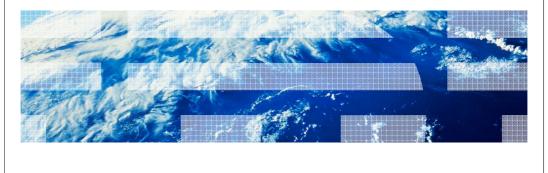


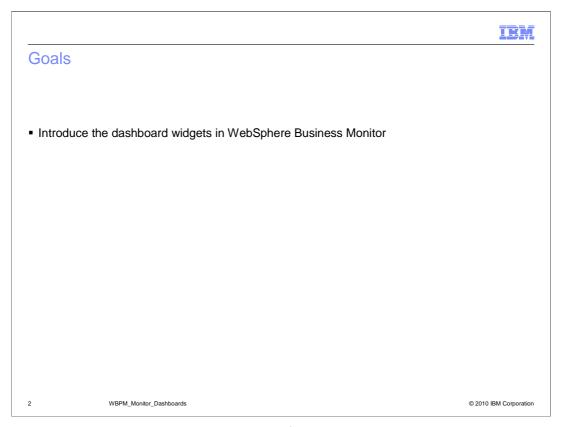
WebSphere Business Monitor

Dashboards



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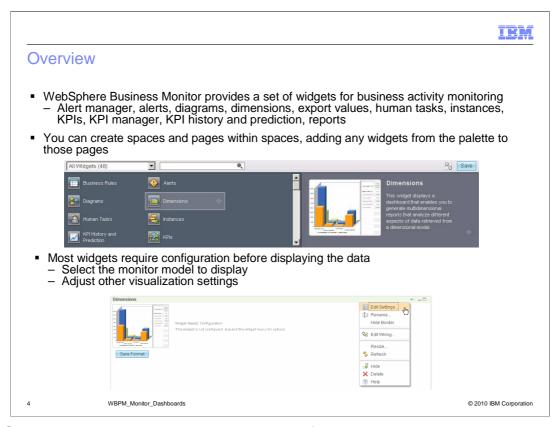
This presentation should provide an overview of the dashboard widgets for use with WebSphere Business Monitor.



This presentation will give you an overview of the monitor dashboard including the various widgets that are available in WebSphere Business Monitor.

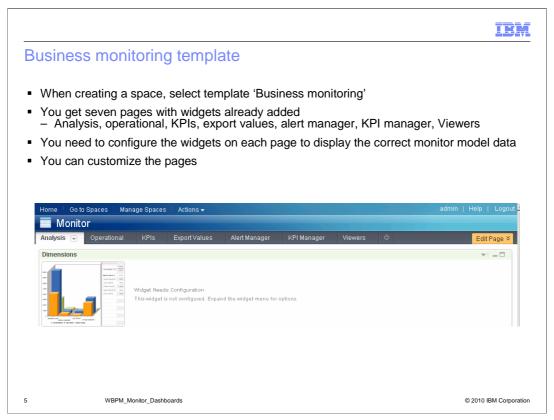


This is the agenda for this presentation. You will see an overview of the monitor dashboard. In addition you will review the monitoring template and how to use it when creating a new business space. Then you will review each of the widgets that are provided with WebSphere Business Monitor.



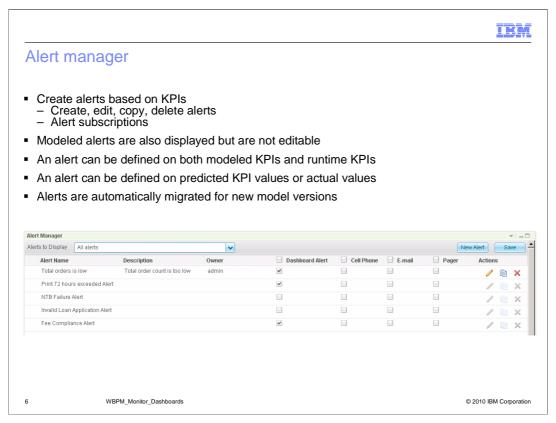
WebSphere Business Monitor provides widgets for monitoring business activities. You can create spaces and then create pages within each space. For each page, you can add widgets from the palette, as you can see in this screen capture. Widgets are provided for each BPM product that you have installed, plus there can be generic widgets or custom widgets that are also installed on the business space server.

