



Product Overview

Note!

Before using this information and the product it supports, be sure to read the general information under “Notices and Trademarks” on page 9

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This edition applies to Version 6 of IBM WebSphere Business Monitor product (5724-M24) and to all subsequent releases and modifications until otherwise indicated in new editions.

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WebSphere Business Monitor overview

The WebSphere® Business Monitor Version 6.0 is a Web-based client/server application that measures business performance, monitors processes and work flow, and reports on business operations. The information captured can help you identify problems, correct faults, and change processes to achieve a more efficient business.

WebSphere Business Monitor monitors business processes at runtime by monitoring event-emitting runtime engines. Only applications that are running on WebSphere Process Server Version 6.0.1 are currently supported.

WebSphere Business Monitor calculates Key Performance Indicators (KPIs) and metrics using collected events, based on a given model. The calculated KPIs and metrics values are represented on a number of views based on business needs. WebSphere Business Monitor notifies users of incidents requiring their attention and can also perform corrective actions to avoid failures. It supports different notification methods (Alert, E-mail, Cell Phone, Pager, and service invocation) against situations and actions associated with defined conditions.

WebSphere Business Monitor depends on business measures models for its monitoring procedure. These models are created in the Business Measures editor where you can specify the measuring points and event filters, define the measurements, their correlations, and sources of the business data. When the business measures model is complete, you can export it to WebSphere Business Monitor. It then recognizes the model to be monitored and the measurements to be captured from the incoming events.

You use the Business Measures editor to open the process models created in WebSphere Business Modeler and to create business measures models. For each business measures model, you can define the metrics and KPIs, event emission points, event filters, event composition rules, and situations that will trigger specific actions at runtime.

To sum up, to monitor your business operations, WebSphere Business Monitor:

- Captures a large amount of data through events from operation activities and transforms it into metric and KPI values
- Extracts the measurements variables from business data
- Displays the measurements values in useful views
- Provides analysis and reports
- Performs corrective actions
- Notifies users to take action to prevent failures

Monitoring cycle

In monitoring business operations, WebSphere Business Monitor uses business models, which are represented in business measures models.

The following overview shows the steps in the monitoring process from representing a business model to monitoring metric and KPI values:

1. Using WebSphere Business Modeler, represent the business model by modeling the business work flow within the organization and specifying measurable entities.
2. Create the business measures model in the Business Measures editor, a component of WebSphere Business Modeler.
Based on the business model, the business measures model is created to specify correlation between activities, event emission points, event filters, event composition rules, and situations. The Business Measures editor also defines the KPIs and metrics that are to be measured.
3. Export the business measures model from the Business Measures editor.
4. Using the Schema Generator, open the exported business measures model by using the WebSphere Business Monitor administrative console .
5. Generate the database schemas and the associated artifacts of the business measures model.
6. Configure the WebSphere Business Monitor databases according to the generated artifacts.
7. Using the **Model Import** page in the administrative console, import the business measures model to WebSphere Business Monitor.
8. Configure the WebSphere Business Monitor dashboards through the WebSphere Portal administration console
9. Use the WebSphere Business Monitor dashboard views to monitor the changes in values of the metrics and KPIs.

Components

The main components of WebSphere Business Monitor interact with each other to manage, store, and display information critical to understanding your business operations.

Monitor Server

The Monitor server is the main component of WebSphere Business Monitor. It manages contexts and events.

Specific actions the Monitor Server performs are:

- Receiving events
- Creating, reading, updating, and terminating process instances
- Retrieving and storing the metric values of process instances according to event processing
- Persisting runtime and historical metrics and KPI values for processes.

Dashboards

The Dashboard Client component of WebSphere Business Monitor Version 6.0 enables users to monitor business performance through a set of views.

The Dashboard Client operates within the IBM® WebSphere Portal Version 5.1 environment. Each of the dashboard views is implemented as a portlet. A dashboard is created by assembling portlets in a portal page. To construct the WebSphere Business Monitor Dashboard Client, you create a portal page and add a set of views portlets to it.

