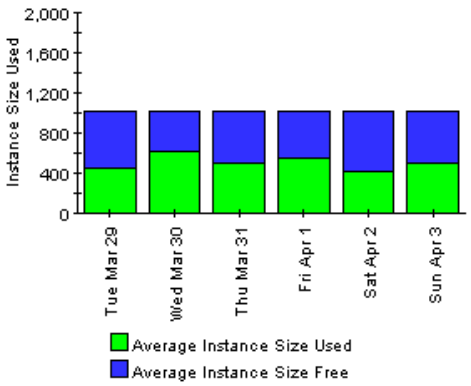
Instance Availability NRT Details

Sun, Apr 3 8:00 PM - Mon, Apr 4 7:00 PM



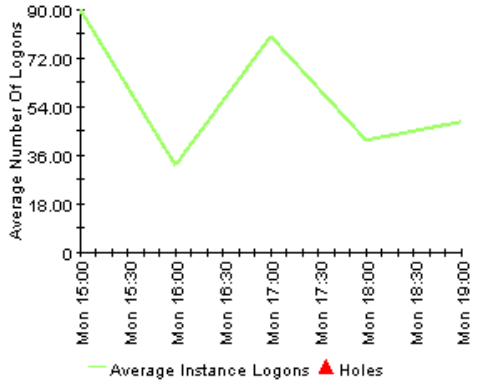
Instance Size Usage Trend(MB)

Tue, Mar 29, 2005 - Sun, Apr 3, 2005



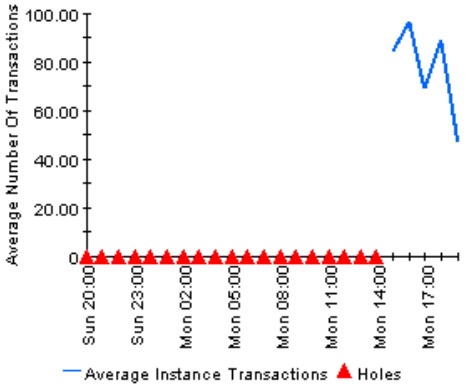
Average Logon Trend

Mon, Apr 4 3:00 PM - Mon, Apr 4 7:00 PM



Average Transaction Trend

Sun, Apr 3 8:00 PM - Mon, Apr 4 7:00 PM



9 Oracle Segment Reports

There are two segment reports in the Database Report Pack:

- Segment Size History
- Segment Size Details

See below for samples of each.

Database Report Pack
Segment Size History Report

This report shows the top segments which had the most dynamic space allocation over the reporting interval.The top segments were selected using the standard deviation of the amount of space allocated. The graph also shows historical trends for the size allocated on daily and monthly basis.

Top 20 Segments

Sorted Based On Most Dynamic Space Allocation

Mon, Mar 28, 2005 - Mon, Mar 28, 2005

System Name	Instance	Vendor	Segment Name	Average Size Allocated	Dynamic Size Allocation
ovpint4	Ovpint54	Oracle	EXAMPLE.SH.COSTS	530.49	79.53
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE.SH.PRODUCTS	483.86	57.99
ovpint4	Ovpint54	Oracle	SYSTEM.SYS.I_SOURCE1	507.21	55.80
ovpihpt3	Ovpihpt3	Oracle	SYSTEM.SYS.I_OBJ2	536.41	52.79

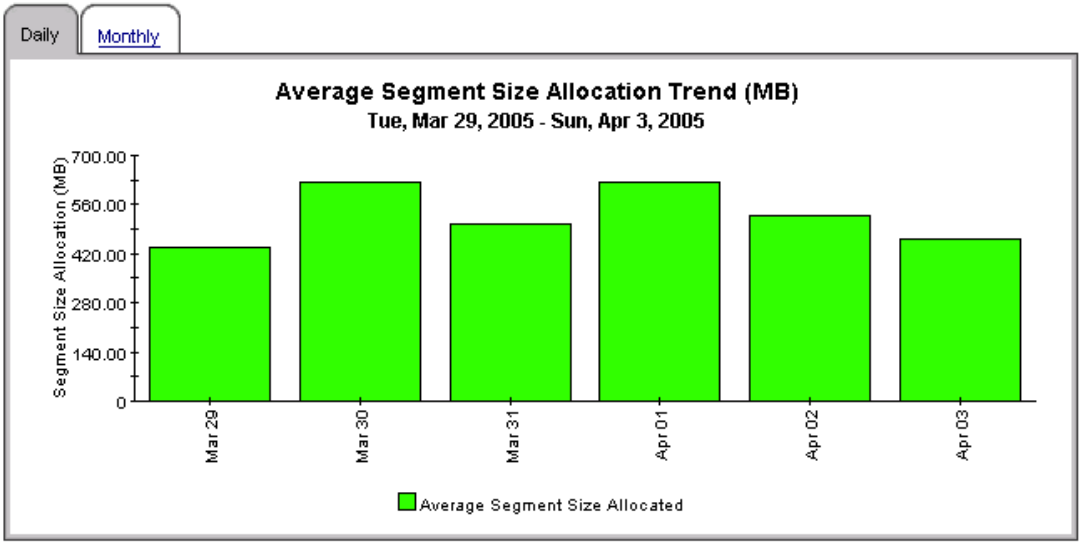
Customer Name	Location Name
Customer Unassigned	Location Unassigned

Segment Size Allocation Details

Tue, Mar 29, 2005 - Sat, Apr 2, 2005

Time Period	Average Segment Size Allocated
Tue, Mar 29 12:00 AM	436.48
Wed, Mar 30 12:00 AM	623.78
Thu, Mar 31 12:00 AM	504.08
Fri, Apr 1 12:00 AM	625.03
Sat, Apr 2 12:00 AM	529.75

Daily | Monthly



Database Report Pack
Segment Size Details Report

This report shows the top 20 segments sorted by megabytes allocated. Selecting a segment from the top table gives the daily and monthly usage trends for the segment.