For each widget you should use the menu option called 'Edit Settings...' to configure the widget to display the data for your selected monitor model, using the formatting options that you choose.

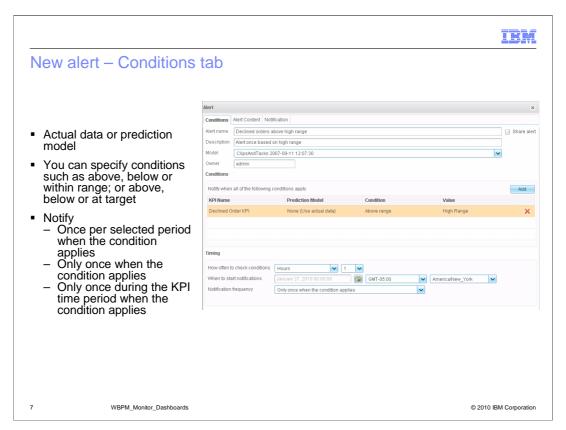


When creating a dashboard, you can use the Business Monitoring template to create a space designed for monitoring business activities. The space created will contain seven named pages, each page with one or more widgets that are ready to be configured. The title of each page created by the template indicates the type of information you will find there. For example, the Operational page contains the Diagrams, KPIs, and Alerts widgets, which are ideal for displaying business operations information. The Diagrams widget might display a business process flow, the KPIs widget might display real-time performance data, and the Alerts widget might display notifications that warn you when certain performance expectations are off target.

You can customize the space by changing the page names, adding widgets to pages, removing existing widgets, and by adding new pages.

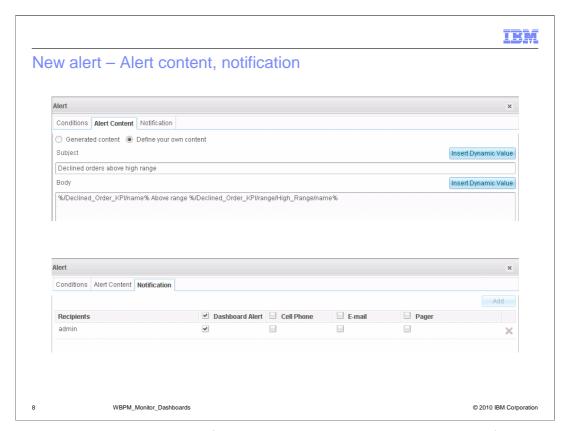


In the alert manager widget you can create alerts dynamically based on KPIs that are defined in the model. You can manage the alerts in this widget so you can create, edit or delete them. And you can update your alert subscriptions so that you can be notified in the dashboard, cell phone, e-mail or pager. In the alert manager you can filter alerts to list all alerts, modeled alerts or alerts by model name. For modeled alerts, you can view the information but you cannot edit the information. Note that the KPI that you reference for the alert can be either a modeled KPI or a KPI that you have created dynamically in the KPI manager widget. Also, you can base the alert on the KPI actual value or on predicted KPI values.



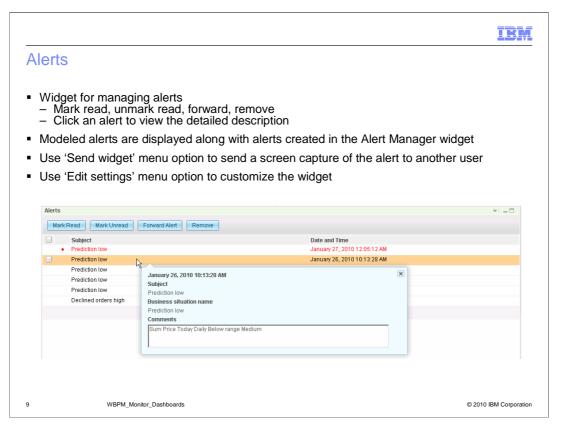
When defining a new alert, you can specify conditional information on the conditions tab. In this example an alert is created when the value of the KPI moves above the high range. You can also specify other criteria such as above, below or within any range; or you can specify above, below or at the target. In this example the alert is based on KPI actual values, but you can also use the KPI manager to create a prediction model, then reference that prediction model on the alert condition.

