

webMethods Optimize for B2B User's Guide

Version 10.1

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This document applies to webMethods Optimize for B2B Version 10.1 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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About this Guide

This guide describes how to set up and use webMethods Optimize for B2B, which is the Business Activity Monitoring (BAM) feature in your webMethods Trading Networks implementation. Optimize for B2B enables you to monitor and analyze Trading Networks transaction data.

To use this guide effectively, you should be familiar with:

- TN document types and document attributes in webMethods Task Engine
- Event maps in webMethods Optimize
- Features in My webMethods

You should also have access to the documentation for the products above.

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Narrowfont	Identifies storage locations for services on webMethods Integration Server, using the convention <i>folder.subfolder:service</i> .
UPPERCASE	Identifies keyboard keys. Keys you must press simultaneously are joined with a plus sign (+).
<i>Italic</i>	Identifies variables for which you must supply values specific to your own situation or environment. Identifies new terms the first time they occur in the text.
Monospace font	Identifies text you must type or messages displayed by the system.
{ }	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.

Convention	Description
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information

Software AG Documentation Website

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Software AG Empower Product Support Website

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To get information about fixes and to read early warnings, technical papers, and knowledge base articles, go to the [Knowledge Center](#).

Software AG TECHcommunity

You can find documentation and other technical information on the Software AG TECHcommunity website at <http://techcommunity.softwareag.com>. You can:

- Access product documentation, if you have TECHcommunity credentials. If you do not, you will need to register and specify "Documentation" as an area of interest.
- Access articles, code samples, demos, and tutorials.
- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Link to external websites that discuss open standards and web technology.

1 Overview of webMethods Optimize for B2B

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Overview

webMethods Optimize for B2B tracks trading partner interactions to deliver real-time, end-to-end visibility into supply chain performance. By observing all B2B (business-to-business) gateway transactions, business analysts can be notified of abnormal behavior to recognize problems and resolve them before they negatively impact business.

webMethods Optimize for B2B is a BAM solution for webMethods Trading Networks that enables enterprises to monitor and analyze key business data from the business documents flowing through Trading Networks. BAM (business activity monitoring) allows you to analyze real-time information about the performance of your business, helping you to understand how well your organization is running.

BAM can be applied to various levels of the business, but it is especially suited to transactional business processes where there is a desire to know that the business is working as expected, to be alerted when something is not working, and where immediacy of the information is a priority. BAM allows you to analyze real-time information about the performance of your business, including the following data:

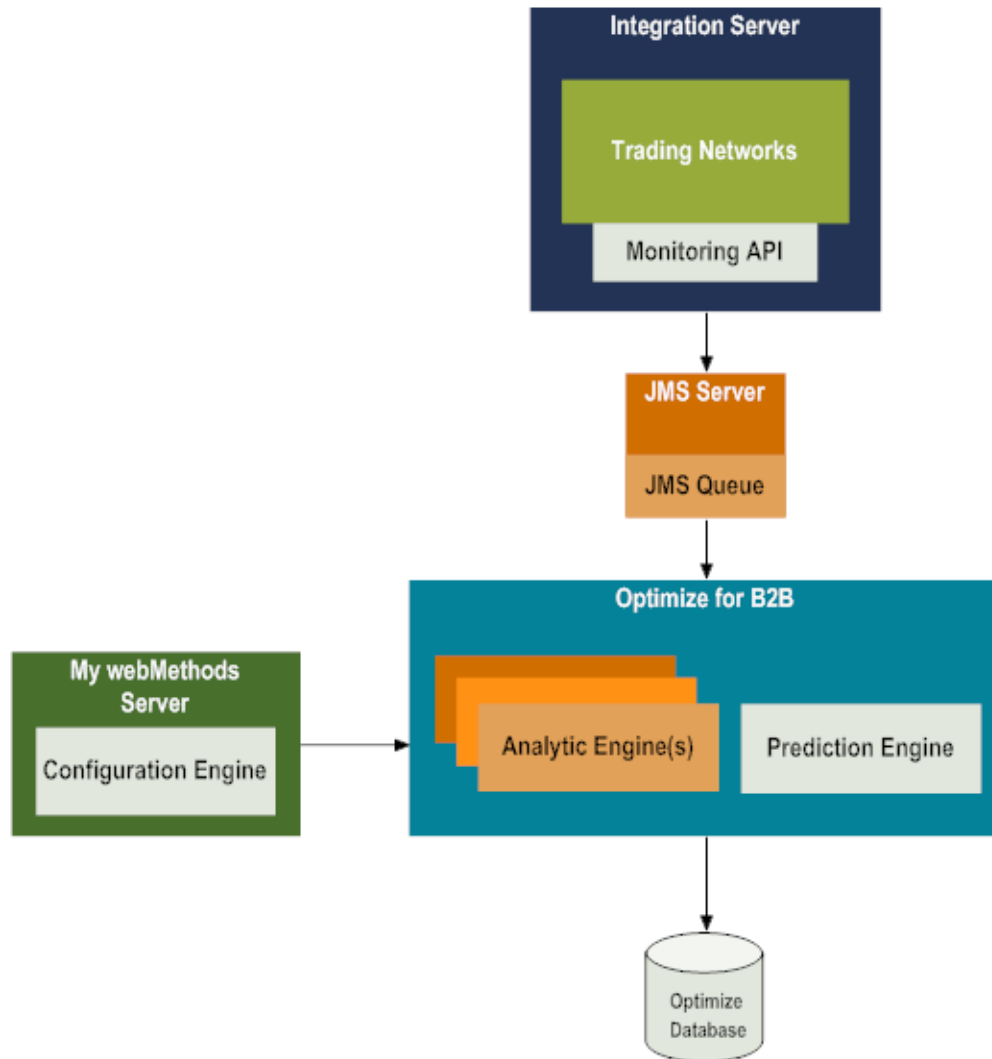
- Volume of business activity and its responsiveness
- Serious errors that might have occurred
- Other key performance indicators (KPIs)

By analyzing this actionable data, you can identify and eliminate problems and take advantage of business opportunities. For example, you can view the purchase order or invoice trend of a particular customer from a particular region and then analyze whether or not working with that customer is beneficial for your organization. For more information about BAM, see *Administering webMethods Optimize*.

