

Precise Alerts™

User Guide

Version 10.0.x

IDERA

Precise™ Alerts User Guide

Copyright © 2019 Precise Software Solutions, Inc. All rights reserved.

Document release version 1.0

Precise™, Precise Software™, the Precise™ Logo, Precise i³™, Precise Indepth™, Precise Insight™, Precise Savvy™, SmarTune™, Performance Warehouse™, Application Service Dashboard™, Precise for Storage Tiering™, Precise for Storage Tiering Plus Apps™, Precise for Database & Storage™, Precise for Applications™, Precise for Storage™, Precise Insight Inquire™, Performance Management Database™, and PMDB™ are trademarks or registered trademarks of Precise Software Solutions, Inc. or its affiliates in the U.S. and other countries. Other names may be trademarks of their respective owners.

The product described in this document is distributed under licenses restricting its use, copying, distribution, decompilation and/or reverse engineering. No part of this document may be reproduced in any form by any means without prior written authorization of Precise Software Solutions, Inc. and its licensors, if any.

Certain third-party software may be distributed, embedded, or bundled with this product or recommended for use in connection with its installation and use. Such third-party software is separately licensed by its copyright holder. The list that includes the names of the copyright and license agreements can be found in the Release Notes document.

THE DOCUMENTATION IS PROVIDED "AS-IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID. PRECISE SOFTWARE SOLUTIONS, INC. SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, PERFORMANCE, OR USE OF THIS DOCUMENTATION. THE INFORMATION CONTAINED IN THIS DOCUMENTATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

The Licensed Software and Documentation are deemed to be commercial computer software as defined in FAR 12.212 and subject to restricted rights as defined in FAR Section 52.227-19 "Commercial Computer Software - Restricted Rights" and DFARS 227.7202, "Rights in Commercial Computer Software or Commercial Computer Software Documentation", as applicable, and any successor regulations. Any use, modification, reproduction release, performance, display or disclosure of the Licensed Software and Documentation by the U.S. Government shall be solely in accordance with the terms of this Agreement.

Global Headquarters

Brookhollow Central III
2950 North Loop Freeway West, Suite 700
Houston, Texas 77092
Phone: +1-877-693-1886
Fax: +1-650-898-1666

Third-party legal notices

Third-party software may be recommended, distributed, embedded, or bundled with this Precise product. Such third-party software is licensed separately by its copyright holder. All third-party copyrights associated with this product are listed in the accompanying release notes.

Customer Support

For technical assistance, visit our customer portal at <http://www.idera.com/support/productsupport> where you can find an extensive knowledge base, product updates and our online community forums. You can also contact our Customer Support Team using our customer portal, or go to <http://www.idera.com/support/productsupport> for a list of our support access numbers in your country.

Contents

Chapter 1 Introducing Alerts

About Alerts	6
Improved performance management	6
Integrating with other Precise products	7
Components of Alerts	7
Precise FocalPoint	8
Alerts FocalPoint	8
PMDB	8
Alerts FocalPoint processes	8
InformPoint agents	9
How Alerts works	10
Where to get more information	10

Chapter 2 Precise Alerts basics

About the Precise bar	11
Tasks common to most tabs	12
Switching to a different tab	12
Determining which table columns to display	12
Copying data to the clipboard	12
Exporting to Precise Custom Portal	13
Adding, viewing, and deleting Favorites	13
Sending an email message	14
About the Alerts user interface	14
Launching Alerts	14
Alerts user interface elements	15
About the Tab heading	16
About the Metric status legend	16
About the Alerts tree	17

Chapter 3 Working with Alerts

Investigating alerts	20
Launching Alerts	20
Carrying out further examination of an alert in the Alerts tab	20
Manually initiating the metric sampling process	20
Launching other Precise products	21
Configuring Alerts settings	21
Editing metrics	21
Process Availability alerts	21
About editing metric properties	23
Defining actions on the Actions tab	23
Using dynamic parameters in actions	23
Setting Alerts SNMP connectivity	23
Browsing the Alerts MIB	23
SNMP trap operation	24
Alerts MOM connectivity	24
Creating customized metrics	24

Chapter 4 Metric sets

About Metric sets	25
Status set	26
Performance set	26
Load set	27
Service set	27
Performance trending set	27
Load trending set	28
Precise status set	28
Customized set	28
Glossary.....	29
Index.....	29

Introducing Alerts

This section includes the following topics:

- [About Alerts](#)
- [Components of Alerts](#)
- [How Alerts works](#)
- [Where to get more information](#)

About Alerts

In a world where organizations rely on their information systems, avoiding problems that affect service to end-users is of prime concern. Proactive monitoring enables organizations to avoid such conditions by predicting potential problems before they occur. It focuses on identifying conditions that may lead to problems or that indicate that a problem may develop. This enables you to implement corrective solutions before problems surface.

Alerts, is an alerting product that helps you manage your system performance proactively. With Alerts, you can effectively detect availability and performance problems and react quickly to solve them.

Alerts samples data collected by other Precise products for the values of a set of metrics and compares these values with a predefined set of values, called thresholds. When the value of a metric exceeds the metric's threshold value, Alerts alerts you through its user interface. It can even perform a defined corrective action.

A major cause of performance problems is imperfect application design. Therefore, monitoring the effectiveness of utilization and the efficient handling of data by the monitored servers are crucial to optimizing performance.

Alerts achieves this by focusing on the following:

- The resources and objects of the sampled devices
- The way your applications use those nodes to detect potential bottlenecks

Improved performance management

IT and operations staffs frequently ask questions like, "I cannot sit next to my console day and night looking for problems in the system. How can I find out immediately when something goes wrong?" and "How can I find out a performance problem exists before receiving complaints from our end-users?"

Using Alerts, IT and operations staffs can focus their valuable time on other activities. Alerts continuously and proactively monitors the health of critical applications.

When Alerts detects a performance problem, it will warn you before the problem affects the service to your end-users. Alerts can even draw your attention to performance problems that occur overnight or while you are away from your desk. To do so, Alerts sends you an email or an SNMP message. In addition, Alerts automatically logs all alerts to keep you fully up-to-date on system performance, no matter when a problem occurred.

When the threshold of a performance metric is exceeded, Alerts alerts you and triggers a user-defined automatic response. You can define thresholds and sampling frequencies for performance metrics using the Alerts user interface, without having to customize the code of your application.

Integrating with other Precise products

Precise consists of the following product suite:

- Alerts
- Report Manager

Alerts and Report Manager are used to support the Detect stage of the Precise methodology. They will alert you to performance problems early in their development and provide you warehouse-type information to support long-term profiling, trend and capacity analysis.

- Precise Custom Portal

The Precise Custom Portal is a lightweight, configurable portal application that provides access to various types of data from different applications. The Precise Custom Portal features a Web-based view. It is highly customizable and extensible, allowing you to build a dashboard for each user or each function within your organization. For example, you can build a dashboard for all the information that a system administrator or director of IT operations would need to constantly follow up on. This component is automatically installed as part of the Precise framework installation.

- Insight

Insight products monitor the response times of systems and break these times down into the various tiers and components. Insight products also provide tier-specific metrics to help understand the activities in each tier.

- Precise for Web
- Precise for SAP
- Precise for J2EE
- Precise for Microsoft .NET
- Precise for Oracle
- Precise for DB2
- Precise for SQL Server
- Precise for Sybase

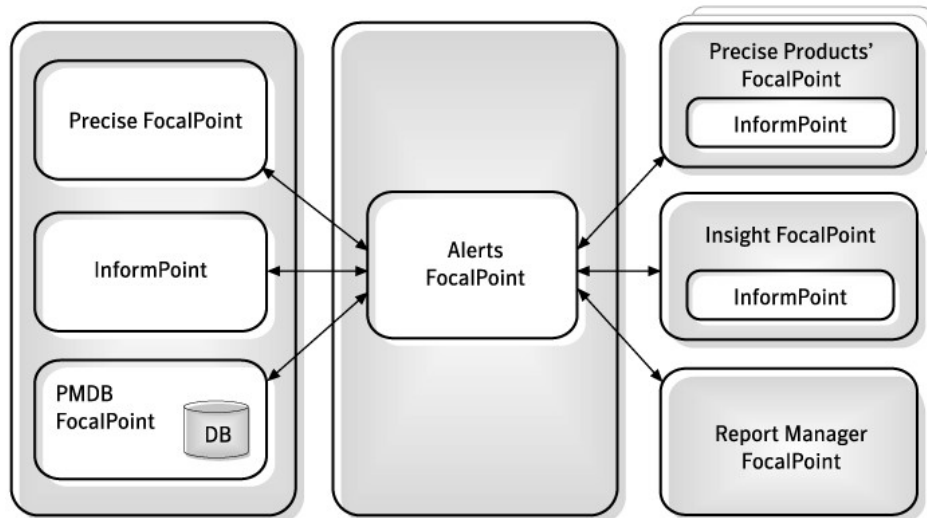
These “Precise for” products provide a way to drill down into problematic tiers to identify and isolate root causes of performance problems. They can also assist in identifying and assessing solutions.

Components of Alerts

Alerts uses a distributed architecture that enables you to monitor performance in your entire application from a single control point.

The following figure illustrates the Alerts architecture.

Figure 1-1 Alerts typical architecture



Alerts consists of the following components:

- Precise FocalPoint and a Web server that communicates with the client's browser.
- One Alerts FocalPoint that is installed on a system server (or a dedicated server).
- InformPoint agents that are installed on one or more servers in your application. These InformPoint agents sample information from all Precise products (only one agent installation is required for each server).
- One InformPoint agent that is automatically installed on the server where Alerts FocalPoint is installed. This InformPoint agent samples the Status set metrics, and is also available for sampling metrics of Precise products. (If this InformPoint agent is uninstalled, the metrics of the Status set metrics will not be available.)

