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# WebSphere® Business Process Management Suite V6.2

## *WebSphere Process Server*

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This presentation provides an overview of the new features in WebSphere Process Server version 6.2.

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# Goals

- WebSphere Process Server V6.2 enhancements

- Prior knowledge of 6.1 products
  - ▶ Coverage of new content only (V6.1.2 covered in June)
  - ▶ IBM Education Assistant
    - http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/index.jsp

- At the end of the presentation you should be able to:
  - ▶ Overview V6.2 WebSphere Process Server features
  - ▶ Interaction with other products

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The goal is to provide an overview of the WebSphere Process Server enhancements for version 6.2. This overview is based on you having prior knowledge of the 6.1 products. There are detailed presentations for 6.1.2 also that provide an update of the new enhancements only for that release in IBM Education Assistant. This presentation should provide you with the knowledge about the version 6.2 features and their interaction with other products within the WebSphere Business Process Management Suite.

# WebSphere Process Server V6.2

- Installation and configuration
  - Improve uninstalling a business module
  - Scripting for configuration of production environments
- Application
  - Support versioned SCA modules
  - Governance framework
- Migration
  - WebSphere InterChange Server
  - WebSphere Business Integration Server Foundation
- Support
  - Unified failed event management sub-system
  - Dynamic modifications of process instances
  - BPEL based human tasks workflow monitor
  - Business calendar runtime for business calendar administrative enablement
- New business space widgets for WebSphere Process Server
- Administrative console enhancements
- Relationship service enhancement

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In the process server the **Installation and configuration** enhancements have improved the ease of uninstalling business modules. Scripting capabilities for configuration of production environments has also been added.  The **applications** now support versioned SCA modules and Deployment of a module automatically to multiple clusters in the same cell. A Governance Framework has been put in place to help control applications with a connection to a governance repository such as WebSphere Services Registry and Repository or potentially others. These repositories provide Failover behavior when the repository does not exist, control of execution and enforcement of a life cycle on governed artifacts.  **Migration** tools have provided improved performance of migrated content using heritage WebSphere InterChange Server APIs on WebSphere Process Server. Migration from WBIA adapters to native bindings has been added for MQ, HTTP, JMS and EJBs. The process server provides support for many of the stack products. The Recovery and Failed Event Management moved down to SOA Core with a Unified Failed Event Management sub-system. Dynamic modifications of process instances can now occur. Support for the Business Calendar and a BPEL based Human Tasks Workflow Monitor has been provided for BPC.  In version 6.2, there are three new widgets that can be added to Business Space for Business Calendar, Security Manager, and Health Monitor.  The new **Business Calendar** widget provides the ability to work with Business Calendars from within Business Space;  The new **Security Manager** widget allows role based authorization system that is used by business calendars; The new **Health Monitor** widget allows the business administrator to monitor system health parameters.  In the administrative console the command assistance displays the wsadmin scripting command for the last console action you performed. You can then use this data to create wsadmin scripts that automate certain administrative tasks. Command assist support has been added for WebSphere Process Server WebSphere Enterprise Service Bus administrative tasks and SCA binding panels. The relationship database tables contain relationship runtime data that is created during relationship installation.

# Installation enhancements

- Improve the ease (or speed) of uninstalling a business module

- Installation verification tool

- Provide scripting capabilities for configuration of production environments

- Version-to-version migration

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Business modules can now be uninstalled separately and updated without restarting the server. The install verification tool now validates the installation to ensure that the system is ready to be used. Additional scripting capabilities now allow the configuration of each production environment or the duplication of that environment across multiple systems. Version to version migration is required from 6.0.2, 6.1 and 6.1.2 to version 6.2.Most applications can be moved directly into the 6.2 environment but the configuration and topology of the previous system must be migrated.

# Application

- Support versioned SCA modules
  - ▸ Life cycle version handling and governance for modules
  - ▸ Shared libraries and components
- Governance framework
- Deploy a module automatically to multiple clusters in the same cell
- Business context propagation and access

The application support has taken a big step toward support for versioned artifacts to be running together in the same server. The governance framework has provided version handling support for shared libraries and components. A application module can automatically be deployed to multiple clusters within the same cell. Context information from a business object can be propagated across multiple requests to other business objects allowing the sharing of information within the scope of the business operation.

