Working with the Business Process Dashboards

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About this Guide

This guide is an introduction to the Software AG Business Process dashboards. It contains information to help business analysts who want to use these dashboards to monitor their business environments and react to conditions that are detected. It also contains configuration information for setting up the Business Process dashboards.

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Narrowfont	Identifies service names and locations in the format *folder.subfolder.service* , APIs, Java classes, methods, properties.
Italic	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
		Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the	symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.

Convention	Description
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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Software AG Empower Product Support Website

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Once you have an account, you can open Support Incidents online via the eService section of Empower at "https://empower.softwareag.com/".

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Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

1   Getting Started with the Business Process Dashboards
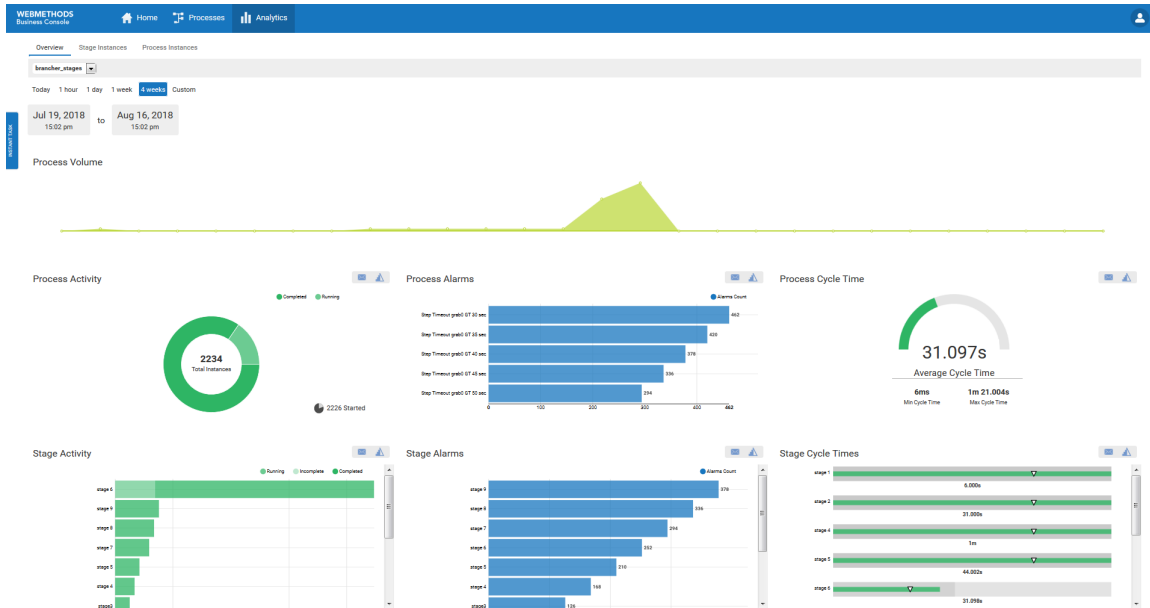
The Business Process Dashboards

The Business Process dashboards display summary metrics, instance detail, and other performance information about business processes that are under analysis by Optimize. These dashboards are displayed in webMethods Business Console.

There are two primary dashboard use case scenarios as described below.

■ For authorized users who have access to My webMethods, including the Optimize Analytic Engine, the dashboards can be used to view business process data. In this scenario, the dashboards enable the users to view process metrics, and to generate Email notifications or Escalation events. This scenario does not include the infrastructure to create a closed loop process that creates and assigns tasks related to Escalation events, unless users create a custom solution to implement such functionality.

■ Authorized users who have purchased and installed the appropriate Software AG components can take advantage of a true closed loop solution. Using this type of solution, dashboard users can observe issues on the dashboards and can create escalation actions that are assigned to other users.

For both use case scenarios, the list of available dashboards is as follows.

■ **Process Overview Dashboard** - This dashboard provides high-level information about a selected process including intrinsic metrics, historical views, and normality comparisons across a specified time range. This dashboard helps users to quickly identify potential issues, obtain information about alarms and stage activity, and use email or escalation actions to share findings with others.