See [Status set](#).

- One or more Internet Explorer windows may be activated on the client-side. Working with Alerts, you may open as many clients as you want.

Precise FocalPoint

Precise FocalPoint is the main FocalPoint of all Precise suite products. FocalPoint is a Precise infrastructure component that communicates with its own distributed agents, each of which gathers information from the other Precise agents on a Tier and stores it locally.

Alerts FocalPoint

Alerts FocalPoint collects data from all InformPoint agents, stores it, and then processes it according to user requests. By processing data in its FocalPoint, Alerts keeps the consumption of your system's resources at a minimum.

The Alerts FocalPoint software consists of the following components:

- PMDB
- Alerts FocalPoint Processes

PMDB

Alerts FocalPoint stores the sampled data, which is collected by the Alerts agents, in the PMDB. In addition, it stores all Alerts configuration data.

Alerts FocalPoint processes

The Alerts FocalPoint processes perform the following functions:

- Processing sampled data retrieved by InformPoint agents from Precise products. FocalPoint writes the data it receives into the PMDB and, if required, generates actions.
- Communicating with the user interface. Requests issued by users are sent using the user interface to Alerts FocalPoint. The Alerts FocalPoint processes obtain relevant data from either the PMDB or the InformPoint agents, process the data, and send it back to the user by using the user interface.
- Maintaining the PMDB by periodically purging old data.
- Generating pre-defined actions such as:
 - Sending email messages.
 - Displaying popup messages on any open Alerts user interface.
 - Running a program on the FocalPoint server and on the servers where the instance is running.
 - Sending SNMP traps to any SNMP-based management system.

When SNMP is enabled, then Alerts FocalPoint can receive SNMP Get and Set requests, to read or update the PMDB accordingly.

InformPoint agents

The InformPoint agents collect performance data in your system by running pre-defined (generic) metrics and user-defined metrics (customized metrics).

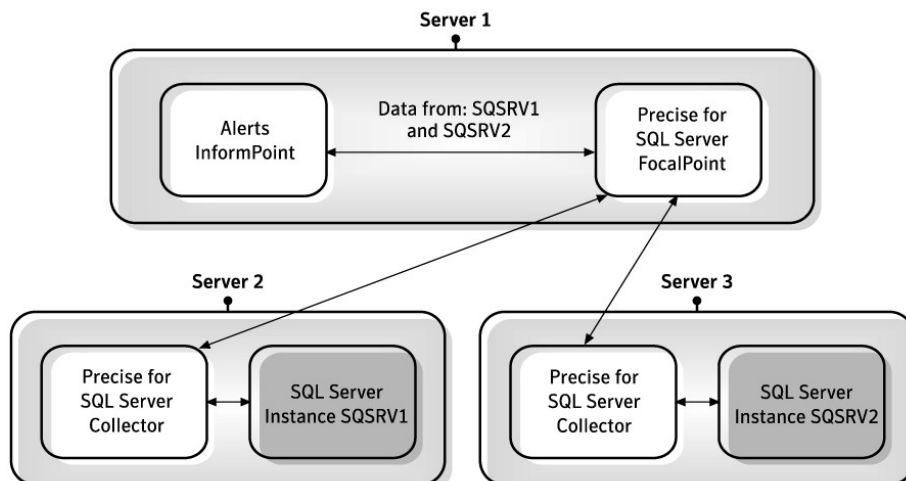
The InformPoint agents process the retrieved data and report to the Alerts FocalPoint. Alerts FocalPoint then correlates this information to provide the current status of the different instances' performance in your application and to alert you to any problematic changes.

The other agents of Precise products collect and process the performance data of the monitored instance and send it to the appropriate FocalPoint of the Precise product. InformPoint, which is installed on the same server as the product's FocalPoint, requests data for all the instances monitored by that product directly from the product's FocalPoint.

Customized Metrics are designed to be executed on the instance server. An InformPoint agent must only be installed on the sampled instance server (using the Agent Installer) if one or more customized metrics for sampling the instance will be defined. For sampling all other Precise product metrics, InformPoint will be installed automatically on the same server of the Precise product FocalPoint server as part of the Precise product FocalPoint installation. InformPoint should not be installed manually using the Server List page (the third stage in the Precise Agent Installer process) if no customized metrics are going to be defined for sampling instances on this server.

The figure below illustrates the typical architecture of InformPoint agents.

Figure 1-2 InformPoint agents



In this example, Alerts monitors a Precise for SQL Server installation. The Precise for SQL Server installation includes two instances on different servers, QSRV1 and QSRV2. To enable Alerts to monitor the Precise for SQL Server product, an InformPoint agent is installed on the Precise for SQL Server FocalPoint (Server 1). Alerts InformPoint collects the alerts data from the Precise FocalPoint product.

See [Creating customized metrics](#).

How Alerts works

Alerts proactively monitors the performance in your application from a centralized location called Alerts FocalPoint. Alerts agents—called InformPoints—query all Precise products. The InformPoints retrieve performance data collected by the Precise products, analyze it, and generate alerts if the predefined thresholds are exceeded.

These alerts are then sent to Alerts FocalPoint, which processes the information, saves it in a local database, and activates any action that is defined for the specific alert.

Once a metric is sampled, the value of the metric is compared to a predefined set of values called thresholds. When the value of the metric exceeds one of the metric's threshold values, an alert is generated and the status of the metric is changed to near-critical or critical.

Metrics are grouped into metric sets. The status of the metric set is the overall status of its metrics. You can monitor the status of metric sets and metrics through the Alerts tab.

To proactively monitor your application, you can define actions that Alerts will automatically perform if it detects a warning or critical status for a specific metric. For example, you can configure Alerts to send an email message, display a pop-up message, run a program, send SNMP traps, or send MOM alerts to the MOM Server.

You can change the default properties of a metric to suit the special requirements of your application. For example, you can change the near-critical and critical thresholds and limit information to be included.

Another important aspect of monitoring is a look at the overall activity to identify current performance problems and compare the load and service of different components.

Where to get more information

More information on Precise, its products, technical notes, and so on, can be found in the Release Notes document for this version.

Precise Alerts basics

This section includes the following topics:

- [About the Precise bar](#)
- [Tasks common to most tabs](#)
- [About the Alerts user interface](#)
- [Launching Alerts](#)
- [Alerts user interface elements](#)

About the Precise bar

The Precise bar enables you to keep track of where you have been and provides various controls. The following table below describes the function of each of the toolbar buttons.

Table 2-1 Precise bar functions











Icon	Name	Description
	Back	During a work session, keeps track of where you have navigated to. The Back button enables you to navigate between previously visited views. The Back control displays your previous view.
	Forward	Enables you to navigate to the next view. This button is only enabled if you clicked Back or if you chose a history option.
	Stop	Stops a request for information from the server.
	Refresh	Updates the data currently displayed.
	Home	Navigates to the highest level entity, usually the instance or tier (all instances). The time frame settings remain the same.
	Send	Opens new email message in your email program with the link to the current application in context.

Table 2-1 Precise bar functions

Icon	Name	Description
	Help	Opens the online help in context.
	Favorites	Enables you to add or remove favorites in your Favorites list.
	Settings	Lets you configure process availability settings.
	AdminPoint	Launches Precise AdminPoint.

Tasks common to most tabs

The following tasks are commonly performed in most tabs:

- [Switching to a different tab](#)
- [Determining which table columns to display](#)
- [Copying data to the clipboard](#)
- [Exporting to Precise Custom Portal](#)
- [Adding, viewing, and deleting Favorites](#)
- [Sending an email message](#)

Switching to a different tab

You can easily switch between the different tabs using the Tab Selection bar. When you start your Precise product, the Dashboard tab opens by default. For other Precise products, another tab will open by default. The button of the selected tab is displayed in orange.

To select a tab

- Click a button on the Tab Selection bar to display information on the selected entity in a different tab.

Determining which table columns to display

Tables are used to display information about a set of related entities. It is possible to determine which columns to display in the area tables.

To determine which columns to display in a table

1. Click the Table icon on the upper right-hand side of a table and select **Column Chooser**.
2. In the Table columns dialog box, click the arrows to move the names of the columns that you want to display to the Visible box and the ones that you do not want to display to the Invisible box.
3. Click **OK**.

Copying data to the clipboard

At times you may want to save data displayed in the table area in a Microsoft Excel spreadsheet for further analysis. To copy data displayed in the table to the clipboard

1. Click the Table icon on the upper right-hand side of the table and select **Copy to clipboard**.
2. Open a Microsoft Excel spreadsheet and choose Paste from the Edit menu.

Exporting to Precise Custom Portal

The Export to Precise Custom Portal Portlet feature enables you to export the view of the chosen table or graph and generate a portlet with that view in Precise Custom Portal, so that it will provide you with another way of monitoring your application.

Prerequisites

To be able to use this feature, you need to have the following rights in Precise:

- View permissions to all Tiers in the application.

If you do not have sufficient rights, you will get an error message when trying to execute this feature.

Exporting the information

You can either export a table view or a graph view.

NOTE The name field has the following restrictions: maximum 100 characters.

To export a table view

1. Click the Column Chooser icon.
2. Select Export to Precise Custom Portal Portlet.
3. Insert a name in the name field that clearly describes the table view.
4. Click **OK**.

To export a graph view

1. Right-click the graph.
2. Select Export to Precise Custom Portal Portlet.
3. Insert a name in the name field that clearly describes the graph view.
4. Click **OK**.

Adding, viewing, and deleting Favorites

The Favorites feature allows you to save a specific location in your application and to retrieve the same location later without having to navigate to it.