# Heritage product migration

- WebSphere InterChange Server migration enablement
  - Improve performance of migrated content using heritage WebSphere InterChange Server APIs on WebSphere Process Server.
  - Provide full native support for heritage data handlers as WebSphere Process Server data bindings using the new strategic WebSphere Process Server data handler API.
  - Migrate HTTP WBIA Adapter to HTTP native binding
  - Migrate JMS WBIA Adapter to JMS native binding
  - Migrate EJB WBIA Adapter to SCA binding
  - Migrate MQ WBIA Adapter to MQ/MQ JMS native binding
- WebSphere Business Integration Server Foundation migration enhancements
  - Enhance the WebSphere Integration Developer wizard to migrate the entire WebSphere Studio Application Developer Integration Edition workspace (containing multiple projects)
  - Programmer tools to migrate invocation of WebSphere Business Integration Server Foundation Java code
  - FDL-2-BPEL converter enhancements
  - Support upgrade for WebSphere Business Integration Server Express to WebSphere Process Server

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The InterChange Server migration has been improved for the performance of the WebSphere InterChange Server APIs running on WebSphere Process Server along with full native support for heritage data handlers. Several of the WBIA adapters are now migrated to their native binding. The WebSphere Business Integration Server Foundation migration enhancements include a complete migration of the WebSphere Studio Application Developer Integration Edition workspace, tools to migrate the invocation of Java™ code and FDL-2-BPEL converter enhancements.

# Support

- Recovery and Failed Event Management moved down to SOA Core
  - ▸ Unified Failed Event Management sub-system

- Dynamic modifications of process instances

- Improve error and FFDC messages

- Improve performance
  - ▸ BPC explorer
  - ▸ Workflow query

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A unified failed event management infrastructure is now provided to stack products by moving the failed event management down to the SOA core. The ability to change process instances dynamically now allows the applications to move onto a new version of the application modules or to change configuration without stopping the application. As in all previous releases, this release includes performance and problem determination enhancements.

# BPC support

- Business calendar
  - ▶ Runtime for business calendar administrative enablement

- BPEL based human tasks workflow monitor

- BPC more detailed graphical view of process instances
  - ▶ Richer flow model to support BPMN, BPM-TP

- Enhanced dynamicity for business and knowledge workers

There were several enhancements that were provided specifically for the business process choreographer. In the 6.1.2 release the business calendar was moved into the process server runtime to provide a consistent calendar module across the stack products. In the 6.2 release some additional improvements were made for the process choreographer to allow easier creation, modification, and access to calendars. A BPEL based human tasks workflow monitor has been added. The support for BPMN and BPM-TP notation has been added. You can dynamically switch between notations and support these notations when importing models from other editors. Support has been enhanced for the dynamicity between business and knowledge workers.

# Administration enhancements

| | Health monitor widget for business space |
|---|---|
| **New 6.2** | New **health monitor** widget allows the business administrator to monitor any of these system health parameters:<br><br>Monitor status of<br>  ▸ node agents<br>  ▸ server/clusters<br>  ▸ deployment environments<br>  ▸ system messaging engines (BPC, CEI, SCA Application and Sys)<br>  ▸ system databases (BPC DB, Common DB, ME DB, …)<br>  ▸ system and infrastructure applications (BPC container, CEI server, Web applications )<br><br>Monitor message depth and trending of system internal queues |
| **Benefits** | Provides the ability to monitor status of various aspects of the system from within business space |

The first of the administration enhancements for version 6.2 is the Health Monitor widget for Business Space. The Health Monitor allows you to view the status of various system health parameters. As noted here, you can see the status of node agents, server/clusters, deployment environment, messaging engines, databases, applications, and message queues, all from within the business space.

