# About configuring Precise for J2EE settings

This section includes the following topics:


- Configuring Precise for J2EE settings
- Configuring Monitor Settings
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- Enabling Populate Configuration
- Enabling monitoring for leaks and/or exceptions
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## Configuring Precise for J2EE settings

The Precise for J2EE user can define how Precise for J2EE collects data and how the collected data is displayed. The Settings menu on the Precise bar allows you to configure the following:

- Monitor Settings
- Tree View Setting (Activity workspace only)
- Display Settings
- Time Frame Settings
- Dynamic Types Allocation

## Configuring Monitor Settings

The Monitor Settings dialog box enables you to configure and modify the data aggregation and collection definitions for each Precise for J2EE Collector, monitored Java Virtual Machine (JVM) and cluster.

To view and modify the Precise for J2EE monitor settings

1. On the Precise bar, go to **Settings>Monitor Settings**. The Monitor Settings dialog box appears.
2. From the drop-down list in “Step 1: Select JVM / Cluster”, select the cluster (clusters appear in bold) or JVM (instance and server name). Clicking **Affected Instances** opens the Affected Instances dialog box, displaying the instances connected to the selected instance/cluster that will be affected by any instrumentation change.
    - To view and modify configuration in the Production monitoring mode, see “About Monitoring Configuration” on page 42.
3. To enable statistics collection, mark the “Collect Statistics” check box.
4. To modify the statistics collections settings, click **Statistics Configuration**. The Statistics Configuration dialog appears. See “Configuring Statistics Settings” on page 45.
5. To copy the current instrumentation to additional JVMs or clusters, click **Populate Configuration**. The Populate Configuration dialog appears. See “Enabling Populate Configuration” on page 46.
6. To enable one or more of the following monitoring options, mark the relevant check boxes:
    - Monitor Leaks
    - Monitor Exceptions
    - Enable Application Awareness for the DB Tier
7. Click **OK**.

### About Monitoring Configuration

You can use the Monitoring Configuration dialog box to view and modify the status of all classes and methods in the selected JVM or cluster. To open this dialog box, go to **Settings>Monitor Settings>Monitoring Configuration**.

### About the JVM Loaded Classes table

The JVM Loaded Classes table in the Monitoring Configuration dialog box displays all classes and methods detected in the selected JVM in alphabetical order. To ensure that you are viewing the most updated list, check the “Last Updated” date and time on the top right of the window, and if needed, click the refresh icon. If the “JVM is stopped - last saved snapshot” text appears, the JVM must be restarted in order to refresh the list.

The following table describes the information displayed in the “JVM Loaded Classes” table:

**Table 1** Monitoring Configuration icons

| Column | Description |
|---|---|
| Class | Displays the loaded classes in the JVM. |
| Method | Displays the methods included in the class. |
| Status | Displays the monitored status of the selected entity. For more information, see “About Status values” on page 43. |
| Type | Displays the type name of the selected entity. For more information, see “About Type values” on page 43. |

| | |
|---|---|
| Remarks | Displays relevant remarks regarding the selected entity.<br><br>JDBC methods will not appear in the loaded methods list. Methods invoking JDBC calls will appear with an indicator in the Notes column as “Calls JDBC methods”. |

When there are no pending changes, the list in the table displays “actual” monitoring status of classes and methods in the JVM. If pending changes exist, the list in the table displays “estimated” status of classes and methods in the JVM.

## About defining the information displayed in the JVM Loaded Classes table

In the Monitoring Configuration dialog box, you can define and filter the information displayed by selecting one of the pre-defined view options and by using the search fields.

The pre-defined view options are:

- **All Classes and Methods**. Shows all loaded default classes and associated methods (no filtering by status)
- **Configured (Monitored & Blocked)**. Shows all statuses except for <blank> that are retrieved (for example: classes and methods including monitored, monitored (partial), pending, etc)
- **Not Configured**. Shows only <blank> and pending statuses that can be retrieved
- **Pending**. Shows only pending statuses

In addition to selecting a view option, the user can apply search criteria by either Package/Class pattern and/or Method pattern.

Click the **Search** (spyglass) icon to search and select an existing pattern name, or begin typing a pattern name into the appropriate field. Precise for J2EE has a unique auto-complete feature which displays a list of all pattern names with letters that match the typed letters in the field. The table displays results based on the selected viewing option and the search criteria.

Click the **Clear** (X) icon to clear any entered search criteria, or simply delete the pattern name field content.

## About Status values

Status can have any of the values shown below in the table.

