WebSphere® Business Process Management Suite V6.1.2

What is New in WebSphere Integration Developer V6.1.2 – Part 1 of 2

This presentation is part one of a two part series to cover what is new in WebSphere Integration Developer version 6.1.2.

Agenda

- **Ease of use enhancements**
    - ▶ Basis of enhancements
    - ▶ Performance enhancements
    - ▶ WBPM Suite integration
    - ▶ Business space
    - ▶ Rational® Asset Manager
    - ▶ Business calendar
    - ▶ Quality of service usability improvements
    - ▶ Substitution groups
    - ▶ Improved array support for XML maps
    - ▶ Manage server profiles

WebSphere. Integration Developer
Version 6.1.2

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The enhancements are split between two major themes. The first are ease of use enhancements and the second, covered in a separate presentation, are problem determination enhancements. You will first cover the basis of the WebSphere Integration Developer version 6.1.2 enhancements, the performance enhancements, and integration between the WebSphere Business Process Management suite of products. This section will cover Business Space and the Rational Asset Manager products. To continue on enhancements, you will cover the Business calendar, Quality of service usability improvements, introduce substitution groups, and the improved array support for XML maps. Next you will cover the Manage Server Profiles feature.

Agenda

- **Ease of use enhancements**
  - ▶ Sticky Notes
  - ▶ View and publish changes to server
  - ▶ Refactoring
  - ▶ CICS® MQ support
  - ▶ Array support in Lotus® Forms clients
  - ▶ BPEL editor enhancements
  - ▶ Visual snippet enhancements
  - ▶ Rational ClearCase® remote client support
  - ▶ Citrix presentation server support
  - ▶ Consistent actions between editors

WebSphere. Integration Developer
Version 6.1.2

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Continuing with the ease of use enhancements, you will learn about sticky notes, a new dialog to view and publish changes to server, and two refactoring enhancements. There has been added support for CICS MQ, arrays in Lotus Forms clients, Rational ClearCase Remote Client, and Citrix presentation server. In addition, there are several BPEL editor enhancements, visual snippet enhancements, and consistent actions between editors.

Basis of enhancements

- Majority of V6.1.2 enhancements are in tools

- Foundation software levels
  - Eclipse v3.2.2
  - Rational Application Developer V7.0.0.7
  - WebSphere Test Environment (WTE)V6.1.2
    - based on WebSphere Application Server 6.1.0.17

- Migration
  - V6.1 projects import directly into V6.1.2
  - Important technotes for WTE upgrade (V6.1 – V6.1.2)
  http://www-1.ibm.com/support/docview.wss?rs=2308&context=SSQQFK&dc=D600&uid=swg21313162&loc=en_US&cs=UTF-8&lang=en

- No technology changes from V6.1 to V6.1.2
  - SCA, SDO, WSDL, BO, Xpath

The majority of version 6.1.2 enhancements are in tools. The foundation of WebSphere Integration Developer is based on Eclipse 3.2.2 and Rational Application Developer V7.0.0.7. The WebSphere test environment is now based on WebSphere Application Server 6.1.0.17. Version 6.1 projects import directly into V6.1.2, so there is no migration needed. However, there are important technotes for WebSphere test environment upgrade from version 6.1 to version 6.1.2. The URL is located on this slide. There have been no new underlying technology changes from version 6.1 to version 6.1, like SCA, SDO, WSDL, business objects, and Xpath.

Ease of use enhancements

- **Performance enhancements**
  - ▶ Clean Build time
    - 610: ~ 300 seconds
    - 612 (same hardware): ~ 200 seconds
    - 612 (new hardware): ~ 100 seconds
  - ▶ Publish response time
    - 610: ~450 seconds
    - 612: ~250 seconds
    - Algorithmic enhancements and memory analysis for publish
  - ▶ Improved performance of server start and recycle times
- New default for test server
  - ▶ Run server with resources on Server
    - Previous default – resources in workspace
  - ▶ Replicates publishing in a production situation

▼ **Publishing**
Modify the publishing settings.
- ○ Run server with resources within the workspace
- ◉ Run server with resources on Server

☑ Minimize application files copied to the server

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A few performance enhancements have been added to WebSphere Integration Developer version 6.1.2 on top of version 6.1.0. The time it takes to do a clean build in version 6.1.2 versus version 6.1.0 is down by one third. A very large application took 300 seconds to build in version 6.1. 0 compared to version 6.1.2 on same hardware took 200 seconds and took 100 seconds on new hardware. Publishing has had some memory analysis and algorithm enhancements to reduce publish times almost by half. In version 6.1.0 the publish times for a very large application took 450 seconds, while in version 6.1.2 the same application took 250 seconds. In addition, the server performance has improved in terms of the server start and recycle times. The test server now has a new default to run server with resources on server. The previous default was to run resources within the workspace. The new default improves performance and replicates publishing in a production situation.

Ease of use enhancements

- **WebSphere Business Process Management suite integration**
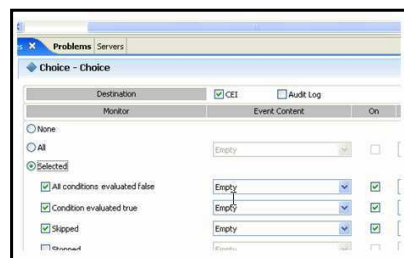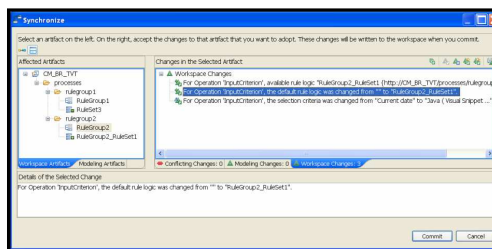 - WebSphere Integration Developer and Modeler
    - Support for business rules in Compare/Merge
    - Support for Modeler Timetables
      - exported to WebSphere Integration Developer as Business Calendars
    - Rational Asset Manager
  - WebSphere Integration Developer and Monitor
    - Event monitoring for BPEL choice activity
    - Throw events for monitoring
      - All conditions evaluated false
      - Condition evaluated true
      - Both selected
    - Help track which choice path is taken
  - Business Space