In the timing section of the condition definition, you can adjust the timing interval, the starting timestamp, and the notification criteria.



In the screen capture at the top of this slide you see the alert content tab for business user alerts. Here you can enter the details of the alert message or you can accept the default content. You can enter the subject and body and you can insert dynamic values into the text. If you click to insert dynamic values, you are presented a list to select from KPI value, target, name, and range information.

In the screen capture at the bottom of this slide you see the notification tab for business user alerts. Here you can manage the recipients of the alert and you can manage the notification method - either dashboard, cell phone, e-mail or pager.



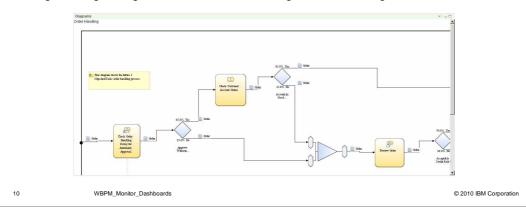
The Alerts widget displays alert notifications of predefined business situations occurring at run time. There are two ways that a user can view alerts, by model design in WebSphere Business Modeler, or by subscription. Generally, an administrator designs models with specific business situations defined to trigger alerts. Users then receive alert notifications when these situations occur. Alert notifications can be sent to a dashboard, pager, cell phone, or an e-mail message. Users who are not designed to receive these alerts by the administrator can subscribe to view the same alerts using the Alert Manager dashboard widget.

If you are viewing an alert and notice something that requires attention, then you can invoke an action to create a new human task to have the issue investigated by the specified user. A screen capture of the alert is sent along with the human task.

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Diagrams

- Display visual representations of business processes, such as flowchart diagrams
- Associated with a key performance indicator (KPI) context or monitoring context
- Scalable Vector Graphics (SVG) diagrams can contain visual customizations as defined in the visual sub-model of the monitor model
- Requires a browser plug-in for a supported SVG viewer Adobe SVG Viewer, Examotion Renesis Player
- Wire a connection from the alerts widget or instances widget to the diagrams widget
- Diagram widget integration with human tasks widget or custom widget



The Diagrams widget can display visual representations of business processes, such as flowchart diagrams, with visual cues for the status of the process and access to subprocesses.

A diagram is associated with a key performance indicator (KPI) context or monitoring context.

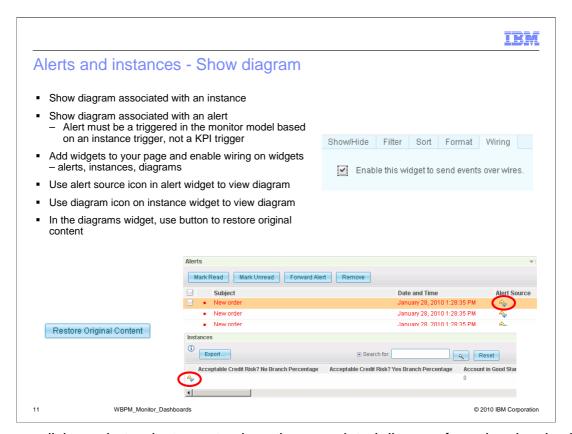
The Diagrams widget requires a monitor model that contains a visualization element, consisting of one or more Scalable Vector Graphics (SVG) diagrams associated with a monitoring context or a KPI context.