**Table 2** Available Status values

| Name | Description |
|---|---|
| Monitored | For a class, it means that all of its loaded methods are instrumented. For a method, it means that the method is instrumented. |
| Monitored (partial) | For a class, it means that only some of its loaded methods are instrumented.<br><br>For a method, it means that only some of the signatures are instrumented. |
| Excluded | For a class, it means that all of its loaded methods are ignored. For a method, it means that it is ignored. |
| Excluded (partial) | For a class, it means that all of its loaded methods are either ignored (exists at least once) or not instrumented (exists at least once). |
| <Blank> | For a class, it means that all of its loaded methods are not instrumented (but not ignored).<br><br>For a method, it means that it is not instrumented (not ignored). |
| Pending | Relevant for classes or methods after a change was performed and the JVM was not restarted. The Class will have a pending status if it has at least one pending method. |

## About Type values

The type is used to categorize classes and methods as meaningful parts of the monitored application. Predefined types can contain HTTP, EJB and others. User defined types can be added when defining classes/methods to be monitored. (If no type is defined, the Custom default type is used.) The types are the foundation for displaying response time breakdown into its components in the Precise for J2EE User Interface (for example, how much time is spent in EJBs or in JDBC methods).

The type of methods is either defined by the user, or by the product’s predefined definitions.

The type of classes can be defined by the user or by the product’s predefined definitions, or (when no specific definition exists) as a combination of all of its methods’ types.

## About modifying the Monitoring Configuration

The Monitoring Configuration dialog box enables the user to easily view and edit the monitoring status of the loaded classes or methods. It covers a broad spectrum of use cases, serving both novice and experienced users.

A Pending Changes message will appear at the top of the screen after the user has made any changes to instrumentation definitions, and restart has not yet been performed.

To monitor one or more loaded classes or methods

1. In the table, click to select one or more loaded classes or methods for monitoring.
2. Click **Monitor**.
3. Click **Save** to save your changes, or **Cancel** to close the screen without saving changes.

The user can stop monitoring a selected row in the table according to class or method status. To stop monitoring a loaded class (classes) or methods

1. In the table, click to select one or more loaded classes or methods to stop monitoring.
2. Click **Stop Monitor**.
3. Click **Save** to save your changes, or **Cancel** to close the screen without saving changes.

   Restart JVM after saving your changes.

The user can exclude a selected row in the table according to class or method status. To exclude (ignore) a loaded class (classes) or methods

1. In the table, click to select one or more loaded classes or methods to exclude.
2. Click **Exclude**.
3. Click **Save** to save your changes, or **Cancel** to close the screen without saving changes.

   Restart JVM after saving your changes.

4. Click Manage Patterns to edit or view the matching classes or methods.
5. After selecting a search pattern, click **Monitor Search Results** to monitor the search criteria pattern. After clicking the monitor search result, assign a type to the pattern in the opened pop-up message. Use Monitor Search Results to create and monitor patterns.

## About the Patterns Manager

Use the Patterns Manager dialog to manage monitoring patterns to view or edit types and matching classes.

User-defined classes can be edited (to add, edit, or delete) types, classes, and methods.

At the top of the screen, the selected JVM name and its “Last JVM start time” (date and time) are displayed. The Monitoring Patterns table displays configured patterns (classes and methods, and their assigned types). Click **Add Pattern** (above the table) to create a new pattern name to the table.

Click on the **+** icon in the table to open and view all members of the selected class.

To add a class or method pattern

1. For a new class pattern, click **Add Pattern**.
2. Begin typing the class name. Pattern Manager will automatically display currently detected classes starting with the same letters. Select the appropriate class name from the list.
3. For a selected class pattern, click the blank field in the Method Pattern column for the selected class row.
4. Begin typing the method name. Pattern Manager will automatically display currently detected methods starting with the same letters. Select the appropriate method name from the list.

## About Patterns Manager loaded classes and methods results

The table (lower pane) displays the results (actual instrumentation status) for the selected classes or methods that match the selected definition row (upper pane).

The JVM “Loaded Classes and Methods” displays (in parenthesis) the total number of classes that were loaded. Also displayed is the date and time when the classes were “Last updated”.

Click the Refresh icon to refresh the screen and update all viewed data.

Click on the **+** icon in the table to open and view all members of a selected class. The table displays the following results:

- Class (the class name)
- Method (the method name)
- Status (See “About Status values” on page 43).
- Type (the assigned type, “custom” by default)
- Notes (additional information for a specific class)

## Configuring Statistics Settings

The Statistics Settings dialog enables you to modify the Application Server Metrics data collection options for the selected JVM or cluster. You can view data for all the selected metrics in the Association area of the Memory and Statistics workspace.

> Application server overhead will increase when the application server collects metrics and when the Precise for J2EE collector gathers them. Refer to the application server documentation for further details.

To configure Statistics Settings

1. On the Precise bar, go to **Settings>Monitor Settings>Statistics Configuration** (the link will only be active if the “Collect Statistics” check box is marked). The Statistics Configuration dialog box will appear, displaying a partial list of all metrics detected in the selected JVM or cluster. The two lists, Available Metrics and Selected Metrics, respectively show which metrics have not yet been selected to appear in the Memory and Statistics workspace and which metrics have already been selected.
2. Use the left and right arrows to move metrics between the two lists. By default, the Available Metrics list only displays a partial group of all detected metrics. To display all detected metrics, click **Update Metrics**. A message dialog box will appear. If you have made changes to the metrics, click Yes to save those changes before the metric retrieval process begins. Clicking **No** will begin the retrieval process without saving any changes made.
3. To search for a specific group or metrics, enter a JVM property in the field below the Available Metrics heading and click **Filter**.
4. Mark the “passwordRequired” check box.
5. Click **OK**.