There have been several additions to further integrating the WebSphere Business Process Management suite of products. WebSphere Integration Developer and Modeler now have support for business rules in Compare/Merge. This allows modelers and business integrators to compare and merge changes between the model and implementation. In addition, support for Modeler timetables has been added in the form of business calendars in WebSphere Integration Developer. Rational Asset Manager, or RAM, has been added as a repository to store and reuse assets between WebSphere Integration Developer and Modeler. For Monitor, you can now select BPEL events that monitoring tools can use to track which choice path is taken by selecting All conditions evaluated false, condition evaluated true, or both under selected. The events emitted for links in flow constructs now have source and target information and can be used to evaluate KPI that need the execution path information. Additional source and target information has also been added. For Business Space integration, you can now create and generate Dojo forms for human task inputs and outputs that are consumed and used by the Business Space human task widgets. More on Business Space is covered on the next slide.
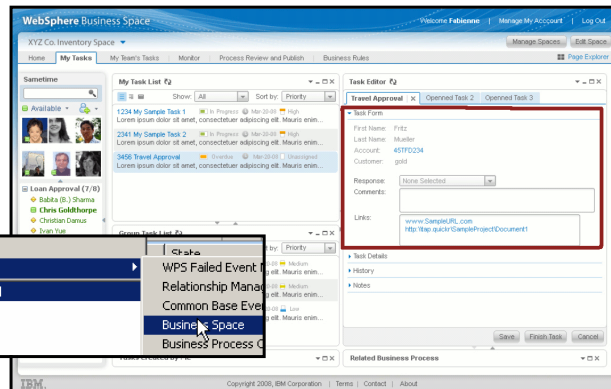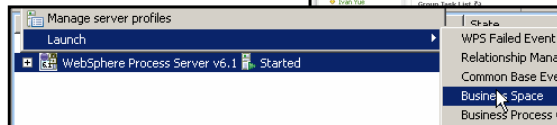
Ease of use enhancements

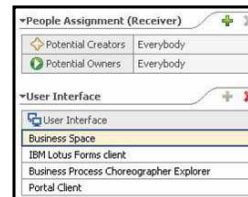- Business Space
  - Servers View
    - Right click server > Launch > Business Space
      - Launches Business Space Web interface if installed
  - Human Tasks
    - Business Space interface added to Human Task Editor
      - Supports new Business Space client
      - HTML file needs to be in same module or library as human task
    - Enable users to generate, specify and modify the visualization of human task data as HTML page
      - Uses dojo tags
      - Opens up to clients that use html/dojo

What is new in WebSphere Integration Developer V6.1.2 — © 2008 IBM Corporation — 7

Business space has been introduced in version 6.1.2 of the WebSphere Business Process Management suite of products. Though business space is covered in a separate presentation, WebSphere Integration Developer version 6.1.2 adds access to the business space Web interface, if installed, through an option in the right click menu of the server the business space application is running on. Simply right click the server in the servers view and select launch, then business space. An HTML form generator has been added for using human tasks in business space. Enable users to generate, specify and modify the visualization of human task data as an HTML page for use in a business space. To work with a human task in business space, you need a special client definition for the input and output data. The new HTML form generator creates these pages. You can also generate the new HTML definition, with Dojo tags, directly in the client definitions of the human task editor. A limitation to note is that the HTML file needs to be in same module or library as human task to foster the communication needed between the two on the runtime.

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Ease of use enhancements

- **Rational Asset Manager**
  - ▶ Rational Asset Manager plug-in added
  - ▶ Development time repository for assets and associated metadata
    - Store and reuse assets
    - Manages iterative development between Modeler and WebSphere Integration Developer
      - – Import Models into WebSphere Integration Developer
      - – Subsequent iterations of synchronizing thereafter
    - Uses the Reusable Asset Specification to describe and classify assets
    - Is an application that runs on WebSphere Application Server
    - Web client interface or eclipse interface
    - User registry
  - ▶ Not a source code control system
    - Publish assets and asset versions
   - Not detailed file management

The Rational Asset Manager, or RAM, is an optional plug-in added to WebSphere Integration Developer version 6.1.2. It is a development time repository for assets and associated metadata. You can use Rational Asset Manager as a repository to store and reuse assets. It provides a convenient way to manage iterative development between WebSphere Business Modeler and WebSphere Integration Developer. When the Business model is ready to be handed off to IT, it is saved to the asset repository. When IT is ready to implement the model, they retrieve it from the asset repository. IT imports models into WebSphere Integration Developer and have iterations of synchronizing thereafter. RAM uses the Reusable Asset Specification to describe and classify assets and is an application that traditionally runs on WebSphere Application Server. It has a Web client interface or eclipse interface, this plug-in being the latter, and comes with a user registry. RAM is not a source code control system, but a repository for publishing assets and asset versions.

Ease of use enhancements

- **Rational Asset Manager (RAM)**
  - ▶ Perspective and views
    - Asset Management Perspective
      - – Assets, Asset Repositories, and Asset Search View
  - ▶ Import assets, synchronize, and add assets to repository
  - ▶ Requirements
   - Rational Asset Manager V7.1, Rational License Server, License key, BPM model loaded
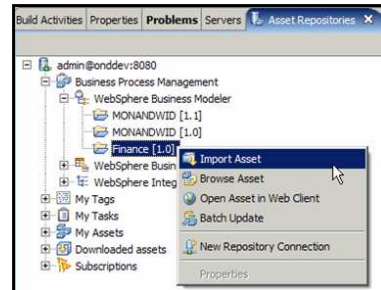
RAM integrates into WebSphere Integration Developer with its own perspective and views. The asset management perspective provides the way to create connections to asset repositories, find assets, and import assets into WebSphere Integration Developer with the assets view, asset repositories view, and the asset search view. In WebSphere Integration Developer version 6.1.2 WebSphere Business Modeler projects are imported from the repository. To add an asset in WebSphere Integration Developer, right-click a module or library and select Add to Asset Repository to launch and complete the Add to Repository wizard. Requirements to run RAM with WebSphere Integration Developer version 6.1.2 are Rational Asset Manager V7.1, Rational License Server, a license key, and the BPM model loaded into RAM. The BPM model is packaged with the WebSphere Integration Developer and Modeler.

