

This presentation will cover administration of WebSphere Business Monitor V6.0.



An overview of WebSphere Business Monitor Version 6.0 administration using the WebSphere Process Server administrative console will be provided.



The agenda is to first discuss the submenus in the Monitor menu of the Administrative Console, including schema generation, importing models in the server menus, and setting up actions for situation events. The next topic covered is configuring Portal with LDAP so that you can use the organization view in the Dashboard Server, followed by redeploying and un-deploying existing business measures models and finally, a review of the various logs used for troubleshooting.



The Monitor administrative console is an extension to the WebSphere Administrative Console and provides a familiar user interface with all the administrative menus in one place. If security is enabled on the server, the security processing of the administrative console is automatically inherited.



Shown here is the Main menu for WebSphere Business Monitor in the Administrative Console.



You can use the administrative console to configure and run the Schema Generator, configure the Server, and import or unload a model. You can also configure the Action Manager, create templates, and bind templates to situation events.

IBM Software Group	IKM
Schema Generator – General Configuration	n
Schema Generator Configuration Preferences	
Preferences used for the generation of schemas	
General Configuration State to Runtime Configuration Runtime to Historical Configuration	
General Properties	
Table space Properties File C:\IBM\WebSphere\Monitor.i Business Measures Model c:\ProjectScenario\Monitor.zi; Output Directory C:\IBM\WebSphere\Monitor. Ignore older deployments and generate all artifacts Apply OK Reset Cancel	
WebSphere Business Monitor V6.0 Administration	7

The default table space properties file

(C:\IBM\WebSphere\Monitor\install\mondb\default\_minimum\_tablespace.properties) is pre-created for your DBA and can be modified for performance optimization.

You might wish to distribute tables among different hard drives, so you could identify additional tablespaces for this purpose. For example:

You must type in your path to the business measures model and the output directory to contain your DDL and replication scripts. You should generally store this with the folder containing your project artifacts (WebSphere Business Modeler workspace, WebSphere Integration Developer workspace).

If you select 'Ignore older deployments and generate all artifacts' and you are redeploying an existing model, the scripts will be created as though it were a brand new model. You cannot deploy these scripts on the server, because that would result in duplicate tables and stored procedures. If you do not select this option and you are redeploying an existing model, the existing model is analyzed and only the delta changes are created.



Shown here are some of the modifications that you can make to the tablespace properties file in order to optimize performance.

IBM Software Group	
Schema Generator – State to Runtime	
Schema Generator Configuration Preferences	
Schema Generator Configuration Preferences	
Schema Generator Configuration Preferences	
Preferences used for the generation of schemas	
General Configuration State to Runtime Configuration Runtime to Historical Configuration	
General Properties	
Capture Log Path C:\IBM\WebSphere\Monitor\;	
Apply Log Path C:\IBM\WebSphere\Monitor\r	
Runtime Database Population Interval	
Apply OK Reset Cancel	
	9

The Default capture log path (C:\IBM\WebSphere\Monitor\rm\logs\s2r\capture) is where the log is stored for the replication captures.

The Default apply log path (C: $IBMWebSphereMonitorrM\logs2r)$  is where the log is stored for the replication applies.

The Default Runtime database population interval (5 minutes) dictates the time interval for replication between the state database and runtime database. For testing purposes, you might want to set this to a smaller value like 2 minutes, so you do not have as long to wait to see results

IBM Software Group	IKM
Schema Generator – Runtime to Historica	I
Schema Generator Configuration Preferences	
Preferences used for the generation of schemas	
General Configuration State to Runtime Configuration Runtime to Historical Configurati	on
General Properties	
Capture Log Path C:\IBM\WebSphere\Monitor\) Apply Log Path	
C:\IBM\webSphere\Monitor\  Historical Database Population Interval 2	
Apply OK Reset Cancel	
WebSphere Business Monitor V6.0 Administration	10 2006 IBM Corporation

Default capture log path: C:\IBM\WebSphere\Monitor\rm\logs\r2h\capture

Default apply log path: C:\IBM\WebSphere\Monitor\rm\logs\r2h\apply

The Default Historical database population interval (1440 minutes or 24 hours) dictates the time interval for replication between the runtime database and historical database. For testing purposes, you might want to set this to a smaller value like 2 minutes, so you do not have to wait as long to see results.