Trading Networks uses the monitoring capabilities of webMethods Optimize to analyze and monitor Trading Networks (TN) transaction data. You indicate what data you want to monitor by configuring the TN document types, selecting the document attributes to monitor, and then associating the TN document types to an event map. The system then uses that configuration information (TN document types and required document attributes) for analysis and monitoring.

Architecture and Components

The following figure shows the components that are required for BAM (Optimize for B2B) on Trading Networks:



- **Integration Server** hosts packages that contain services and related files. The Integration Server provides an environment for the orderly, efficient, and secure execution of services.
- **Trading Networks** extracts the document attributes from every document it receives. These extracted document attributes include the attributes required for monitoring and for further processing. After document processing, Trading Networks sends the monitorable attribute values as *events* to Optimize for B2B for analysis. An *event* is the data that Trading Networks sends to Optimize for B2B for monitoring.
- **Monitoring API** is the medium through which Trading Networks posts the events to the JMS queue in Broker.
- The JMS Server, generally either Software AG Universal Messaging or **Broker**, along with the JMS queue act as an intermediary to pass the data from Trading Networks to webMethods Optimize. By default, the Software AG Universal Messaging Server on the Integration Server is used. For more information on Software AG Universal Messaging, see the Terracotta website. For more information about configuring

Broker for Optimize for B2B, see "[Configuring the Java Message Service \(JMS\) Server](#)" on page 15.

- **Optimize for B2B.** Trading Networks uses Optimize for B2B for its monitoring capabilities and to define and manage the KPIs required for analysis and monitoring. Optimize for B2B subscribes to the events from the broker and analyzes those events using one of its Analytic Engines. This analyzed data is saved to the Optimize database.
- **Optimize Database.** Optimize stores Optimize for B2B information about Trading Networks transaction data in relational databases. For more information about the Optimize database, see *Administering webMethods Optimize*.
- **My webMethods Server.** My webMethods Server is the run-time container for functions that webMethods components make available. Trading Networks administrators use My webMethods to configure Trading Networks to enable BAM, or Optimize for B2B. My webMethods Server also contains the Configuration Engine, which pushes down configuration information into Optimize when an environment is deployed.

For more information about these components, refer to any of the following documents:

- To learn more about Integration Server, see *webMethods Integration Server Administrator's Guide*.
- To learn more about Broker, see *Administering webMethods Broker*.
- To learn more about Optimize, see *Administering webMethods Optimize* and *webMethods Optimize User's Guide*.
- For more information about My webMethods Server, see *Working with My webMethods*.

Design-Time Actions

The following list provides a high-level overview of the steps you will complete at design time to use Optimize for B2B to monitor Trading Networks transaction data:

1. Configure a broker.
2. Enable BAM on Trading Networks and Integration Server.
3. Configure the TN document type by selecting the document attributes you want to monitor.
4. Create the event map for the TN document type you are configuring.
5. Deploy the event map to Optimize for B2B.
6. Define the individual KPIs and the Dimension Hierarchies.
7. For detailed information about these steps, see "[Configuring Trading Networks Transaction Data for Optimize for B2B](#)" on page 13.

How Trading Networks Processes Transaction Data

After you have completed the necessary configuration steps in "[Design-Time Actions](#)" on [page 10](#), at run time, Trading Networks processes the data that you have configured for monitoring, as described in the following steps:

1. After the recognition of a document, Trading Networks creates a BizDocEnvelope that contains the following items:
 - The original document
 - The extracted attribute values
 - Any additional information required for routing and processing the document
2. Trading Networks checks whether that TN document type and Trading Networks itself are enabled for BAM. If BAM is enabled, Trading Networks collects all of the attribute values for monitoring and stores those attribute values in a hash map within the BizDocEnvelope until the document processing is complete.
3. After the document processing is complete, Trading Networks once again synchronizes the actual attribute values to the values existing in the hash map. Synchronization is necessary because the attribute values stored in the BizDocEnvelope may have been updated either during any of the service execution tasks (both Synchronous /Asynchronous) or due to any other services in Trading Networks.
4. Trading Networks maps the attributes to the event maps (in accordance with the configuration completed during design time) and creates events.

For more information about the BizDocEnvelope and the processing of documents in Trading Networks, see *webMethods Trading Networks Administrator's Guide*.

5. Trading Networks passes the events to Broker. If an error occurs while passing the events, an exception is thrown. This exception will be logged as a warning in the Activity Log associated with the specific document.

During the document processing, the point at which Trading Networks actually passes the event to the broker depends on the processing rule actions defined for the TN document type. For more information about when Trading Networks passes the events to the broker, see "[Stages at Which Events Are Passed to the Broker](#)" on [page 12](#).

6. Optimize for B2B subscribes to the events from the JMS queue and feeds the events to the Optimize for B2B Analytic Engine. The Analytic Engine analyzes these events and saves the data to the Optimize database.
7. During monitoring, My webMethods Server retrieves the required data from the Optimize database at run time and allows the user to view the data in various formats such as charts, tables, and graphs. For an overview, see "[Working with Trading Networks KPIs](#)" on [page 29](#).

Stages at Which Events Are Passed to the Broker

After completing the processing of a document, Trading Networks collects the monitorable attribute values and creates events to be passed to the broker.

The processing rule action for a TN document type you are monitoring determines how events are passed to the broker, as follows:

- If you choose to turn off the routing for the document, the event is passed to the broker immediately after document recognition is done and is persisted.
- If you use the **Execute a Service** processing action, different methods can be used to invoke the service. The timing for when the event is passed to the broker is determined based on which of the following methods is used to invoke the service:
 - **Synchronous:** The event is passed only after the service execution is complete and the document processing is successful.
 - **Asynchronous or Reliable Execution:** The event is passed after service execution is complete, regardless of the document processing status.
 - **Service execution task:** The event is passed after the service execution is complete and the service execution task status is updated, regardless of the document processing status.
- If you use the **Deliver Document By** processing action, the event is passed to the broker only when the document processing status is complete.