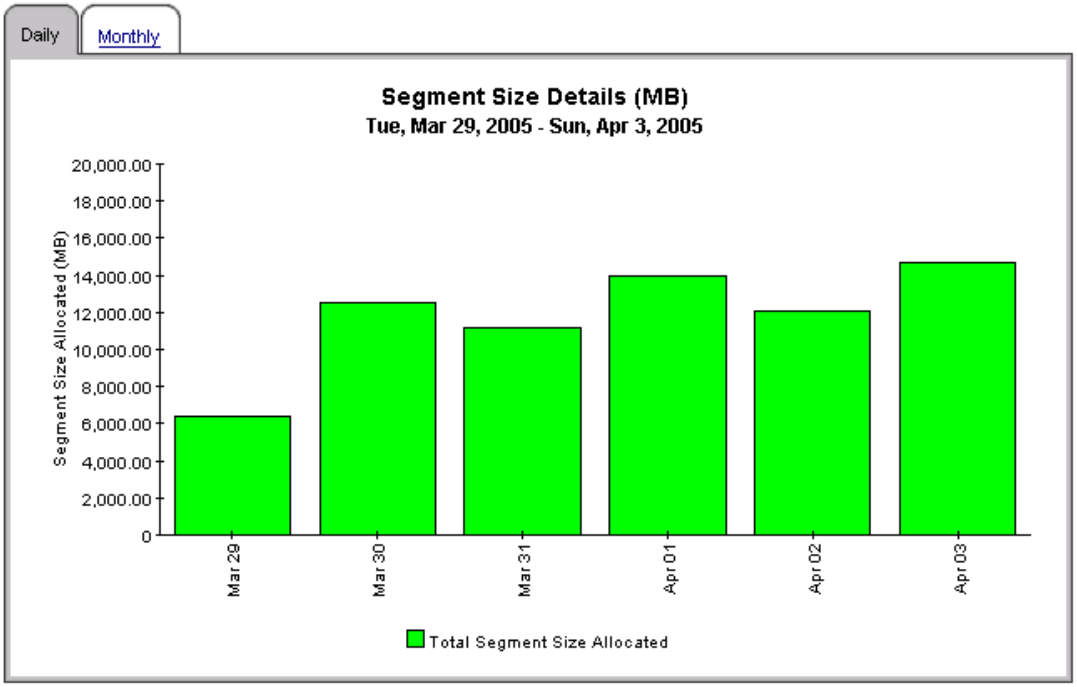
Top 20 Segments
Sorted Based on Total Allocated Size (MB)

Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Segment Name	Total Segment Size Allocated
ovpihpt3	Ovpihpt3	Oracle	SYSTEM.SYS.I_OBJ2	14670.99
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE.SH.PRODUCTS	12545.87
ovpint4	Ovpint54	Oracle	SYSTEM.SYS.I_SOURCE1	11840.32
ovpint4	Ovpint54	Oracle	EXAMPLE.SH.COSTS	11131.27

Customer Name	Location Name
Customer Unassigned	Location Unassigned

Daily | Monthly



10 Oracle Tablespace Reports

There are five tablespace reports in the Database Report Pack:

- Tablespace Physical I/O Top 20
- Tablespace Size History
- Tablespace Size Allocated Top 20
- Tablespace Size Used Top 20
- Tablespace Size Percentage Used Top 20

Database Report Pack

Tablespace Physical IO Top 20 Report

This report shows the top 20 tablespace by physical I/O (reads plus writes) for the previous week. Selecting a tablespace from the top table, shows the daily and monthly I/O trends for the tablespace.