IE	3M Software Group	IKM
Schema	Generator - Generate	
	Schema Generate Profile	
	Profile to be used for Schema Generation	
	Preferences	
	Generate	
	Generation Profile	
	Previously defined configuration preferences.	
	Total 1	
		11

Once you have completed the configuration for Schema Generator, you can click the Generate button to create the scripts.

IBM Software Group	IKM
Server – System Properties	
System Properties Specify the properties that allow tuning WebSphere Business Monitor performance. Configuration <u>General Properties</u> * On-time situations checking interval (min) 10 * Event processing batch size 100 Apply OK Reset Cancel	
	12 IBM Corporation

Type the interval at which all on-time situations on the system are checked for occurrence in the **On-time situations checking interval** field. The situation events are checked at this interval to determine if they should be triggered.

Type the number of events consumed and processed in a single batch in the **Event processing batch size** field. You might want to modify this to optimize performance. A larger batch size might increase throughput but requires additional resources, such as system memory.

IBM Software Group	IKM
Server – Model Import	
Business Measures Model Import	
Select a .zip file that contains the business measures model to be imported.	
Configuration	
File parce Browse	
Import	
Import	
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Importing a business measures model is as simple as entering your monitor.zip file that was created by schema generation, then clicking the Import button. WebSphere Business Monitor will then begin capturing events for this model.

BM Software Group
Server – Model Unload
Business Measures Models Cleanup ? –
Business Measures Models Cleanup
Select a business measures model, and then select one or more of its versions for deletion.
Delete Delete and keep for reporting
Select Business measures models
ProjectScenario
Total 0
14 WebSphere Business Monitor V6.0 Administration © 2006 IBM Corporation

To unload a model, select the project to delete from the list, then click

•Delete to Delete the selected business measures model from the repository database. The process instance data is not deleted, but you will not be able to view it on the dashboards. The process will no longer be monitored on the runtime engine.

•Delete and keep for reporting to Delete the selected business measures model from the repository database while keeping the information of the selected business measures model in the repository database for dashboard reporting. The process instance data is not deleted, however the process will no longer be monitored on the runtime engine



When making changes to the Action Manager configuration using the General tab or LDAP tab, you must restart the Action Manager application. This does not apply to the creation of templates or situation event bindings, which are created and updated immediately.

IBM Software Group	IKM
Action Manager – General Configuration	
Global Configurations Global configuration values that persist for each template of the given type. General LDAP <u>General Properties</u>	
SMTP Sender name: anyId@your.domain.com SMTP Host name: your.smtp.server.com SMTP Port number: 25	
CEI Action logging: C On © Off	
Apply OK Reset Cancel	
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Shown here is a screenshot of the General Configuration tab for Action Manager. You might want to turn on CEI Action logging to drop Action Manager alerts onto the bus for logging purposes or problem resolution.

IBM Softwar	e Group
Action Mana	ger – General Configuration
Element	Description
SMTP Sender Name	The Email address representing the sender of notifications, i.e., userId@yourCompany.com
SMTP Host Name	SMTP Server Host Name for Email, i.e., yourSmtp.yourCompany.com
SMTP Port Number	Listener port number used by the SMTP server
CEI Action Logging	On/Off Radio Button. The default selection is off. This radio button selects whether the customer would like to publish Action service information to CEI.

Shown here are the definitions of the elements on the General Configuration tab for Action Manager.

IBM Software Group	IKM
Action Manager – LDAP Configuration	
Global Configurations         Global configuration values that persist for each template of the given type.         General       LDAP         General Properties         LDAP URL:       [Idap://localhost:389         LDAP User ID:       [cn=root         [cn=root       [LDAP Password:         •••••••••       [LDAP Alert field:         [uid       [LDAP Cell phone field:         [mobile       [LDAP Ermail field:         [LDAP Ermail field:       [mobile         [DAP Pager field:       [pager         [Apply]       OK       Reset	
WebSabere Business Monitor V6.0 Administration	© 2006 IBM Corporation

Shown here is a screenshot of the LDAP Configuration tab for Action Manager. You will need an LDAP Server, such as Tivoli® Directory Server, to configure Action Manager.

