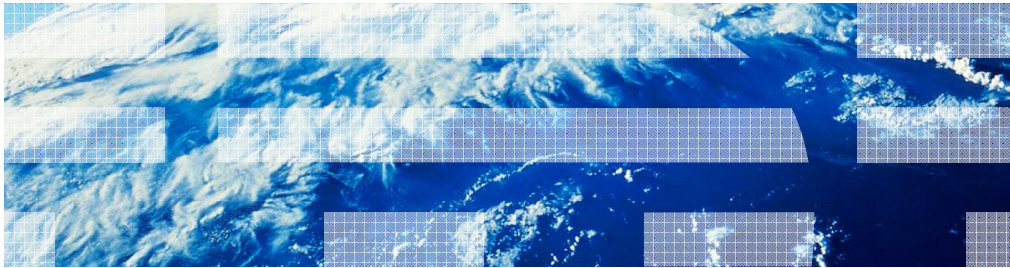

IBM Business Monitor

Administration



This presentation will show you the functions in the administrative console for WebSphere Business Monitor.

Goals

- Show the administrative menus for use with IBM Business Monitor

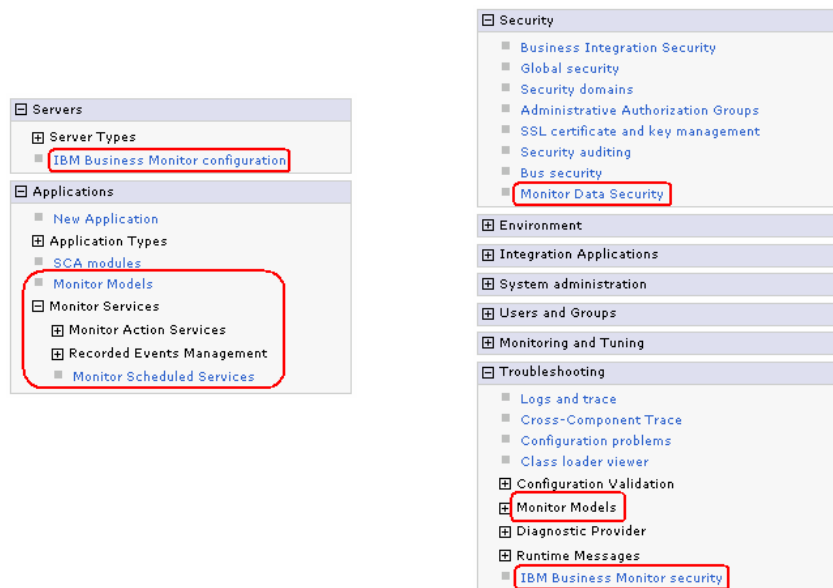
This presentation will show you how to use the administrative console for managing various functions in IBM Business Monitor.

Agenda

- Monitor models
- Monitor data security
- Event recording
- Transfer instance data
- Purge instance data
- Monitor services
- Action services
- Failed events

This is the agenda for this presentation. You will see how to manage monitor models, including configuring data security and viewing the overall security configuration. You will review the event recording capability, and you will see how to transfer and purge monitor instance data. Also, there are various services associated with your models and you will review the services management which also includes action services for business situation events. Finally, you will see where to look for failed event sequences.

Monitor menus



There are several monitor sub-menus in the server administrative console. In the servers section there is a menu to configure the monitor components in an installation. In the applications section you can manage your monitor model applications and monitor services. In the security section you can manage user access to your monitor models. Then in the troubleshooting section you can view failed event sequences and view the overall security configuration.

Monitor models

Monitor Models

Use this page to manage all versions of monitor models and their associated applications. To start or stop a version of a monitor model, you must start or stop the associated application. All models are initially added to the root resource group and may not be visible by its intended dashboard users. Use the Monitor data security panel to assign permission to the models.