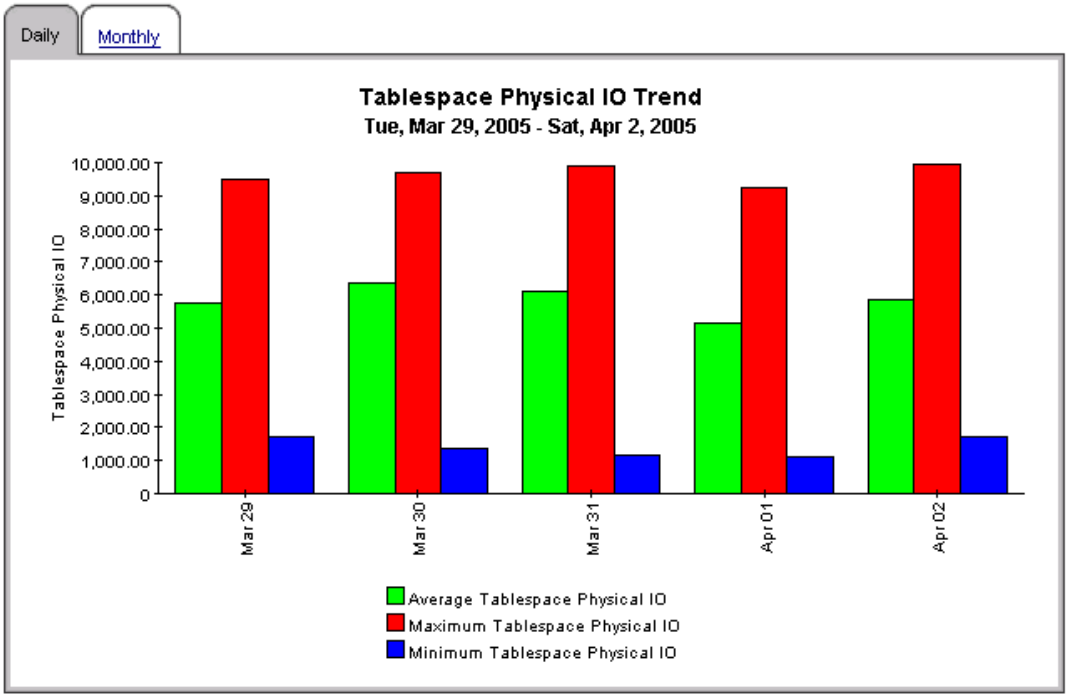
Top 20 Tablespaces

Sorted Based On Total Physical IO

Sun, Apr 17, 2005 - Sun, Apr 24, 2005 [GMT+05:30]

System Name	Instance Name	Vendor	Tablespace Name	Total Physical IO	Maximum Physical IO	Minimum Physical IO	Average Physical IO
ovpint4	Ovpint54	Oracle	DRSYS	762673.54	9961.55	1099.64	5777.78
ovpint4	Ovpint54	Oracle	CVMLITE	756694.76	9918.15	1229.29	5705.92
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE	737823.59	9952.93	1225.10	5532.06
ovpint4	Ovpint54	Oracle	SYSTEM	733414.21	9925.98	1153.64	5640.42
ovpihpt3	Ovpihpt3	Oracle	XDB	724070.33	9971.07	1107.64	5424.47
ovpint4	Ovpint54	Oracle	USERS	703221.52	9696.91	1037.66	5279.53

Daily | Monthly



Database Report Pack
Tablespace Size History Report

This report shows the top tablespaces which had the most dynamic space usage over the reporting interval.The top tablespaces were selected using the standard deviation of the amount of space used. The graph also shows historical trends for the size usage on daily and monthly basis.

Top 20 Tablespaces

Sorted Based On Most Dynamic Space Usage

Mon, Mar 28, 2005 - Mon, Mar 28, 2005

System Name	Instance Name	Vendor	Tablespace Name	Average Size Allocated	Dynamic Space Usage	Average Size Free
ovpihpt3	Ovpihpt3	Oracle	XDB	1024.00		496.58
ovpint4	Ovpint54	Oracle	USERS	1024.00	71.92	487.72
ovpint4	Ovpint54	Oracle	SYSTEM	1024.00	71.54	521.38
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE	1024.00	62.41	507.92
ovpint4	Ovpint54	Oracle	DRSYS	1024.00	50.02	538.00
ovpint4	Ovpint54	Oracle	CWMLITE	1024.00	36.88	532.07

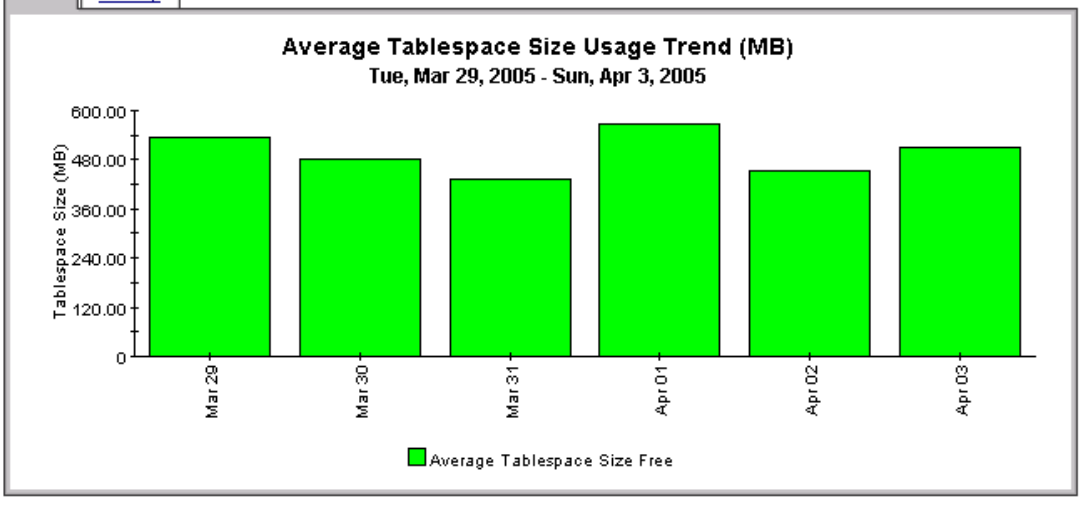
Customer Name	Location Name
Customer Unassigned	Location Unassigned