The LDAP alert field is the name of the userid field in the directory. The LDAP query retrieves the user from the directory and the alert message is sent to that user. If uid=NewUser on the user record in the directory, the user must log on to Portal as NewUser in order to receive the alerts.

The cell phone field is the name of the cell phone field in the directory. The LDAP query retrieves the user from the directory and a text message is sent to that user by cell phone. If 'mobile=999-555-1234@phoneCo.com' on the user record in the directory, the alert message is sent to that email address for text messaging notification over the cell phone.

The email field is the name of the email field in the directory. The LDAP query retrieves the user from the directory and the alert messge is sent to that user for email notification. If 'email=yourID@yourCo.com' on the user record in the directory, the alert message is sent to that email address for email notification.

The pager field is the name of the pager field in the directory. The LDAP query retrieves the user from the directory and the text message is sent to that user by pager. If 'pager=999-555-1234@pagerCo.com' on the user record in the directory, the alert message is sent to that email address for text messaging notification over the pager.

Element	Description	
LDAP URL	URL to connect to the user registry	
LDAP User ID	User ID to log onto the user registry	
LDAP Password	Encrypted password for the above user ID	
LDAP Alert Field	LDAP record field name for the Alert info.	
LDAP Cell Phone Field	LDAP record field name for the Cell Phone info.	
LDAP Email Field	LDAP record field name for the email address.	
LDAP Pager Field	LDAP record field name for the pager info.	

Shown here are the definitions of the elements on the LDAP Configuration tab for Action Manager.



Shown here is the high level process for setting up actions in response to situation events defined in the business measures model.

- 1. Create the situation event in the model and identify the associated trigger.
- 2. Create a query to identify the user(s) that you want to extract from the user directory.
- 3. Create a notification template to identify the nature of the action, such as email, alert or Web service.
- 4. Bind the situation event to one or more notification templates.
- 5. Configure the Alert view on the dashboard server for alert type bindings.

IBM Software Group	IKM
Action Manager – Notification Template	
Notification Template Configuration General Properties * Template name: MyTemplate Description: New template Action service type: • Alert • Cell Phone • Email • Pager To (LDAP Query): (@(objectclass=top)(objectClassetop)	
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Shown here is a screenshot of the Notification Template for Action Manager.

This is a sample LDAP query which retrieves all inetOrgPersons from the directory, which is useful for running tests:

•(&(objectclass=top)(objectClass=inetOrgPerson))

For a production implementation, you would probably use a query to pick specific individuals or groups.

The substitution variable %OrderNumber% can be seen in the Body of the alert. OrderNumber is a field defined on the Event in the model, and it will be substituted for the %OrderNumber% variable. You can also use substitution variables in the Subject of the notification.

Name	Description
Template Name	Unique template name
Description	Template description
Action Service Type	Notification type selection (select only one)
To (LDAP query)	LDAP query to retrieve the set of users intended to receive the Notification.
Subject	Subject text of notification with inline CBE value substitution variables
Body	Body text of notification with inline CBE value substitution variables
LDAP Root	Distinguished name for the root of the LDAP search

Shown here are the definitions of the elements on the Notification Template for Action Manager.

IBM Software G	<sub>iroup</sub> er – Notific	cat	tion Te	mplat	e	IBM
Business Modeling - EventOrder - WebSpherr File Edit Navigate Search project Modeling B Project Tree X Project Tree X Project Scenario Project Scenario Project Scenario ProcessScenario ProcessScenario Resources Progenizations	re Business Modeler Advanced Edition Version 6.0 Early Evaluation Program Bun Window Help  Comparison CustomerOrder CustomerOrde					
Events	Name		Туре	Minimum	Maximum	Container
EventOrder	BusinessSituationName	¥.	String	0	1	Extended
	ContextID	U. (3)	Long	0	1	Context
Predefined recourses	Contextber	U. ()	DataTima	0	1	CONCEXT
<ul> <li>Construction</li> <li>Cons</li></ul>	OrderNumber		String	1	1	Extended
						23 2006 IBM Corporatio

This screenshot shows the Event that was defined in the business measures model, and in it is the definition of OrderNumber which is used as a substitution variable in the Body of the alert.