For more information about processing rule actions, see *webMethods Trading Networks Administrator's Guide*. For more information about configuring TN document types for monitoring, see "[Configuring TN Document Types and Attributes for BAM](#)" on page 16.

When the events are passed to the broker is determined by the TN document type's processing rule actions and the setting on the **Send BAM Event After** field on the Document Type Attributes page.

Preventing Duplicate Events

When a TN document type has both **Execute a Service** and **Deliver Document By** actions associated with it, if the document processing fails and the document is reprocessed, duplicate events could get passed to the broker. To prevent duplicate events, set the **Send BAM Event After** field on the Document Type Attributes page for the TN document type to specify the action after which the events will be passed. Depending on which option you select in this field, Trading Networks passes the events to the broker after the selected action is complete and thus avoids duplicate events being passed. For information about the **Send BAM Event After** field, see "[Configuring TN Document Types and Attributes for BAM](#)" on page 16.

2 Configuring Trading Networks Transaction Data for Optimize for B2B

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Overview

When you enable Trading Networks for BAM (business activity monitoring), you can analyze and monitor Trading Networks transaction data. You can view this data in charts, tables, and graphs. Trading Networks uses the monitoring capabilities of webMethods Optimize for B2B to support data analysis using BAM.

This chapter explains the steps necessary to enable BAM and how to configure Trading Networks to monitor its transaction data.

Required Permissions for Analyzing Transactional Data

For each user who is to be allowed to analyze the Trading Networks transaction data, functional permission Manage Optimize for B2B configuration must be granted to the user's role in My webMethods. For instructions on how to manage function privileges, see the guide *Administering My webMethods Server*.

Steps for Configuring Optimize for B2B

You can use My webMethods to complete the following steps at design time to be able to monitor Trading Networks transaction data:

1. Configure the JMS Message Server. If you want to use a Message Server other than the default Integration Server Message Server instance, you must configure it appropriately. See "[Configuring the Java Message Service \(JMS\) Server](#)" on page 15 for details.
2. Enable BAM on Trading Networks and Integration Server. See "[Enabling BAM](#)" on page 16 for details.
3. Configure a TN document type by selecting the document attributes you want to monitor. The values of only those document attributes that you select are extracted for monitoring. You can monitor both system attributes and custom attributes. See "[Configuring TN Document Types and Attributes for BAM](#)" on page 16 for details.
4. Create the event maps and deploy them to Optimize for B2B.

For each document attribute you selected for monitoring, you must indicate whether the document attribute is a measure, a dimension, or a transaction. This is known as *map*.

A *KPI* is a monitor item that analyzes the measures using the dimensions. A *Dimension Hierarchy* illustrates the relationships between KPIs. You map each KPI with a Dimension Hierarchy. Based on these KPIs, Optimize for B2B analyzes the data and saves that data to the Optimize database.

For complete information about configuring KPIs, see the guide *Administering webMethods Optimize*.

Note: For most systems, the default Optimize event processing configuration provides an appropriate mix of performance and event integrity and, under normal operation, users should not encounter any event related problems. For some users that require maximum event integrity in the face of system or software failures, however, Optimize supports a guaranteed event storage configuration that uses a custom Monitor API (MAPI) configuration and batching techniques to provide enhanced event delivery and notification of event delivery problems. Note that this configuration sacrifices system performance for maximum event integrity, and it is not appropriate for most typical system configurations. For more information about implementing Guaranteed Event Storage, see the "Configuring Optimize" chapter of the *Administering webMethods Optimize* guide.

Configuring the Java Message Service (JMS) Server

To pass events to Optimize, Trading Networks uses the JMS server such as Broker or Universal Messaging. By default, Optimize for B2B sends events to the default Integration Server JMS server instance. However, if you want to use a JMS Server other than the default Integration Server JMS provider instance, you must associate that JMS Server as described below. Using a different JMS Server ensures that when Optimize for B2B is processing large amounts of data for monitoring, it does not adversely affect the performance of the JMS Server that might also be processing information for other components.

To use a different JMS Server

1. From Integration Server Administrator, select **Settings > Extended**.
2. Click **Edit Extended Settings**, and then add or update the properties as follows.
 - For Broker: `watt.server.optimize.jms.server.url=broker://localhost:6849/Broker #1`
where *Broker #1* is the name of the broker to which events will be passed.
 - For Universal Messaging: `watt.server.optimize.jms.server.url=nsp://localhost:9000`
3. Click **Save Changes**.
4. Restart Integration Server for the changes to take effect.

Optimize for B2B will now pass the events to the JMS server specified in the `watt` parameters.

For more information about working with extended configuration settings in the Integration Server, see *webMethods Integration Server Administrator's Guide*.

Enabling BAM

To monitor Trading Networks transactional data, business activity monitoring (BAM) must be enabled for both Trading Networks and Integration Server. You can enable Trading Networks and the Integration Server for monitoring either by setting the individual configuration properties (as explained in ["Enabling Trading Networks for Monitoring" on page 22](#)) or by selecting the **Enable Business Activity Monitoring** option, described below.

To enable BAM for Trading Networks and Integration Server Administrator

1. In My webMethods, select **Navigate > Applications > Administration > Integration > B2B > Business Monitoring**.
2. My webMethods displays the Business Monitoring page. In the **Document Types** panel, select **Enable Business Activity Monitoring**. After you select this option, Trading Networks and the Integration Server are enabled for monitoring.
3. If you have not already configured TN document types for BAM, do so as described in ["Configuring TN Document Types and Attributes for BAM" on page 16](#).

Disabling BAM

If you need to temporarily stop monitoring, you can disable BAM. For example, if a large amount of Optimize data has been created, you can disable monitoring while this data is being processed.

To disable BAM for Trading Networks and Integration Server Administrator

1. In My webMethods, select **Navigate > Applications > Administration > Integration > B2B > Business Monitoring**.
2. My webMethods displays the **Business Monitoring** page. In the Document Types panel, clear the **Enable Business Activity Monitoring** option. After you clear this option, Trading Networks transaction data will not be monitored.