### About information displayed in the metrics lists

The table below describes the information displayed in the metrics lists.

**Table 3** Metrics list fields

| Option | Description |
|---|---|
| Group | Category of statistics in which the metric will be displayed in the Memory and Statistics workspace. |
| Metric | Name of metric as it will be displayed in the Memory and Statistics workspace. |

## Enabling Populate Configuration

The Populate Configuration dialog box enables you to choose clusters or JVMs and copy the configuration from the selected JVM or cluster in the Monitor Settings dialog box to these clusters or JVMs.

To copy configuration to one or more JVMs or clusters

1. On the Precise bar, go to **Settings>Monitor Settings>Populate Configuration**. The Populate Configuration dialog box will appear, displaying the JVMs and clusters in the Available JVMs/Clusters and Selected JVMs/Clusters lists. The dialog heading will feature the name and server name of the source JVM or cluster.
2. Using the left and right arrows, move JVMs and clusters between the two lists until all JVMs and clusters that you wish to take on the instrumentation appear in the Selected JVMs/Clusters list.

   > To search for a specific JVM or cluster, enter the JVM or cluster name (or part of it) in the field above the Available JVMs/Clusters list and click **Filter**.

3. Click **OK**.

## Enabling monitoring for leaks and/or exceptions

Mark the appropriate option(s) to monitor for leaks and exceptions.

## Configuring Dynamic Types Allocation

The Dynamic Types Allocation dialog box enables you to customise the appearance of user-defined dynamic types in Precise for J2EE.

In this dialog, you can designate a color to a dynamic type which will represent the specified type in the various breakdown bars throughout Precise for J2EE. You can also define that information regarding specific types will appear in the information ToolTip in these graphs.

Up to 5 dynamic types can be assigned a color or ToolTip, and up to 5 dynamic types can be assigned only a ToolTip.

> To define dynamic types, see About the Patterns Manager.

To configure the dynamic types allocation

1. In any Precise for J2EE workspace, go to **Settings>Dynamic Types Allocation**.The Dynamic Types Allocation dialog will appear.
2. From the No Color and No ToolTip list on the left, select one or more types (up to 5).
3. Click the upper right arrow to move your selections to the Color and ToolTip list. Types in this list will appear as the specified color and information about them will appear in the information ToolTip.
4. Click the lower right arrow to move your selections to the No Color and ToolTip list. Types in this list will appear as part of the general “custom” type in the breakdown bar but will be mentioned by name in the information ToolTips.
5. To remove a selected type from either of the right lists, select the item(s) and click the appropriate left arrow.
6. Click **OK**.

## Configuring Tree View Settings

The Tree View settings dialog box enables you to modify how information is displayed in the Tree view.

> When you click **OK** in this dialog, the current workspace is automatically refreshed.

To configure the tree view settings

1. In any Precise for J2EE workspace, go to **Settings>Tree View Settings**. The Tree View Settings dialog will appear.
2. In the “Sort by” drop-down list, select a field to sort the displayed data by. The default value is Avg. Response Time (Sec).
3. Click **A** to sort in ascending order, or **D** to sort in descending order.
4. From the drop-down list, select the maximum number of search results to be returned by a search within the execution tree. The default value is five.

   > Changing this setting will automatically update the Search dialog box.

5. Mark the “Show short name only” check box to display the method name in the execution tree by a short name.

   > The full method name will always be displayed in the information ToolTip that appears when hovering over any entity in the execution tree.

6. Click **OK**.

## Configuring Display Settings

The Display Settings dialog box enables you to define Precise for J2EE to retain the selected view or tab, if applicable, when you drill down on an entity or select a different entity. This is sometimes referred to as sticky tabs. For example, if you have chosen the Locks view in the Activity workspace, this will become the default view for all entities, where applicable

To define Precise for J2EE to retain the selected view or

1. In any Precise for J2EE workspace, go to **Settings>Display Settings**. The Display Settings dialog will appear.
2. Mark the “Maintain the selected tab or view when switching entities” check box.
3. From the drop-down list, select the maximum number of executions to be displayed under each node. The default value is 30.
4. Click **OK**.

## Configuring Time Frame Settings

The Time Frame Settings dialog box enables you to modify the default settings for both the time frame for displayed data and the auto-refresh mechanism.

To modify the default settings for the time frame and auto-refresh mechanism

1. In any Precise for J2EE workspace, go to **Settings>Time Frame Settings**. The Time Frame Settings dialog will appear.
2. Modify the “By default, show performance information for the last” value by selecting the desired unit of time from the drop-down list and entering in the desired value for the selected unit. This will be the default time frame for data displayed in Precise for J2EE.
3. Modify the default frequency of the auto-refresh mechanism by entering the desired value (in minutes) in the “Auto-Refresh data every” field. When auto-refresh is enabled, data will be refreshed according to the updated value in this field.
4. Click **OK**.