Ease of use enhancements

- **Business calendar**
  - Compose meaningful time intervals into one business artifact
  - Consumed by BPEL, human task, or Java components
    - For all duration settings and escalations
  - Specify inclusive and exclusive intervals
    - interval/exception
  - Reference other calendars
    - include/exclude subset calendars

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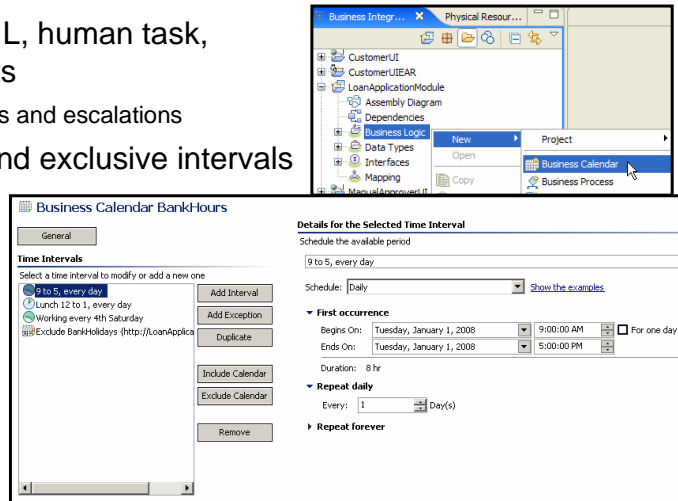
The business calendar has been introduced in WebSphere Integration Developer version 6.1.2 to provide the ability to compose meaningful time intervals into one business artifact. Business calendars are consumed and accessed by BPEL, human task or Java components for all duration settings and escalations. These include wait activities, timeout elements in receive choice activities and event handlers, and expiration definitions for invoke and Inline human task activities. Specify inclusive and exclusive intervals by adding intervals and exceptions within a business calendar. For instance, working 9am to 5pm is an interval and not working one hour for lunch is an exception. Business calendars can reference other calendars have include calendars or exclude calendars. For example, the screen capture shows a business calendar for employee's bank hours. A separate subset calendar was created called Bank holidays to manage days excluded from the Bank Hours calendar. Access business calendars by clicking File > New > Business Calendar or Business Logic > New > Business Calendar.

Ease of use enhancements

- **Business calendar**
  - ▶ Able to import Modeler Timetables (TTs) as business calendars
    - ▪ Read only
  - ▶ Can reside in library or module
    - ▪ .cal file is an artifact
    - ▪ Located under business logic
  - ▶ If calendar is created in WebSphere Integration Developer
    - ▪ Indexed, participates in refactoring
  - ▶ Limitation
    - ▪ Cannot be tested in test client
  - ▶ Examples
    - ▪ Human task escalation
      - – Calendar used to determine escalation trigger
    - ▪ BPEL Wait activity
      - – Define timeframe to trigger timeout

To-do Task - hr

Calendar type:	Business Calendar - "Germany"
Duration until task is overdue: ○	
◉	0 Days 1 Hours 0 Minutes 0 Seconds
Duration until task is deleted: ○	Immediate
◉	0 Days 1 Hours 0 Minutes 0 Seconds
Auto deletion mode:	On successful completion
Duration until task expires: ○	
◉	0 Days 0 Hours 0 Minutes 0 Seconds

Wait - Wait

Expression language:	Timeout
Calendar Type:	Business Calendar - "Germany"
Timeout Duration:	0 Days 0 Hours 0 Minutes 0 Seconds

WebSphere Integration Developer version 6.1.2 is able to import Modeler Time Tables, or TTs, as business calendars, but they are read only. The business calendar can reside in module or library. They are local to the context of the application and scoped like other module resources such as XSDs. The .cal file holds the business calendar data and is a business artifact. If the business calendar is created in WebSphere Integration Developer and not imported, it is indexed by WebSphere Integration Developer and will participate in refactoring. The current limitation is business calendars cannot be tested in test client. For an example of where business tasks are used in processes, the duration for human tasks can use business calendars to determine if enough time has elapsed since a certain event and then trigger an escalation. For BPEL, a wait activity can use a business calendar to define the timeframe for the Wait to trigger a timeout.

Ease of use enhancements
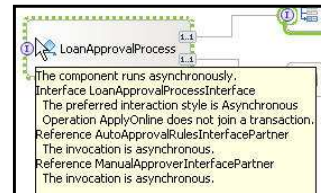
- **Quality of service improvements**
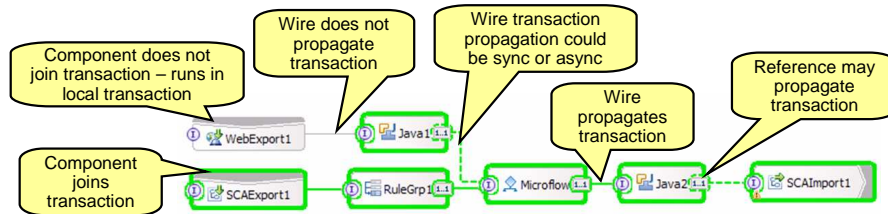
There are three main quality of service improvements in WebSphere Integration Developer version 6.1.2. First, the assembly editor has been enhanced to show and hide transaction propagation through SCA components. This is very helpful in order to see transaction information for the module. To access, right click in the assembly diagram or on certain component and select Show/Remove Transaction Highlighting. While highlighting is turned on, you can put the mouse over the component to view text that explains why the component has a certain transaction quality. In addition to seeing transaction propagation for an entire assembly diagram, you can also focus on a select component or component tree. Right click on a component and select "show transaction from here". The component that you started from will have a bolder highlighting around it to make sure you can see where you started from. WebSphere Integration Developer will also try to set the propagate transaction over a wire for you. Right click a wire in the assembly editor and select "propagate transaction". WebSphere Integration Developer will set transaction where available and if not, tell you why the transaction cannot be propagated.