About the Favorites feature

The new Favorites feature includes the following options:

- **Relative Time Frame.** Saving relative time frame instead of static date. For example, saving the last 7 days will always display the last 7 days, depending on the day entered.
- **One click to specific location.** Once you open Precise by launching a saved Favorite item, you will not have to enter a login credential nor click the login button.
- **IE Favorites support.** Adding a new Favorite item in Precise will also add it to the IE Favorites menu.
- **Auto Complete.** The Favorites dialog includes a new combo box which supports Auto Complete.
- **Auto Naming.** The Favorites dialog generates item names based on the current location.

UI description

An Add/Delete Favorites option under the Favorites menu allows you to save the current location or delete an existing one.

To add a new Favorite location

1. On the Add/Delete Favorites dialog box, enter the name of the new Favorites entry.
2. Click **Add**. The dialog box is closed and the new Favorite is added to the list.

To view a Favorites location

1. On the Precise bar, click **Favorites**.
2. Select the Favorites location you want to view.

To delete an existing Favorite location

1. On the Add/Delete Favorites dialog box, select the Favorite location to be deleted.
2. Click **Delete**. The dialog box closes and the selected Favorite is deleted from the list.

NOTE The favorite address is displayed in the Address field and cannot be edited.

Sending an email message

You can send an email message to one or more recipients from the Precise toolbar. The default subject for the message will be "Link to a Precise application".

The email will include a link to the Precise product in the current context (time frame and selected entries).

To send an email message

1. Click the email icon on the Precise toolbar. The default email program opens.
2. Fill in the required fields and click **Send**.

About the Alerts user interface

Alerts is a Web-based application. This means that you do not need to install any special software on your desktop to use Alerts. Instead, the application opens in a normal browser window.

Because Alerts is Web-enabled, you can access it from almost any location that is connected to the World Wide Web as long as you can access your Alerts FocalPoint server.

Although Alerts opens in a browser window it is important to understand that it is an application rather than a Web site. To perform activities within Alerts, you must use the Alerts controls, not the ones of your browser. You should not open information in a New Window, and you should not use the Back or Refresh hot-keys. Instead, use the Precise bar.

Launching Alerts

You launch Alerts from the Application screen or by selecting the Alerts tab on the Dashboard screen. From the Alerts screen, you can view alerts from Application level down to metrics level. Each of these alert levels helps you to isolate the causes of the alerts in the monitored application.

Red or yellow AppTier icon colors indicate a critical or near-critical alert condition. Green AppTier icon colors indicate normal conditions. For a description of the metric status icons see [About the Metric status legend](#).

Alerts can be generated for the following:

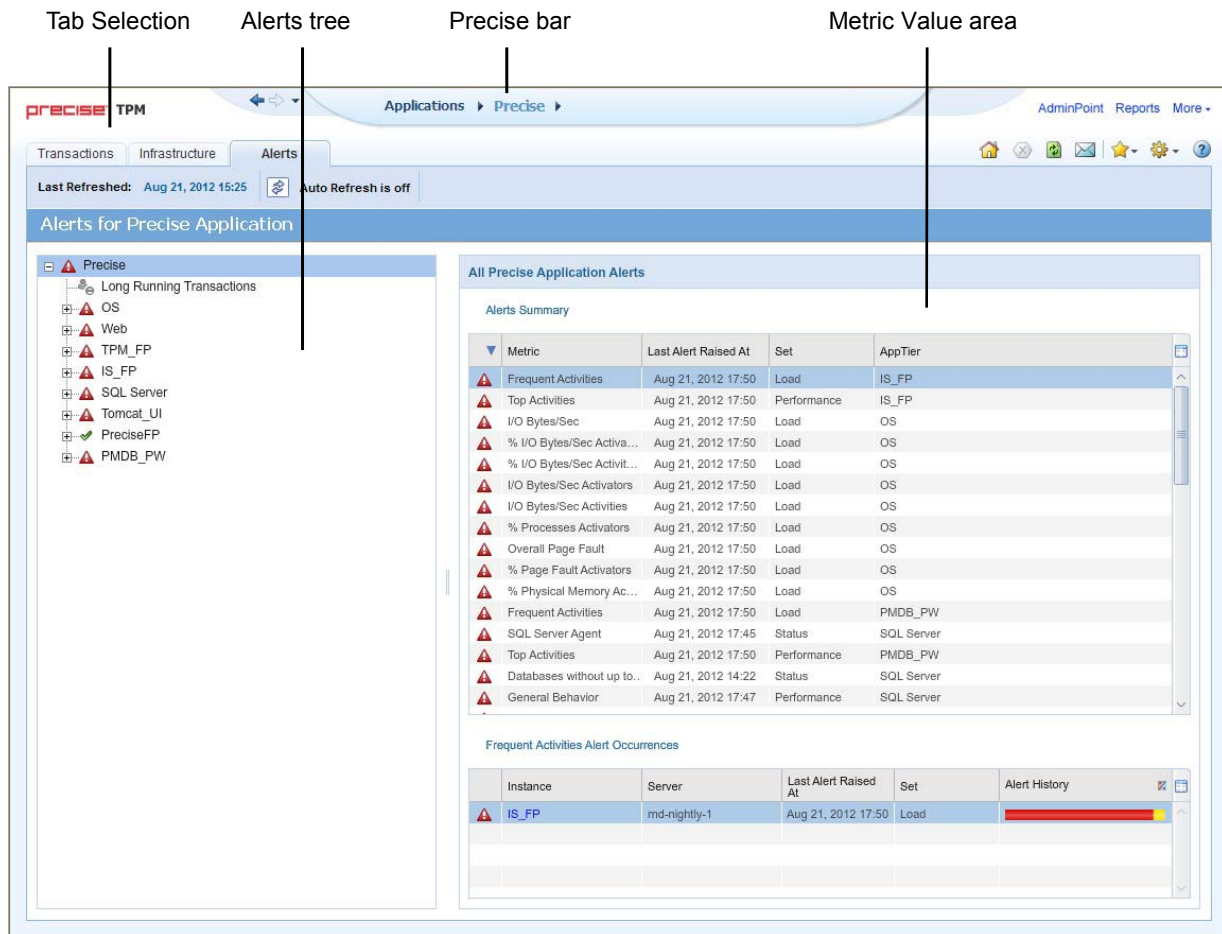
- Activity
- Service
- Trending
- Status

To launch Alerts from the Applications screen:

1. Click the required application from the Applications list.
2. In the Environmental map area, do one of the following:
 - a. Click Alerts.
 - b. Click a specific Tier, and from the pop-up menu select Alerts. The Alerts screen opens for the specified Tier tab.

The following figure shows an example of the information displayed when you open the Alerts tab for the first time.

Figure 2-1 Alerts Tab



Alerts user interface elements

The Alerts user interface consists of one main screen from which you can access the various alerts.

The Alerts tab display performance, availability, and management data on monitored instances in your application, in table format.

The left side of the main screen lists the Alerts in the following levels:

- Application level
- AppTier level.
- Instance level.
- Metric level.

The right side of the main screen provides details of the alerts according to the element selected in the tree on the left side of the screen as follows:

- Application level
 - All application alerts listing:
 - Alerts Summary
 - Alert Occurrences

- AppTier level
 - AppTier alerts listing:
 - Alerts Summary
 - Alert Occurrences

- Instance level
 - Instance alerts listing all alert instances

- Metric level
 - Details of the instances of the alert including the following details:
 - Metric description
 - Alert current and historical occurrences
 - Alert value
 - What to do next

About the Tab heading

The Tab heading provides information about the refresh status. It contains the following:

- Display of the date–and–time when the current tab was last refreshed.
- Auto-Refresh toggle button that also indicates whether it is On or Off. When the Auto-Refresh is On, the tab information is refreshed every one minute.

The Auto-Refresh is On by default, to display the most updated information, in the Cross-Tiers tab and Instances tab of the Tier tab.

The Auto-Refresh is Off by default in the Metrics tab of the Tier tab, because this tab is used for further investigation of specific metrics.



About the Metric status legend

The metric status legend contains icons that indicate the different alert statuses. The table below describes the status icons.

Table 2-2 Status icons

Icon	Status	Description
	Key Metric	Indicates that the metric is defined as a key metric, which is a metric that monitors an important performance aspect. You can define a metric as a key metric through the Thresholds tab of the metric properties.
	Critical	Indicates that the metric value exceeds the defined Critical threshold value.
	Near-Critical	Indicates that the metric value exceeds the defined Near-Critical threshold value.
	Normal	Indicates that the metric value falls in the defined acceptable range.
	Down Time	Indicates that the metric is not sampled due to Down Time definition of the metric's technology or when the sampled instance is not available. You can set the Down Time definition through AdminPoint. See the <i>Precise Administration Guide</i> .

Table 2-2 Status icons

Icon	Status	Description
	Disabled	Indicates that the metric is disabled, and therefore it does not sample or generate alerts. A metric is disabled in case the related Precise product is not installed, or the metric properties are set to stop sampling.
	Not Sampled	Indicates that the metric is not sampled since InformPoint was started, or errors occurred during the sampling process.

See [About editing metric properties](#).

About the Alerts tree

The Alerts tree displays the highest alerts in the Tier level, thus simplifying the identification of exceeding metrics.

About Alert metrics

The right side of the Alerts tab displays the following information according to the element selected in the Tiers tree.

- All Application Alerts
- Application Level Metrics
- AppTier Alerts
- Instance Alerts
- Metric Details

All Application Alerts

The table below describes the details displayed in the All Application Alerts table that is displayed when you select the application in the Alerts tree.