Preferences

<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Install"/>						
Select	Model	Version	Deployment	Application	Data Security	Status
<input type="checkbox"/>	ClipsAndTasks	2007-09-11T12:07:30	OK	ClipsAndTasksApplication	Members assigned	➔
<input type="checkbox"/>	GlobalHTMM	2007-06-18T09:54:38	OK	IBM_WBM_HUMAN_TASK_MONITOR_MODEL	Members assigned	➔
<input type="checkbox"/>	Global_Process_Monitor	2009-11-10T20:00:00	OK	IBM_WBM_GLOBAL_PROCESS_MONITOR	Members assigned	➔
<input type="checkbox"/>	MM1266614757859_1_BLM-0424adf29efb09d82ca1e7cd1e36cfa_RequestWork_DoSomethingProcesses	2010-02-19T16:26:07	OK	RequestWork_Mon_1266614757859_1App1	Members assigned	➔
Total 4						

Displays warning icon if model cannot start

The monitor models page displays all versions of all models. By default, both installed and uninstalled applications are displayed, but an option under preferences allows only installed applications to be displayed. The model ID is displayed in the model column and the version timestamp is displayed in the version column. The deployment column displays an indicator of deployment status. 'OK' means the model can be started. Other indicators show you that the schema has not been created, the CEI configuration is incomplete or the model state is not active. In the application column you see the application name. In the data security column you will see an indicator to show if users are assigned to the resource group for the model. The status column shows that the application is started or stopped.

The start button starts a version in the active state so that events on its event queue can be processed.

The stop button stops a version in the active state so that events on its event queue are no longer processed. Events continue to build up on its event queue while a version is stopped.

If you click the model name for a specific model, you will see model configuration information. If you click the version number for a specific model, you will see the version information panel. If you click the application name for a model, you will see the standard enterprise application menu where you can perform additional server administrative functions for the application.

Model properties

Monitor Models

Use this page to manage all versions of monitor models and their associated applications. To start or stop a model, you must be initially added to the root resource group and may not be visible by its intended dashboard users. Use the

Preferences

<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Install"/>		
Select	Model	Version
<input type="checkbox"/>	ClipsAndTacks	2007-09-11T12:07:30
<input type="checkbox"/>	GlobalHTMM	

Monitor Models > ClipsAndTacks

Use this page to view the configuration for this monitor model. Click the links to access pages for model properties.

General

<p>General Properties</p> <p>Model <input type="text" value="ClipsAndTacks"/></p> <p>Number of versions <input type="text" value="1"/></p> <p>Resource group <input type="text" value="root"/></p> <p><input type="button" value="Back"/></p>	<p>Model Properties</p> <ul style="list-style-type: none"> <input type="checkbox"/> Change CEI configuration <input type="checkbox"/> Manage Scheduled Services <input type="checkbox"/> Change resource group <input type="checkbox"/> Purge model
---	--

If you click the model name for a model in the monitor models panel, you will see model configuration information. It shows the model name, number of versions and the resource group associated with the model. There are also links that allow you to manage CEI configuration, services, resource groups, and purging.

Purging a monitor model removes the model from the repository database. Before you can remove all versions of a model from the repository database, you must delete all versions of the schema and you must uninstall all versions of the model you are purging.

Model version

Select	Model	Version
<input type="checkbox"/>	ClipsAndTacks	2007-09-11T12:07:30
<input type="checkbox"/>	GlobalHTMM	2007-06-18T09:54:38

Monitor Models > ClipsAndTacks (2007-09-11T12:07:30)

Use this page to tune and configure the error handling and KPI properties of this model version.

General

General Properties

Model: ClipsAndTacks

Version: 2007-09-11T12:07:30

Application: ClipsAndTacksApplication

CEI distribution mode: Active (Table-based event delivery)

Active MC instances: 0

Deployment

- Dashboards enabled
- Schema created
- Cognos cubes created (optional)
- Data Movement Service enabled (optional)

Version Properties

- [Manage schema](#)
- [Manage Cognos cubes](#)
- [Enable Data Movement Service](#)
- [Change CEI distribution mode](#)
- [Change runtime configuration](#)
- [View model](#)
- [Purge model version](#)

Manage Monitor Data

- [Export instance data](#)
- [Purge and archive instance data](#)

7 Administration © 2011 IBM Corporation

If you click the version number for a model in the monitor models panel, you will see the version information panel. You can see the CEI distribution mode, and the number of active monitoring context instances. In the deployment section, you see the list of setup steps and an icon indicating the status of each step. There are additional links that you can use to manage the schema, cubes, distribution mode, runtime configuration and purging. You can also export, import and purge instance data from the monitor database.

Before you purge the model version you must delete the schema and uninstall the application. There is also a force option which doesn't check for the preconditions but you must use the administrative command to use this option.

On the manage schema page, you can run the schema script and setup the database for that version of the model. You can run a script to delete the schema for this version of the model. You can also export the scripts to your file system.

On the manage Cognos cubes page, you can publish, export and delete cubes on the Cognos server.

On the 'Change CEI distribution mode' page, you can change the CEI distribution.