Tablespace Size Usage Details

Tue, Mar 29, 2005 - Sun, Apr 3, 2005

Date	Average Size Allocated	Average Size Used	Average Size Free
Tue, Mar 29 12:00 AM	1024.00		534.08
Wed, Mar 30 12:00 AM	1024.00		480.73
Thu, Mar 31 12:00 AM	1024.00		433.26
Fri, Apr 1 12:00 AM	1024.00		566.98
Sat, Apr 2 12:00 AM	1024.00		454.78
Sun, Apr 3 12:00 AM	1024.00		509.68

Daily | Monthly



Database Report Pack
Tablespace Size Allocated Top 20 Report

The report shows top 20 tablespaces across all instances sorted based on megabytes allocated in the top table with a graph showing the daily trend for the tablespace selected from the top table.

Top 20 Tablespaces

Sorted Based on Average Megabytes Allocated (MB)

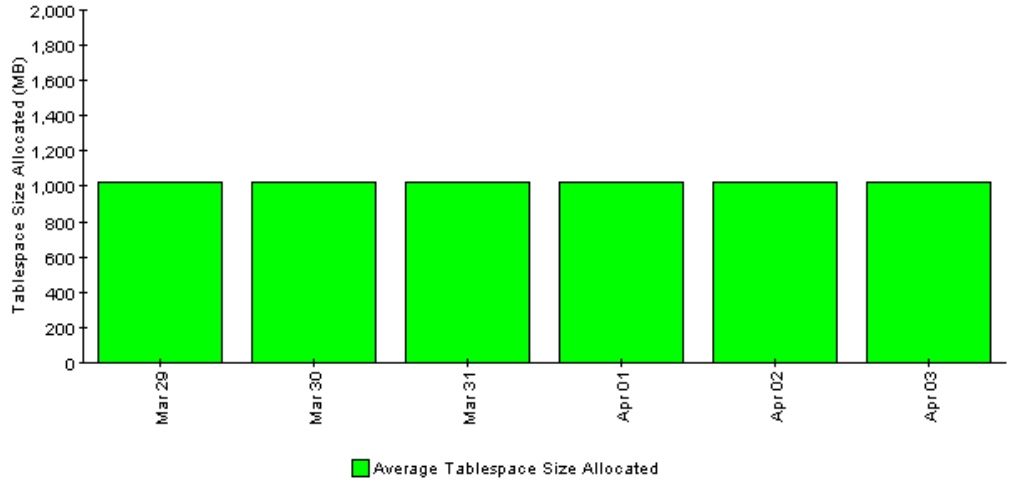
Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Tablespace Name	Average Megabytes Allocated	Average Megabytes Used	Average Megabytes Free
ovpint4	Ovpint54	Oracle	DRSYS	1024.00	533.02	490.98
ovpint4	Ovpint54	Oracle	USERS	1024.00	583.02	440.98
ovpint4	Ovpint54	Oracle	SYSTEM	1024.00	595.55	428.45
ovpint4	Ovpint54	Oracle	CWMLITE	1024.00	434.89	589.11
ovpihpt3	Ovpihpt3	Oracle	XDB	1024.00		509.68
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE	1024.00	600.46	423.54

Customer Name	Location Name
Customer Unassigned	Location Unassigned

Average Tablespace Size Allocated (MB)

Tue, Mar 29, 2005 - Sun, Apr 3, 2005



Database Report Pack

Tablespace Size Used Top 20 Report

The report shows top 20 tablespaces across all instances sorted based on megabytes used in the top table with a graph showing the daily trend for the tablespace selected from the top table.

Top 20 Tablespaces

Sorted Based on Average Megabytes Used (MB)

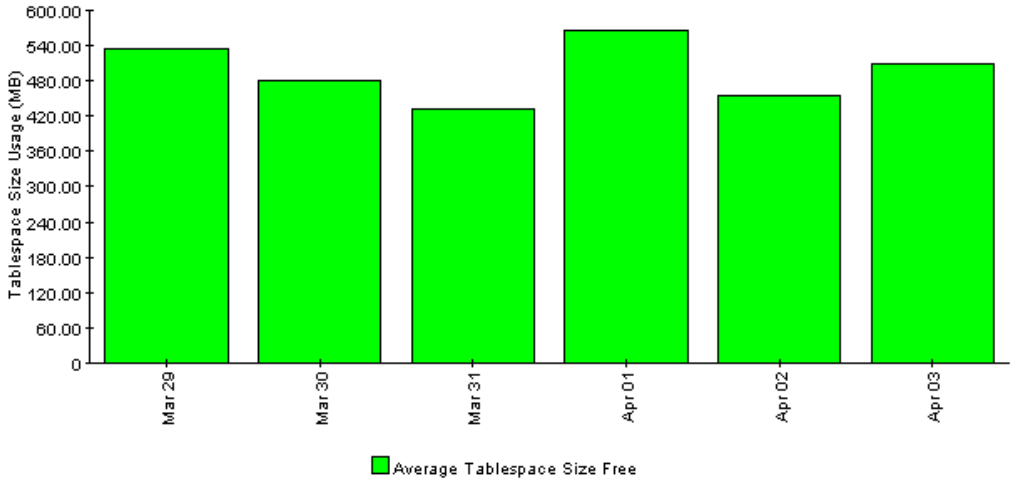
Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Tablespace Name	Average Megabytes Allocated	Average Megabytes Used
ovpihpt3	Ovpihpt3	Oracle	XDB	1024.00	
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE	1024.00	600.46
ovpint4	Ovpint54	Oracle	SYSTEM	1024.00	595.55
ovpint4	Ovpint54	Oracle	USERS	1024.00	583.02
ovpint4	Ovpint54	Oracle	DRSYS	1024.00	533.02
ovpint4	Ovpint54	Oracle	CWMLITE	1024.00	434.89