Table 2-3 Alerts Summary - All Application Alerts

Column	Description
Alert	Indicates the highest alert severity level of the metric
Metric	Indicates the metric name.
Last Alert Raised At	Indicates the timestamp of the most recent sample.
Set	Indicates the metric set.
AppTier	Indicates the AppTier name of the metric.

When you select an entry in the Alerts Summary table, details of the instance of the alert are displayed in the Metric Alert Occurrences table.

The table below describes the details displayed in the Metric Occurrences table.

Table 2-4 Metric Alert Occurrences

Column	Description
Instance	Indicates the instance that is sampled by the metric.
Server	Indicates the server name where the instance (that is sampled by the metric) is running.
Last Alert Raised At	Indicates the timestamp of the most recent sample.
Set	Indicates the metric set.

Table 2-4 Metric Alert Occurrences

Column	Description
Alert History	<p>Appears only in the Metrics table. Indicates the number of normal, near-critical, and critical alerts that occurred during a pre-defined history period. The number of alerts does not include user-triggered samples (Resamples) from that history period.</p> <p>You can display the bar either in absolute values or relational values (percentage of the total alerts) by clicking the rectangle in the column header.</p> <p>You can modify the history period through the Settings dialog box.</p>

Application Level Metrics

Lists the Application level metrics for all applications. In version 9.5 the only Application level metric is Long Running transactions. The details shown on this page are the same as those show for Instance Alerts, see [Instance Alerts](#).

AppTier Alerts

The table below describes the details displayed in the AppTier Alerts table that is displayed when you select an AppTier in the Alerts tree.

Table 2-5 AppTier Alerts

Column	Description
Alert	Indicates the highest alert severity level of the metric.
Metric	Indicates the metric name.
Last Alert Raised At	Indicates the timestamp of the most recent sample.
Set	Indicates the metric set.

When you select an entry in the AppTier Alerts table details of the instance of the alert are displayed in the Metric Alert Occurrences table.

The table below describes the details displayed in the Metric Occurrences table.

Table 2-6 Metric Alert Occurrences

Column	Description
Instance	Indicates the instance that is sampled by the metric.
Server	Indicates the server name where the instance (that is sampled by the metric) is running.
Last Alert Raised At	Indicates the timestamp of the most recent sample.
Set	Indicates the metric set.
Alert History	Indicates the samples taken organized by time.

Instance Alerts

The table below describes the details displayed in the Instance Alerts table that is displayed when you select an instance in the Alerts tree.

Table 2-7 Instance Alerts

Column	Description
Alert	Indicates the highest alert severity level of the metric.
Metric	Indicates the metric name.

Table 2-7 Instance Alerts

Column	Description
Last Alert Raised At	Indicates the timestamp of the most recent sample.
Set	Indicates the metric set.
Alert History	Indicates the samples taken organized by time.

When you select an entry in the Instance Alerts table details of the instance of the alert are displayed in the Metric Details table (see [Metric Details](#)).

Metric Details

The table below describes the details that displayed when you select a metric in the Alerts tree or in the Instance Alerts table (see [Instance Alerts](#)).

Table 2-8 Metric Details

Column	Description
Metric Description	Detailed description of the metric.
Alert Current and Historical Occurrences	Bar graphic indicating current and historical occurrences.
Alert Value	Displays a sample value for the alert.
What To Do Next	Suggests various options as a next step.

Working with Alerts

This section includes the following topics:

- [Investigating alerts](#)
- [Configuring Alerts settings](#)
- [About editing metric properties](#)
- [Setting Alerts SNMP connectivity](#)
- [Alerts MOM connectivity](#)
- [Creating customized metrics](#)

Investigating alerts

Alerts provides real-time alerts about potential performance problems in your application.

Alerts displays alerts at various levels, which provides alerts summary of the entire application (or few applications if you monitor more than single application). You launch Alerts from the Application screen or by selecting the Alerts tab on the Dashboard screen. From the Alerts screen, you can view alerts from Application level down to metrics level. Each of these alert levels helps you to isolate the causes of the alerts in the monitored application.

The alert levels described in the following topics are ordered from the overview perspective up to the most detailed data:

Launching Alerts

To view the Alerts tab, see [Launching Alerts](#).

Carrying out further examination of an alert in the Alerts tab

The Alerts tab displays the alerts of each AppTier. The Alerts tab includes a Alerts tree that lists all AppTiers, Instances and metrics.

To carry out further examination of an alert

1. In the Alerts tree, click on a row to view the details of a specific alert (for example, a key metric with critical alert).

The details that are displayed on the right side of the screen differ according to the level that you selected in the Alerts tree (see [Alerts user interface elements](#)).

2. Click a row in the table on the right side of the screen to drill down and display details of the specific metric.

Manually initiating the metric sampling process

Metrics are sampled according to the settings of the metric sampling (which can be minutes, hours, or even days). During investigation of an alerted metric, it is important to be sure that the data is the most updated data. Therefore, if you are not sure about the data, you can initiate a sampling process manually.

To manually initiate the metric sampling process

1. On the What To Do Next area, click **Resample**.
2. Wait a few seconds until the sampling process is completed.
3. On the Precise bar, click **Auto Refresh is on** or click **Refresh** to refresh the screen immediately.

NOTE When **Auto Refresh is on**, the screen refreshes automatically according to the settings. You can change the Auto Refresh settings by clicking **Settings** in the Precise bar and choosing **Time Frame Settings**.

Launching other Precise products

To launch the user interface of the relevant Precise product, click the link in the What to do next area.

Configuring Alerts settings

To configure Alerts settings, see [About editing metric properties](#).

NOTE From Alerts version 9.6 on, all metrics (except for some availability metrics) are enabled by default.

Editing metrics

It is possible to edit the properties of each metric that is available in your Precise application, including the AppTiers metrics (FocalPoints, Agents, Processes, and Licenses) in the system generated “i3 Status” application. You can also add customized metrics to a Tier (excluding the AppTiers), or delete customized metrics.

Go to AdminPoint and see the *Precise Administration Guide* to perform the following:

- To configure the Alerts settings
- To edit a metric of a Tier or Tier

Process Availability alerts

Process Availability metrics allow you to monitor a list of processes for specific instances of a specific technology. A process is considered available when running on the server.

The Process Availability monitoring functionality is available for all instances and technologies (Tiers) defined in the Precise installation. You can monitor any process by assigning it to the Process Availability configuration of any instance of any Tier.

The Process Availability metric status is periodically updated every 60 minutes. When a metric status change occurs, the monitoring agent (Insight OS) sends an immediate notification and the status is updated in Alerts within 1 minute.

Functional specification

When you configure Process Availability settings for an instance, a Process Availability metric of the instance is made available. Insight Savvy for OS monitors the availability of instance processes according to the Process Availability settings for the instance. Alerts samples Insight for data that was gathered with a predefined Process Availability metric and sets the metrics alert accordingly. Every change in the Process Availability metric status or content is viewed on the Alerts user interface.

A Process Availability configuration can be defined for all Tier instances as the default configuration (see Instance Association on the Process Availability Settings dialog box). This means that any instance that is recently added to an Tier inherits the Process Availability configuration automatically. In other words, you do not have to manually redefine the configuration for a recently added instance.

Metrics

The Process Availability metric for a specific instance is available on the Alerts user interface only if all of the following conditions are met:

- The Precise framework is installed.
- Alerts and Insight are installed and Insight product is integrated with Alerts.
- Insight OS Agent is installed on the machine the instance is running on.
- The instance is monitored by Alerts (the FocalPoint of the specific instance is integrated with Alerts). This is required so that the instance can be viewed in the Alerts user interface.
- Process Availability settings are defined for the instance.

For more information on the installation of these products, see the *Precise Installation Guide*.

Settings

A Process Availability configuration includes the list of processes that you want to monitor and their respective details. You configure Process Availability in the Process Availability Settings dialog box, accessible from the Alerts user interface.

To add a new Process Availability setting

1. From the Alerts user interface, on the Precise bar, click **Settings>Process Availability**.
2. In the Process Availability Settings dialog box, select the technology you want to work with and Click **Add**.
3. In the Process Availability Setting - Add dialog box, enter a Process Availability Name. Do not leave any empty spaces in the name.
4. Enter User Name (optional). Entering the user name limits the availability of processes search to the collection of processes related to the specified user name.
5. To search for processes stored in the PMDB, enter a name or use wildcards (*) at the beginning and/or end of the word (for example, *sql*) and click **Search Now**.
6. Select each process you want to assign to this definition and click the corresponding arrow to move it to the Processes Assigned to this Definition table.
7. You can Add Other Processes/Wildcard Patterns by inserting them in the text box and moving them to the Processes Assigned to this Definition table (for example, sqlWb*).
8. To create an instance association, select whether to associate to Instances that have not been associated with a Definition or to Specific Instances.
9. If you select Specific Instances, a list of instances that can be monitored (instances that have OS agents installed on the server they are running on) is displayed. Select each instance you want to associate and click the arrow to move it to the table on the right. You can also remove an instance's association by moving the instance back to the table on the left.
10. Click **OK** to accept the settings. The Process Availability Settings dialog box is displayed showing your newly configured Process Availability setting.

The configuration will be deployed and sampled automatically on the selected servers. Data will be available on the Alerts GUI according to the sample rate of the selected metric. If you want to resample, you can do so after a 15 minute wait.

To edit an existing Process Availability definition

1. On the Precise bar, click Settings>Process Availability.
2. In the Process Availability Settings dialog box, select the technology you want to edit.
3. Select the Process Availability Name you want to edit.
4. Click **Edit**.

5. In the Process Availability Settings - Edit dialog box, make the changes you want to the processes definitions and instance associations.
6. Click **OK**.