■ **Stage Instances Dashboard** - This dashboard shows stage activity and performance for a process across a specified time range. The top of the page shows metrics about each stage, including information about activity, cycle time, and alarms. Selecting one or more table rows reveals information about individual stage instances and enables users to send email notifications or escalation actions for individual stage instances.

■ **Process Instances Dashboard** - This dashboard shows process activity and performance across a specified time range. A chart at the top of the page displays historical information about process volume activity and cycle time performance. A table at the bottom of the page shows individual process instances and enables users to send email notification or escalation actions for individual process instances.

Before you Begin

To use the Business Process dashboards, make sure that:

- Optimize for Process is installed and configured appropriately as described in the Optimize product documentation.

- Optimize for Process UI is installed.

- Analytic Engine is configured for Business Console. For more information about configuring Analytic Engine for Business Console, see *Working with webMethods Business Console*.

Displaying the Dashboards

Use the following procedure to display the Business Process dashboards in Business Console.

To display the dashboards

1. In Business Console: Click **Analytics**.

   The Process Dashboards Overview tab is displayed.

2. From the three tabs at the top of the page, select the dashboard you want to view. The following table gives a description for each dashboard.

Dashboard	Description
Overview	Displays performance metrics for a selected process for a specified time range. For more information about this dashboard, see "Understanding the Overview Dashboard" on page 16.
Stage Instances	Displays details about the stage instances that were active during a selected time range. For more information about this dashboard, see "Understanding the Stage Instances Dashboard" on page 23.
Process Instances	Displays details about the processes instances that were active during a selected time range. For more information about this dashboard, see "Understanding the Process Instances Dashboard" on page 25.

3. From the drop-down box in the upper left hand portion of the page, select the process you want to examine.

> **Note:** The drop-down list displays processes that are "enabled for analysis" in Optimize. If a process is not enabled for analysis, it will not appear in the list.

4. From the six choices listed above the dashboard, select the time range you want to apply. The following table shows the possible intervals.

Interval	Displays data
Today	From 12:00 AM to the current time
1 hour	From the last hour
1 day	From the last 24 hours
1 week	From the last week
4 weeks	From the last four weeks
Custom	Enables you to specify a date/time range

> **Note:** The caption beneath the time-range options displays the exact start and end time of the time range you have selected or specified.

The dashboards are updated to display the appropriate data for the specified time range.

2   Understanding the Dashboards

General Behavior of the Process Dashboards

The following are general behaviors of the Business Process dashboards:

■ Dashboards usually display additional details about a graphic element through the use of tool tips. For example, you can display the actual measurement for a given data point in a line graph by hovering over the point with your cursor.

■ The times and dates shown in a dashboard are expressed in the timezone of the machine where your browser is running.

■ Most panels include a button or icon that enables you to email information from the dashboard to other interested parties. When you use this feature, the "From" field is filled automatically based on the email address associated with your My webMethods user account. The generated email includes a link that enables the recipient to view the dashboards in the state in which the email was created.

■ In addition, most panels also include an Escalation icon that enables you to create an escalation event related to information observed on the dashboards. This event includes similar information that is included in the email option. However, with an appropriately event-enabled system configuration that is set up to support closed loop analytics functionality, this event can be propagated through other applications to schedule tasks, create or initiate process steps, etc.

■ When a dashboard reports an "average" value for a measurement, the value represents the *arithmetic mean*.

Understanding the Overview Dashboard

The Overview dashboard displays performance metrics for the selected process.

Process Volume

The Process Volume panel plots the number of process instances that completed during the selected time range.

When viewing with this panel, be aware that:

■ The graph plots measurements from left (the first measurement in the selected time range) to right (the most recent measurement) for the selected time range.

- A measurement represents the number of process instances that *completed* during a given interval within the time range.

- The length of an interval varies as follows according to the selected time range.

Selected range	Length of each interval
Today	One minute (if range is less than 12 hours). One hour (if range is greater than 12 hours)
1 hour	One minute
1 day	One hour
1 week	Four hours
4 weeks	One day
Custom	Varies according to what is most appropriate for the specified time range.

- You can display the time and exact measurement for a given data point by hovering over the point with your cursor.

- The time displayed for a data point represents the end of the interval. For example, if you are viewing the graph for a **1 day** time range (which reports measurements at hourly intervals), the data point at 2:00 represents the measurement for the interval 1:00:00:001 to 2:00:00:000 (inclusive).