This is a screenshot of the Web Service Template for Action Manager.

The Web service is sent the entire event as a serialized XML string, so the Web service must be capable of parsing the XML event string to access the individual elements in the event message.

Tunic		
Template Name	Unique template name	
Description	Template description	
Target Name Space	The TargetNameSpace attribute of the "definitions" element.	
Service Name	The name attribute of the "service" element.	
End Point Address	The location attribute of the "service/port/address" element.	
Port Type	The name attribute of the "portType" element.	
Operation Name	The name attribute of the "portType/operation" element.	
Input Message Name	The name attribute of the "portType/operation/input" element.	
	I	

Shown here are the definitions of the elements on the Web Service Template for Action Manager.

	IBM Software Group		IKM		
Acti	on Manager – Situa	tion Event Binding			
	New Situation Event Binding				
	General Properties				
	* Situation Event name: NewOrder				
	Description: Notification of new orders				
	Apply OK Reset Cancel				
	Add Remove				
	Select Template Name 🗘	Action Service Type			
	MyTemplate3	WebServiceHandler			
	MyTemplate2	EmailHandler			
	MyTemplate	AlertHandler			
	Total 3	I			
	WebSphere Business Mon	itor V6.0 Administration © 20	26 006 IBM Corporation		

This is a screenshot of the Situation Event Binding for Action Manager, which shows a situation event "NewOrder." There are three templates assigned to this situation event. In this case, each template is handling a different service type: Web Service, Email and Alert.

The 'Situation Event name' should match the defined situation in the business measures model. See the next slide for an example of the situation definition in the business measures model. Enter the 'Situation Event name' and description, click Apply and then Add to insert your templates into the list.

	0:1	ation Ex.	and Directions		
	nager – Situ	ation EV	ent Binding		
	· · · · · · · · · · · · · · · · · · ·				
Seneral Metric	Stopwatch Counter Trigg	er Properties E	vent Type		
<ul> <li>Reusable triggers</li> </ul>					
This section provides information	about reusable triggers created on the se	elected element.			
Name	Source category		Source		
📫 Order Trigger	Inputs and outpu	ts	ProcessScenario.ProcessScenario_Input Criterion		
Condition					
Condition  Situation events  Dptionally, specify situation events	nts that are sent when the value of the se	lected business measure cha	nges.		
Condition  Situation events  Dptionally, specify situation even  Event definition	nts that are sent when the value of the se	lected business measure chai	nges.		
Condition Condition Situation events Dptionally, specify situation event Event definition EventOrder	nts that are sent when the value of the se	lected business measure chai	nges.		
Condition  Situation events  Dptionally, specify situation even  Event definition  Event Order	nts that are sent when the value of the se Event attribute BusinessSituationName	lected business measure cha Attribute type String	nges. Attribute calculation		
Situation events     Situation elevents     Event definition     Event Order	nts that are sent when the value of the se Event attribute BusinessSituationName ContextID	lected business measure cha Attribute type String Long	nges. Attribute calculation		
Condition Situation events Dptionally, specify situation even Event definition Event Order	nts that are sent when the value of the se Event attribute BusinessSituationName ContextID ContextDef	lected business measure cha Attribute type String Long String	nges. Attribute calculation		
Condition  Situation events  Dptionally, specify situation even  Event definition  Event Order	Its that are sent when the value of the se Event attribute BusinessSituationName ContextID ContextDef CreationTime	lected business measure chai Attribute type String Long String DateTime	nges.		
Condition Situation events Dptionally, specify situation even Event definition Event Order	nts that are sent when the value of the se Event attribute BusinessSituationName ContextID ContextDef CreationTime OrderNumber	lected business measure cha Attribute type String Long String DateTime String String	nges. Attribute calculation "NewOrder" 'Input Criterion.Input.OrderNumber'		

The 'Situation Event name' in the situation event binding should match the defined situation in the business measures model. Shown here is a screenshot of the business measure model, showing the Trigger and its associated situation event. When this event was created, the BusinessSituationName was set to "NewOrder" and this matches the name of the Situation Event Binding.