To delete an existing Process Availability definition

1. On the Precise bar, click Settings>Process Availability.
2. In the Process Availability Settings dialog box, select the technology in which you want to make a deletion.
3. Select the Process Availability Name you want to delete.
4. Click Delete.
5. On displayed confirmation dialog box, click **Yes**.

NOTE If you delete a process availability setting, all instances associated to that setting will automatically be disconnected from the process availability setting and their process availability metric will not be available.

NOTE If you uninstall the OS agent from a server, process availability will not be collected anymore for the instances on this server.

About editing metric properties

Alerts issues alerts according to the metric properties, which must be adjusted to your individual application and organization preferences. The metric definitions must be accurate and adequate. Sampling frequencies and periods require careful considerations. Thresholds need to be set in accordance with the performance level you want to meet.

In addition, alerts must reach the relevant personnel, or in severe cases, management representatives immediately and regardless of their location. Subsequently, the threshold-exceeding values must be examined.

Metric properties are configured by selecting **Settings** in the Precise bar and choosing **Alerts Metric Settings**.

Defining actions on the Actions tab

An application that is monitored by Alerts may generate alerts at any time. Sitting in front of the screen waiting for a metric to go critical may be strenuous and time consuming. Instead, you can set Alerts to inform you about any alert, or to run your repair utility to fix certain problems.

See “Defining actions on the Actions tab” in the *Precise Administration Guide*.

Using dynamic parameters in actions

To use dynamic parameters in actions, go to AdminPoint. See the *Precise Administration Guide* for details.

NOTE The dynamic parameters in actions are not the same as used in customized metrics.

Setting Alerts SNMP connectivity

SNMP (Simple Network Management Protocol) is the Internet standard protocol for network management software. See “About setting Alerts SNMP connectivity” in the *Precise Administration Guide*.

Browsing the Alerts MIB

Before you start browsing the Alerts MIB, it is recommended to be familiar with the following issues:

- Technology representation
- Identifying applications and instances in the MIB
- Identifying metrics in the MIB
- Identifying property fields in the MIB
- MIB structure

See “Browsing the Alerts MIB” in the *Precise Administration Guide*.

SNMP trap operation

Using SNMP trap operations, you can automatically receive alerts in your SNMP server. The trap message contains critical information about the trap alert.

To enable Alerts to send SNMP traps to your SNMP manager, go to AdminPoint. See the *Precise Administration Guide* for details.

Alerts MOM connectivity

See “About Alerts MOM connectivity” in the *Precise Administration Guide*.

Creating customized metrics

Alerts allows you to monitor any performance aspects using pre-defined metrics for each Tier. For data that is not collected by any of the pre-defined metrics, you can create new customized metrics. (Only users with Administrator privilege are allowed to define customized metrics.)

You can create customized metrics in AdminPoint. See the *Precise Administration Guide* for details.

Metric sets

This section includes the following topics:

- [About Metric sets](#)
- [Status set](#)
- [Performance set](#)
- [Load set](#)
- [Service set](#)
- [Performance trending set](#)
- [Load trending set](#)
- [Precise status set](#)
- [Customized set](#)

About Metric sets

Alerts agents, called InformPoints, sample information collected by Precise products for values of a set of metrics and send the sampled data to Alerts FocalPoint. Alerts FocalPoint processes the data, stores it in the FocalPoint database, and, if configured, performs a defined action.

Once a metric is sampled, the value of the metric is compared to a predefined set of values called thresholds. When the value of the metric exceeds one of the metric's threshold values, an alert is generated and the status of the metric is changed to near-critical or critical. You can see full information about the metric on the Metric Properties dialog box.

Metrics are grouped into metric sets. All Metric sets are Tier-dependent (except Status set, which is available for all Tiers and the Precise Status set, which is Cross-Tier dependent), meaning that each set is available for specific Tiers only. The status of the metric set is the overall status of its metrics. You can use the Alerts tab to monitor the status of metric sets and metrics.

The table below describes to which Tiers the metric sets are relevant.

Table 4-1 Metric set dependency

Tier/Metrics Set	Status	Performance	Load	Service	Performance Trending	Load Trending
OS	+	+	+		+	+
Web Client	+	+	+	+	+	+
J2EE	+	+	+	+	+	+
DB2	+	+				
WebSphere MQ	+	+	+	+		
Tuxedo	+	+	+	+	+	+

Table 4-1 Metric set dependency

Tier/Metrics Set	Status	Performance	Load	Service	Performance Trending	Load Trending
Oracle	+	+	+	+	+	+
SQL Server	+	+	+	+	+	+
EMC Storage		+	+		+	+
SAP	+	+	+	+	+	+
Oracle Applications	+	+	+	+	+	+
Other	+	+	+	+		
Microsoft .NET	+	+	+	+		
Sybase Replication Server		+				

NOTE The Performance Trending and Load Trending metric sets include metrics that are sampled by Report Manager, that is, each metric alerts to one or more Report Manager exception reports. For more information, see the *Report Manager User's Guide*. Maintenance metrics are available in the Service set.

See [About Alerts metrics](#).

Status set

The Status set includes metrics that report the status of the instance and maintenance metrics. If the instance applies to several components, then several metrics may appear. If the instance has any other status indication, a relevant metric should also appear. For example, in Oracle Tier, the Oracle alert log indicates information relevant to the general activity of the instance.

The Maintenance metrics report on maintenance issues relevant to the specific instance type, for example, for an Oracle database, report on objects with a high number of extents. The Maintenance metrics are relevant to Oracle and SQL Server Tiers.

Performance set

The Performance set helps find performance bottlenecks in your system.

It includes the following metrics that measure the level of performance currently achieved by the system:

General Behavior	Measures the resources consumption of the instance to detect times when the instance consumes a higher level of resources than is normal (according to definition), for example when the instance level memory usage is high.
------------------	---

Top Activities	Reports on resource consumption of activities to allow the detection of activities that are high resource consumers, for example, Oracle programs using a high percentage of Oracle resources. The alert is generated on an activity level, that is, as a percentage of the resources the activity used out of the resources that the instance consumed. For example, when an SQL statement in the Oracle Tier is using 20% of the total resources consumed by the Oracle instance.
Top Activators	Report on resource consumption of activators to allow the detection of activators that are high resource consumers, for example, Oracle users consuming a high percentage of Oracle resources. The alert is generated on an activator level (such as, Users, Locales, and IPs). The Top Activators are displayed as a percentage of the resources the activator consumed out of the resources that the Oracle instance consumed.
Long I/O waits	Reports on I/O waits to allow the detection of objects that have a long access time and are causing activities to have a long I/O wait time while accessing them. The alert is generated on an I/O object level, that is, as a percentage of the I/O wait time the I/O file spent out of the total I/O wait time that the Oracle instance spent.
Internal performance metrics	Reports on internal components and procedures of the instance. These metrics are Tier-specific, for example, for an Oracle database, a report on SGA utilization, on Oracle sessions that are waiting for a lock, and so on.

Load set

The Load set helps to identify any increase of load on the system, which can cause a decrease in the performance. It includes the following metrics that measure the load on the system:

Frequent Activities	Reports on activities that have a high number of executions compared to the total number of executions in the instance. This might help you point out abnormal activities, wrong use of the system, and so on.
Frequent Activators	Reports on originators that have a high number of executions compared to the total number of executions in the instance. This might help you point out abnormal originators; for example, SAP users running many transactions.
High I/O activity	Reports on I/O objects that have high access hits compared to the total number of accesses in the instance. This might help you point out objects that were accessed many times compared to all other objects in the system.
Internal load metrics	Indicates the internal load. This might help you point out times when instance resources are exceeded. For example, when the number of logged-in users approaches, reaches, or transgresses the allowed maximum, and so on.

Service set

The Service set includes SLA metrics. The SLA metrics indicates the actual service level compared to the predefined SLAs. These metrics help to identify a decrease in response time.

NOTE	Alerts samples the data for the Service metrics from Insight and not from the “Precise for” products (except for SAP and Web Tiers, which retrieve their Service data from their “Precise for” products and not from Insight).
-------------	--

The following SLA metrics are included:

Overall SLA Compliance	Reports on the total instance performance not conforming to the defined SLA.
SLA Breaching Activities	Reports on activities that exceeded their defined SLA, for example, programs taking longer than defined.
SLA Breaching Activators	Reports on activators that get bad response times, for example, users suffering from SLA breaches.

Performance trending set

The Performance Trending set helps you point out problematic performance aspects that cannot be pinpointed in the short term.

The performance trending set holds the following metrics that measure the performance of the instance over a longer period of time:

Instance Performance (Exceptions)	Based on daily and/or monthly Report Manager reports that compare the instance performance to a baseline.
Activity Performance (Exceptions)	Based on daily and/or monthly Report Manager reports for the different activities that: <ul style="list-style-type: none">○ Compare the average performance of each activity to its baseline.○ Compare the average time of all the activities to a baseline.
Internal performance trending metrics	Includes metrics based on daily and/or monthly Report Manager reports that compare the performance of internal instance components to their baseline.

The metrics in this set are sampled by Report Manager.

Load trending set

The Load Trending set helps you identify a change in the load levels of the system that cannot be pinpointed in the short term.

It holds the following metrics that measure the load of the instance over a longer period of time.

Activity Volume (Exceptions)	Based on daily and/or monthly Report Manager reports that compare: <ul style="list-style-type: none">○ The number of executions of an activity in relation to its baseline.○ The percentage of executions of an activity to the total of executions of all the activities in relation to a baseline.
Activator Volume (Exceptions)	Based on daily and/or monthly Report Manager reports that compare: <ul style="list-style-type: none">○ The number of executions by each activator in relation to the relevant baseline.○ The percentage of executions by activator to the total of executions by all activators in relation to a baseline.