The visual model is created using the Monitor Model Editor and it contains annotations that allow you to customize the diagram display at runtime. You can display text dynamically on the diagram, or you can color code elements on the diagram based on expressions in the model. Also, you can use define inter-diagram navigation so that you can click an element in the diagram and drill down to a new diagram.

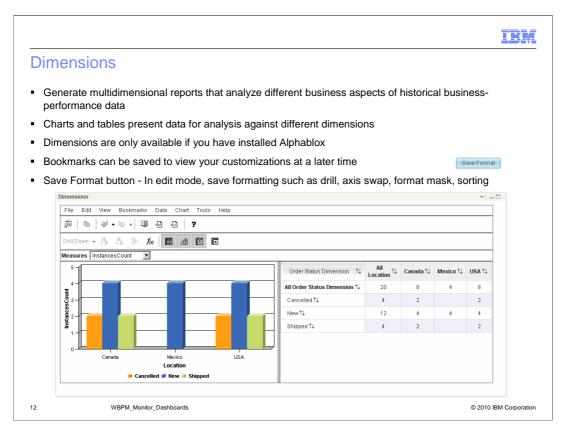
To display SVG diagrams in the your browser, you will need to install a supported version of an SVG viewer.

An instance diagram can be associated with a monitoring context when there is a wired connection with either the Alerts widget or the Instances widget. Then when you click an alert or instance, then the corresponding diagram is displayed for that selection.

You can integrate the diagram widget with the human task widget so business users can see all of the instances related to a human task in a diagram. You can also setup actions in the visual model to support cooperation between the diagram widget and any custom widget that you create, including sending instance metric values to the custom widget.

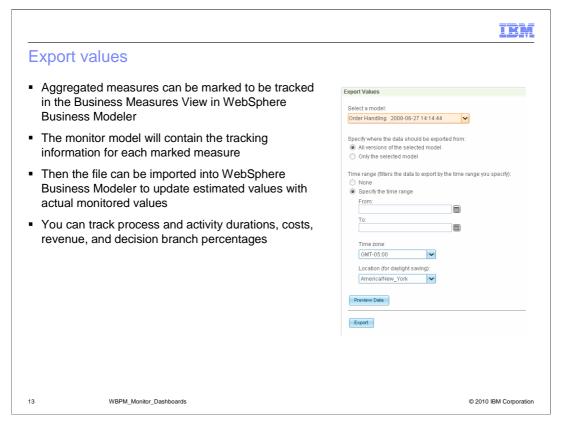


You can click an alert or instance to show the associated diagram from the visual submodel of the monitor model. The alert must be triggered by a monitored instance in the monitor model. If the alert is based on a KPI, then the alert source icon will display gray in color and it is disabled. To show the diagrams, make sure that the alerts, instances and diagrams widgets are added to your dashboard page, and make sure that the widgets have the wiring enabled. Use the alert source icon on the alerts widget to display the associated diagram in the diagrams widget. Use the diagram icon in the instances widget to display the diagram. Note that the diagram displayed is the generic visual model diagram, unless annotations have been applied to the visual model to affect the visual formatting. After viewing the diagram, there is a button on the diagrams widget to restore the diagram to the original content.



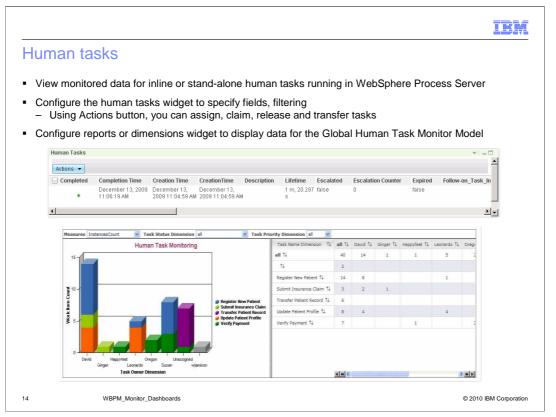
The Dimensions widget displays charts and grids with data for analysis against different dimensions. In the dashboard, you can generate multidimensional reports that analyze different aspects of data retrieved from a dimensional model.