Process Activity

The Process Activity panel reports the following metrics for the selected process:

This measurement	Represents
Running instances	The number of instances still in progress at the end of the time range.
Completed instances	The number of instances that finished processing (successfully or not) during the time range.
Total instances	The total number of instances that were active during the time range. (This value represents the sum of *Running Instances* and *Completed Instances*.)

This measurement	Represents
Started instances	The number of new instances of this process that began during the time range.

This panel includes the email action, which enables you to send the alarm information to other interested parties. To use this action, click the email icon ✉ and complete the email form.

> **Note:** Using the email action requires a valid configuration of an email server. For more information about Managing Email Settings, see *Administering My webMethods Server*.

This panel also includes the escalation action which enables you to create an escalation event. If you have a closed loop solution configured this event assigns a follow up task to the designated user. To use this action, click the escalation icon ▲ and complete the form.

Process Alarms

The Process Alarms panel displays all *error types* that occurred during the selected time range. An error type represents a system-defined or user-defined condition that Optimize tracks. When the condition occurs (that is, when the condition is "true"), Optimize reports it.

Typically an error type represents a problem or an error condition you want to know about. However, error types can report positive events too. For more information about defining error types, see the "Configuring Business Processes" chapter in *Administering webMethods Optimize*.

This panel includes the email action, which enables you to send the alarm information to other interested parties. To use this action, click the email icon ✉ and complete the email form.
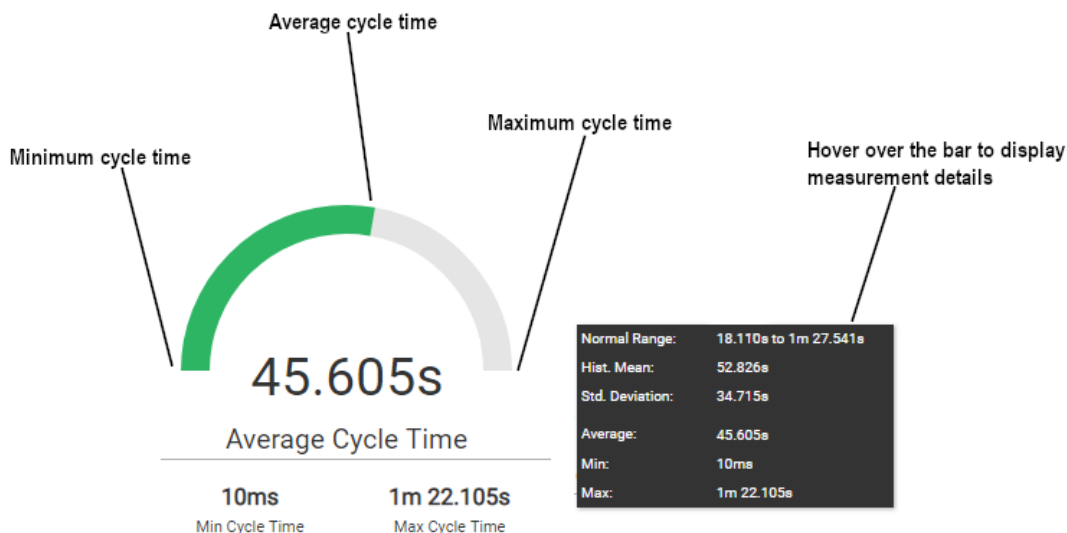
> **Note:** Using the email action requires a valid configuration of an email server. For more information about Managing Email Settings, see *Administering My webMethods Server*.

This panel also includes the escalation action which enables you to create an escalation event. If you have a closed loop solution configured for your system, this event assigns a follow up task to the designated user. To use this action, click the escalation icon ▲ and complete the form.

Process Cycle Time

The Process Cycle Time panel displays the average cycle time for the selected time range relative to the minimum and maximum cycle times for this process. This panel also reports the normal cycle times for the time range.

> **Note:**   *Cycle time* refers to the total time required for a process to run from beginning to end, including the time spent waiting to be processed and the process execution time.

When viewing with this panel, be aware that:

- The gauge represents the average cycle time of the process. The end points on the gauge represents the minimum and maximum cycle time, respectively. You can hover over the gauge to see additional information, such as the historical mean and the standard deviation.