Ease of use enhancements

▪ Quality of service improvements

Interface

- ⓘ - Joins Transaction
- ⓘ - May join transaction
- ⓘ - Does not join transaction

Reference

- 1..1 - Does not suspend transaction
- 1..1 - Suspends transaction

Wire

- ——— - Propagates a transaction
- - - - - - May propagate a transaction
- ——— - Does not propagate a transaction

Nodes

- ⓘ C3 - Implementation joins propragted global transaction
- ⓘ C2 - Implementation runs in a local transaction
- ⓘ C1 - Implementation may join a propagated global transaction.
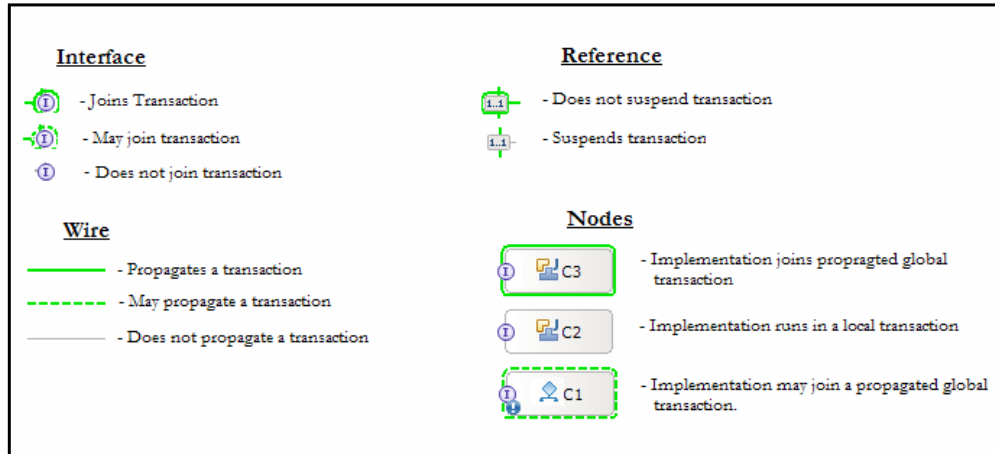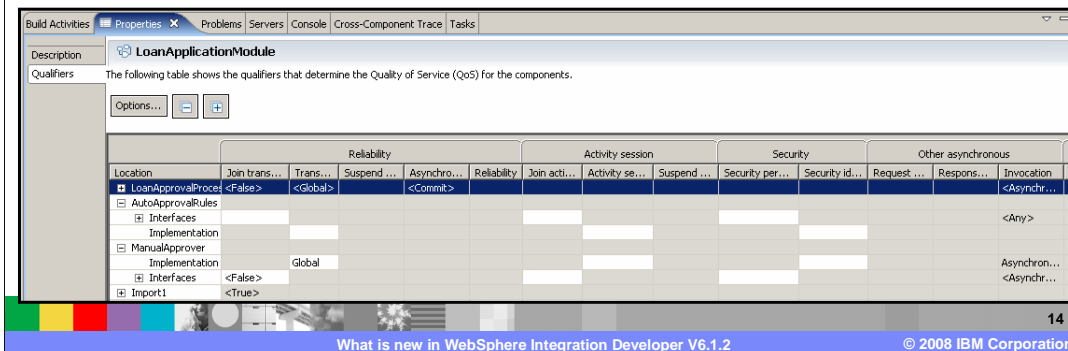
▸ Transaction highlighting meanings

This slide covers the highlight meanings for the nodes in the assembly diagram that participate. If the node has solid green highlighting, then it will join or propagate the transaction. If the node has dotted green highlighting, this means it may join the transaction. WebSphere Integration Developer used the dotted green line when the node could be synchronous or asynchronous depending upon the situation. If the node has no highlighting, this means it will not join or propagate the transaction.

Ease of use enhancements

- **Quality of service improvements**
  - ▶ Qualifiers tab in Properties view for Assembly Diagram
    - ▪ Shows summary of all qualifiers on all parts in the module or selected component
      - – Do not have to select each nodes' properties view to see/set quality of service qualifiers
    - ▪ Edit quality of service settings in table
      - – White cells – available for editing with drop-down of options
      - – Grey cells – not editable
      - – Expand and collapse components
    - ▪ Columns can be set in options
      - – Invocation column does not correspond to a qualifier
        - – Indicates where asynchronous calls are made

| Build Activities | Properties ✕ | Problems | Servers | Console | Cross-Component Trace | Tasks |

LoanApplicationModule

Description
Qualifiers

The following table shows the qualifiers that determine the Quality of Service (QoS) for the components.

Options... ⊟ ⊞

		Reliability					Activity session			Security		Other asynchronous		
Location	Join trans...	Trans...	Suspend ...	Asynchro...	Reliability	Join acti...	Activity se...	Suspend ...	Security per...	Security id...	Request ...	Respons...	Invocation
⊞ LoanApprovalProce...	<False>	<Global>		<Commit>									<Asynchr...>
⊟ AutoApprovalRules													
⊞ Interfaces													<Any>
Implementation													
⊟ ManualApprover													
Implementation		Global											Asynchron...
⊞ Interfaces	<False>												<Asynchr...>
⊞ Import1	<True>												

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The second quality of service improvement is the addition of a qualifiers tab in the properties view for assembly diagram. Previously, you had to open the properties view of each component to see/set quality of service qualifiers. Now, the addition of this tab shows a summary of all qualifiers on all parts in the module if a component is not selected or shows just the qualifiers set for certain component if selected in the assembly diagram. You can also edit quality of service settings in table. The white cells of the table indicate the qualifier is available for editing with drop-down of options to scope what is available for that node. The gray cells mean the qualifier cannot be edited. The components in the location list can be collapsed or expanded to drill down into the components or to edit qualifiers globally for a set of components. The options button allows you to show/hide information for collapsed branches and sort/hide rows and columns in the tab. Notice that the invocation column at the far right does not correspond to a qualifier, but is useful for indicating where asynchronous calls are made.