Using the Dimensions widget, you can customize the multidimensional reports and save what you customized using bookmarks. For example you can save customizations such as drill downs, axis swap, format mask, and sorting. In edit mode, there is also a button called 'Save Format' which allows you to save the formatting so that the widget is always initially displayed with this formatting.



The Export Values widget allows you to export your observed monitoring data for import back into WebSphere Business Modeler. You specify the model and optionally a time range, then these values can be imported into WebSphere Business Modeler to update the model so that simulations can then be run with real observed values instead of estimates. This provides a continuous end to end improvement cycle. You can track durations, costs and revenue for processes or activities within processes. You can also track decision branch percentages.

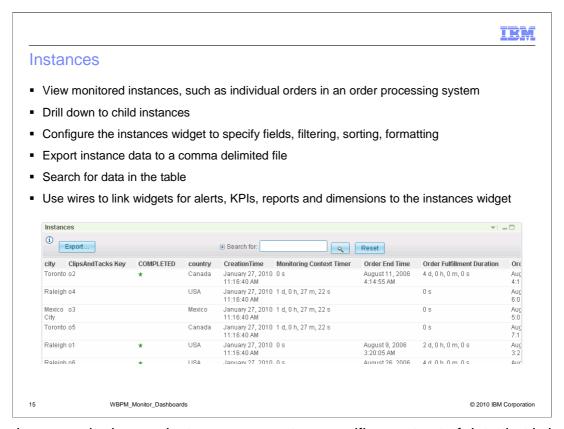
To setup exporting values, you first mark the aggregate measures for tracking in the Business Measures View in Modeler. Then, when you export the monitor model from Modeler it will contain a tracking key for each business measure that you want to track. Later, when you use the export values widget to export data, then only those business measures that have the tracking key are exported.



The Human Tasks widget displays human task instances. Human task instances can be inline tasks running inside any Business Process Execution Language (BPEL) process or they can be stand-alone human tasks running in the process server. You must first configure the Human Tasks widget before you can monitor human task instances. You can select which properties are displayed. You can also use the actions button on the human tasks widget to assign, claim, release and transfer tasks.

In the upper screen capture you see the Human Tasks widget which shows instance information for each human task.

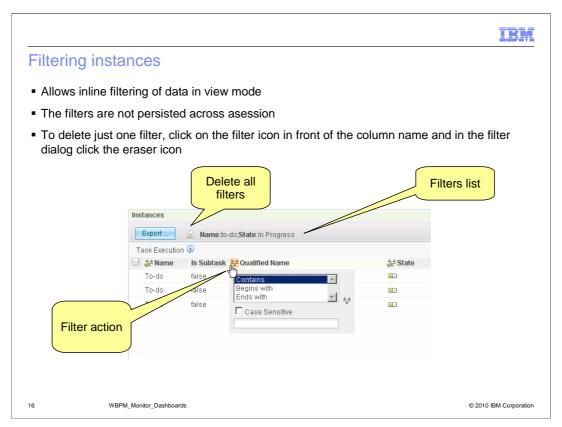
You can also use the reports or dimensions widget to display aggregated human task information. You need to configure them to display the measures and dimensions for the Global Human Task Monitor Model. In the lower screen capture you see the Dimensions widget showing the aggregated information for tasks and users, and you can easily see the total tasks assigned to each user.



In business monitoring, an *instance* represents a specific construct of data that is being processed by WebSphere Business Monitor. In an order processing scenario, an order can be considered an instance. Information about each order instance can be monitored, such as the dollar amount of each order. The instances widget displays the available monitoring context instances along with specific metrics which have been defined in the monitor model.

You can use the Instances widget to view the available instances of a monitoring context for a specific monitor-model version, or for all instances across all versions of the monitor model. You can also navigate through all the descendants of a certain monitoring context instance by drilling down through the hierarchy.