For the runtime configuration, you can set tuning fields that affect the monitor server behavior. You can define the behavior of various error handling situations and you can specify details for handling the cache for KPI value retrieval, which affect performance by caching the values for the KPIs rather than recalculating the values every time from the monitor database.

Change CEI distribution mode

[Monitor Models](#) > [ClipsAndTacks \(2007-09-11T12:07:30\)](#) > **Change CEI distribution mode**

Use this page to view and change the CEI configuration properties for a specific monitor model.

General

General Properties

Distribution mode

Current
Active (Table-based event delivery)

Target
Inactive

Apply OK Reset Cancel

Model Properties

■ [Change CEI configuration](#)

- Distribution modes
 - Active
 - Inactive
 - Active (no new monitor context instances)
 - Inactive (event queue recoverable)
- Mode also includes the event delivery type, either table-based or queue-based

On the change CEI distribution mode page, you can change the CEI distribution. You can change the mode to be active, inactive or “inactive event queue recoverable”. When you install a new version then the old versions will automatically change to mode “active (no new monitor context instances)”, so that only the latest version will create new monitoring instances. The old versions are used to finish any existing monitoring instances. The mode “inactive (event queue recoverable)” can be used to handle incorrect versions of a monitor model. In this case you can deploy a newer correct version, and this new version will process the events for the incorrect versions.

The distribution mode also includes an indicator for the type of event delivery. When you deploy the monitor model you are given the choice. Queue-based event delivery uses Java Messaging Service (JMS) to deliver events from CEI to the monitor model. Table-based event delivery (formerly known as queue bypass) uses a database table to deliver events from CEI to the monitor model. With table-based event delivery, the work can be distributed among multiple cluster members. For most environments, this method improves performance and simplifies the system configuration.

On this page you can also click to change the CEI configuration specifying location, security and group profile, but you should make sure that all versions for this model are in inactive mode before using this function.

Monitor data security - Configure

The screenshot displays the IBM administrative console interface for configuring Monitor Data Security. On the left, a navigation tree shows categories like Servers, Applications, Services, Resources, Security, Environment, Integration Applications, System administration, Users and Groups, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI. Under the Security category, 'Monitor Data Security' is highlighted. The main content area is titled 'Monitor Data Security Administration > root' and includes a 'Configure' tab (circled in red), a 'Diagnose' tab, a description of the root resource group, a list of models (ClipsAndTasks, GlobalHTMM, Global_Process_Monitor, MortgageLendingBAMShowcase), and a list of roles (Business Manager, Personal KPI Administrator, Public KPI Administrator, KPI Administrator). The 'Roles' section includes instructions on how to assign roles and lists requirements for assignment.

Using the administrative console, you can configure security for your monitor models by setting data access permissions. Monitor models can be grouped into resource groups to allow easy administration of data access permissions. Permissions must be assigned to a resource group by way of a three way binding. This binding consists of a resource group, a role, and a user or group of users.

Monitor data security always has a root resource group defined. All resource groups other than root are considered children of root. All resources are visible to the root resource group. By default, all models are deployed to the root resource group unless they are added to a different resource group during model deployment. A model can be a member of only one resource group.

Monitor data security – Diagnose

- Tool for diagnosing model access problems

The screenshot shows the administrative console interface. On the left, a navigation tree is visible with 'Monitor Data Security' highlighted. The main content area has two tabs: 'Configure' and 'Diagnose', with 'Diagnose' selected. Below the tabs, there is a search section with a 'Search for:' label, a text input field containing an asterisk (*), and a 'Maximum results' dropdown set to '100'. A 'Search' button is located below the input field. A search results window is open, displaying a list of user IDs. Below this, a table lists models and their associated roles.

Model	Roles
ClipsAndTacks	Business-Manager KPI-Administrator Personal-KPI-Administrator Public-KPI-Administrator
GlobalHTMM	Business-Manager KPI-Administrator Personal-KPI-Administrator Public-KPI-Administrator
Global_Process_Monitor	Business-Manager KPI-Administrator Personal-KPI-Administrator Public-KPI-Administrator
MortgageLendingBAMShowcase	Business-Manager KPI-Administrator Personal-KPI-Administrator Public-KPI-Administrator

There is a tool for helping you diagnose monitor model access problems. In the administrative console, for monitor data security, there is a tab called diagnose. This tab displays the models assigned to a particular user, and the roles associated with it. You can also enter a search string to select the users that you want to query. This function makes it easy to determine the model access for any particular user.