Ease of use enhancements

- **Quality of Service improvements**
    - ▶ Assembly diagrams created in V6.1.2
        - Will use best practice quality of service and preferred interaction style settings by default
            - Assume synchronous and join transaction to true
            - Qualifiers automatically set for components
                - asynchronous invocation – commit
                - reliability – assured/persisted
                - suspend transaction - false
    - ▶ Preferred interaction style
        - Interface map component or an SCA export
            - Will adopt the preferred interaction style of its target

The third quality of service improvement is a change for assembly diagrams that are created in WebSphere Integration Developer V6.1.2. They will now use best practices for quality of service and preferred interaction style by default. The first default is to set to synchronous and join transaction to true and automatically sets a few qualifiers for components. Asynchronous invocation is set to commit. Reliability is set to assured/persisted. Suspend transaction is set to false. In addition, the preferred interaction style of an interface map component or an SCA export will adopt the Preferred Interaction Style of its target. All of these qualifiers for components can be reset by the user, but starting with the best practice settings will help users.

Ease of use enhancements

- Substitution groups
  - Similar to a choice type
  - Head element can be replaced dynamically with substitutable elements
   - Derived from head element
    - Superset and subset
  - Why use
    - Change objects with minimal affec on current application

superset element → Book BookType [ ]
subset element → Magazine MagazineType [ ]
Head element → Publication PublicationType [ ]

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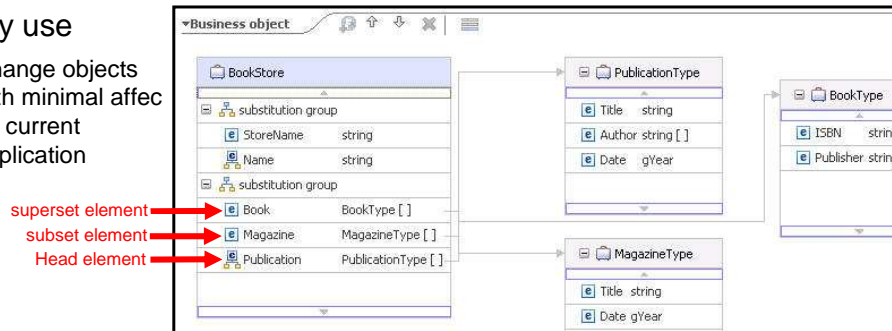
Substitution groups are very similar to choice types. A substitution group is a construct in XML Schema, or XSD, that allows an integration developer create a set of elements that can substitute for one head element, referred to as the substitution group head element. The substitutable element is designated as being part of the group through the use of the XSD *substitutionGroup* attribute and can be the same type element or derived from head element. Therefore, a substitutable element can be a superset, add elements to the base head element, or be a subset, use only a few of the elements from the head element. Substitution groups are used to make an application more dynamic by allowing the change of objects with minimal affect of the current application. In the example screen capture, notice PublicationType is a head element identified with a different icon. MagazineType is of type PublicationType, but only uses the Title and Date elements, and not the Author element. This makes MagazineType a subset element of PublicationType. Alternatively, notice BookType adds ISBN and Publisher to Title, Author, and Date element to make it a superset.
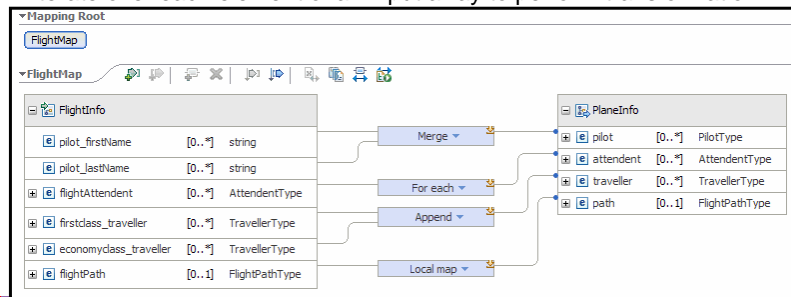
Ease of use enhancements

- Substitution groups
  - Available in multiple areas
    - XPath builder
    - Visual Java™ Snippets
    - Business Object editor
    - Business Object map editor
    - XML map editor
    - BPEL editor
    - Test client
    - Mediation Flow Component primitives
      - MessageElementSetter
      - SetMessageType
    - Human task editor
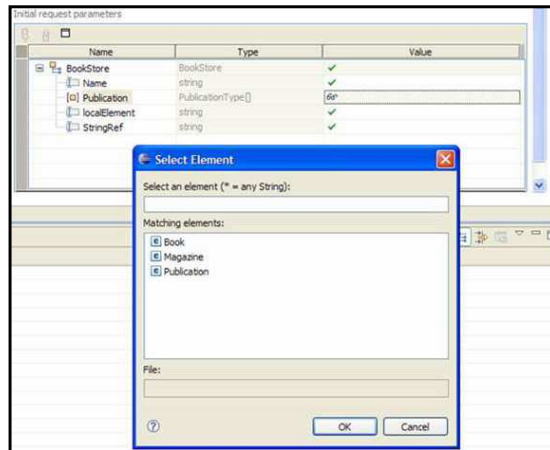
With substitution group support, you can access and edit substitution group elements in these WebSphere Integration Developer components. For the XPath builder, you can now select a substitutable element in an XPath expression when a complex type refers to a head element. For visual snippets, you can now select business object fields in the visual Java snippet editor tree-based pop-up menu. You can also show and select the substitutable elements of a head element. Substitution group elements are also displayed in the business object editor, business object map editor, and XML map editor. On the details tab of the BPEL editor, in the assign section, you can assign an XSD structure to another XSD structure. The assign tree can display the substitutable elements. The screen capture on this page shows the test client. In the test client, you can now show and select the substitutable elements of a head element in the input to test a component. For the mediation flow component, you can now show and select the substitutable elements of a head element in the MessageElementSetter and SetMessageType primitives. To support the SetMessageType primitive, you select an element from a substitution group. In the human task editor, you can choose a part of the input message to replace properties of that task. For example, you can choose part of the input message from an XSD structure if the XSD structure contains a substitutable element.