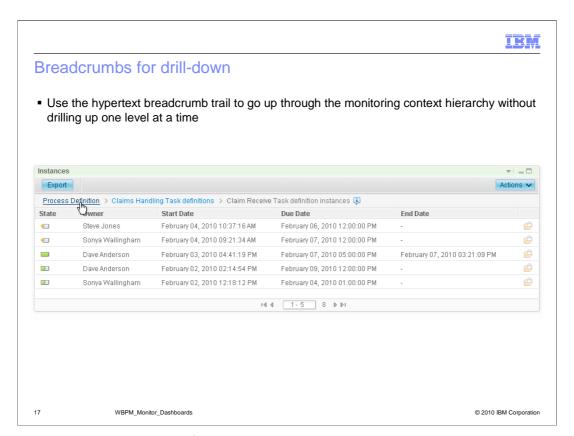
You can configure the widget to specify fields, filtering, sorting and formatting. You can use the export button to export instance data to a comma delimited file, and you can specify to export just the current page or all pages. You can use the search field to find specific information in the instances table. All pages in the instances table are searched when you submit a query. In addition, you can wire other widgets to the instances widget. So for example, you can click an alert or a KPI and the associated instances are displayed in the instances widget. And you can pick a cell in the reports or dimensions grid, and select to show the instances associated with the aggregated amount.



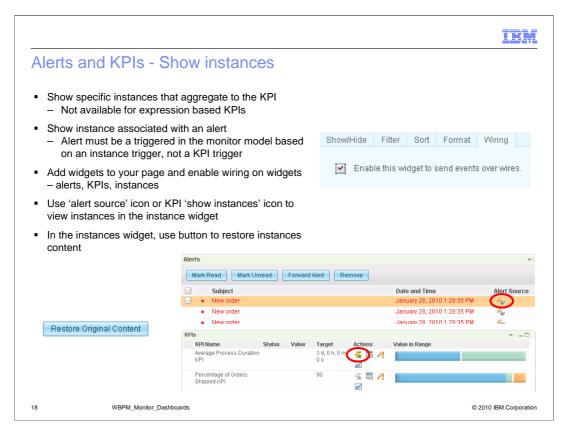
You can use inline filters in view mode to restrict the data that is displayed. The filters are not persisted so once you logout and log back in the filters are cleared.

To enable a filter, just click on the icon in front of the column name, and use the dialog box to complete the filter. You can set more than one filter and they are displayed at the top of the widget. You can can also delete all filters or delete an individual filter.

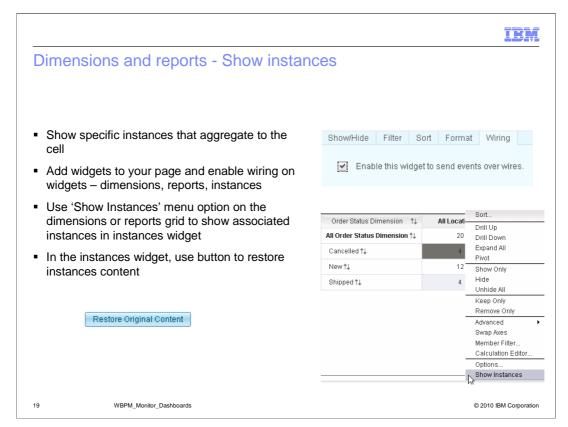
If inline filters are set and you are using the search function, you will only be able to search the instances that are being displayed.



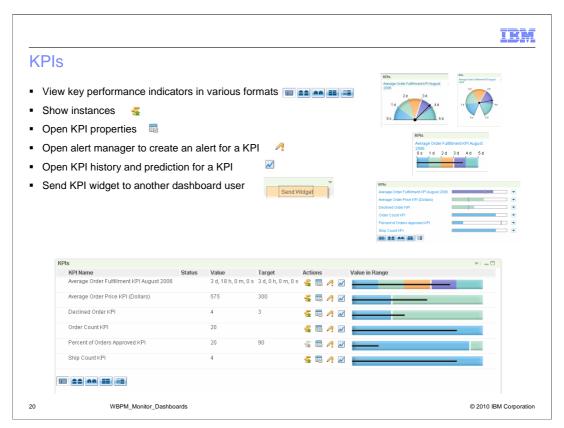
There are breadcrumbs listed for use with nested monitoring contexts. As you drill down to child contexts, the breadcrumbs display the path you have taken. You can easily click anywhere in the breadcrumb trail to directly access a parent context.