Health monitor widget – Topology tab
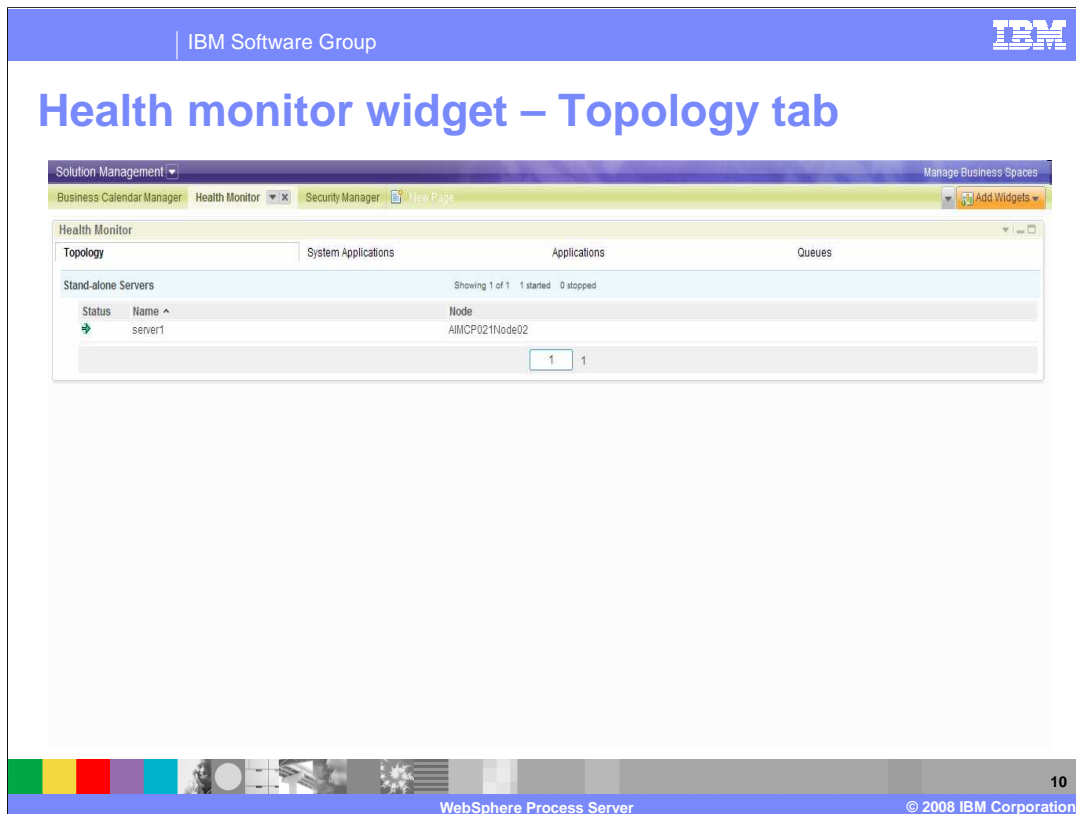
Shown here is a screen capture of the health monitor widget. Across the top of the display are four tabs. Each tab shows different information. Here in this screen capture, the Topology tab is shown. In this case there is a single server installation, so all that is seen here is a stand-alone server. If your installation has a more complex setup, like clusters and nodes and so forth, then those items are listed here as well. In the blue title line for each section there is an 'at-a-glance' view of the number of items in that section and their status. In this case there is one of one servers, and it is in a 'started' state. The System Applications tab shows a list of the applications owned by Process Server, and the status of each of those applications (started, stopped). The Applications tab shows a list of the non-system applications that have been deployed to the server, and their status. The Queues tab shows the messaging queues listed by name, the messaging engine they are associated with, and the current depth. In the upper right corner is the pull-down menu, which is accessed by clicking on the amber triangle. The pull-down menu is used to configure the Health Monitor views. The 'configure' action is only available for the Health Monitor in this release; there is no configuration available for the other WebSphere Process Server widgets called Business Calendar manager or Security Manager.

# Administration enhancements

| | Business calendar widget for business space |
|---|---|
| **New 6.2** | Business calendar widget gives users the ability to work with business calendars and timetables:<br><br>▪List calendars accessible to logged in user<br><br>▪Create, read, update, delete calendar entries (with proper authorization)<br><br>▪View calendar details<br><br>▪Include or exclude calendars<br><br>▪Assign calendar roles (using the security manager) |
| **Benefits** | Provides the ability to work with business calendars from within business space |

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The Business Calendar widget is another new business space widget in version 6.2. During runtime, users of applications that have been developed using Business Calendars can use the Business Calendar widget within Business Space to work with business calendars and timetables. The Business Calendar widget can list calendars, show details about calendar entries, and create, read, update and delete entries. Each business calendar has security roles associated with it: owner, reader, and writer, which can be assigned through the security manager. These roles are discussed further along with the Security Manager widget.

# Business calendar widget

Solution Management ▾     Manage Business Spaces

Business Calendar Manager ▾ ✕   Health Monitor   Security Manager   New Page     ▾   Add Widgets ▾

**Business Calendar Manager**

**All Timetables**

| Name | Target Namespace | Module Name | Version |
|------|------------------|-------------|---------|
| DailyWorkOnTime | http://tempuri.org/wbi-businesscalendar-test | sampleCalendarArtifacts | v100 |
| DailyLunchOnTime | http://tempuri.org/wbi-businesscalendar-test | sampleCalendarArtifacts | v100 |
| DailyHierarchical | http://tempuri.org/wbi-businesscalendar-test | sampleCalendarArtifacts | v100 |
| DailyFlat | http://tempuri.org/wbi-businesscalendar-test | sampleCalendarArtifacts | v100 |

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This is a screen capture from the business calendar widget showing the timetables view, with the list of timetables and the associated modules. Clicking on one of the timetables will give a more detailed view including a list of intervals for that timetable, and the intervals can be added, edited, and deleted as well from within the business calendar widget.