The metrics in this set are sampled by Report Manager.

Precise status set

The Precise status set is available in the Precise Status application for Cross-Tiers.

NOTE Metrics for the i3 Status application do not appear in the alerts report on screen, and are indicated by the action items defined in the metric properties only. See the *Precise Administration Guide* for details.

FocalPoints	Indicates the FocalPoint agents' status.
Agents	Indicates the agents' status, excluding FocalPoint agents.
Licenses	Indicates the license status of Precise components.
Processes	Indicates the status of PMDB processes.

Customized set

The Customized set holds all user-defined metrics. You can create customized metrics to sample any system data. You can create customized metrics in AdminPoint. See the *Precise Administration Guide* for details.

abandonment rate	In Web, a counter that keeps track of the percentage of users that abandon the loading of the Web page before it completes downloading.
action	An operation that Alerts FocalPoint automatically performs when detecting a warning or critical status for a specific metric. According to the defined action, Alerts FocalPoint opens a message box, sends an email or SNMP trap, or executes a program.
action item (manual)	Some installation steps cannot be executed automatically by Precise Installer. The administrator is required to execute them manually. Action Items are presented (when necessary) at end of installation or product update.
AdminPoint	The central administration console of Precise that facilitates the maintenance, configuration, and management of all installed Precise components, such as monitoring the status of all Precise agents and PMDB processes, getting license information, starting and stopping the agents, getting log data on agents and events, changing PMDB settings, and installing patches. See also PMDB . See also agent .
advice	In Oracle, an algorithm that is designed to recommend on gathering statistics, creating new indexes, change existing indexes, and add or delete hints to make Oracle's Optimizer choose a better access path and make the statement perform better. Can be activated from any DML (Data Manipulation Language) statement.
agent	A program that runs on a server machine to collect, process, or communicate performance information. The Precise installation consists of multiple agents.
alert	The state of an Alerts metric that has reached a near-critical or critical status. An alert is issued by Alerts, triggering an action and informing of a problem that has occurred or is likely to occur within the area sampled by the specific metric. See also action .
Alerts	These product provide alerts to problematic conditions before they turn into performance problems, based on predefined metrics and thresholds. Alerts can automatically perform an action, such as displaying a pop-up message, sending an email message or SNMP trap, or running a program.
Alerts FocalPoint	An agent that receives data from the InformPoint agents, stores it, and performs any action that has been user-defined for that specific alert, such as displaying a pop-up message, sending an email message or SNMP trap, or running a program. See also InformPoint .
alert type	In Alerts, the status of all metrics belonging to a metric group or a monitored instance, indicating the current performance level through colors. See also alert . See also metric .
application server metric	In J2EE, a metrics that is provided by the application server or by customer code. This can include metrics published by the Java Management Extension (JMX) APIs or vendor-specific APIs, such as IBM's Performance Management Interface (PMI).
AppTier	The abbreviation for an application tier in a Precise environment. An AppTier contains one or more instances of the same technology and purpose. Application tiers do not necessarily correspond to distinct physical servers: in many cases, the tiers are logical, with one server running multiple AppTiers or one AppTier spans a cluster of servers. A Precise environment may contain multiple AppTiers on the same technology. For example, you may group J2EE instances (JVMs) into a J2EE Presentation AppTier and a J2EE Business Logic AppTier. Segmenting application service time into the contribution of individual application tiers is helpful in identifying the source of performance problems. Analyzing the performance and behavior of each tier separately is crucial for isolating the root causes of performance problems.
cabinet	In Oracle, SQL Server, DB2, and Sybase, the highest logical level in the SQL workspace hierarchy. A cabinet contains folders and, within folders, statements.

call path	A subset of a stack trace including only those methods that have been instrumented.
client cache	In Web, a counter that keeps track of the percentage of requests taken from the client cache (http status 304).
client-side collection	See Web client browser-side .
cluster	A group of servers or instances that are configured to be treated as a single entity. In Oracle, all Oracle instances of the same Oracle database (RAC configuration) are treated as a cluster and presented in the Precise for Oracle UI as a Database. In J2EE, a group of JVMs that serve the same application can be defined as Cluster (even if they are not defined as a cluster in the application server configuration). All JVMs of the same cluster share the same configuration.
collapsed access plan	In SQL Server and Sybase, the access plan of a unique group of statements or batches that belong to the same collapsed statement or batch but have different access plans. This can differ due to the constants in the text of the original (not collapsed) statements. See also explained statement . See also collapsed statement .
collapsed statement	In Oracle, SQL Server, Sybase, and DB2, a statement whose constants are replaced with parameters. Each collapsed statement can have several access plans, according to the occurrences of its statements. See also collapsed access plan .
Collector	The program that runs on the monitored server to collect performance information. Some technologies allow a single Collector (agent) to serve multiple instances running on the same server. Other technologies require a dedicated Collector per monitored instance. In most cases, it must be installed on the monitored server. Collectors for SAP, SQL Server, and Sybase may reside on a remote server. See also agent .
collector slice size	In J2EE, the smallest unit of data presentation and storage. It can be configured as 30 seconds or five minutes. If SmartLink is configured, relevant Web and Microsoft .NET Collectors will report to SmartLink using the same collector slice size. Regardless of the defined collector slice size, the most granular slice size presented on both the Precise for Web UI and the Precise for Microsoft .NET UI will be 15 minute intervals.
completion rate	In Web, a counter that keeps track of the percentage of users that completed the loading of a Web page.
count	The number of occurrences observed during a measurement interval.
CPU time	The average amount of time consumed by the operating system actively processing instructions on behalf of a running activity.
critical status	In Alerts, the status represented by a red bullet indicating that the value of the sampled metric has exceeded the near-critical and critical threshold values. See also metric .
Cross-AppTiers	In Insight, Report Manager, and Alerts, a perspective that provides high-level information about the performance of all AppTiers in an environment, including operating system data. It provides a holistic view of the entire environment and helps understand how the AppTiers interact. See also AppTier .
current data	In SmartLink, the end-to-end activity, detected by Precise over the last five minutes, including activities that are still in progress. In all databases products, a workspace that presents Current Sessions and the SQL statements that were executed including statements that are still in progress.
custom	Represents invocations of a type not specifically defined. See also work time .
customized metric	In Alerts, a user-defined metric that measures site-specific parameters.
drilldown	Within Precise products and Insight SmartLink, the filtering of analyzed data by clicking a specific entity. Then, additional information about the selected entity is presented, plus a breakdown of its activity by another entity. For example, drill down on a transaction and get an overtime graph of the selected transaction, plus a list of top users that executed the selected transaction.
entry point	Usually a top-level HTTP or EJB request. An entry point can originate when a user clicks in a browser or an E-commerce server invokes a remote EJB. J2EE makes a distinction between service request invocations and other invocations. The first HTTP or EJB invocation within a call path is designated as an entry point.

environment	<p>The highest Precise logical group. It may contain multiple AppTiers of various technologies that serve an application together. For example, a Payroll Production environment may contain all Web servers, application servers, transaction managers, databases, and servers that serve this application. Alternatively, it may contain any set of instances that form together an administrative group. Since Precise version 8.5, an instance can belong to more than one environment. Let's say a single Oracle database serves two different applications plus the DBA wants to associate this database with a group of other databases under his responsibility regardless of served applications. In this case the Oracle database will be associated to three different Precise environments.</p> <p>See also AppTier.</p> <p>See also instance.</p>
ERP Extension	<p>In Oracle, DB2, and SQL Server, an extension to the Collector that provides detailed information on the activities and resource consumption of packaged application components. It correlates the database information, and the packaged application information and lets you see users, transactions, reports, and other elements of ERP applications, such as Oracle Applications, SAP, PeopleSoft, and Siebel.</p>
executions	<p>In Oracle, SQL Server, DB2, and Sybase, the number of times a SQL statement was executed during the selected time frame. In SmartLink and SAP, the number of times a transaction was executed during the selected time frame.</p>
explained statement	<p>In Oracle, SQL Server, DB2, and Sybase, a statement whose access path (chosen by the RDBMS Optimizer) is clarified and translated into a visual display. Explained results include information on the objects referenced by the statement and the operations performed on these objects.</p>
extended collection	<p>In Oracle, a function that proactively specifies a future period during which Oracle activity data is collected and organized for subsequent analysis. Extended collections are an easy means to view collected information, assess application resource consumption, and identify bottlenecks that are inhibiting application performance and end-user productivity.</p>
Federated Precise	<p>Federated Precise is a version of Precise (starting with version 8.5) that can manage multiple Precise installations within the AdminPoint screen, displaying and managing all environments, instances, and installations.</p>
findings	<p>A ranked list of top performance problems in the selected context. They are presented in Oracle, SQL Server, .NET, and J2EE. Each finding provides: a short explanation of the problem, detailed background information, and most important: one or more links to further investigate the problem and possibly get more granular findings on the selected context.</p>
first byte time	<p>In Web, a counter that keeps track of the time that it takes from the moment a new Web page is called until the first byte arrives back from the Web server.</p>
FocalPoint	<p>An agent that communicates with the Listeners installed on the monitored servers, receives data from the Collectors, periodically processes and stores this data in the PMDB, and serves UI requests.</p>
folder	<p>In SQL Server, Oracle, DB2, and Sybase, the intermediate logical level in the SQL workspace hierarchy. Folders are grouped into cabinets and contain SQL statements.</p> <p>See also cabinet.</p>
Framework Installer	<p>The application that facilitates the installation of Precise framework components. It can be invoked from the installation DVD to install a new Precise deployment. It can also be invoked from an existing Precise deployment to install an additional framework node and attach it to the originating Precise deployment.</p> <p>See also Framework node.</p>
Framework node	<p>A set of FocalPoint agents that are installed together and manages a set of monitored instances. The performance data of these instances will be loaded into a dedicated PMDB. A single Precise deployment may contain multiple framework nodes (using a separate PMDB for each node). An environment cannot span over multiple framework nodes.</p>
garbage collection	<p>An automatic process in the Java runtime environment that periodically reclaims memory used by objects that are no longer referenced. The process can impact an application's performance while memory is being reclaimed. Java programmers may initiate garbage collection explicitly.</p>
grouper	<p>In Web, the identifier that is used to group other identifiers, such as sites or URLs.</p>
hint	<p>In Oracle, an instruction directed at the Oracle Optimizer that includes considerations for an execution plan. The Oracle Optimizer will build an execution plan based on the hint, ignoring its own set of considerations.</p>
hour group	<p>A unit that reflects the type and level of activity within the system at different times. By defining the times of the day that are peak and off-peak, or day and night, the performance analysis can be focused on those</p>