Configuring TN Document Types and Attributes for BAM

To identify the transaction data you want to monitor, you configure TN document types by selecting the document attributes for which you want to collect monitoring data. The data of the attributes that you configure will constitute the data for analysis and monitoring.

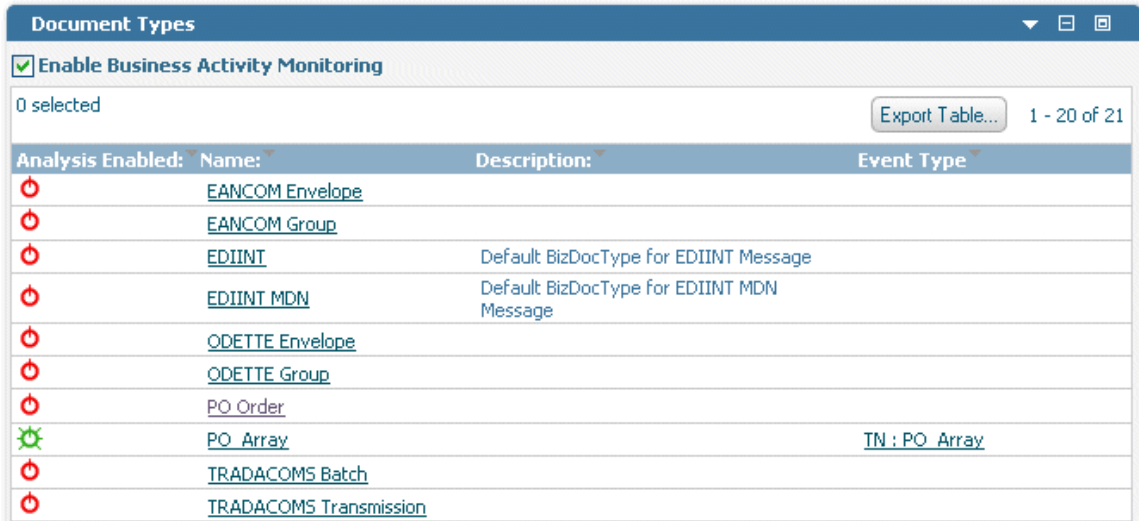
To configure a TN document type for BAM

1. If you have not already defined TN document types and document attributes, do so before continuing. For more information, see ["Monitoring Trading Networks-Specific](#)

Data" on page 21. For instructions to define and manage TN document types and document attributes, see *webMethods Trading Networks Administrator's Guide*.

- In My webMethods, select **Navigate > Applications > Administration > Integration > B2B > Business Monitoring**. My webMethods displays the Business Monitoring page. The **Document Types** panel lists all defined TN document types, and indicates their analysis status.

Figure 1. Example Document Types Panel



- If the TN document type you want to work with is currently enabled for analysis, disable it by clicking its **Analysis Enabled** icon.
- To view the attributes of a TN document type, click a TN document type in the **Name** field.

If the list of attributes is long, you can search for a TN document type. For information about keyword searches or using a saved search, see *Working with My webMethods*.

- My webMethods displays the **Business Monitoring > Document Type Attributes** page. You use this page to create the event map and to select the document attributes to monitor.
 - In the **Document Type Information** panel, enter the event mapping information as follows:

Field	Description
DocType Name	Display only. Shows the TN document type for which you are creating the event map.
Event Map Name	Display only. Shows the name for this event map.


Field	Description
Map to Document Type	<p>Contains a list of configured TN document types and a null value.</p> <ul style="list-style-type: none"> ■ If you select a TN document type from the list, the TN document type you are configuring will use the attribute configuration of the selected TN document type. All fields in the Select Attributes to Monitor panel will be disabled. ■ If you do not select a TN document type from the list (that is, you select the null value), the TN document type you are configuring will use the attributes as configured in the Select Attributes to Monitor panel. <p>For details about choosing to map TN document types to an event map, see "Associating an Event Map with Multiple TN Document Types" on page 25.</p>
Send BAM Event After	<p>Specifies when Trading Networks must pass TN document type events to Optimize for B2B:</p> <ul style="list-style-type: none"> ■ Service Execution ■ Document Delivery ■ Other (the default) <p>Select the above options based on the following conditions:</p> <ul style="list-style-type: none"> ■ Select either Service Execution or Document Delivery only when the processing rule for the TN document type you are monitoring has <i>both</i> the Execute a Service and Deliver Document By processing actions associated with it. You do this to avoid sending duplicate events to Optimize for B2B. For example, if you select Service Execution, Trading Networks sends the events only after the associated service identified in the processing rule completes execution. Likewise, if you select Document Delivery, Trading Networks sends the events only after the associated document is delivered. For more information about how events are passed to the broker, see "Stages at Which Events Are Passed to the Broker" on page 12. ■ Select Other when the processing rule for the TN document type you are monitoring has: <ul style="list-style-type: none"> ■ Only one (but not both) of the Execute a Service or Deliver Document By processing actions associated with it <p style="text-align: center;">-OR-</p>

Field	Description
	<ul style="list-style-type: none"> Neither the Execute a Service nor the Deliver Document By processing actions associated with it.
Event Map Name	Display only. Shows the name for this event map.

- b. In the **Select Attributes to Monitor** panel, complete the fields as follows:

Field	Description
Post Multiple Events for Arrays	<p>For the system attributes and the custom attributes that use a list, specifies how Trading Networks events will be passed to Optimize for B2B.</p> <ul style="list-style-type: none"> If the number of values for an event can vary, and if you want to monitor multiple events, select this option. Doing so will send multiple events for the same document when there is an arraylist in custom attributes or multiple elements in system attributes. For more information, see "Monitoring Multiple Events in Array Lists" on page 23. If the number of values for an event is known and is not expected to change, do not select this option. Instead, complete the Maximum Number of Items field for each list attribute. Doing so will create multiple attributes in the event map. For example: ordernumber1, ordernumber2, ordernumber3. <p>Choose these options carefully to ensure that Trading Networks passes the events to Optimize for B2B correctly.</p> <p>For more information about processing rule actions, see <i>webMethods Trading Networks Administrator's Guide</i>.</p>
Attribute Name	<p>Lists the system attributes and custom attributes that are available for monitoring. Select the attributes that you want to monitor.</p> <div style="background-color: #f0f0f0; padding: 10px;"> <p>Note: The system attributes Sender ID, Receiver ID, and Internal ID are always monitored. You cannot clear the selection of these attributes.</p> </div>
Maximum Number of Items	For the system attributes and the custom attributes that use a list, specify the maximum number of items to send to Optimize for B2B for monitoring.