  > **Note:**   The gauge does not become fully functional until Optimize has collected enough performance data to produce valid baseline statistics for the process. Until then, the gauge is gray, and the "normal" statistics are absent from the tool tip that is displayed when you hover over the gauge.

- The end of the green bar represents the average cycle time for the process instances that completed during the selected time range.

  > **Note:**   Process instances in the canceled or suspended state do not contribute to the cycle time measurement. If a suspended process resumes and completes successfully, it will contribute to the cycle time minus the time spent suspended.

This panel includes the email action, which enables you to send the alarm information to other interested parties. To use this action, click the email icon ✉ and complete the email form.
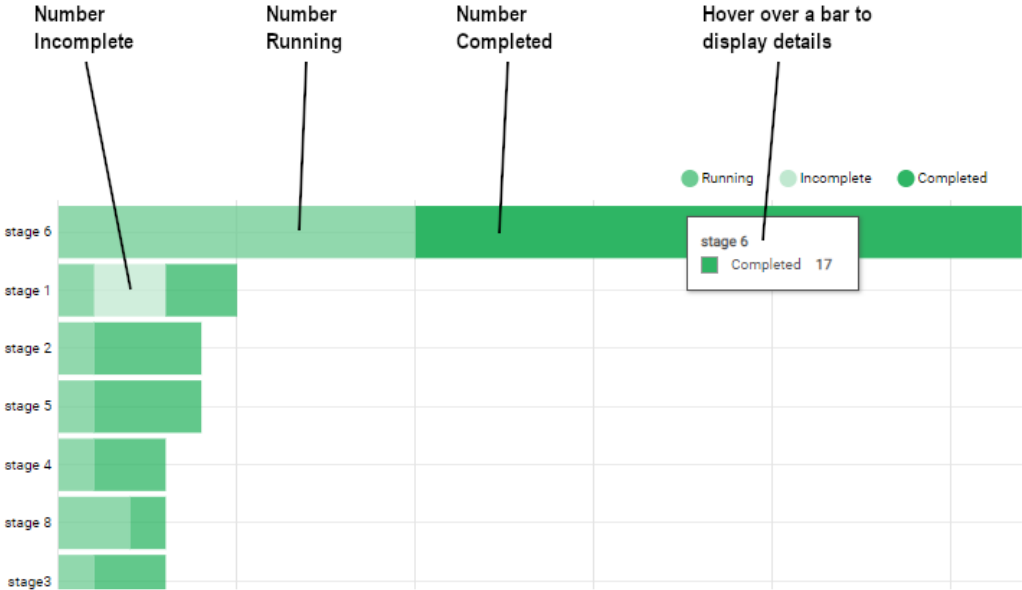
This panel also includes the escalation action which enables you to create an escalation event. If you have a closed loop solution configured for your system, this event assigns

a follow-up task to the designated user. To use this action, click the escalation icon ⚠ and complete the form.

Stage Activity

The Stage Activity panel lists the *stages* associated with the process and, for each stage, reports the number of running, incomplete, and completed instances.

> **Note:** A *stage* is a sequence of process steps that you want to monitor as a unit. You identify stages when you define your process model. For additional information about defining stages in a process, see the section on working with stages in *webMethods BPM Process Development Help*.

This count	Represents
Running	The number of stage instances that were still in progress at the end of the time range.
Incomplete	The number of stage instances that were started but not completed during the time range. Note that, in some cases, processes can be complete even though particular stage instances do not complete. This can occur because a process may step through the first milestone of a stage, but take a branch that does not lead to the stage's end milestone. A process may also end prematurely, due to various reasons which would prevent the stage's end milestone from being encountered.

This count	Represents
Completed	The number of stage instances that finished processing (successfully or not) during the time range.
	Note: This count will include any stage instances that Optimize marked as complete because the parent process completed before the stage instance did. This can happen, for example, when the parent process takes a path that does not include the end of the stage.

When viewing this panel, be aware that:

■ You can hover over a bar in the graph to display the exact number of running and completed instances for the stage.

■ You can use the buttons at the top of the graph to hide or show the segments in the bar graph.

This panel includes the email action, which enables you to send the alarm information to other interested parties. To use this action, click the email icon ✉ and complete the email form.