Security configuration



- A single panel provides easy access to relevant security configuration information

Security Information

This page provides information about some of the security properties for IBM Business Monitor.

Component	Status
<input checked="" type="checkbox"/> Global Security	Administrative Security is Enabled Application Security is Enabled Selected User Account Repository: Federated Repositories The user registry is searchable
<input checked="" type="checkbox"/> IBM Business Monitor Data Security	There are 32 members in the root resource group
LTPA	LTPA key regeneration is disabled
Single Sign-on	Single Sign-on (SSO) is enabled The single sign-on domain has not been specified

On the security page in the troubleshooting section you can view security configuration for IBM Business Monitor from a central location. You can access administrative and application security, Monitor data security, LTPA, and single sign-on security. This makes it easy to view security information consolidated in one place. To update the security configuration, you can click the component link and you are taken to the configuration page for that component.

Event recording and playback

- Use the administrative console to select events to playback or export
- Use toolkit server menu to manage recording during development cycle

The screenshot displays the IBM Business Monitor Event Recording administrative console. At the top, a menu bar includes 'IBM Business Monitor Event Recording', 'Properties', and 'Alt+Enter'. A dropdown menu is open, showing options: 'Clear Recorded Events', 'Disable', and 'Enable'. Below the menu, a tree view on the left shows the navigation structure, with 'Recorded Events Management' highlighted in a red box. The main content area, titled 'Events Management', contains a 'Preferences' section with buttons for 'Delete', 'Delete All', 'Export', 'Export All', and 'Import Events'. Below this is a table of recorded events:

Select	Event	Time Recorded
<input type="checkbox"/>	2394	2008-11-13T20:57:55.889
<input type="checkbox"/>	2393	2008-11-13T20:57:55.655
<input type="checkbox"/>	2392	2008-11-13T20:56:55.858

At the bottom left, the page number '12' and the title 'Administration' are visible. At the bottom right, the copyright notice '© 2011 IBM Corporation' is present.

The event recording feature allows you to record an event sequence for subsequent playback. This is very useful if you want to iteratively test a monitor model as you continually change and develop the model. For a BPEL application or any other application, you can enable event recording, then manually step through the process or the application which will then generate the event sequence. The event sequence is saved to a database, so then you can replay the event sequence later to re-run the test. You can use scripts or the administrative console to manage these functions. Also, you can activate the event recording in the monitor toolkit. And you can import these events into an integrated test console script.

To enable event recording, you can use the administrative pages or you can also use the server menu in the monitor toolkit.

You can use the administrative console to manage the events. On the events management page, you can list the events that have been recorded, and you can click an event to see the details of an individual event. You can also select options to delete, import and export. The import and export functions allow you to save events to the file system. On the play back page, you can select events and model version and then you can initiate a play back.

Transfer instances

- Retire old model versions by moving instances to a new model version
- Repairing a monitor model
- LifecycleServices mBean methods
 - moveCompletedMCInstances
 - moveActiveMCInstances
 - moveAllMCInstances
- For moving active instances, change old version CEI mode to “inactive (event queue recoverable)” state which causes the new version’s CEI mode to go to “inactive” state
- Run the mBean then set the new version to “active” status
- For more information see information center topic ‘Transferring model context instances’

The transfer feature is useful if the functionality of certain monitor model versions, or the sheer number of monitor model versions, are causing production problems. Transfer instances is a way to retire old model versions and move the instances to a new model version.

When deploying a new monitor model version, you can choose to have active instances from the previous versions be processed by the new model version. Before you install the new model version, you switch the CEI distribution mode of the previous version to "Inactive (event queue recoverable)". You can then transfer active (or active *and* completed) instances from the previous version to the new version.

Import, export, purge, archive instance data

- You can archive data on a one-time or scheduled periodic basis
 - This applies to instance data only, not KPI history
- Access the menu from the model version page

The screenshot displays the 'Manage Monitor Data' section of the IBM BPM Monitor Administration console. It features three main menu items: 'Export Instance Data', 'Import Instance Data', and 'Purge and Archive Instance Data'. The 'Purge and Archive' section is active, showing a 'Time Filter' for selecting the instance termination end time (UTC) and an 'Archive' checkbox for storing data on the server. Overlaid on this is the 'Export' dialog box, which allows users to specify instance data to export based on either creation or termination time, and choose between exporting to the browser or a server directory.

To help you manage your monitored instance data in the monitor database, there are functions to purge and export. You can invoke these functions using the administrative console to run them as required. If you want to setup a periodic archive, then you can do that in the monitor scheduled services menu. These functions do not operate on KPI history; they just apply to instance data.