Ease of use enhancements

- Improved array support for XML maps
  - Four new transformations added
  - Easier to understand how arrays are handled and processed
- ▶ Local map
  - Replaces "inline map" name
  - Define local transformations on a complex type
- ▶ For each
  - Iterate over each element of an input array to perform transformation

▼Mapping Root

FlightMap

▼FlightMap

☐ ☒ FlightInfo

	pilot_firstName	[0..*]	string
	pilot_lastName	[0..*]	string
⊞	flightAttendent	[0..*]	AttendentType
⊞	firstclass_traveller	[0..*]	TravellerType
⊞	economyclass_traveller	[0..*]	TravellerType
⊞	flightPath	[0..1]	FlightPathType

Merge ▼

For each ▼

Append ▼

Local map ▼

☐ ☒ PlaneInfo

⊞	pilot	[0..*]	PilotType
⊞	attendent	[0..*]	AttendentType
⊞	traveller	[0..*]	TravellerType
⊞	path	[0..1]	FlightPathType

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Four new transforms have been added to XML maps to make it easier to understand how arrays are handled and processed. First, the local map transform replaces the "inline map" name used in previous versions of the product. The action for the local map transform is the same as the inline map transform, to define local transformations on a complex type. Next, the for-each transform iterates over each element of an input array to perform transformations. The input array takes one primitive or complex type and the target array takes an array or singular object, but must be a complex type.

Ease of use enhancements

- Improved array support for XML Maps
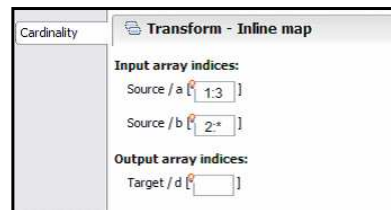 - ▶ Append
    - Iterate over multiple input arrays in a specified order
    - Append data in target array
  - ▶ Merge
    - Iterate over multiple input arrays in unison
    - Join element data in target array
  - ▶ Properties view
    - Cardinality
      - Default is empty
      - Takes single positive integer value
   - Improved F1 help across transforms
      - Light bulb for user assistance
      - added hover-over information

Cardinality

Transform - Inline map

Input array indices:
Source / a [1:3]
Source / b [2:*]

Output array indices:
Target / d [   ]

The append transform individually iterates over multiple inputs in the order specified to append data together on the target side. The input array takes multiple primitives or complex types and the target array takes an array of complex type where the order of inputs into transform are recognized. It iterates over each input array sequentially. Meaning the append transform iterates over all elements in first input array, then over all elements in second input array, and so on till the last array is iterated over. This action is similar to having a For Each transform on each input array, then appending the elements at the end of the target array following the ordering. You can reorder or change cardinality in the properties view when the append transform is highlighted in map editor. Next, the merge transform iterates over multiple inputs in unison to join element data on the target side. The input array takes different multiple primitives or complex types and the target array takes an array or singular object, but must be a complex type. Similar actions to the append transform, except for data is merged instead of appended. You can reorder or change cardinality in the properties view when the merge transform is highlighted in map editor. Cardinality is important for changing the indexes of multiple input arrays for the situation where input arrays are different sizes. Singular inputs are allowed and treated as constants over each iteration.

The properties view for these transforms allows the editing of cardinality. The default is empty and takes single positive integer value. There is improved F1 help across the transforms, including a light bulb icon for user assistance and added hover-over information.

Ease of use enhancements

- **Manage Server Profiles**
  - Automatically reset or create default test server profiles
    - Recover quickly if test server becomes corrupted
    - Limited to default "esb" and "wps" profiles
    - Reset uninstalls/reinstalls profile
    - Server must be stopped – will get warning
  - Access
    - Servers View – Right click server > Manage server profiles
  - Time
    - WPS profile reset – 40 minutes
    - ESB profile reset – 20 minutes
  - If errors
    - Check server log to troubleshoot
    - Reset / create again
  - All server artifacts deleted on reset
    - Make back up if needed

What is new in WebSphere Integration Developer V6.1.2

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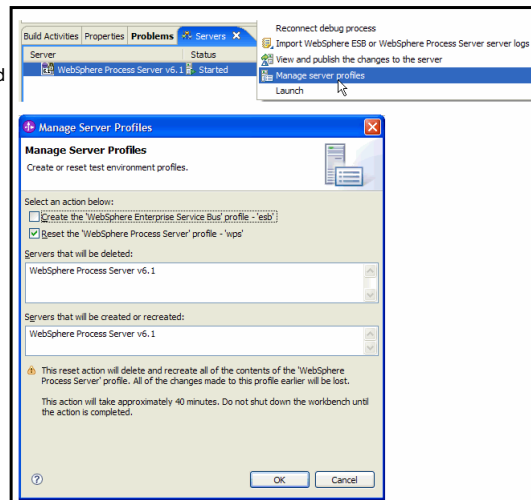
You can now create or reset the WebSphere Process Server or the WebSphere Enterprise Service Bus unit test server to its shipped state. This is helpful when the WebSphere Test Environment, or WTE, in WebSphere Integration Developer becomes corrupt. For the reset, the manage server profiles routine looks for the WebSphere Integration Developer installed runtimes under <widHome>/runtimes/bi_v61, the profile exists <widHome>/pf/[wps|esb], and the profile/server is stopped. If not the manage server profiles will display the appropriate problem and solution if applicable. If the profile is not there, the manage server profiles will display the create option rather than reset. This enhancement will remove the server from WebSphere Integration Developer if present, delete the WebSphere Integration Developer installer created profile if it exists, and create a new profile with the same options as used by the WebSphere Integration Developer installer. It will place a corresponding server in the WebSphere Integration Developer server view, configured to reflect the user ID and password used to create the profile. This enhancement is limited to default profiles, "ESB" and "WPS", created by the WebSphere Integration Developer installer only. If you choose to reset the "ESB" and "WPS" profiles at same time, it will take about 60 minutes. If you choose to reset the WPS profile, it will take about 40 minutes. If you choose to reset the esb profile, it will take about 20 minutes. When finished a dialog is displayed to show it is finished. If the process produced errors a server log file is created. Troubleshoot the log file and reset the test server again. All artifacts in profile are deleted on reset, so make a back up of content on the test server if needed.