Customer Name	Location Name
Customer Unassigned	Location Unassigned

TableSpace Size Usage Details (MB)

Tue, Mar 29, 2005 - Sun, Apr 3, 2005



Database Report Pack

Tablespace Size Percentage Used Top 20 Report

The report shows top 20 tablespaces across all instances sorted based on percentage tablespace size used in the top table with a graph showing the daily trend for the selected tablespace from the top table.

Top 20 Tablespaces

Sorted Based on Percentage Used

Sun, Apr 3, 2005 - Sun, Apr 3, 2005

System Name	Instance Name	Vendor	Tablespace Name	Total Space Allocated	Percent Used
ovpihpt3	Ovpihpt3	Oracle	EXAMPLE	24576.00	29.32
ovpint4	Ovpint54	Oracle	SYSTEM	24576.00	29.08
ovpint4	Ovpint54	Oracle	USERS	24576.00	28.47
ovpint4	Ovpint54	Oracle	DRSYS	24576.00	26.03
ovpint4	Ovpint54	Oracle	CWMLITE	24576.00	21.23
ovpihpt3	Ovpihpt3	Oracle	XDB	24576.00	0.00

Customer Name

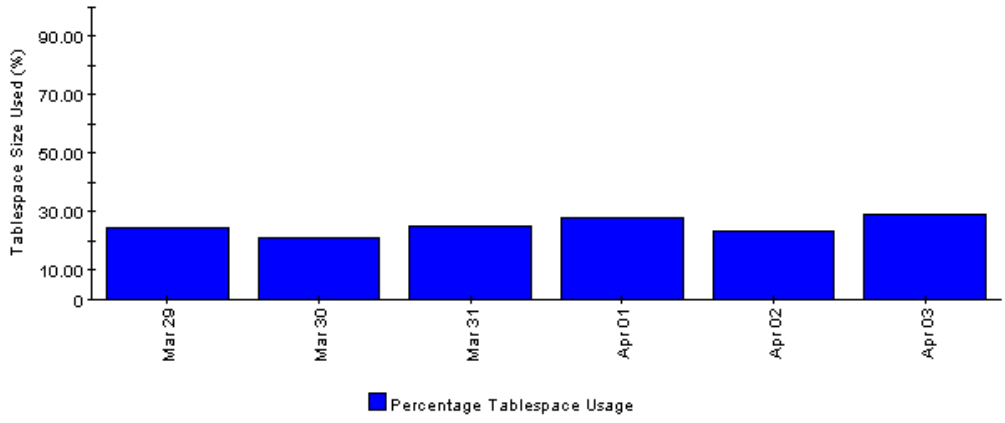
Customer Unassigned

Location Name

Location Unassigned

Tablespace Usage Trend (%)

Tue, Mar 29, 2005 - Sun, Apr 3, 2005



A PI Report Packs

Business Technology	Reporting Solution
Application	Application Report Pack: • WebLogic SPI • WebSphere SPI
Database	Database SPI Report Pack
HP Business Process Insight	BPI Report Pack
HP Internet Services	Internet Services Report Pack
HP Network Node Manager	NNM Event & Availability Report Pack
HP Operations Manager	OVO Report Pack
HP SiteScope	SiteScope Integration Report Pack
IP Telephony	• Cisco IP Telephony Call Detail • Cisco IP Telephony Gateway Statistics
MPLS VPN	MPLS VPN Report Pack
Networking	Infrastructure Usage • Interface Reporting • Device Resource Report Pack LAN/WAN Edge • Frame Relay (SNMP only) • ATM (SNMP only) WAN Core • Frame Relay (multiple switch vendors) • ATM (multiple switch vendors) Traffic Profiling • RMON II • NetFlow Interface • NetFlow Global View • IP QoS Report Pack

Business Technology	Reporting Solution
Networking (continued)	• Class-Based QoS Quality Assurance • Cisco Ping Report Pack • Service Assurance • IP Access Rate
System Resources	System Resource Report Pack • CPU • Disk • Logical System • Logical Volume • NetIf • Process

B Formulas

Main Package Formulas

If a metric cannot be collected directly from the EPC sub-agent, OVPI calculates it. The following table indicates how each metric is calculated.