In order to view your organizational data in the Organization view on the Dashboard Server, you must configure Portal security. This will enable Portal to access your LDAP server using Portal WebSphere Member Manager (WMM).

First you setup your data on a supported LDAP server, for example:

- •Tivoli Directory Server
- •Lotus® Domino® Server
- •Microsoft<sup>™</sup> Active Directory
- Sun Directory Server
- •Novell eDirectory

Then you run the Portal configuration wizard to setup the connection to LDAP using Portal WMM.

After this step, you can add the Oraganization view and configure it on a dashboard.



You can use a helper file to make it easier to run the configuration wizard. This will prefill the configuration information in the many screens to follow. You can edit this file beforehand if you like. Run the Portal configuration wizard to setup the connection to your LDAP server.

Portal LDAP	Configuration – Org	ganization View
ganizations		ů <i>†ℓ</i> ? – □
Use this portlet to view the organii administrator has created a coope through the user registry by emplo	ation user registry and filter the Report View by employee. To filter the ative portiet scenario between the two views. Then click on an employee ree or organization.	Report View by employee, be sure that the e or organization in the tree. You can also search
Admins		-
Group1		
- 100		
Group11		
Group12     Group1     Group12     Group1     Group		
E Group13		
E Group14		
E Group15		
E Group16		
E Group17		
🛨 🔯 Group18		
🛨 🔯 Group19		
🗄 🔯 Group2		•
Search for:	Organization:	
Employee	<u>·</u>	
*Last name:	First name:	
		Search
Name 1		

Shown here is an example of a configured Organization view on the Dashboard server.



When you change a business measure model, you must redeploy it to the Monitor Server and Dashboard Server.

If you happen to delete the business measures model in WebSphere Business Modeler, you cannot recover it by simply creating a new default model and adding your measures back. Each model has a unique identifier and the Monitor table names are based on this identifier. When you deploy the newly created business measures model, there will be a new set of physical tables created for the same logical model, which will result in dashboard errors. You can export a model with business measures to a Modeler zip file and re-import that to a new workspace. Then when you redeploy the model, it will redeploy properly.



You can update the business measures model and redeploy the model using the normal deployment process. If you need to change a business measure relating to a dimension, you should create a brand new model with a new process name.



You can select which version of a model to export from WebSphere Business Modeler. When redploying a model, versioning is used to ensure that only a newer version of a model is imported and though all versions are stored in the database, only the latest version is active.



Shown here is the process for redeploying a changed business measures model. You should create a new folder to store your new artifacts. The new scripts that are created by Schema Generator are delta changes only, so they are not a complete replacement for the old scripts.



Make sure you are using copies of the views in the Dashboard server. If you are not, Portal could hang when you try to reconfigure the report view and dimension view if the cubes have been deleted or modified. If this is the case, you might have to reinstall WebSphere Business Monitor on the Dashboard server to recover.

If you do not update any of the dimension related information in the model, then you would not need to delete and recreate the cube information.



This slide describes the un-deploy process for removing a model from the Monitor databases.

To remove one model, you will need to review the schema generation logs to determine the DB2 artifacts to remove.



To remove one model, use the logs listed here to find the artifacts to be removed from DB2 and Replication Manager. They are located in the schemagen folder.

•state\_to\_runtime\_setup\_target.bat.log

•state\_to\_runtime\_setup\_source.bat.log

•runtime\_to\_historical\_setup\_target.bat.log

•runtime\_to\_historical\_setup\_source.bat.log

In each log, all the commands that were run for each model are listed. You should process them in the reverse order, so work your way from the end of the log to the beginning, and process the target log before processing the source log. You will be removing:

•Rows from control tables using DB2 Control Center

•Tables using DB2 Control Center

•Triggers using DB2 Control Center

- •Stored procedures using DB2 Control Center
- •Registered table entries in Replication Center

•Registered capture schema entries in Replication Center

•Target server subscription sets in Replication Center

Check the mapping files listed here and use them to drop the tables for your model. They are located in the schemagen folder.

stateMapping.txt

•runtimeMapping.txt

•datamartmapping.txt

Make sure you are using copies of the views in the Dashboard server. If you are not, Portal could hang when you try to reconfigure the report view and dimension view if the cubes have been deleted. If this is the case, you may have to reinstall WebSphere Business Monitor on the Dashboard server to recover.