Ease of use enhancements

- **Sticky notes**
  - ▸ Common mechanism to share and capture textual information in a module
    - ▪ ideas, reminders, TODO's, short notes
  - ▸ Sticky notes available in four editors
    - ▪ Assembly editor
    - ▪ Business process editor
    - ▪ Mediation flow editor
    - ▪ Business state machine editor
  - ▸ To create a sticky note
    - ▪ From palette, context menu, or local action bar
  - ▸ Saved and exported along with module
    - ▪ Can be shared in team environment
    - ▪ Sticky note information persisted in stickyboard extension file – BPELX
  - ▸ Associations
    - ▪ Dotted lines associate sticky text to a component
    - ▪ Cannot connect to interface, reference, or wire
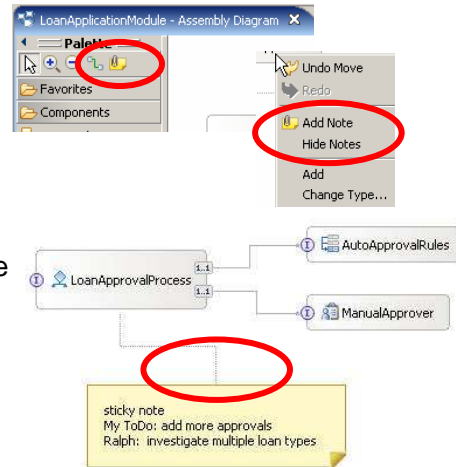
Sticky notes have been added to four editors in WebSphere Integration Developer version 6.1.2; the assembly editor, business process editor, mediation flow editor, and business state machine editor. Sticky notes are a common mechanism to share and capture textual information and are an easy way to save ideas or to-do's, or leave reminders and short notes in a module. For example, an architect can leave instructions on BPEL editor for developers on team with a sticky note. The basic functions are create/edit/delete, show/hide, able to move the sticky note around, undo/redo action, and add/delete association. To create a sticky note, access sticky note icon on palette, by right clicking in an editor to bring up the pop-up menu, or use the icon on the local action bar to the editor. Sticky note information is persisted in a stickyboard BPELx extension file. This means the sticky note can be saved and exported along with the module and can be shared in team environment. Associations are the dotted lines that you can associate a sticky note to a component. You cannot connect an association to an interface, reference, or wire. In addition, notes from WebSphere Modeler do not import as sticky notes though they look similar.

Ease of use enhancements

- **View and publish changes to server**
  - Shows difference between workspace and server contents for publishing
  - For both test servers
    - WebSphere Process Server
    - WebSphere Enterprise Service Bus
  - Two tree modes
    - Logical mode
      - SCA module view of artifacts with changes
      - Default for SCA artifact only changes
    - Physical mode
      - More detailed view of artifacts with changes
      - Default for non SCA artifact only changes
  - How to access
    - Servers view – Context menu
      - "View and Publish changes to server"
    - Build Activities view
      - Clicking "Update Running Servers"

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What is new in WebSphere Integration Developer V6.1.2   © 2008 IBM Corporation
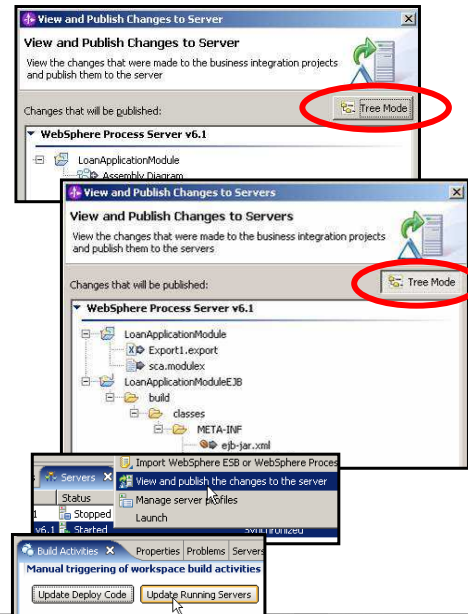
"View and publish changes to server" has been added to WebSphere Integration Developer version 6.1.2 to allow you to see the difference between workspace and server contents for publishing. The enhancement has been added for both WebSphere Process Server and WebSphere Enterprise Service Bus test servers and has two tree modes to view what artifacts are going to be published. The logical mode is the default when only SCA artifacts have been changed. It shows an SCA module view of changes similar to the business integration view. The physical mode is a more detailed view of artifacts that will be published and is the default for non SCA artifact only changes like Java files. This mode is similar to the physical resources view. "View and publish changes to server" is not the default, so to access right click on the test server in the servers view and select "View and Publish changes to server". You can also access the new enhancement when you are using the build activities view by clicking the "Update Running Servers" button.
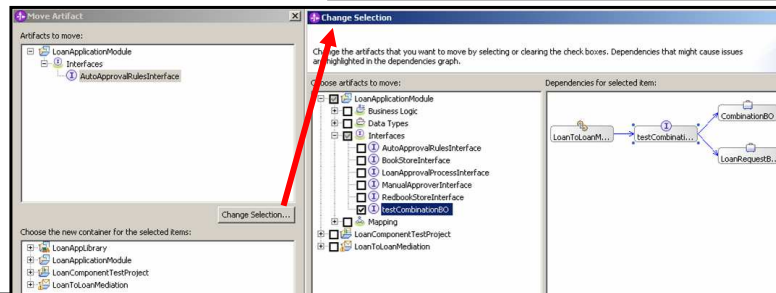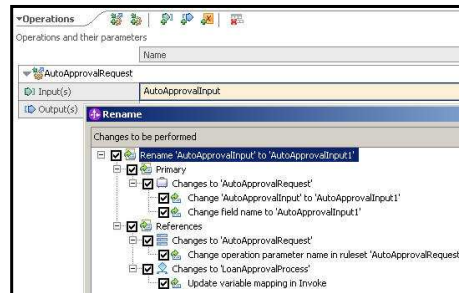
Ease of use enhancements

- **Refactoring**
  - Rename interface operation parameters
    - Inputs, outputs, and fault names
    - doc/lit wrapped operation
      - renames the corresponding business object field
    - non-doc/lit-wrapped operation
      - renames the corresponding WSDL part
  - Move refactoring support enhanced
    - Change Selection button added to move dialog
    - Provides dynamic selection of artifacts to be moved
    - Tree view and assembly editor type view

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Two new refactoring options have been added for WebSphere Integration Developer version 6.1.2. You now have the ability to rename interface operation parameters; inputs, outputs, and fault names. For doc/lit wrapped operations, the refactoring framework renames the corresponding business object fields. For non-doc/lit-wrapped operations, the refactoring framework renames the corresponding WSDL parts. The second refactoring enhancement is for moving artifacts within a workspace. A change selection button has been added to the move dialog to allow a dynamic selection of artifacts to be moved. The dialog has a tree view and an assembly editor type view to help visualize move details.