# Administration enhancements

| | Role-based security and<br>Security manager widget for business space |
|---|---|
| **New 6.2** | Introduction of new BPM security roles – BPMadmin and BPMrolemanager<br><br>Introduction of new resource security roles – reader, writer, owner<br><br>These roles are configured and assigned through the security manager widget |
| **Benefits** | Provides the ability to govern administrative operations and access to artifacts from within business space |

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Another new widget in version 6.2 is a Security Manager widget that can be added to Business Space. The security manager widget gives the administrator the ability to manage the new role-based security features being introduced in V6.2. There are two new BPM Security roles called BPMadmin and BPMrolemanager. There are also three new resource security roles – reader, writer and owner. These roles are configured and assigned through the Security Manager widget, which gives the ability to manage security and role-based access control through the Business Space interface.

Security manager widget
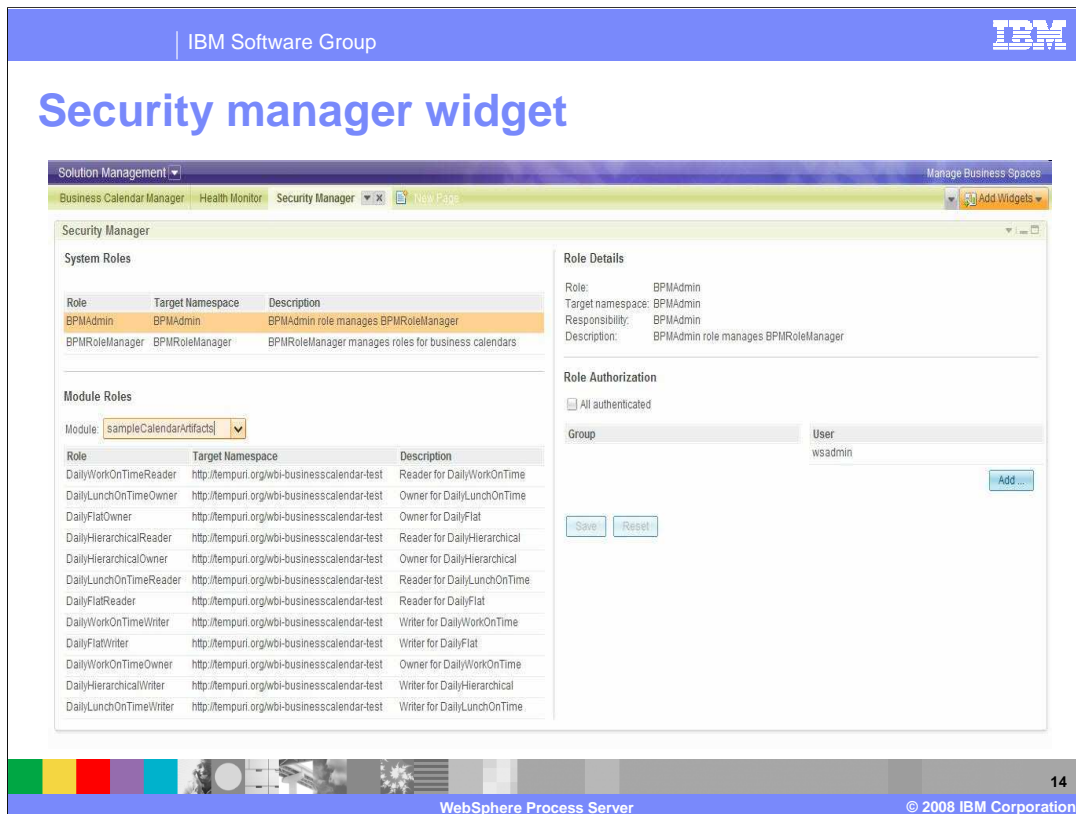
This screen capture shows the Security Manager widget. The System Roles appear in the upper left of the screen capture. In this case the BPMAdmin role has been selected, so in the right half of the screen the details for this system role are displayed. The top half has the role details information, and under that is the list of users and groups that have been granted authorization to this particular role. Here user "wsadmin" has been granted the BPMAdmin role. On the left again, there is also a display of the Module Roles active in this system. In this case, the module roles associated with the sampleCalendarArtifacts module are listed. In the timetable manager view of the Business Calendar widget, a list of four timetables was shown. Here in the Security manager widget, those same four timetable names appear. However, now those timetable names have been appended with each of the three security roles – Reader, Writer, and Owner – making a list of twelve module roles associated with the sampleCalendarArtifacts module. These module roles grant a specific type of authority to that timetable; a Reader authority, a Writer authority, and an Owner authority. On this panel of the security manager, the administrator can assign specific users to these roles, granting you either Reader, Writer, or Owner authority over that specific timetable. Note that in version 6.2, this security role function is only available for business calendars