Field	Description
	<p>Note: This field is disabled when Post Multiple Events for Arrays is selected.</p> <p>Note: The system attributes that use a list are Sender Profile Group and Receiver Profile Group.</p>

- c. Click **Save and Configure Event Map** to save the attribute selection in Trading Networks.
6. Return to the Business Monitoring page and enable the TN document type for analysis by clicking its  **Analysis Disabled** icon.
7. Specify the event and the event map information for the document attributes you selected to monitor in step 3, and then deploy the event to Optimize for B2B. You do this from the Add/Edit Event Map page. For information about the steps of specifying the event and the event map information, see *Administering webMethods Optimize*.
8. Create the Dimension hierarchies and the KPIs based on which the Trading Networks transaction data is analyzed. For information about the procedures for creating Dimension hierarchies and KPIs, see *Administering webMethods Optimize*.

Updating Existing TN Document Types for BAM

You can update the monitoring configuration of an existing TN document type either by selecting more attributes for monitoring or by clearing any of the already selected attributes for monitoring.

To update a TN document type for BAM

1. In My webMethods, select **Navigate > Applications > Administration > Integration > B2B > Business Monitoring**.
My webMethods displays the Business Monitoring page, which lists all of the TN document types available in Trading Networks.
2. If the TN document type you want to update is currently enabled for analysis, disable it by clicking its  **Analysis Enabled** icon.
3. Click the name of the TN document type that you want to update.
4. Either select more attributes for monitoring or clear the attributes that you want to stop monitoring.
5. Click **Save and Configure Event Map**. The Add/Edit Event Map page appears.
6. Return to the Business Monitoring page and enable the TN document type for analysis by clicking its  **Analysis Disabled** icon.

- In step 4, if you selected additional attributes for monitoring, you must configure event maps for those additional attributes. You can also update KPIs and Dimension hierarchies based on the changes you made in the attributes. For more information about updating event maps, KPIs, and Dimension hierarchies, see *Administering webMethods Optimize*.

Monitoring Trading Networks-Specific Data

You can analyze Trading Networks-specific data, such as transaction status and task status, to get results on successful transactions, the percentage of documents resubmitted or reprocessed, and so on. However, because these data are dimensions, you cannot analyze them using Optimize for B2B without completing additional configuration tasks. To analyze Trading Networks-specific data, you must either create custom attributes or use the required system attributes to monitor the data and then create the associated KPIs.

To analyze Trading Networks-specific data based on status

- Create the required attributes in the TN document type. Alternatively, you can use the following business-monitoring system attributes to create B2B-specific KPIs to analyze data:

System Attribute	Description
Total Count	Total count of executed transactions.
Successful Transaction Count	Total count of successful transactions.
Resubmit Count	Total count of resubmitted transactions.
Reprocess Count	Total count of reprocessed transactions.
Successful Delivery Count	Total count of successfully delivered transactions.

You can also use the individual KPIs that you create using the above system attributes to create composite KPIs. For example, you could create a composite KPI that uses a **Successful Transaction Count** for a particular partner or region (an individual KPI) in combination with the **Total Count** system attribute (a second individual KPI) to calculate what percentage of transactions were successful.

- Configure and enable the TN document type for monitoring, as described in ["Configuring TN Document Types and Attributes for BAM" on page 16](#).
- Create the required KPIs for the data that you want to monitor and analyze, for example, using the **Successful Transaction Count** system attribute. Create one

KPI for total count and another KPI for successful transaction count. Create another composite KPI using these two individual KPIs that divides the successful transaction count by the total count to get a percentage of successful transactions. You can follow the same procedure for analyzing data using other attributes.

4. After you configure the required KPIs, associate a service execution task with the TN document type's processing rule that updates the attributes after the completion of the service execution.

For more information about any of the tasks described in this section, see the sources listed below.

To...	See this source...
Create custom attributes	"Defining and Managing Document Attributes" chapter in <i>webMethods Trading Networks Administrator's Guide</i>
Configure and enable TN document types for monitoring	"Configuring TN Document Types and Attributes for BAM" on page 16 in this guide
Create individual KPIs and Dimension hierarchies	<i>Administering webMethods Optimize</i>
Configure the processing rule action.	"Defining and Managing Processing Rules" chapter in <i>webMethods Trading Networks Administrator's Guide</i>

Enabling Trading Networks for Monitoring

You can initialize Trading Networks for monitoring either by selecting the **Enable Business Activity Monitoring** option (as explained in "[Configuring TN Document Types and Attributes for BAM](#)" on page 16) or by setting the property `tn.bam.monitoring.enable`. Setting this property to `true` allows you to monitor the Trading Networks transaction data and thus configure the TN document types for monitoring.

To enable BAM on Trading Networks

1. In My webMethods, select **Administration > Integration > B2B Settings > Configure Properties**.
2. Add or update the following Trading Networks configuration property:

```
tn.bam.monitoring.enable=true
```
3. Click **Save**.

Enabling Integration Server for Monitoring

You can initialize the Integration Server for monitoring either by selecting the **Enable Business Activity Monitoring** option (as explained in "[Configuring TN Document Types and Attributes for BAM](#)" on page 16) or by setting the server configuration property `watt.server.optimize.monitoring`. Setting this property to `true` initializes the Integration Server and the broker for monitoring. It creates a JMS queue in the broker that allows Trading Networks to pass events from to Optimize for B2B.

To enable BAM on Integration Server

1. From Integration Server Administrator, select **Settings > Extended**.

Note: If the `watt.server.optimize.monitoring` property is not shown, click **Show and Hide Keys**. Then select the box to the left of the `watt.server.optimize.monitoring` property, and click **Save Changes**.

