



IBM Software Group

WebSphere® Enterprise Service Bus V6.1 WebSphere Process Server V6.1

Overview of new functionality



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This presentation provides an overview of new functions and enhancements for version 6.1.

Goals

- Introduce WebSphere Business Process Integration Enhancements with V6.1
- At the end of the presentation you should be able to:
 - ▶ Identify the new features available in the V6.1 release
 - WebSphere Process Server
 - WebSphere Enterprise Service Bus
- Prerequisites to understanding this presentation
 - ▶ Knowledge of V6.0.2 WebSphere Business Process Integration Environment

The focus of this presentation is on the new features and enhancements common to version 6.1 of the WebSphere Enterprise Service Bus and the WebSphere Process Server. This is an overview of the differences between version 6.0.2 and version 6.1, therefore an understanding of version 6.0.2 is required. Each slide will list and discuss the V 6.0.2 product, the new features and enhancements in V 6.1 and the benefits resulting from the changes.

Agenda

- WebSphere Enterprise Service Bus and WebSphere Process Server common features update
 - ▶ Database enhancements
 - ▶ Runtime migration
 - ▶ Network Deployment topology
 - Installation
 - Profile management tool
 - Administrative console
 - ▶ Additional enhancements
- Summary

Some of the enhancements which are common cover database enhancements for ease of use, runtime migration and creation of network deployment topologies. The runtime migration is now much more complete allowing the movement from version 6.0.1 or 6.0.2 to version 6.1 much easier. The process of creating a network deployment environment in 6.0.2 required extensive knowledge and time to create. There are three pre-configured network deployment environments provided in the 6.1 release. Some additional enhancements include the support for the i5/OS platform.

Section

WebSphere Enterprise Service Bus and WebSphere Process Server common features update



This section covers the WebSphere Enterprise Service Bus and the WebSphere Process Server common features update.

Database enhancements

Existing 6.0.2	<ul style="list-style-type: none">▪ Data sources hard to access▪ Database support
New 6.1	<ul style="list-style-type: none">▪ Single panel for all data sources▪ Single database for WebSphere Business Integration components
Benefits	<ul style="list-style-type: none">▪ Easier to use▪ Fewer resources

In version 6.0.2 the data sources are accessed under several layers of panels for each of the components. Not all databases were supported by each of the components within the products. For version 6.1 these problems have been resolved by providing a single panel to review and revise data sources. The WebSphere Business Integration components within these products now use a single database. This helps to reduce the resources which are used and simplifies the configuration.

Data sources

- Single page view
- Edit data source
- Reset configured values
- Test connection
- Edit provider