Users can display the monitoring data through a set of dashboard views defined according to display properties and content. These views provide different representations of both runtime and historical data. DB2® Alphablox is used with the views for a more refined data analysis.

A dashboard view is a type of display supported by one or more dashboard categories. The display is targeted to address specific functions or responsibilities of a particular role. Each view type supports a number of display properties to customize the display. The dashboard view types are:

- **Active Instances:** Displays the instances of a specific process and the runtime values of selected business measures.
- **Reports:** Displays performance reports showing the values of metrics aggregated over a period of time in tables and graphs.
- **Scorecards:** Primarily supports executive users. A scorecard groups the KPIs of particular interest to executives.
- **Key Performance Indicators (KPIs):** Displays the details of individual KPIs.
- **Gauges:** Visually represents the values of KPIs relative to KPI limits or relative to the KPI target, in the form of a gauge that looks like an automobile speedometer or tachometer.
- **Dimensions:** Displays a multidimensional view of business performance data. You can analyze any measure to view the performance based on this dimension.

- **Alerts:** Displays the alert notifications for a specific user.
- **Process Diagrams:** Displays process status on a process graph with visual indicators showing the status of the process. You can also display the status of a specific process instance in the process graph by highlighting the activities that have been performed in the instance.
- **Organizations:** Retrieves organization and employee information from a user-registry such as LDAP. You can select an organization or a set of employees to use to filter the data of the Reports view.
- **Export Values:** Allows further analysis and manipulation of processes information by exporting their average values for a selected business measures model. Those values are then imported in WebSphere Business Modeler for continuous improvement of the business processes

Databases

WebSphere Business Monitor databases are the data storage component that provides the Monitor Server with information for event processing and the dashboards with information for views.

WebSphere Business Monitor contains five databases:

- **State:** Stores information about the current state of all business measures groups. It is used for event processing by the Monitor Server component.
- **Runtime:** Stores the running monitor-context instances and the corresponding metrics and KPIs that the dashboards use for retrieving information for views and that the Action Manager uses for storing alert notifications.
- **Historical:** Stores all completed and running monitor-context instances data. The dashboards use it for enhanced data analysis in conjunction with IBM DB2 Alphablox.
- **Repository:** Stores the definitions of the deployed business measures model along with other WebSphere Business Monitor information from other databases.
- **Action Catalog:** Stores the action services that are defined in the Adaptive Action Manager component.

Adaptive Action Manager

The Adaptive Action Manager component receives situation events emitted by the Monitor Server. It selects appropriate actions based on predefined bindings between the situations and actions that are set by the user, and invokes one or more actions services.

The actions performed by the WebSphere Business Monitor fall into two main categories:

- **Notification actions:** These are a group of actions that dispatch notifications according to criteria defined for each type of media. The supported notification types are:
 - **E-mail:** Sends e-mail notifications. They are sent using Java™ Mail APIs.
 - **Pager:** Sends a notification to users' pagers via e-mail to notify them of specific situations.
 - **Cell Phone:** Sends a notification to users' cell phones via e-mail to notify them of specific situations.
 - **Alert:** Sends and displays alert notifications on a dashboard view.

- **The Service Invocation Adaptive Action:** Creates and starts process instances using the runtime engine APIs. The name of the process and the data needed to create it are defined in the adaptive action configuration. Supported service invocations are:
 - Web Service invocation
 - BPEL process via Web Service invocation

Schema Generator

The Schema Generator is the WebSphere Business Monitor component that manages the WebSphere Business Monitor database environments for the business measures models.

It generates the required scripts for creating database tables that are specific for each of the business measures models. It manages the multidimensional analysis environment as well by generating the required definitions of the DB2 Cube views for each model. The Schema Generator also defines the replication scripts needed by the replication service for moving information between the different WebSphere Business Monitor databases.

These functions are implemented through the Schema Generator panels in the WebSphere Business Monitor administrative console extension in the WebSphere Application Server admin console.

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