2. Click **Edit Extended Settings**, and then update the following property:

```
watt.server.optimize.monitoring=true
```

3. Click **Save Changes**.
4. Restart Integration Server for the changes to take effect.

For more information about working with extended configuration settings in the Integration Server, see *webMethods Integration Server Administrator's Guide*

Monitoring Multiple Events in Array Lists

When configuring custom attributes for monitoring and the attributes are for an array data type (for example, DATETIME LIST), you can post the events to Optimize in arrays of events or as a single array with all the values. You specify your choice while configuring the event map (from the **Administration > Integration > B2B > Business Monitoring** page).

When configuring the event map:

- Selecting **Post multiple events for arrays** sends multiple events for the same document when there is a arraylist in custom attributes or multiple elements in system attributes.
- Clearing **Post multiple events for arrays** sends all attribute values in a single event for an array (for example, ordernumber1, ordernumber2, ordernumber3).

To post events to Optimize in arrays of events rather a single array with all the values, go to the **Administration > Integration > B2B > Business Monitoring** page, and select **Post multiple events for arrays**, as shown below.

Post Multiple Events for Arrays selection

The screenshot shows the 'Select Attributes' configuration page. The 'Document Type Information' section includes fields for 'DocType Name' (Purchase Order Request), '* Event Map Name' (TN : Purchase Order Requ), and 'Map to document type'. The 'Send BAM Event After' section has radio buttons for 'Service Execution' (selected), 'Document Delivery', and 'Other'. The 'Select Attributes to Monitor' section has a table with columns 'Attribute Name' and 'Maximum Number of Items'. The 'Post multiple events for arrays' checkbox is checked and circled in red. The 'Maximum Number of Items' field is disabled for the selected attributes.

Attribute Name	Maximum Number of Items
System Attributes	
<input checked="" type="checkbox"/> Sender	
<input checked="" type="checkbox"/> Receiver	
<input checked="" type="checkbox"/> InternalID	
<input type="checkbox"/> Sender Profile Group	

When **Post multiple events for arrays** is selected, the **Maximum Number of Items** field is disabled for the attributes.

After you configure the event map, click the **Save and Configure Event Map** button. The Event Map page appears, with the individual array element.

After the event map is configured and the document type is enabled for monitoring, Trading Networks sends events to Optimize as follows:

- Optimize determines how many events to create for this transaction based on the maximum size of arrays in the extracted monitored attributes.

For example, the attributes "Sender Profile Group," "Receiver Profile Group," and custom attributes "ArrayList1" and "ArrayList2" are enabled for monitoring. Optimize determines the maximum number of elements available in the four attributes and creates that many events. If "ArrayList1" has 20 elements and the other attributes each contain fewer than 20 elements, Optimize creates 20 events.

- Individual attributes such as Sender, Receiver, and InternalID are always populated in all events. Arrays are populated in terms of their size.

For example, if five events are to be created and "ArrayList1" has five elements and "ArrayList2" has two elements, the events are populated as follows:

1st event - Sender / Receiver / InternalID / Arraylist1[0] /
Arraylist2[0]

2nd event - Sender / Receiver / InternalID / Arraylist1[1] /
Arraylist2[1]

3rd event - Sender / Receiver / InternalID / Arraylist1[2]

4th event - Sender / Receiver / InternalID / Arraylist1[3]

5th event - Sender / Receiver / InternalID / Arraylist1[4]

Associating an Event Map with Multiple TN Document Types

Optimize for B2B allows you monitor your Trading Networks transactional data based on the relationships you establish between a TN document type and an event map defined in Optimize. Depending on your business requirements, you can monitor one TN document type per event map or you can use the same event map to monitor multiple TN document types. For example, if you want to extract the same attribute (for example, Purchase Order Amount) from both X12 4010 850 and X12 4050 850, you could map each TN document type to the same event map so that one KPI can be generated across all EDI PO documents. This feature applies to newly mapped document types as well as for existing document types that would benefit from a many-to-one mapping.

Typically you will have created several TN document types, and most would be configured to the same type of documents (for example, you may use different purchase orders or different standards but ultimately each purchase order contains similar data). In this case, you could associate each TN document type with a different event map, but to analyze the data, you would need to collate the events across multiple KPIs. With this approach, even though the data is same, the analysis would be two-fold. As an alternative you can map a single event map to different types of TN document types giving an option of many-to-one mapping.

While configuring the event map (from the **Administration > Integration > B2B > Business Monitoring** page), use the **Map to Document Type** field, as shown below. This field lists all the available TN document types that have already been defined. If you want to configure a new TN document type to one that is already defined, select one from the list and click **Save**.

Map to Document Type selection

The screenshot shows the 'Business Monitoring > Document Type Attributes' window. The 'Document Type Information' section contains the following fields:

- DocType Name: PurchaseOrder4
- * Event Map Name: TN : PurchaseOrder4
- Map to document type: (Dropdown menu open showing: PurchaseOrder2, PurchaseOrder3, PurchaseOrder, Other)
- Send BAM Event After: (Empty field)

The 'Select Attributes to Monitor' section includes a checkbox for 'Post multiple events for arrays' and a table of attributes:

Attribute Name:	Maximum Number of Items:
System Attributes	
<input checked="" type="checkbox"/> Sender	
<input checked="" type="checkbox"/> Receiver	
<input checked="" type="checkbox"/> InternalID	
<input type="checkbox"/> Sender Profile Group	<input type="text"/>
<input type="checkbox"/> Receiver Profile Group	<input type="text"/>
<input type="checkbox"/> Processing Status	
<input type="checkbox"/> User Status	
<input type="checkbox"/> Received Date	

After you select a document type from the **Map to Document Type** field, My webMethods does the following:

- Disables all fields in the **Select Attributes to Monitor** panel
- Disables the **Save and Configure Event Map** button
- Uses the monitoring configuration details of the selected document type for this TN document type

When you click **Save**, Optimize uses the document type configuration for monitoring, using the same event map name as the selected document type.

Optimize applies any updates to the selected document type to the child document types (that is, the child document type will always have the same configuration as the parent document type even if the parent document type is updated).