The screenshot displays the 'Data Sources' configuration page. At the top, a breadcrumb trail reads: 'Deployment Environments > Admin > Deployment Tools > System Deployment Tools > Enhanced Configuration > Data Sources'. Below this, a table lists various data sources with columns for Selection, Component ID, Data Source, JDBC Name ID, Scope, Database Instance ID, Schema ID, Check Status, User Name, Password, Server ID, and Provider ID. The table includes entries for 'DB2', 'DB2_400', 'DB2_400_1', 'DB2_400_2', 'DB2_400_3', 'DB2_400_4', 'DB2_400_5', 'DB2_400_6', 'DB2_400_7', 'DB2_400_8', 'DB2_400_9', 'DB2_400_10', 'DB2_400_11', 'DB2_400_12', 'DB2_400_13', 'DB2_400_14', 'DB2_400_15', 'DB2_400_16', 'DB2_400_17', 'DB2_400_18', 'DB2_400_19', 'DB2_400_20', 'DB2_400_21', 'DB2_400_22', 'DB2_400_23', 'DB2_400_24', 'DB2_400_25', 'DB2_400_26', 'DB2_400_27', 'DB2_400_28', 'DB2_400_29', 'DB2_400_30', 'DB2_400_31', 'DB2_400_32', 'DB2_400_33', 'DB2_400_34', 'DB2_400_35', 'DB2_400_36', 'DB2_400_37', 'DB2_400_38', 'DB2_400_39', 'DB2_400_40', 'DB2_400_41', 'DB2_400_42', 'DB2_400_43', 'DB2_400_44', 'DB2_400_45', 'DB2_400_46', 'DB2_400_47', 'DB2_400_48', 'DB2_400_49', 'DB2_400_50', 'DB2_400_51', 'DB2_400_52', 'DB2_400_53', 'DB2_400_54', 'DB2_400_55', 'DB2_400_56', 'DB2_400_57', 'DB2_400_58', 'DB2_400_59', 'DB2_400_60', 'DB2_400_61', 'DB2_400_62', 'DB2_400_63', 'DB2_400_64', 'DB2_400_65', 'DB2_400_66', 'DB2_400_67', 'DB2_400_68', 'DB2_400_69', 'DB2_400_70', 'DB2_400_71', 'DB2_400_72', 'DB2_400_73', 'DB2_400_74', 'DB2_400_75', 'DB2_400_76', 'DB2_400_77', 'DB2_400_78', 'DB2_400_79', 'DB2_400_80', 'DB2_400_81', 'DB2_400_82', 'DB2_400_83', 'DB2_400_84', 'DB2_400_85', 'DB2_400_86', 'DB2_400_87', 'DB2_400_88', 'DB2_400_89', 'DB2_400_90', 'DB2_400_91', 'DB2_400_92', 'DB2_400_93', 'DB2_400_94', 'DB2_400_95', 'DB2_400_96', 'DB2_400_97', 'DB2_400_98', 'DB2_400_99', 'DB2_400_100'. Below the table, there are buttons for 'Apply', 'Reset', and 'Cancel'. Below the table, there are two panels: 'Database Provider' and 'Data Source'. The 'Database Provider' panel shows 'Provider: DERBY_NETWORKSERVER', 'JDBC provider name: SA_data_source', and 'Implementation type: SA_data_source'. The 'Data Source' panel shows 'Data Source Provider: Provider', 'Implementation Type: SA_data_source', 'Scope: Cell', 'Data Source Properties: User Name, Password', and 'Component Specific Properties: Component ID, Data Source Name, JDBC Name, Description'. The 'Additional Properties' panel shows 'Custom Properties: JDBC Data Source, JDBC Authentication Alias, Message Source Data Store'. At the bottom right, there is a small number '6'.

Shown on this slide is the new data source panel which shows all data sources configured for the system. This panel allows editing of the data sources directly or selection of the data source to edit in an individual data source panel. The single panel also allows testing of the selected connections.

Runtime migration

Existing 6.0.2	<ul style="list-style-type: none">▪ Limited server runtime migration
New 6.1	<ul style="list-style-type: none">▪ Profile migration V6.0.2 to V6.1▪ Configuration migration▪ Application migration▪ Database migration
Benefits	<ul style="list-style-type: none">▪ Complete migration support▪ Less administrative work

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Overview of new functionality

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In version 6.0.2 server runtime migration from a previous version is very limited. In version 6.1 profiles can be migrated from version 6.0.1 or 6.0.2. The configuration can be migrated to avoid having to reconfigure the new system during upgrading. The sample applications are not migrated but are provided with the version 6.1 installation. All system and product applications will be migrated. The user applications should be able to run directly on the 6.1 server. A new default database called Derby is shipped with the 6.1 runtime. The migration utility will move the data from the Cloudscape database into the Derby database. The migration program will provide a GUI interface to specify options for the migration and will run the WBIPreUpgrade and WBIPostUpgrade with those options.

Runtime installation

Existing 6.0.2	<ul style="list-style-type: none">▪ Limited profile augmentation
New 6.1	<ul style="list-style-type: none">▪ Common installation engine▪ Use existing WebSphere Application Server▪ Install as non-root user▪ Trade up installations
Benefits	<ul style="list-style-type: none">▪ Allows business to grow

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Overview of new functionality

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The version 6.0.2 installation provided a very limited augmentation of a profile. In version 6.1 a common install engine is used for SOA Core, Business Process Choreographer, WebSphere Enterprise Service Bus and WebSphere Process Server which allows trading up from a base install. This helps to allow a business to grow where it may need only the WebSphere Application Server initially but then need to add WebSphere Enterprise Service Bus or WebSphere Process Server to enhance their business applications. The installation now also allows installation as a non-root user. This helps to protect the root resources on platforms that allow administrator protection.