This panel also includes the escalation action which enables you to create an escalation event. If you have a closed loop solution configured for your system, this event assigns a follow up task to the designated user. To use this action, click the escalation icon ⚠ and complete the form.

Stage Alarms

The Stage Alarms panel reports the number of *breaches* that occurred during the selected time range by stage.

Note: A *breach* represents a violation of a condition that is specified for the stage. For example, a condition might specify that a given stage is expected to run in less than 5 minutes. If the stage takes longer than specified, the stage is breached. For more information about specifying the conditions for a stage, see *webMethods BPM Process Development Help*.

This panel includes the email action, which enables you to send the alarm information to other interested parties. To use this action, click the email icon ✉ and complete the email form.
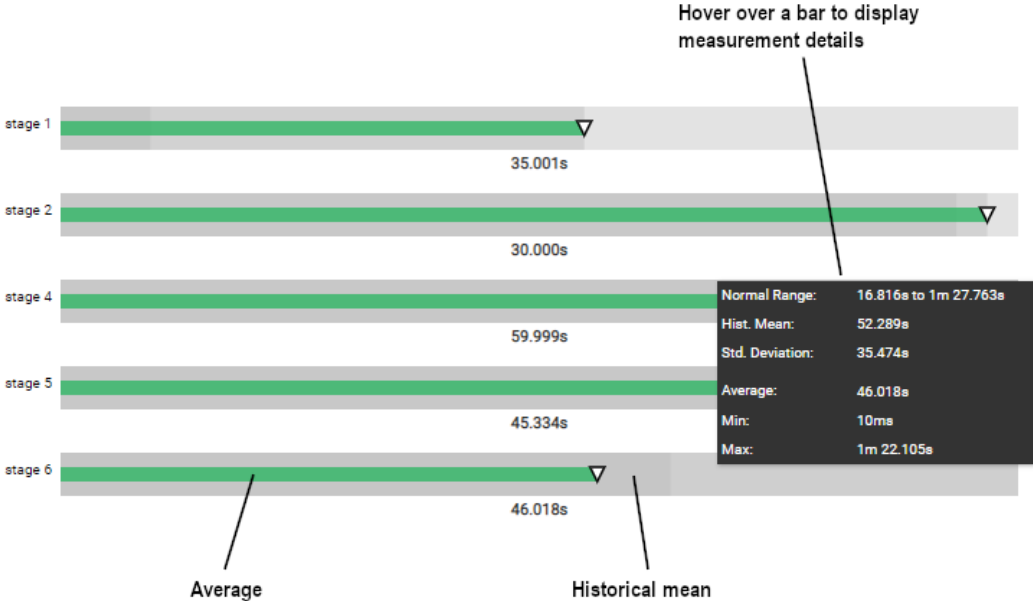
This panel also includes the escalation action which enables you to create an escalation event. If you have a closed loop solution configured for your system, this event assigns a follow up task to the designated user. To use this action, click the escalation icon ⚠ and complete the form.

Stage Cycle Times

The Stage Cycle Times panel shows the average cycle time for each stage during the selected time range relative to the maximum cycle time for the stage.

> **Note:** *Cycle time* refers to the time from the beginning of a stage instance to the end of the instance.

When viewing this panel, be aware that:

■ The bar represents the maximum cycle time for the stage. Hover over the chart to see the values of the normal cycle time and the standard deviation.

■ The arrow position represents the average cycle time for the stage instances that completed during the selected time range.

> **Note:** Stage instances that have been marked complete because their parent process ended prior to the completion of the stage do not contribute to the cycle time measurement.

■ A graph for a given stage does not become fully functional until Optimize has collected enough performance data to produce valid baseline statistics for that stage. Until then the "normal" statistics are absent from the tool tip that is displayed when you hover over the arrow.

This panel includes the email action, which enables you to send the alarm information to other interested parties. To use this action, click the email icon ✉ and complete the email form.

This panel also includes the escalation action which enables you to create an escalation event. If you have a closed loop solution configured for your system, this event assigns a follow up task to the designated user. To use this action, click the escalation icon and complete the form.

Understanding the Stage Instances Dashboard

The Stage Instances dashboard displays detailed information about stage instances that were active during the selected time range.

Stages

The Stages table displays the stages associated with the selected process and reports summary statistics for each.