Metric	How the Metric is Calculated
Instance uptime	Time in minutes the database instance was up
Instance downtime	Time in minutes the database instance was down
Instance unknowntime	Time that is unaccounted for, time when the instance was neither up nor down = (60 – Uptime – Downtime)
Instance percent uptime	Average Percent Up time of database instance = (InstUpTime/60) * 100
Instance percent downtime	Average Percent Down time of database instance = (InstDownTime/60) * 100
Instance percent unknowntime	Average Unknown time of database instance = ((InstUpTime+InstDownTime)/60) * 100
Instance size allocated	Total size of memory allocated by this instance, measured in megabytes
Instance size free	Amount of memory still free from the total allocated, measured in megabytes
Instance size used	Amount of memory used, measured in megabytes = (InstanceSizeAllocated – InstanceSizeFree)
Instance size percent used	Average Percent Instance Size Used = (InstSizeUsed/ InstSizeAllocated) * 100
Instance size percent free	Average Percent Instance Size Used = (InstSizeFree/ InstSizeAllocated) * 100

Oracle Sub-Package Formulas

The following formulae are used to calculate metrics for reports in the Oracle sub-package.

Metric	How the Metric is Calculated
Tablespace Size Allocated	Total size of Tablespace, measured in megabytes

Metric	How the Metric is Calculated
Tablespace Size Free	Amount of free Tablespace size, measured in megabytes
Tablespace Size Used	Amount of used Tablespace size, measured in megabytes = (TblSpaceSizeAllocated – TblSpaceSizeFree)
Tablespace Size Percent Used	Average Percent Tablespace Size Used = (InstSizeUsed/ InstSizeAllocated) * 100
Tablespace Size Percent Free	Average Percent Tablespace Size Used = (InstSizeFree/ InstSizeAllocated) * 100
Segment Size Allocated	Total size of segment, measured in megabytes
Instance Logons	Number of logons for an instance
Instance Transactions	Number of transaction for an instance
I/O	Number of physical I/O operations for a tablespace

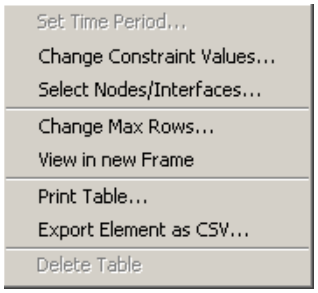
C Editing Tables and Graphs

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

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

View Options for Tables

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



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

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

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

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

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.

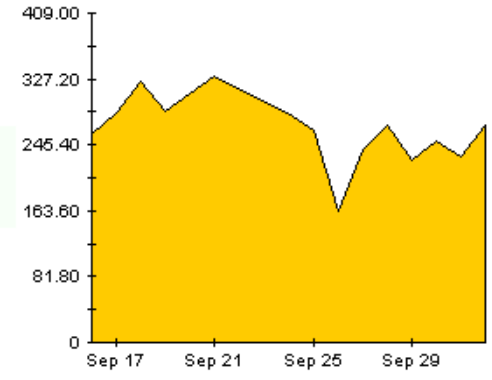
Table Viewer

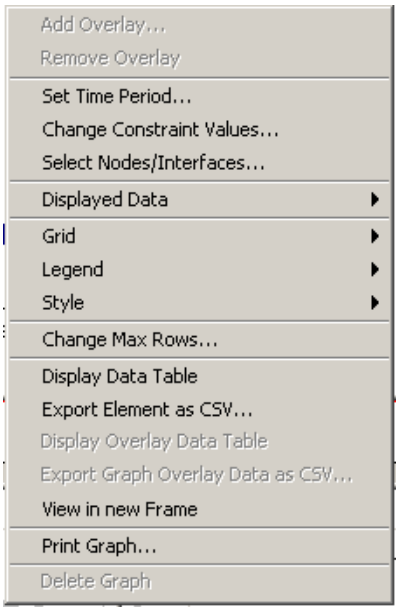
Polled IP QoS Statistics Data - Input
Over Previous 6 Hours

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
Input	3	0	0	Tue Oct 29 06:45 AM
Input	4	0	0	Tue Oct 29 06:45 AM

View 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.



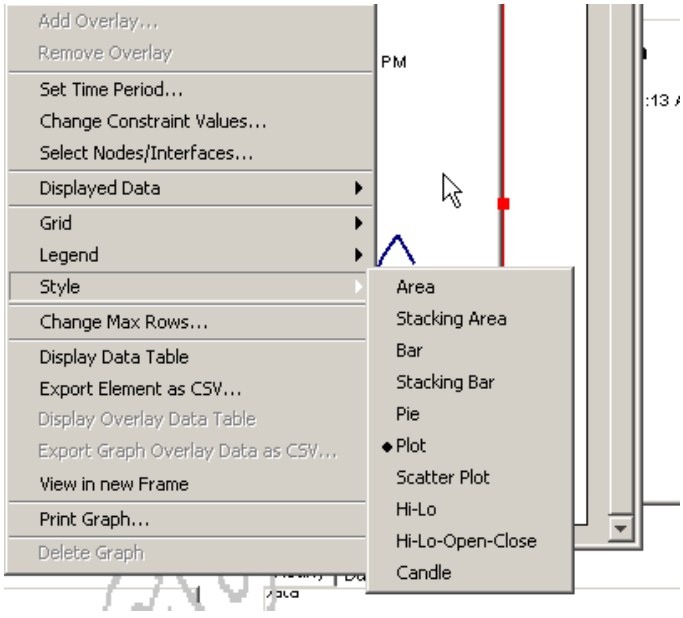


The following table provides details about each option.