Network Deployment topology

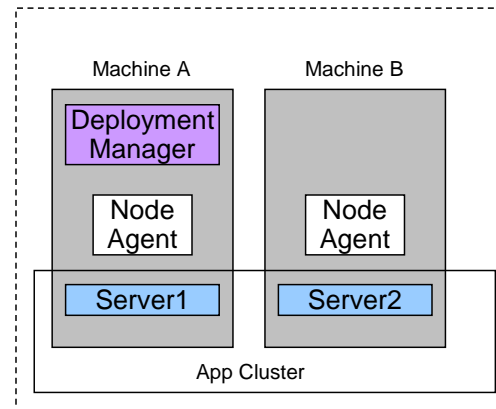
Existing 6.0.2	<ul style="list-style-type: none"> ▪ Manual topology creation
New 6.1	<ul style="list-style-type: none"> ▪ Predefined topologies <ul style="list-style-type: none"> ▶ Single cluster ▶ Remote messaging ▶ Remote messaging and support ▪ Profile creation <ul style="list-style-type: none"> ▶ Installation ▶ Profile management tool ▶ Administrative console
Benefits	<ul style="list-style-type: none"> ▪ Automatic Network Deployment creation



Before version 6.1 all network deployment topologies had to be created and configured manually. This process would take 50 to 60 pages of instructions and several days. There are three pre-defined topologies provided with version 6.1 which cover 80% of the typical network deployment configurations. These pre-defined topologies allow a single cluster, remote messaging or remote messaging and support nodes. These topologies can be selected during installation, after installation with the profile management tool or using the administrative console. This topology creation can be done only for the first topology being created for an installation.

Single cluster topology

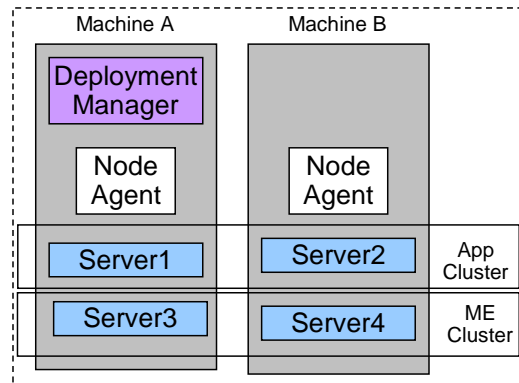
- Application deployment
- Messaging
- Common event infrastructure



The single cluster is the simplest pattern that defines one cluster for the application deployment. Both messaging and common event infrastructure with support applications are configured on the application deployment cluster.

Remote messaging topology

- Cluster for application deployment
 - ▶ Common event infrastructure
 - ▶ Support applications
- Cluster for messaging



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The remote messaging pattern defines one cluster for application deployment and one remote cluster for messaging. The common event infrastructure and other support applications are configured on the application deployment cluster.

Remote messaging and support topology

- Application deployment
- Remote cluster for messaging
- Support cluster for
 - ▶ Common event infrastructure
 - ▶ Support applications

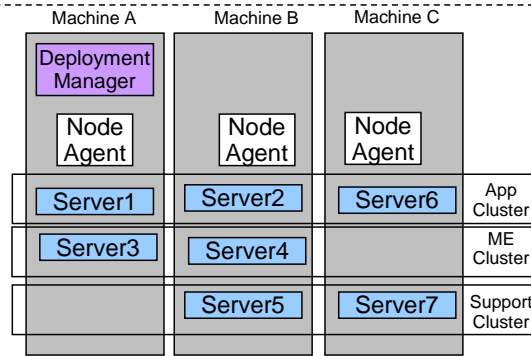
Select	Name	Status
<input type="checkbox"/>	default.AppTarget	➔
<input type="checkbox"/>	default.Messaging	➔
<input type="checkbox"/>	default.Support	➔
Total 3		

Application servers

Use this page to view a list of the application servers in your environment and the status of each of these servers. You can also use this page to change the status of a specific application server.