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# Administration enhancements

| | Changes to BPC configuration navigation in the administrative console |
|---|---|
| **New 6.2** | ▪The BPC observer configuration settings are merged with the BPC explorer configuration panel<br>▪Supports the merging of the two applications into one new application called BPC explorer. |
| **Benefits** | Configuration settings panel in the administrative console has been updated for new merged BPC explorer application. |

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Due to the merging of the BPC Observer into the BPC Explorer in V6.2, the configuration settings panels in the administrative console are also merged.

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# Administration enhancements

| | **Business user workspace support in BPC configuration panels of administrative console** |
|---|---|
| **New 6.2** | ▪ A new check box on the BPC Configuration panel allows the administrator to enable or disable human task history state observer<br><br>▪A similar check box is added to the BPC human task manager configuration / runtime panel |
| **Benefits** | The administrator can enable the state observers for human task history or disable it after the BPC container has been configured. |

There is a new check box in the BPC Configuration panels of the administrative console to allow you to enable or disable the human task history feature.

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# Administration enhancements

| | SCA module administration |
|---|---|
| **New 6.2** | From the administrative console, you can now:<br>▸ Install SCA modules<br>▸ Uninstall SCA modules |
| **Benefits** | Deployers can now work with SCA modules through the administrative console. |

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Another new enhancement is the ability to install and uninstall SCA modules from the administrative console.

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# Administration enhancements

| | |
|---|---|
| | **New service integration bus browser in administrative console** |
| **New 6.2** | The new service integration bus browser in the administrative console<br>▸ Shows the SIB buses and queues elements in a tree view.<br>▸ Shows the message contents of an SIB queue |
| **Benefits** | Administrators can see the service integration bus elements in a tree table view. |

The new SIB browser in the administrative console shows the SIB elements in a tree table view that shows all relevant information at a glance. This enhances the ability to see the SIB elements and their relationship to each other. It also shows the message contents of a SIB queue.

Service integration bus browser

The service integration bus browser has two panes that appear to the right of the navigation frame. The first pane, called the tree pane, is a navigation tree where you can browse the service integration buses configured on the system. The second pane, called the content pane, contains the collection and detail pages for the buses and their individual components, such as messaging engines, queue points, destinations, publication points, and mediation points. When an item in the tree pane is clicked, its corresponding collection or detail page opens in the content pane. In this case the name of a bus is selected in the tree pane on the left, and the details for that bus are displayed in the content pane on the right.

# Relationship service enhancement

| | **New script-based access to the relationship service repository tables** |
|---|---|
| **New 6.2** | ▪ New APIs for the pre-population of instance data in the repository tables<br><br>▪Sample SQL scripts to help users write their own SQL scripts to pre-populate the data using views<br><br>▪Sample Java code to help users write their own Java code to pre-populate the data using APIs |
| **Benefits** | The administrator can pre-populate the relationship instance data in the database using these new APIs. |

And the last item is a relationship service enhancement. Relationship database tables contain relationship runtime data that is created during relationship installation. In previous releases, the only way to enter new data into the Relationship tables was using the Relationship Manager in the administrative Console, or through the database GUI, one entry at a time. New in V6.2 are APIs to allow the relationship instance data to be pre-populated in the database multiple entries at a time. There are also some sample scripts and sample Java code provided to help you use these new views and APIs.

# Summary

- Installation enhancements

- Application

- Migration

- Support

- New business space widgets for WebSphere Process Server

- Administrative console enhancements

- Relationship service enhancement

In summary, this presentation covered installation enhancements for DB configuration before WebSphere Process Server installation, quick start using your products, Improve uninstalling a business module and Scripting for configuration of production environments.

The WebSphere Integration Developer support in version 6.2 covered Horizontal trace improvements now called server log view and Business calendar updates.

The application improvements covered support for versioned SCA modules using the Governance Framework.

Migration added new support for MQ CICS®, WebSphere InterChange Server with adapters to their native bindings and more complete migration of WebSphere Business Integration Server Foundation WebSphere Studio Application Developer Integration Edition workspace into WebSphere Integration Developer.  Support enhancements included dynamic modifications of process instances and failed event enhancements. There are new widgets added for business space for the health monitor, business calendar and role based security.

Several console enhancements improved the business user workspace, additional SIB support and SCA module administration.

New APIs were added to the relationship service to allow pre-population of repository tables.

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