If you would like to start with a clean database, then you must delete the Monitor databases. In order to do this, you must also clean up the SI Bus Cloudscape database, which requires reinstalling the Monitor Server.



You will need to uninstall both Monitor Databases and Monitor Server.

When you attempt to drop the databases in the DB2 Control Center, you might not be allowed to do so because there are processes using the databases. Use the stop feature in the DB2 Control Center, which will also disconnect the applications, then you will be able to start them and drop them.

The CEI event database must be cleaned up too and there are scripts to remove and create it.



You must delete the SI Bus Cloudscape database to clear out the events on the bus.

When you originally configured the SI Bus, you ran two scripts, one for the Monitor Server (wsadmin -f configureMonitorCrossCell.tcl) and one for the Runtime Server (wsadmin -f configureMonitorCrossCell.tcl). You only need to run the first one to configure the Monitor Server bus.

You must also restart Portal on the dashboard server. Even though DB2 recognizes the refreshed databases, Portal thinks the databases have been deleted, so a restart is required.



To troubleshoot WebSphere Process Server: Check the logs on Monitor Server in /IBM/WebSphere/ProcServer/profiles/monitor/logs/server1 or use the Process Server administrative console to view them (Troubleshooting > Logs and Trace ).

For Portal: Check the logs in /IBM/WebSphere/PortalServer/log.

For Monitor: For installation problems, check your folder specified by %temp% environment variable. For example C:\Documents and Settings\<yourid>\Local Settings\Temp\1\launchpad-monitor.log. To get trace details, navigate to Administrative Console > Troubleshooting > Logs and Trace > server1 > Change Log Detail Levels. Specify log level for sub-components of *com.ibm.wbimonitor*. The trace is stored with the Process Server logs as trace.log.

For Replication Manager: C:\IBM\WebSphere\Monitor\rm\logs

- For CEI logging: navigate to Administrative Console > Servers > Application servers > server1 > Business process container settings > Business process container > Enable Common Event Infrastructure logging
- For Common Business Event Viewer: Navigate to Administrative Console > Integration Applications > Common Base Event Browser

For WebSphere Integration Developer: <workspace>\.metadata\.log



When troubleshooting, Check the Valid From Date

If events are not being monitored, the 'Valid From' date might be set to a date in the future, or the 'Valid From' date on the BPEL process might not match the 'Valid From' date on the Business Measures model. Make sure that these dates match. The Monitor trace will not indicate why the events are being ignored.

For the State database check to see that

- Process table is named 'CTX\_<unique-id>' and the comment on the table shows the BPEL process name there will be one row per process instance
- Task table is named 'AI\_<unique-id>' and the comment on the table shows the BPEL task name there will be one row per task instance
- For a complete list of table names, look at stateMapping.txt, runtimeMapping.txt, datamartMapping.txt in the generation folder
- Note, that if the replication manager is working, then completed process instances are deleted here and moved to the Runtime database, so if they don't show up here, check in the Runtime database

For the Runtime database

- Process table is named 'CTR\_<unique-id>' and the comment on the table shows the BPEL process name there will be one row per process instance
- Task table is named 'AIR\_<unique-id>' and the comment on the table shows the BPEL task name there will
  be one row per task instance
- For a complete list of table names, look at stateMapping.txt, runtimeMapping.txt, datamartMapping.txt in the generation folder
- Note the alert table is located in the Runtime database and is called ACTIONMGR\_ALERTS

You only need to start the WebSphere Application Server underlying Portal to do Administrative Console work. Normally, you can just stop and start Portal (Start > Programs > IBM WebSphere > Portal Server 5.1).

You can download an SVG viewer from www.adobe.com. Search for 'svg viewer' and download the latest version.



In summary, this presentation covered the WebSphere Monitor administrative console menu, organization view set up, redeploying models, and troubleshooting.

	IBM Software	e Group				<u>i kņ</u>
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