You can click a KPI to show the instances that comprise the aggregated value, however the menu option is disabled if the KPI is based on an expression rather than a metric with aggregation function. You can also click an alert to show the monitored instance that is associated with the alert. The alert must be triggered by a monitored instance in the monitor model. If the alert is based on a KPI, then the alert source icon will display gray in color and it is disabled. Make sure that the alerts, KPIs and instances widgets are added to your dashboard page, and make sure that the widgets have the wiring enabled. Use the 'alert source' icon on the alerts widget to display the associated instance in the instances widget. Use the 'show instances' icon in the KPIs widget to display the instances that comprise the KPI aggregation. After viewing the instances, there is a button on the instances widget to restore the instances to the original content.

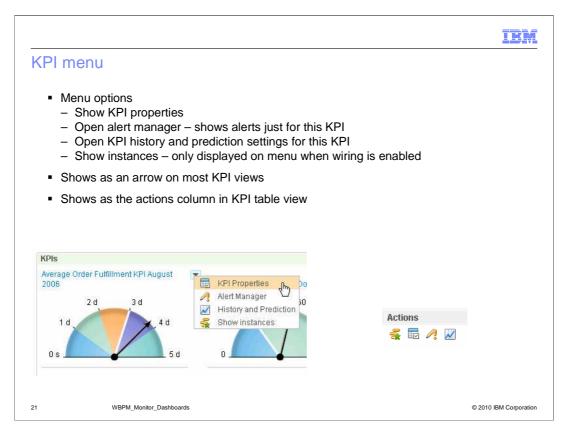


You can drill down from aggregated multi-dimensional information to the instances that comprise the aggregated value. On the dimensions or reports view, you can bring up the pop-up menu on any of the aggregate cell values and select to show the instances for that value. When you select this option, the instances widget is opened with only the instances listed that represent the aggregate value. To enable this, make sure that the instances widget is added to your dashboard page along with the reports or dimensions widget, and make sure that the widgets have the wiring enabled. After viewing the instances, there is a button on the instances widget to restore the instances to the original content.



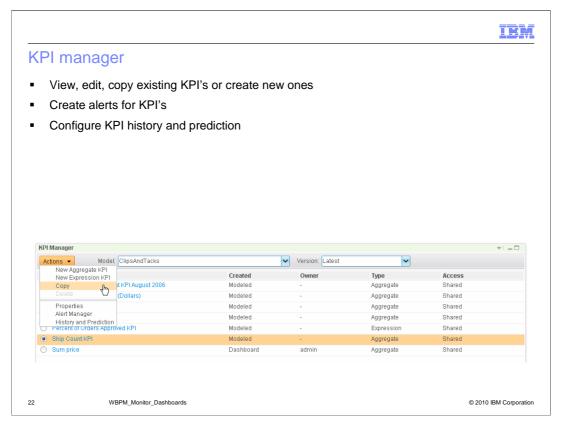
The KPIs widget displays the target and current status of key performance indicators (KPIs) in the form of graphical gauges and tables. Key performance indicators (KPIs) are quantifiable measures designed to track the critical success factors of business processes. These measurements break down key areas of your business so that you can see how each area contributes to the overall business results. You can select different formats for display, such as table, half gauge, full gauge, bar and simple. These formats are displayed in the screen captures on this page.

You can use the KPIs widget to show instances that comprise a KPI, view KPI properties, and open alert manager to create an alert for a KPI. You can also open KPI history and prediction configuration options for a KPI, and send a KPI widget to another dashboard user.