	particular times of the day. If, for example, most performance problems occur within nighttime and weekend batches, it can be useful to focus only on them.
InformPoint	In Alerts, an agent that retrieves performance data from all installed Precise products, analyzes it, and sends an alert to the Alerts FocalPoint when the predefined thresholds are exceeded. See also agent .
Insight	The Precise product family that facilitates the process of monitoring and correlating system performance. It consists of Insight. See also Report Manager . See also FocalPoint .
Insight FocalPoint	An agent that receives performance information from Insight Savvies, which monitor the environment. Insight FocalPoint then correlates, processes, and stores this information in a centralized location. The Insight performance history is stored in the PMDB. See also Savvy . See also PMDB .
instance	A monitored object of a specific technology. The following list specifies what constitutes an instance for the various supported technologies: J2EE - a Java Virtual Machine (JVM - a logical name set by the user), Microsoft .NET - a Common Language Runtime (CLR - a logical name set by the user), Oracle Applications - an Oracle Applications Form server, Oracle - an Oracle instance, SAP - a SAP system, SQL Server - an SQL instance, Sybase - a Sybase instance, Tuxedo - a Tuxedo domain, Web - a Web server, WebSphere MQ - an IBM WebSphere Queue Manager, DB2 - a DB2 non-partitioned database or a DB2 database partition. During installation, the instance is associated with one AppTier and environment. An Instance can be moved to a different environment or associated with multiple environments without re-installation nor losing historical data. See also environment .
instance statistics	See performance counter .
instance/database changes	In SQL Server and Oracle, the part of the Collect Schema Changes process that captures instance definition changes and database option changes and saves them in the PMDB.
instrumentation	The process of inserting fault-tolerant recording hooks in Java byte code, .NET MSIL, HTML pages, or other monitored components, resulting in the capture of performance metrics. In J2EE, a mechanism that enables collecting performance information when an application is executed. The process involves inserting special fault-tolerant recording hooks into application class objects. In WEB, the insertion of recording hooks into HTML pages can either be in memory (Dynamic Instrumentation) or file-based (Static Instrumentation).
instrumentation context	See invocation context .
internal invocation	The process of invoking a request from an HTTP request (Servlet or JSP) or an EJB. J2EE displays an internal invocation like any other invocation.
invocation	An execution of a J2EE entity (a Servlet, EJB, SQL Statement, method, and so on). When mentioned in plural (Invocations), means the amount of times that the entity was executed.
invocation context	The context within which a method is invoked. For example, if Method A is invoked both from Method B and from Method C, there will be two different invocation contexts for the performance metrics collected for Method A, one for when it is invoked from Method B and one for when it is invoked from Method C. See also call path and instrumentation context .
JRE (Java Runtime Environment)	As the runtime part of the Java software, the combination of the components that enable the execution of a Java program: a Java virtual machine, the core class libraries, and the files that form the Java platform.
JSP (Java Server Page)	An HTML page with special tags for Java scripting. An application server processes the tags and generates a Servlet.
JVM (Java Virtual Machine)	An instance of a JRE that executes Java programs. A server-side Java application server is itself a Java program that runs inside a JVM. Servlets, JSPs and EJBs are Java programs (applications) that run within the application server's JVM. J2EE monitors the JVM running the application server and the server-side Java applications within the application server.
JVM Heap Memory	The amount of real computer memory that is allocated to the JVM for executing Java programs.
key metric	In Alerts, a parameter that monitors a very important performance aspect. The status of the Oracle instance (up/down), for example, is crucial for system performance. If the instance is down, this is the first problem

that needs to be solved. Marking a metric as key metric ensures that a critical alert raised for this metric receives top priority by the person that is responsible to handle alerts at any time. It can also help determine which alert to handle first in case of multiple alerts. In Alerts, key metrics are always displayed at the top of a metric table when it is sorted by alerts so that they get immediate attention.

Listener	The agent that facilitates the communication between the various Precise agents across different servers must be installed on every server where Collectors or FocalPoint agents are installed. The Listener allows communication with all other agents installed on the monitored server, while only the Precise Listener port is known by other servers.
login name	In SQL Server and Sybase, the session identifier that represents the credential used to connect to the database. When an ERP extension is installed, the user name of the packaged application's client overrides the login name. For example, when SAP extension is installed, the SAP user name overrides the login name.
machine	A session identifier. A machine as sampled, for example, by the SQL Server Collector is the identification of the machine where the client process executes. Machine is also sampled by Oracle, DB2 and Sybase. In Insight terminology Machine is called Client machine.
Main framework node	A main framework node is the single point for login and also serves as the Precise FocalPoint for the entire deployment.
major collection count	Number of estimated major garbage collection events that occurred during the last J2EE collector slice. A major garbage collection can stop the application while JVM heap memory is being reclaimed. See also garbage collection .
major garbage collection time	Percentage of time spent by the JVM executing major garbage collection events during the displayed interval. See also garbage collection .
MBean	A Java object that represents a manageable resource. In J2EE, MBeans, or Managed Beans, are used for application server metrics.
memory logger interval	The interval at which the J2EE Collector gathers JVM heap memory data. All snapshots of the memory logger's data collected according to the memory logger interval are summarized with counters in the current aggregation interval. The memory logger interval's time span is typically a small fraction of the aggregation interval.
metric	In Alerts, a query that helps measure performance in the environment. Three types of metrics are available: System metrics relate to the internal resources, operations, and objects of the monitored infrastructure; application metrics reflect the way the applications perform; user-defined metrics can be customized to specifically relate to a site. When a metric's value exceeds one of the defined thresholds, its status changes to near-critical (yellow bullet) or critical (red bullet). See also key metric .
metric set	In Alerts, a unit that groups metrics that measure related performance aspects. The following metric sets exist: Status: includes metrics that alert to functional problems related to the instance. Performance: includes metrics that alert to performance problems related to the instance. Load: includes metrics that alert to instance-related load problems that may later cause errors or crashes. Service: includes metrics that alert to instance-related SLA breaches. The metrics in this set are sampled by Insight. Performance Trending: includes metrics that alert to potential future performance problems. The metrics in this set are sampled by Report Manager. Load Trending: includes metrics that alert to potential future load problems. The metrics in this set are sampled by Report Manager. Customized: includes user-defined metrics. Precise Status: includes metrics that alert to the near-critical or critical status of the installed Precise environment.
module	A session identifier. In Oracle it contains the value of MODULE column in V\$SESSION table. In DB2 it contains the command name of non-SQL statements or the package name for SQL statements.
near-critical status	In Alerts, a status indicating that the value of the sampled metric has exceeded the defined near-critical threshold. A near-critical status is indicated by a yellow bullet.

network time	In Web, a counter that keeps track of the time spent on network activity from the server side perspective. This includes the time to read the request from the network and the network time to send the response back to the client.
node	<p>See Framework node.</p> <p>Note: when creating a new installation from DVD, it would be called "Framework." In the UI screens (columns in tables, choosing a system for a new environment etc), we would call them "Nodes." For example: choose a node for the new environment.</p> <p>When adding a new system within AdminPoint, it would be called a "Framework node".</p>
packaged application	<p>An application that is created and/or maintained by a third party and is not custom-built to one's specific needs. The following packaged applications have special treatment by Precise: SAP, Oracle Applications, PeopleSoft, and Siebel. They are harder to modify because the application code is either not available or hard to understand.</p> <p>See also ERP Extension.</p>
page size	In Web, a counter that keeps track of the amount of data loaded from the server to display the page.
page views	In Web, a counter that keeps track of the number of Web pages viewed at a specific Web site during a selected time period.
parent metric	<p>In Alerts, a joining of several child metrics. Each time a parent metric samples, it gathers data from a set of child metrics and presents it as a single metric query. The individual child metric values are displayed on the Thresholds tab of the Properties dialog box in Alerts.</p> <p>See also submetric.</p>
performance counter	In SQL Server, a Windows performance counter as reported by the operating system. In Oracle, an instance level statistic as gathered from some Oracle V\$ views. In Sybase, a sysmonitors counter collected by Sybase. In Web, an operating system or a Web server performance counter.
PMDB	The Precise data warehouse of performance and availability data. It can be hosted on an Oracle or SQL Server database.
portal server	An application server for Web-based applications that commonly provide personalization, single sign-on, and content aggregation from different sources and that host the presentation layer of Information Systems. Aggregation is the action of integrating content from different sources within a Web page. A portal may have sophisticated personalization features to provide customized content to users. Portal pages may have a different set of portlets creating content for different users.
portlet	A Java-based Web component, managed by a portlet container, that processes requests and generates dynamic content. Portlets are used by portals as pluggable user interface components that provide a presentation layer to Information Systems.
Precise deployment	An independent Precise system. It contains and manages various agent types and provides centralized monitoring and administration. A Precise deployment may contain multiple framework nodes. One of them is defined as the main framework node and it manages all other nodes of the Precise deployment.
Precise FocalPoint	See Precise FocalPoint agent .
Precise FocalPoint agent	An agent that manages all agents in a single Precise deployment. Additional product FocalPoint agents manage specific technologies and resources.
Precise Proxy agent	When multiple Framework Nodes are managed by a single Precise deployment, the Precise FocalPoint agent manages all of the agents of the main Framework node, while every other framework node has a Precise Proxy agent to manage all its agents.
Precise_root	This is the term used in a path for the Precise installation directory. The terms <code><i3_root></code> or <code>i3 root</code> can appear in text too.
program	A session identifier in Oracle, DB2, SQL Server, Sybase, Insight, and Alerts. A program as sampled, for example, by the SQL Server Collector, is the name of the executable that connects to the database. Applications that do not set the application name have N/A as program. When a SAP extension is installed, the SAP transaction overrides the program, and it may change during the application's lifetime. When a Siebel extension is installed, the Siebel views override the program, and it may change during the application's lifetime. In Insight, program is the name of an executable as recognized by the operating system. If an executable is invoked from a script (a batch or a shell), the script is displayed as the command entity. In Alerts, program is part of the customized metrics definition and is the name of the executable or stored procedure executed in the database that runs when the metric is sampled. In action definitions, program is the name of the executable that will run if the metric exceeds its threshold.