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.

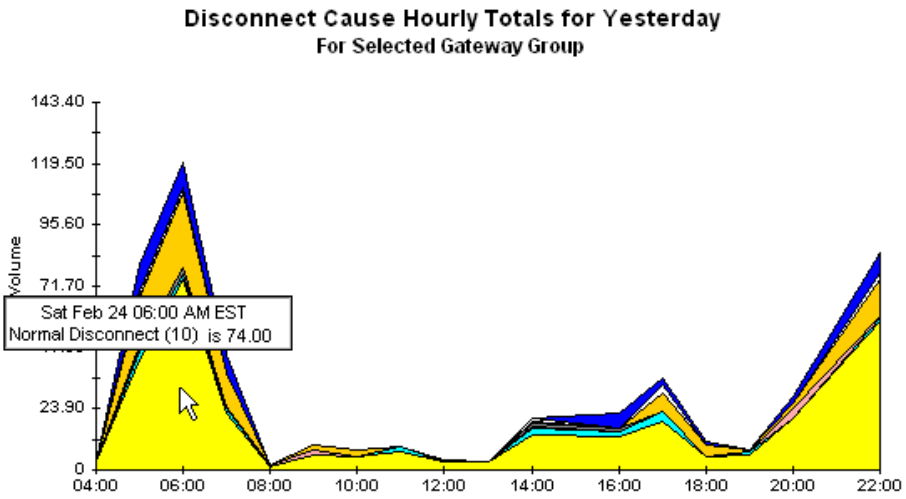
Style Options

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



Style > Area

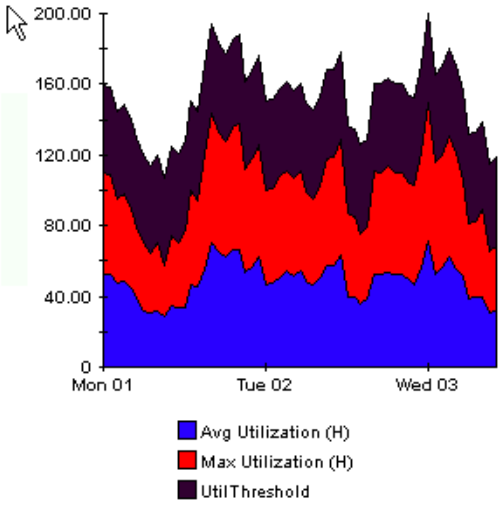
The plot or bar chart changes to an area graph. While relative values and total values are easy to view in this format, absolute values for smaller data types may be hard to see. Click anywhere within a band of color to display the exact value for that location



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.

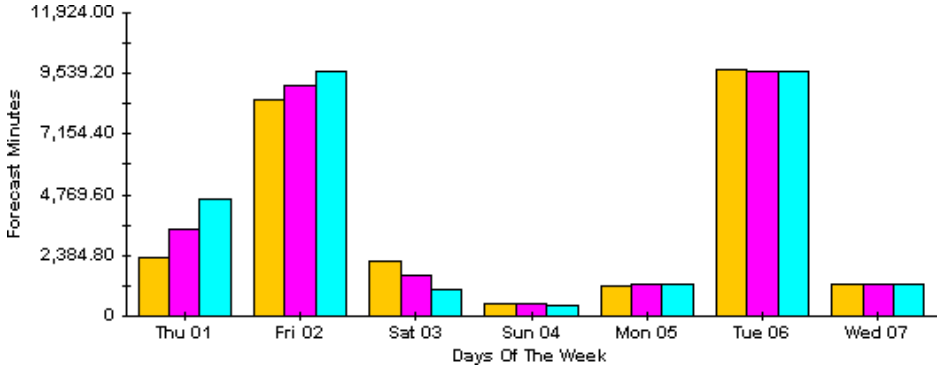
Style > Stacking Area

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



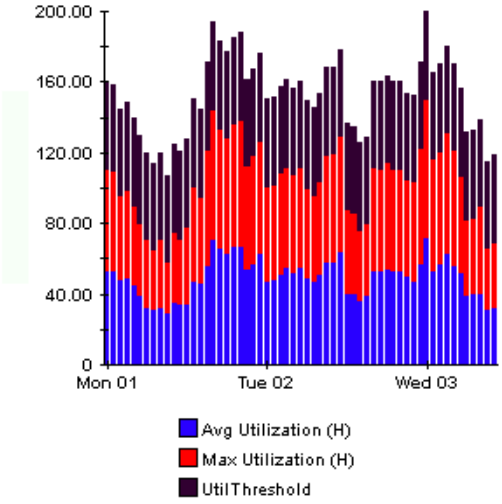
Style > Bar

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.