In the KPI menu you can select KPI properties, alert manager, history and prediction or show instances. The KPI properties lists the definition of the KPI. The alert manager option shows alerts just for the specific KPI in the originating widget. You can open the KPI history and prediction settings for the KPI. And you can show the instances which comprise the aggregated KPI value.

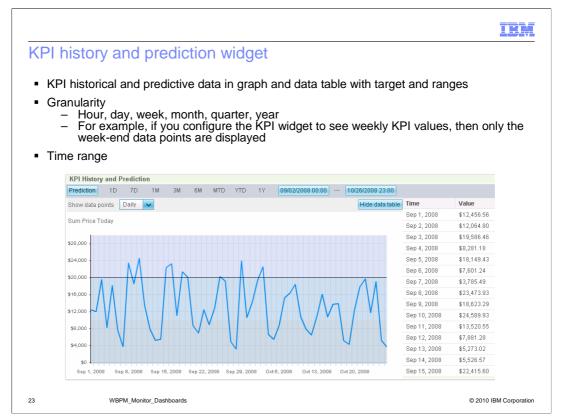
The menu is a drop down arrow on most of the KPI views, however, for the KPI table view you will see a separate actions column in the table with icons representing each of the menu options.



The KPI Manager widget displays the key performance indicators (KPIs) that you own or have been given access to view and allows you to work with them directly from a dashboard.

Use the KPI Manager widget to define, copy, and modify KPIs; view KPI properties; view and create alerts for KPIs; and configure settings for collecting history and prediction data.

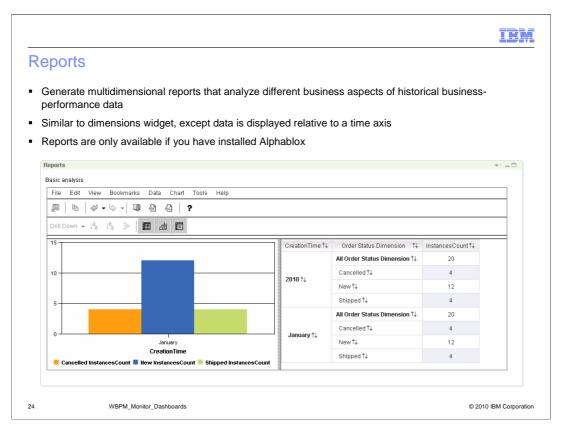
All the properties are available for your modification, such as targets and ranges and filters. As you make changes, you can see a graphical display of your changes on the preview tab. However, for KPI's that were originally created in the toolkit rather than in the KPI Manager, denoted in this widget as Modeled, you cannot change all the properties. You are restricted to changing only the target value for Modeled KPI's.



The KPI History and Prediction widget displays historical and predictive data for a KPI in a graph format that is fully interactive. The flexibility of the graphical interface allows you to easily change the time periods and data points displayed on the graph. Using the KPI Manager widget or the KPIs widget, you can enable the history and prediction capabilities for a KPI.

For KPIs that have history collected, you can use the prediction capabilities to see future trends. Using the Alert Manager, you can create alerts that are based on the predictions so that you can receive a notification when a predicted value is approaching the threshold defined in the alert condition.

You can view the data in graph or tabular format. The granularity on the widget can be set to display data points on various intervals such as hourly, daily or yearly. When you set the granularity, only the data points at the end of the granularity periods are displayed. You can also select a time range for the widget, so you can display historical information for an hour, day, week, month, quarter, or year. And you can enter specific time ranges by date.



The Reports widget displays business performance data in the form of charts and tables. Using the Reports widget, you can view performance reports that are relative to a time axis.

Note that multidimensional analysis and reporting is available only when Alphablox is installed. In this example, you can see a graph of instance count relative to creation time and grouped by the order status dimension. You can drill up and drill down by year, month and day, so you can see instance count at each of these levels. You can also drill down and drill up by order status, so you can see instance count for all order statuses or for a particular order status, by creation time.



In summary, this presentation covered an overview of the dashboard widgets for use with WebSphere Business Monitor.

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