This column	Reports
Stage	The name of the stage.
Started	The number of instances that began during the time range.
Running	The number of instances that were still in progress at the end of the time range.
Incomplete	The number of instances that were running but did not complete and that were associated with a process instance that did complete during the time range.
Completed	The number of instances that completed (successfully or not) during the time range.
Alarms	The number of instances that breached a condition of the stage.
Cycle Time	The average cycle time for instances that completed during the time range.
Details	Metadata about the stage.

Stages Instances

The Stage Instances table is displayed when you select one or more stages in the Stages table, and it shows detailed information about the stage instances for the selected time range.

To display data in this table, select one or more stages in the **Stages** table and click the **View Instances** button.

> **Note:** The table can display details for up to 2000 instances. If your selection produces more than 2000 results, try reducing the number of selected stages in the Stages table or adjusting the time range.

The Stage Instances table contains the following columns:

Column	Description
SID	The stage instance ID. It serves as a link to the Optimize **Process Instances Detail** page, which provides additional information about this process instances related to this stage.
Stage Name	The name of the stage.
Stage Date and Time	Time when the instance began.
End Date and Time	Time when the instance ended.
PID	The ID of the process instance. It serves a link to the Optimize **Stage Instances Detail** page, which provides additional information about the stage instance.
Status	The status of the stage instance. Statuses are as follows: ■ ▶ - Indicates that the stage instance was started during the specified time range. ■ 🔄 - Indicates that the stage instance was still in progress during the specified time range. ■ ✖ - Indicates that the stage instance did not complete, though the associated process instance did complete during the specified time range. ■ ✔ - Indicates that the stage instance completed during the specified time range.
Cycle Time	The duration of the instance (for completed instances only).
Actions	Actions you can take for this instance.

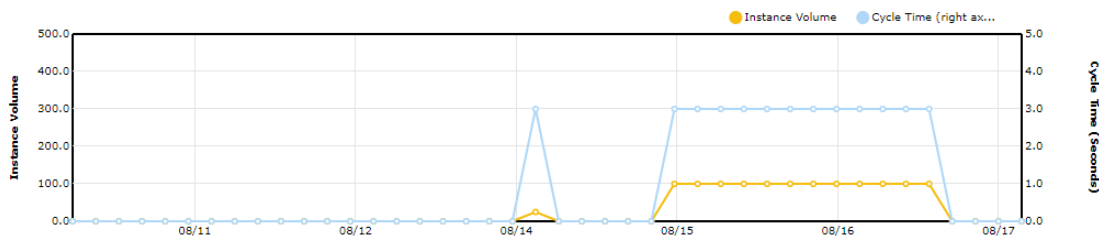| Column	Description
	■ Click the email icon ✉ and complete the provided email form to send details about the stage instance to other interested parties.
	■ Click the Escalation icon 🔺 and complete the provided form to create an escalation action event.

Click 🔍 and specify search criteria to filter the instances in the result table.

Understanding the Process Instances Dashboard

The Process Instances dashboard displays detailed information about the instances of the process that were active during the selected time range.

Process Volume and Cycle Time

The graph in this panel plots process volume and average cycle time for the selected time range.

When viewing this panel, be aware that:

■ Each point in the **Instance Volume** series reports the number of process instances that *completed* during the given interval.

■ Each point in the **Cycle Time** series reports the average cycle time for the given interval.

■ You can toggle the graphs on and off individually by clicking the series name in the legend.

■ You can display the time and exact measurement for a given data point by hovering over the point with your cursor.

■ The time displayed for a data point represents the end of the interval. For example, if you are viewing the graph for a **1 day** time range (which reports measurements at hourly intervals), the data point at 2:00 represents the measurement for the interval 1:00:00:001 to 2:00:00:000 (inclusive).

Process Instances

The **Process Instances** table displays detailed information about instances that were active during the selected time range.

You can use the filtering options above the table to choose the set of process instances you want to view.

Select	To display
Total	All instances in the time range (in any state).
Started	All instances that began during the time range.
Running	All instances that were still in progress at the end of the time range.
Completed	All instances that ended (successfully or not) during the time range.

Note: The table can display details for up to 2000 process instances. If your selection produces more than 2000 results, try filtering the instances using the buttons above the table or adjusting the time range.