Preferences

Select	Name	Node	Version	Cluster Name	Status
<input checked="" type="checkbox"/>	default.AppTarget.localhostnode01.0	localhostnode01	Business Process Choreographer 6.1.0.0 NO 6.1.0.11	default.AppTarget	➔
<input checked="" type="checkbox"/>	default.AppTarget.localhostnode02.0	localhostnode02	Business Process Choreographer 6.1.0.0 NO 6.1.0.11	default.AppTarget	➔
<input checked="" type="checkbox"/>	default.Messaging.localhostnode02.0	localhostnode02	Business Process Choreographer 6.1.0.0 NO 6.1.0.11	default.Messaging	➔
<input checked="" type="checkbox"/>	default.Messaging.localhostnode03.0	localhostnode03	Business Process Choreographer 6.1.0.0 NO 6.1.0.11	default.Messaging	➔
<input checked="" type="checkbox"/>	default.Support.localhostnode02.0	localhostnode02	Business Process Choreographer 6.1.0.0 NO 6.1.0.11	default.Support	➔
Total 5					



This pattern defines one cluster for application deployment, one remote cluster for messaging, and one remote cluster for the common event infrastructure and other support applications. This pattern configures a setup that performs well for most of your business integration needs. If in doubt, select this pattern.

Installation

Existing 6.0.2	▪ Profile creation separate
New 6.1	▪ Installation allows profile creation <ul style="list-style-type: none">▶ Typical▶ Deployment environment▶ Client
Benefits	▪ Once step environment setup

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Version 6.0.2 kept installation and profile creation as separate operations. In version 6.1 profiles can be created during the installation process. The options allow selection of a typical deployment environment or client installation. The typical installation allows an application server, deployment manager or custom profile to be created as it was in the version 6.0.2 profile management tool. The deployment environment allows the creation of one of the three pre-configured network deployments. The client install allows the creation of stand-alone clients to access the application server applications.

Profile management tool

Existing 6.0.2	<ul style="list-style-type: none"> ▪ Topology creation not supported
New 6.1	<ul style="list-style-type: none"> ▪ Create a profile <ul style="list-style-type: none"> ▶ Cell ▶ Deployment manager ▶ Application server ▶ Custom ▶ WebSphere Enterprise Service Bus ▶ WebSphere Process Server ▪ Augment an existing profile
Benefits	<ul style="list-style-type: none"> ▪ Create a cell or predefined topology



Network deployment topology creation has been added to the profile management tool. A single cell can be created which contains an application server. A deployment manager or application server can be created as in version 6.0.2. A custom profile can also be created which allows a node to be create and federated into a cell. The WebSphere Enterprise Service Bus and WebSphere Process Server selections will allow the creation of one of the three pre-defined topologies. The tool now provides the ability to augment a profile to add the WebSphere Enterprise Service Bus, the WebSphere Process Server or the Business Process Choreographer to an existing profile that has only the WebSphere Application Server.

Administrative console

Existing 6.0.2	<ul style="list-style-type: none">▪ No profile creation
New 6.1	<ul style="list-style-type: none">▪ Profile creation supported▪ Select topology type
Benefits	<ul style="list-style-type: none">▪ Create additional profiles

In version 6.0.2 profiles could only be created using the profile management tool. Besides profile creation during installation and with the profile management tool, version 6.1 allows profile creation using the administrative console. The console provides the same options to create one of the three pre-defined topologies or a custom profile to be federated into a cell.

Additional enhancements

- i5OS supported
- National language support
 - ▶ Unicode support
 - Use ICU4C
 - Java with ICU4J
- IPv6
 - ▶ IP Dual stack
- Deprecation list
- Performance
 - ▶ Full lazy parsing implementation for mediation primitives
 - ▶ Improve ESB performance in processing mediation flows
 - ▶ Reduce memory and disk footprint consumed by mediation flows

There are some additional enhancements for version 6.1; the i5/OS platform is now supported as part of the distributed platform list and the national language support now uses the ICU4C and ICU4J standards for Unicode support. The products also support dual IP stacks with both IPv4 and IPv6. A deprecation list is provided with APIs that may not be supported in the future. The usage of these APIs is not recommended. Performance has been enhanced in several areas for the WebSphere Enterprise Service Bus. These include full lazy parsing, processing of mediation flows, reduced memory and disk footprint for mediation flows.

Summary

- Database enhancements
- Runtime migration
- Network Deployment topology
 - ▶ Installation
 - ▶ Profile management tool
 - ▶ Administrative console

In summary, this presentation reviewed several database enhancements to improve ease of use. The runtime migration is now much more complete, allowing upgrading to the next release much more transparent. A major accomplishment for version 6.1 is the creation of three pre-defined network deployment topologies during installation, using the profile management tool or the administrative console.

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