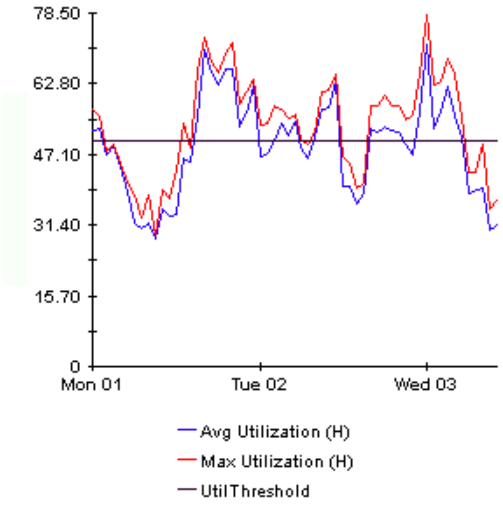
Style > Stacking Bar

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.



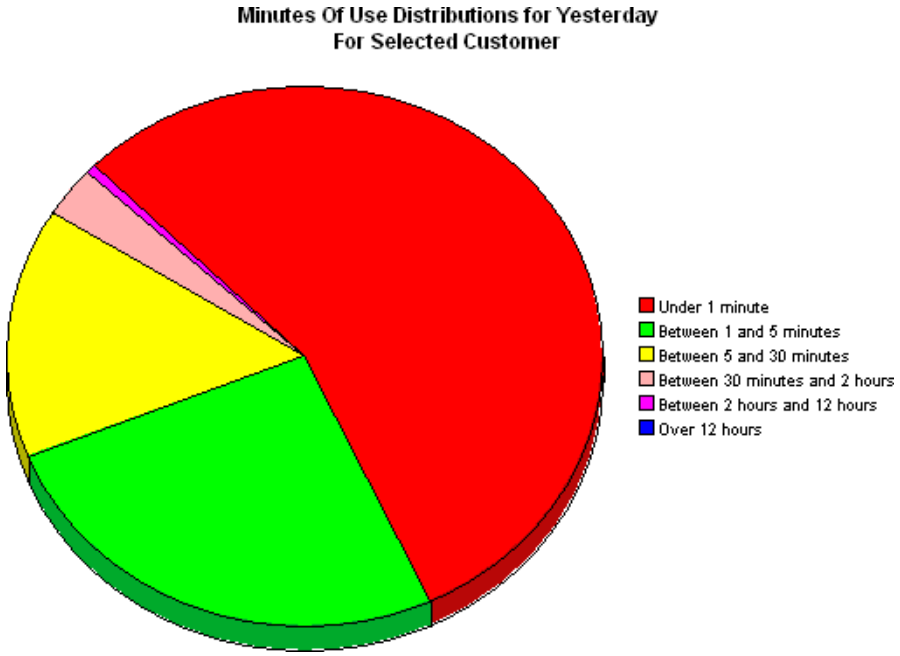
Style > Plot

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

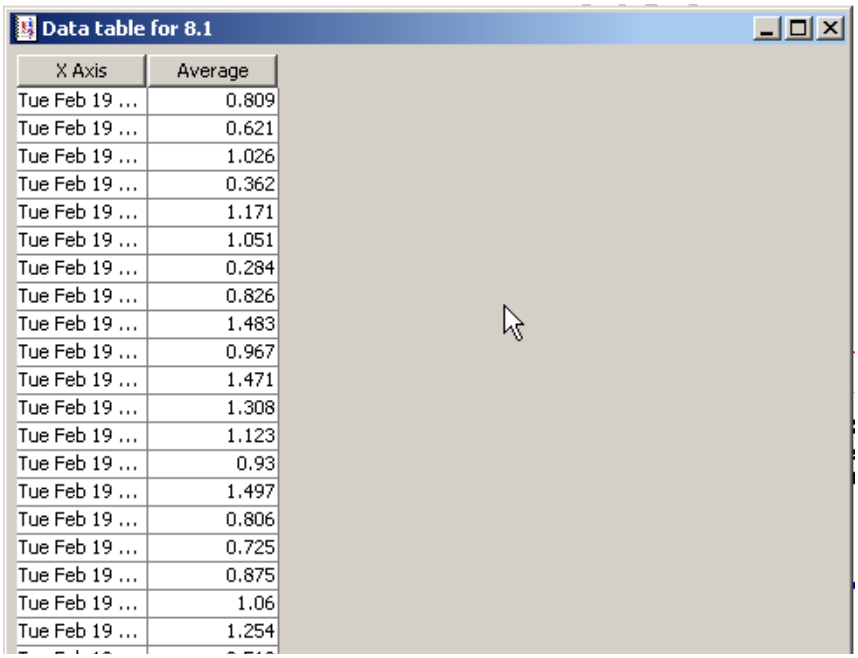
An area graph becomes a pie chart. Bands in an area graph convert to slices of a pie and the pie constitutes a 24-hour period. This view is helpful when a small number of data values are represented and you are looking at data for one day.



If you are looking at data for more than one day, you will see multiple pie graphs, one for each day.

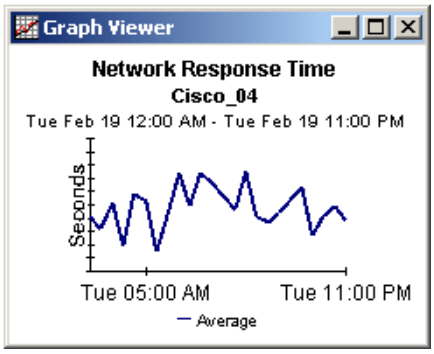
Display Data Table

This option changes a graph into a spreadsheet.



View in New Frame

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



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