If you want to use a different configuration for a child document type, you can change the configuration by deselecting the document type in the **Map to Document Type** field, configuring the document type's details as desired, and updating the configuration.

Working with Software AG MashZone

If your Optimize for B2B processes are enabled for analysis and execution, you can generate reports about obtained data (KPI instance readings, KPI definitions, problems and dimension instances) with MashZone, a browser-based data visualization tool. For information about using MashZone, refer to the “Integration with MashZone” chapter in the *Administering webMethods Optimize* guide.

3 Working with Trading Networks KPIs

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About Viewing Trading Networks KPIs

After you have completed the configuration steps described in "[Configuring Trading Networks Transaction Data for Optimize for B2B](#)" on page 13, Optimize for B2B analyzes the data based on the KPIs and creates KPI instances. A *KPI instance* represents the Trading Networks data that corresponds to a business KPI that Optimize for B2B creates and stores in the Optimize database.

At run time, you can view the KPI summary and instance information using My webMethods.

- Use the KPI Summary page to view and analyze the performance of KPIs and compare the performance of up to five instances of KPIs on one graph. You can analyze historical performance. You can examine events such as rule violations as you analyze and compare KPIs. Based on this analysis, you can improve your business processes. For example, you can analyze order processing to identify and eliminate obstacles.
- Use the KPI Instance Detail page to analyze data for a single instance of a KPI. In addition to the actual or aggregated data for a selected time range, the KPI Instance Detail page provides the historical mean value and standard deviation for all data points reported to date.

Viewing Trading Networks KPIs

The instructions below provide a general overview of viewing the data. For complete information about the Analytics Overview page, the KPI Summary page, and the KPI Instance Detail page, see *webMethods Optimize User's Guide*.

To view Trading Networks KPIs using BAM

1. In My webMethods, select **Navigate > Applications > Monitoring > System-wide > Analytics Overview**.

The Analytics Overview page displays. This page enables you to select KPIs and view more information about them on the KPI Summary page. The Status column to the left of each component in the Analytics Overview panel indicates its current status. Additional icons beside each component indicate whether that component is a KPI, KPI instance, or dimension.

You can drill down into each KPI to view the KPI Summary or the KPI Instance Detail page.

Figure 4. Sample Analytics Overview page

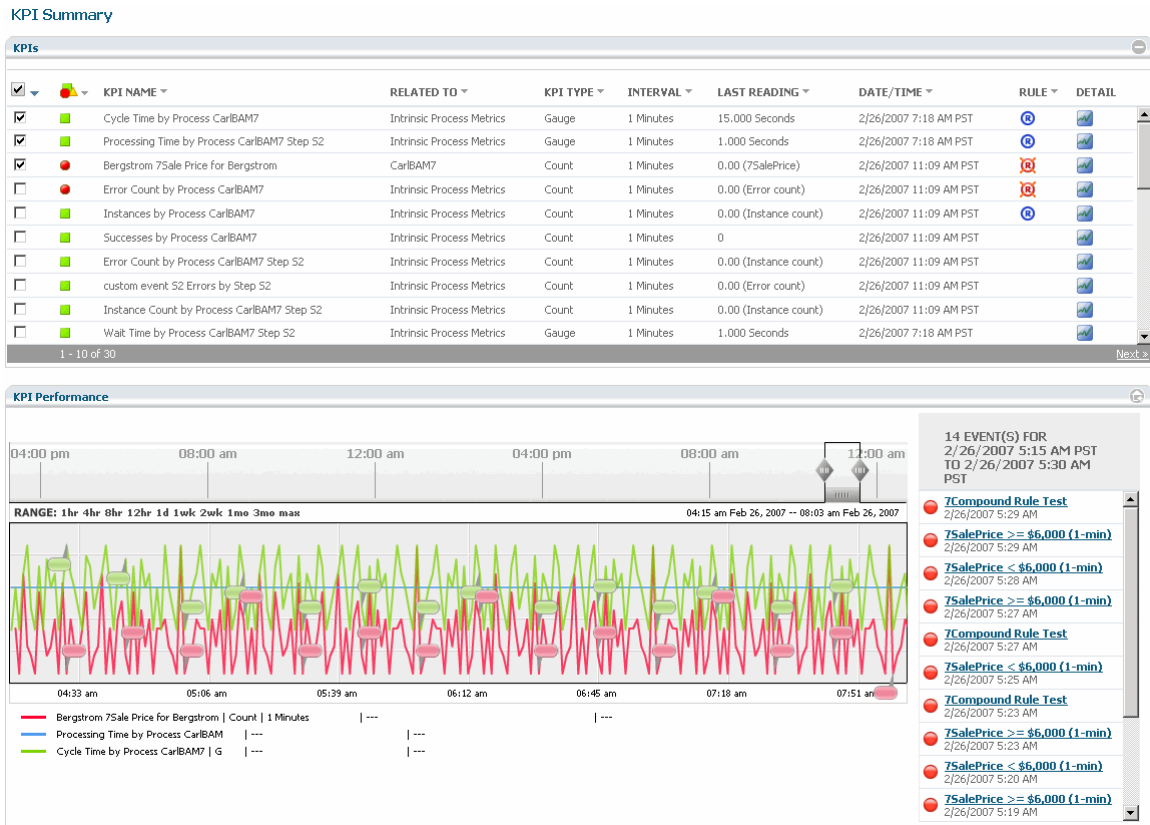
The screenshot shows the 'My webMethods Administrator' interface. The main content area is titled 'Analytics Overview'. At the top, there is a search bar with a 'Keywords:' field and 'Search' and 'Save' buttons. Below the search bar, there is a table with the following columns: 'Components', 'Last Reading', 'Date/Time', and 'Detail'. The table lists several KPI instances, each with a checkbox in the 'Detail' column. The instances include 'Cancelled by Process brancher', 'Cycle Time by Process brancher', 'Error Count by Process brancher', 'Instances by Process brancher', 'process runtime_error2 Errors by Process brancher', 'process runtime_error Errors by Process brancher', and 'Successes by Process brancher'. The 'Last Reading' column shows values like '0.00 (Cancel count)', '12.000 Seconds', and '0.00 (Error count)'. The 'Date/Time' column shows dates like '4/17/2009 10:40 AM'. The 'Detail' column contains checkboxes and icons for each instance. At the bottom of the table, it says '80 KPI Instances'.