In the administrative console, you can access a model version to get to the page to manage monitor data. On the export page you can specify the date and time information either based on instance creation time or instance termination time. You can export the data to your browser or to the server.

On the page for purge and archive, you can specify the instance termination date and time. You can also optionally select to store the data on the server.

The import page allows you to load previously exported data, but this page is only enabled for a development server.

Monitor services

- Applications
 - New Application
 - Application Types
 - SCA modules
 - Monitor Models
 - Monitor Services**
 - Monitor Action Services
 - Recorded Events Management
 - Monitor Scheduled Services

Model Properties

- Change CFI configuration
- Manage Scheduled Services**
- Change resource group
- Purge model

Monitor Scheduled Services > [ClipsAndTasks](#) > Scheduled Services

Use this page to manage all of the scheduled services for the monitor model.

Preferences

Suspend		Resume					
Select	Service	Interval	Last Run	Last Duration	Last Start	Last Completion	Status
<input type="checkbox"/>	KPI History Calculation	1 hours	Success	0h 0m 0s	Jun 28, 2011 4:00:10 PM	Jun 28, 2011 4:00:10 PM	Active - 1 of 1 versions active
<input type="checkbox"/>	KPI Prediction Calculation	1 hours	Success	0h 0m 0s	Jun 28, 2011 4:00:10 PM	Jun 28, 2011 4:00:10 PM	Active - 1 of 1 versions active
<input type="checkbox"/>	Dynamic Alert Evaluation	1 minutes	Success	0h 0m 0s	Jun 28, 2011 4:04:10 PM	Jun 28, 2011 4:04:10 PM	Active - 1 of 1 versions active
<input type="checkbox"/>	Cognos Cache Clearing	5 minutes	None				Suspended
<input type="checkbox"/>	Purge and Archive Instance Data	1 days	None				Suspended
Total 5							

You can access monitor services from the applications section in the console, or from the model properties section of a monitor model. On the services page you can see the status of all the scheduled monitor services. You can see the interval, last run, last run duration, last start, last completion, and current status. If you click a specific service, then you can view the details of the selected service, and you can update the interval for the service. For purge and archive instance data, you can also select the records to purge based on the instance termination date.

You can manage monitor services which include Data Movement Service, KPI History Calculation, KPI Prediction Calculation, Dynamic Alert Evaluation, Cube Summary Table, Cognos Cache Clearing, and Purge and Archive Instance Data.

You must enable the data movement and Cognos cache clearing services before you can schedule them. The KPI history and KPI prediction services run once every hour and this interval is not modifiable.

Action services - Business situation events

Configuration

Use this page to configure the general, federated rep

General Federated repositories LDAP

General Properties

SMTP sender name
default@127.0.0.1

SMTP host name
localhost

SMTP port number
25

CEI action logging

On
 Off

16 Administration © 2011 IBM Corporation

IBM Business Monitor manages action services and event emissions using monitor action services. The monitor action services receives situation events emitted by applications, selects appropriate actions based on user-defined rules and policies, and invokes one or more actions in the form of alerts.

Any changes to the configuration properties that are made while Monitor action services are running are not effective until you stop and then restart the Business Monitor server.

You can also create and manage alerts in the dashboard using the alert manager widget. Using this widget you can create alert notifications from existing key performance indicators (KPIs). Creating an alert notification involves specifying a trigger condition, and creating a notification message and subscription list. You can share the alerts that you create so that other users can view and subscribe to them.

Notification template

* Template name
FeeComplianceAlert

Description

Default action service type

Dashboard Alert
 Cell phone
 Email
 Pager

To query type

Federated repositories query
 LDAP query
 Email address
 User id

To
admin

Query base

Subject
Fee compliance: Loan
 %%cbe:CommonBaseEvents/cbe:CommonBaseEvent
 /mor:feeComplianceAlert/mor:loanNumber/text()%

Body
 There is a fee compliance alert for loan number
 %%cbe:CommonBaseEvents/cbe:CommonBaseEvent
 /mor:feeComplianceAlert/mor:loanNumber/text()% opened
 on %%cbe:CommonBaseEvents/cbe:CommonBaseEvent
 /mor:feeComplianceAlert/mor:dateStarted/text()% by loan
 officer %%cbe:CommonBaseEvents/cbe:CommonBaseEvent

A system administrator uses the Monitor action services to notify the appropriate people about events that occur in a model. These notifications can take the form of a dashboard alert, an email, a call to a cell phone, or a call to a pager. Notifications can also be sent to web services or Service Component Architecture (SCA) services. There are three types of templates that are used to create the actions: notification, web service, and SCA.