progress	<p>In Alerts, the management state of a metric for which an alert has been raised. The following statuses exist:</p> <p>Open: An alert is raised.</p> <p>Investigated: The alert is taken care of.</p> <p>Closed: The problem has been solved.</p>
Proxy FocalPoint	See Precise Proxy agent
recommended index	<p>In SQL Server, a function that uses the Microsoft Index Tuning Wizard to recommend on adding indexes or statistics for a selected statement, batch, or table. Based on the results of this function, the Optimizer will choose a better access plan and make the respective statement or batch perform better. For statements and batches, recommendations are based on the content of the statement or batch. For tables, recommendations are based on all the statements that are stored in the PMDB, are executed during the selected time period, and have an average duration time greater than the value defined in the registry (where 0 is the default).</p> <p>See also advice.</p>
related SQL	In Oracle, a generated statement that uses alternative syntax to access the database in different ways and returns the same output as the original statement.
relative frequency	Number of contributor invocations per entry point. For example, if a service request calls three methods each time it is invoked, the Relative Frequency for the method is three invocations per service request execution. Similarly, if a service request calls one method every other time it is invoked (half of the time), the Relative Frequency for the method is 0.5 invocations per service request execution.
rendering time	In Web, a counter that keeps track of the time that it takes for a Web page to be loaded from the moment the first byte arrives until the Web page is fully loaded or the user interrupts or abandons the loading process.
report	A collection of queries, programming code, and layout settings that Report Manager executes to generate graphical results like tables and charts.
Report Manager	Uses historical information to identify problematic conditions, track long-term performance, volume trends and patterns, view availability problems over long periods of time and on different levels, compare the performance of similar systems, correlate between performance metrics of different products, assist in capacity planning, and generate demand-driven, user-defined reports.
Report Manager FocalPoint	<p>An agent that examines the PMDB tables to produce scheduled performance reports.</p> <p>See also PMDB.</p>
report parameter	In Report Manager, a keyword used in a report. Its value is set during the report execution. A parameter's value can be updated either permanently or for the current execution only.
report property	<p>In Report Manager, the attributes that define a specific report, consisting of report parameters and scheduling information.</p> <p>See also report parameter.</p>
request	In Web, a counter that keeps track of the number of HTTP requests sent for a viewed entity. request
error	In Web, a counter that keeps track of the percentage of requests completed with an HTTP error.
sampling	In Alerts, the process during which a metric queries a Precise product for a specific instance, retrieves values, and calculates the metric's alert level.
sampling base	In Alerts, the start time of a scheduled sampling process (by default Sunday, 00:00 AM).
sampling period	In specific Alerts metrics, the time frame during which statistical data is returned from other Precise products. Such a metric is for example Oracle's General Behavior metric, which returns database behavior for a certain period of time.
sampling rate	In Alerts, the frequency of a metric's regular sampling schedule. The sampling rate is measured in minutes.
Savvy	An Insight agent that collects AppTier-specific performance data.
scalability	A system's ability to withstand load. For example, positive scalability means that the system continues to function properly even when it is called upon to service a larger number of users.
schema changes	In Oracle and SQL Server, a process that captures schema changes and saves them in the PMDB. In SQL Server, instance configuration parameters and database option changes are also captured.
Script Installer	A component of Precise Agent Installer that enables adding a small JavaScript script, also known as a Web browser-side agent, to the Web pages of your Web site.

server	Also called a host machine or server machine. The combination of a computer and associated operating system software that is accessed by multiple clients to perform requested functions and typically returns results to the clients.
server-side collection	In Web, the collecting of performance data from the Web server instance through the Web server agent.
service + network time	In Web, a counter that keeps track of the service and network time, including the total amount of time the request took to reach the server.
Service Level Agreement	See SLA (Service Level Agreement) .
service time	In Web and SmartLink, the time elapsed from when a request is received by the server to the time a response is sent back to the computer that made that request. The service time is measured on the server side. In J2EE, the time it takes an invocation to complete execution. In other words, service time is the average length of time between the start time and end time of a Java method execution. For example, the SQL service time is the time it takes the JDBC method executing the SQL statement to be completed. The service time includes CPU and wait time. The service times are reported in the interval in which they complete execution. Though a contributor's average service time may be very small, the contributor may be called many times. As a result, a contributor's overall contribution to performance may be large even though its average service time is low.
servlet	A class that is loaded only once and for which the application server uses multithreading to process requests. The servlet generates an HTML page that is sent back to the Web browser.
size	In Web, a counter that keeps track of the bytes sent and received.
SLA (Service Level Agreement)	A formal definition of an information system's performance goals. Within Precise, an SLA consists of clauses corresponding to various system activities. Once a system's SLA is defined, its SLA compliance can be analyzed, and breaches can be isolated to identify their causes.
SmartLink	In Insight, a component that provides transactive, correlated information across AppTiers from the user's perspective. Insight SmartLink functions in PeopleSoft and Web applications environments.
socket	An I/O abstraction layer that enables processes to communicate with each other, regardless of whether they are on the same server. Sockets are bi-directional FIFO pipes that look like regular file I/O to the developer with the abstraction layer handling all of the low-level communication details.
Statistics workspace	In Oracle, DB2, SQL Server, Sybase, J2EE, and Web this workspace presents instance level statistics such as hit ratios, utilization, JMX metrics, logging, and more.
submetric	Also called child metric. In Alerts, the subquery of a parent metric. A child metric gathers its own data and combines it with the data gathered by other child metrics to form the result of the parent metric. Each child metric has its own thresholds and may be enabled or disabled individually. See also parent metric .
summary table	A container that stores the information collected by the Precise agents and loads it into the PMDB. Summary tables store the same data at different levels of granularity: time slice, hourly, daily, weekly, and monthly. By storing data in multiple summary tables, Precise can present a detailed view and progressively higher-level views of the same data. Summary tables are particularly useful for data aging. A data purging policy can be implemented for each summary table so that detailed data is retained for short-term historical analyses while more summarized data is used for long-term analyses and trending.
technology	A technology identifies the monitored object. For example, Oracle, SQL Server, Sybase, and DB2 are different technologies, while all Web servers (such as: Apache, IIS, and WebSphere) are defined as a single Web technology. A single monitored object can be monitored by two different technology's Collectors. For example, WebLogic server can be monitored by both a Web Collector and a J2EE Collector.
throughput	The number of average completions per second that are observed during an interval.
time slice	A unit used to break up long sessions into smaller time periods. The length of a time slice is preset and cannot be changed. It represents the maximum time that passes before the data collected can be displayed. For example, if the length of a time slice is 15 minutes, the collection is only updated at 15-minute intervals. The length of a time slice is different for each technology: In Oracle, SQL Server, Sybase, DB2, Web, .NET, MQ, Tuxedo, Network, and OS, a time slice is 15 minutes. In J2EE and SmartLink, a time slice is either 30 seconds or 5 minutes. In Precise for SAP, a time slice is 5 minutes. See also collector slice size .

URI (Uniform Resource Identifier)	The relative path to a resource after the location (network node) is found.
URL mapping	In Web, a function that defines rules that map URLs (Uniform Resource Locators) with dynamic parameters originating from a specific domain to a format that identifies the Web pages and prevents them from having different URLs.
Web client browser-side	In Web, the gathering of performance data from the browser running on the desktop of the Web application's user, through the static or dynamic instrumentation of Web pages.
Web server	A program that receives client requests for Web pages, retrieves the static pages and/or issues a request for dynamic page creation to an application server, and sends the pages to the client. In Web, a computer that delivers (serves up) Web pages. Every Web server has an IP address and possibly a domain name.
work time	The time spent in the specific entity excluding time spent by called (other) entities. In J2EE, work time of a method is calculated as the service time of that method minus the service time of the methods it invoked.
work type	In Web, a counter that keeps track of the type of the Web instance, such as Web, PeopleSoft, SAP, or Siebel.
workspace	A display unit in Precise products. All workspaces display data from different perspectives. For example, in Oracle, SQL Server, and Sybase, the Current workspace shows information on the sessions currently active in an application, and the Objects workspace displays information on Oracle or SQL Server database objects that can be used to understand relationships and associations between database schema objects.