- To view more information about one or more KPIs, select the check box in the **Detail** column next to each desired KPI instance, and then click the **View KPI Summary** button.

The KPI Summary page is displayed. This page displays a list of all KPI instances associated with the selected item. Until you select KPI instances, the KPI performance chart is blank.

Tip: The component you select determines which KPIs display on the KPIs panel. To see all the instances of a KPI, select it on the Analytics Overview page.

Figure 5. Sample KPI Summary page



- View or edit detail information for a KPI instance, as desired, by clicking an event map name or KPI name.
- To view the data collected for a KPI instance, click its **Monitor**.

The KPI Instance Detail page displays data for a KPI instance over any time period you request. The default is the most recent four-hour period. You can view the individual data points of a KPI instance in graphical or tabular format. You can also aggregate the monitors to view the historical average values of the KPI instances, or view data based on a time period. Examples of both formats appear below.

For complete information about viewing data points and events for KPIs, see *webMethods Optimize User's Guide*.

Figure 6. KPI Instance Detail graph page

Monitoring ▾ System-Wide ▾ Business ▾

Process Analytics Business Overview Process Instances

KPI Instance Detail

Close

KPI Instance Detail Close

Start Date: 11/2/2007 Time: 11:00 Go View Data...

End Date: 11/2/2007 Time: 15:00

<< < **Current** > >>
Display Range: 4 Hour
Monitor Notes:
Create Rule...

MONITOR ID: processor time

Collection Interval: 5 Minute Aggregated Display Interval: 5 Minute

KPI Instance Information Close

Monitor ID: hostname.hostname.k2.processor time
 Monitor Type: Last Value
 Collection Interval: 5 Minute
 Unit of Measure: %
 Last Reading: 1.00%
 Reading Date/Time: 11/2/2007 2:00 PM
 Internal ID: 108

Historical Data for Last Reading in Display Range Close

Statistical Confidence: 0.7460832131654194 (Threshold: 0.8)

Readings in Display Range Close

Number of Readings: 35
 Mean: 1.54%
 Minimum: 0.00%
 Maximum: 13.00%

Close

Monitoring ▾ System-Wide ▾ Business ▾

Process Analytics Business Overview Process Instances

KPI Instance Detail

Close

KPI Instance Detail - +

Start Date: 11/2/2007 Time: 11:00 Go Max Results: 2000 Go View Detail...

End Date: 11/2/2007 Time: 15:00 Go No Maximum: Go

Export Table... 1 - 10 of 70 Items

LAST UPDATED ▾	%	PROCESSORTIME
11/2/2007 2:00:00.000 PM	1.00%	
11/2/2007 1:59:04.866 PM		1.0
11/2/2007 1:50:00.000 PM	2.00%	
11/2/2007 1:49:04.967 PM		2.0
11/2/2007 1:45:00.000 PM	1.00%	
11/2/2007 1:44:04.513 PM		1.0
11/2/2007 1:40:00.000 PM	0.00%	
11/2/2007 1:39:04.108 PM		0.0
11/2/2007 1:35:00.000 PM	2.00%	
11/2/2007 1:34:04.617 PM		2.0

< Previous | 1 2 3 4 5 6 7 | Next >

KPI Instance Information -

Monitor ID: hostname.hostname.k2.processor time
 Monitor Type: Last Value
 Collection Interval: 5 Minute
 Unit of Measure: %
 Last Reading: 1.00%
 Reading Date/Time: 11/2/2007 2:00 PM
 Internal ID: 108

Historical Data for Last Reading in Display Range -

Statistical Confidence: 0.7460832131654194 (Threshold: 0.8)

Readings in Display Range -

Number of Readings: 35
 Mean: 1.54%
 Minimum: 0.00%
 Maximum: 13.00%

Close

Using Admin Mode to Delete KPI Instances

For users with administrative privileges, the Analytics Overview page displays an icon that activates a different version of the page, known as Admin Mode. This mode enables users to view and select specific KPI instances for deletion. The ability to delete KPI instances is useful to remove defunct or superfluous KPI instance from the various Optimize pages so that you can concentrate on useful information. For example, in Optimize for B2B, if you are no longer interested in monitoring a specific process, you may want to remove the related KPI instances.

The standard Analytics Overview search functionality is available in Admin Mode, so you can search and filter KPI instances according to specified criteria. Also, Admin Mode offers the same viewing options as the Analytics Overview page. When you select

one or more KPI instances and click the **Delete** button in Admin Mode, a Delete job is scheduled and runs as soon as the system has available resources. If you select a KPI instance that contains child instances, all of the children are selected automatically, though they are not shown as selected on the page. KPI instance deletion jobs can be monitored using the Job Manager pages. Note that KPI instances that have been scheduled for deletion but not yet deleted remain on the Analytics Overview page/Admin Mode, but the Date/Time reading is replaced with “Delete Pending”; however, if new readings are received before the KPI instance is deleted, these will be shown in the interface.

You can also access Admin Mode as a standalone page not linked to the Analytics Overview page from the My webMethods menu by clicking **Administration > Data Management > KPI Instance Deletion**.

To select and delete KPI instances using Admin Mode:

1. From the Analytics Overview page, activate Admin Mode by clicking the Admin Mode icon. Remember that this icon is visible only to users with administrative privileges.
Admin Mode is activated and displayed.
2. If desired, use the Search mechanism at the top of the page to narrow the list of displayed KPI instances. This Search mechanism is identical to the one on the Analytics Overview page, so you can refer to the preceding section for more information about using search functionality.
3. Click the appropriate boxes in the **Select** column to select the KPI instances that you want to delete.
4. Click the **Delete** button to initiate a Delete job to delete the selected KPIs. You must click through several dialog boxes in order to confirm the deletion.
5. If you activated Admin Mode from the Analytics Overview page, you can return to the Analytics Overview page by clicking the Return Monitor Mode icon.