This slide shows the notification template which is used for notifications using dashboard, email, cell phone or pager. You specify the query type and then in the 'To' field you enter a query that is used to retrieve the set of users who will receive this notification. You can enter an LDAP or a federated repositories query. You can also enter a space separated list of email addresses or user ID's.

You can enter a subject and body for the alert. Note in the body of the alert the use of a substitution variable is marked with the percent sign. This variable is a field which was defined on the outbound event in the model, and the value of that field in the event is substituted into the body text. You can also use substitution variables in the subject of the notification.

Situation event binding

The screenshot shows the 'New Situation Event Binding' dialog box with the following details:

- General Properties:**
 - Situation event name: Order Fulfillment Event (circled in red)
 - Description: Order fulfillment
- Preferences:**
 - Buttons: Add, Remove
 - Table:

Select	Binding Name	Category Name	Template Name	Action Service Type
<input type="checkbox"/>	AlertTime		AlertTime	AlertHandler
Total 1				

Below the dialog is the 'Outbound Event Content' section, which includes a table of triggers:

Specify the triggers that cause the event to be sent. Use the Expression column to specify the value for each event attribute when the event is sent.

Name	Type	Expression
Average Process Duration KPI Trigger 1		
Property Data		
Extended Data		
BusinessSituationName	string	'Order Fulfillment Event' (circled in red)
AverageOrderProcessingTime	string	xs:string(Average_Process_Duration_KPI div xs:dayTimeDuration('P1D'))

18

Administration

© 2011 IBM Corporation

At the top is a screen capture of the situation event binding in the action services menu. You see a situation event “Order Fulfillment Event” and there is a template which has been assigned to this situation event to specify which users will receive the alert. You can have one or more service templates assigned to a situation event binding.

Business situation events can be generated by the monitor model or from any other source, as long as the event contains an extended data field with name BusinessSituationName. The value of ‘Situation event name’ on the binding should match the value of BusinessSituationName in the outbound event in the monitor model. At the bottom is a screen capture of the outbound event definition in the monitor model, and the value of BusinessSituationName is ‘Order Fulfillment Event’ which matches the situation event binding.

Monitor model failed events

- [-] Troubleshooting
 - Logs and Trace
 - Configuration Problems
 - Class Loader Viewer
 - [-] Configuration Validation
 - [-] Monitor Models
 - Failed Event Sequences
 - Unrecoverable Events

- Scripting is available, see the information center topic Reference > Commands and scripts > Administrative commands > Managing failed events using scripts

Manage Failed Event Sequences

Use this page to manage model versions with failed event sequence instances.

[-] Preferences

Resume Processing

Select	Model (Version)	Failed Instances	Failed Time	Last Event Submission
<input type="checkbox"/>	GlobalHTMM (2007-06-18T09:54:38)	5	Dec 6, 2007 2:28:08 PM CST	None
<input type="checkbox"/>	dipsbpm (2007-11-20T17:54:57)	3	Dec 6, 2007 2:28:22 PM CST	None
Total 2				

Unrecoverable Events

Use this page to view and delete model versions with unrecoverable events.

[-] Preferences

Delete

Select	Model (Version)	Unrecoverable Events	Failed Time
None			
Total 0			

You can use the administrative console to manage failed event sequences and view unrecoverable events.

If an event cannot be processed, the model stops processing all subsequent messages for the instance in which the fault occurred. Other instances for this model can continue to process incoming events. Manual intervention is therefore only required to restart processing of a particular instance. For failed events you can use the console to view, export, import, replace, delete, re-sequence and resubmit them. You can also use scripting to manage failed events. Check the information center for details.

If a model cannot parse an incoming event for example due to malformed XML, then it goes to the unrecoverable events queue. Unrecoverable events can be inspected in an attempt to establish the cause of a failure, but they cannot be resubmitted. So you can use the console to view, export and delete them.

Summary

- Covered the use of the administrative console for use with IBM Business Monitor

In summary, this presentation covered an overview of the administrative console menus for use with IBM Business Monitor.



Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send email feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_WBPM_Monitor_Administration.ppt

This module is also available in PDF format at: [./WBPM_Monitor_Administration.pdf](#)

You can help improve the quality of IBM Education Assistant content by providing feedback.



Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, Alphablox, and WebSphere are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2010. All rights reserved.