Column	Description
Last Updated	Time of the last process-control event for the instance (for example, step start, step end, stage start, stage end).
Instance ID	The process instance ID. Click on the ID to view the Optimize Process Instances Detail page with additional information on this process instance.
Start Date and Time	Time when the instance began.
Ver	The deployment version of the model that defines this process.
Status	The state of the instance at the end of the time range. This column displays: ■ **Running** if the instance was in progress at the end of the time range.

Column	Description
	■ **Completed** if the instance ended (successfully or not) during time range.
Cycle Time	The duration of the instance (shown for completed instances only).
Actions	Actions you can take for this instance. ■ Click the email icon ✉ and complete the provided email form to send details about the stage instance to other interested parties. ■ Click the Escalation icon ⚠ and complete the provided form to create an escalation action event.

Click 🔎 and specify search criteria to filter the instances in the result table.

3   **Using the Business Process Dashboards with Closed Loop Analytics**

Configuring Closed Loop Analytics

The Business Process dashboards are a central component of webMethods Closed Loop Analytics. If you have the Business Process dashboards installed in a BPM configuration with the appropriate additional Software AG components, you can take advantage of a true closed loop solution that enables you to identify business process related problems and issues and create escalation tasks that are assigned to the appropriate individuals in your organization for follow up.

This type of solution automates the process of assigning a formal task to an appropriate individual to deal with a process problem or exception. When a task is assigned, it includes a link back to the dashboards so the assignee can view the issue as seen on the dashboards at the time it was assigned. You can monitor the status of these tasks and what steps were taken to address the underlying issues.

For the full list of components required to install and configure a closed loop analytics solution, see *webMethods Closed Loop Analytics Help*.

After installing and configuring Closed Loop Analytics, you must also import the appropriate escalation related assets into Software AG Designer. For a full list of these assets, see *webMethods Closed Loop Analytics Help*.

See the "Working with Escalation Processes" section of the Process Development Help for more information on importing these assets into Optimize and configuring them for use.

If you are using Universal Messaging as a JMS provider, and it does not run locally, you must use the procedure to configure JMS settings for Business Process Management (BPM) described in *webMethods Closed Loop Analytics Help*.

A   Escalation Action XML Structure

Escalation Action XML Content and Structure

The Escalation action is designed to work in an event driven environment, so that actions can be assigned and scheduled automatically in response to a potential problem condition observed on the Business Process dashboards. If you are working with webMethods Business Console and have the appropriately configured Software AG components, you have access to a true closed loop solution in which the escalation action and subsequent tasks are created and assigned in an appropriate manner for your system. If you do not have this configuration but still wish to use the Escalation action in a custom event driver architecture, you can use the information herein and the appropriate coding to design and implement an appropriate solution.

Users can gain access to escalation action events by subscribing to them on the EDA Event Bus. The following table shows the appropriate parameters and the action that gets triggered.

`Originator`	User ID for the individual who originated the escalation action.
`Originator Comments`	Text comments added to the escalation event by the originator as well as process activity criteria (as shown in the following list) and dashboard specific process activity metrics. ■ `Process Name`: The name for the process relevant to the escalation action. ■ `Process ID`: The ID for the process relevant to the escalation action. ■ `Start Time`: The beginning time for the process data being displayed. ■ `End Time`: The end time for the process data being displayed.
`Timestamp of Creation`	The time at which the escalation action was created on the originator's computer.
`Task Assignee`	User ID of the individual who is assigned a task related to the escalation action.
`Due Date`	Date by which the appropriate action should be completed.

RefUrl	The URL of the process dashboards for the time and state when the escalation action was generated. This URL enables the assignee to view the dashboards as the originator saw them.
	Note: Clicking the URL does not automatically open the process dashboards, as Single Sign-On is not supported. The user must log in to Business Console to be able to view the dashboards.
Process Name	The name for the process relevant to the escalation action.
Process ID	The ID for the process relevant to the escalation action. The ID is composed of the folder/path and process name from Designer.
StartDateRange	The starting time and date as displayed on the dashboards when the escalation event was generated.
EndDateRange	The ending time and date as displayed on the dashboards when the escalation action was generated.
Escalation Type	The name of the dashboard panel from which the escalation action was originated.