Ease of use enhancements

- **CICS MQ support**
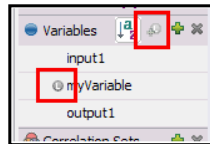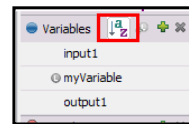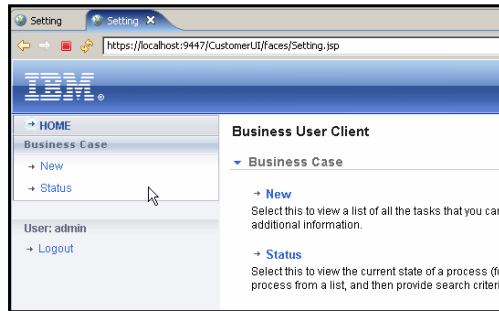 - ▸ Updated MQ bindings
    - ▪ Allow static and dynamic setting of MQCIH and MQIIH header values
      - – Necessary to communicate with CICS with the MQ bridge
      - – Removes requirement for BA78 Support Pac or mediation flow workaround

What is new in WebSphere Integration Developer V6.1.2

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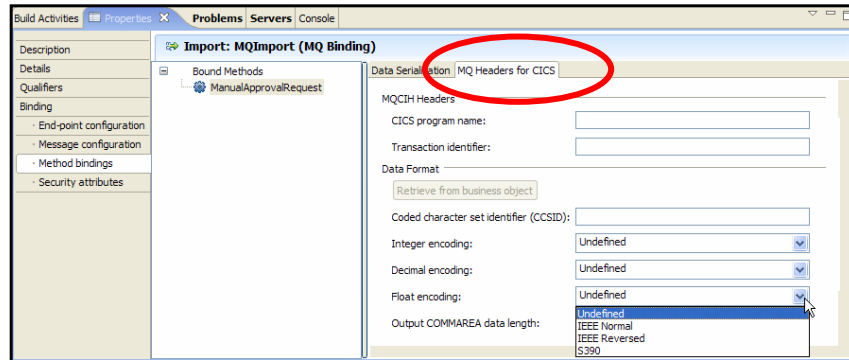
For users connecting their ESB to CICS or IMS systems using MQ, you now have the ability to pass/retrieve parameters carried in the MQ header structures defined by the MQ CICS bridge or MQIMS bridge. This enhancement removes the requirement for BA78 Support Pac and saves having to use a mediation flow component to work around the issue. MQ bindings do not provide the capability to configure values for these headers. Therefore, this enhancement correctly processes an MQ message received from IMS based on the content of the MQIIH and sends an MQ message to a CICS application over the CICS/DPL bridge with correct header values in the MQCIH. This builds on the 6101 support for importing CICS copy books to produce a data binding for use in MQ, JMS, Flat File and FTP. In WebSphere Integration Developer version 6.1.2, the MQ CICS tools include a new tab for the MQ method binding. When you select the MQ Headers for CICS tab, you can set properties and header information for targeting CICS over MQ. The method must use business objects that were created from COBOL, C, or PL/I. You can select retrieve from business object to populate CCSID, encoding, and COMMAREA-length values.

Ease of use enhancements

- Array support in Lotus Forms clients
  - ▸ Business objects with arrays
- Improved usability of generated JSF and Lotus Form clients
- BPEL editor
  - ▸ Collapse/expand trays
  - ▸ Alphabetically order variables
 - ▸ Designation for local variables versus global
    - ▪ Small gray L icon

The Lotus® Forms client now supports business objects that have array elements. You can generate a JSF or Lotus forms for tasks with large input or output messages. The presentation of generated JSF and Lotus forms have changed to improve usability in WebSphere Integration Developer version 6.1.2.

There are multiple improvements to the BPEL editor tray behavior. You can now collapse or expand all tray categories by selecting a category title. You can alphabetically sort the BPEL variables inside the variables category. The variables that are displayed in the tray change dynamically depending on the selection in the canvas. You see all of the variables that are available to the currently selected element. In addition, locally defined variables are now indicated with the small gray L icon. Also, to create local variables you can select "create local", which becomes active when you select a scope in the canvas.

Ease of use enhancements

- **New visual snippets**
  - manipulate SOAP and HTTP headers
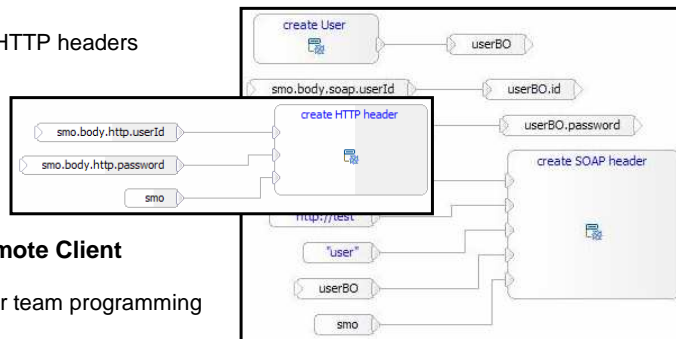
- **Rational ClearCase Remote Client support**
  - Integration with client for team programming environment
- **Citrix presentation server support**
  - Multiple users can connect remotely using Citrix clients
- **Consistent actions between editors**
  - Enable standard Eclipse keyboard shortcuts
  - BPEL Editor
    - Cut or copy BPEL activity from one BPEL editor and paste to another BPEL editor
    - Limitation: cannot for partners, correlations sets, or correlation properties
  - Interface editor
    - Copy and paste inputs, outputs, and faults

New visual snippets have been added to the snippet library. You can now manipulate SOAP and HTTP headers. Used mainly in mediation flows to create these headers programmatically. In WebSphere Integration Developer 6.1 this was done manually.

Rational ClearCase Remote Client, or CCRC, is now supported to help foster integration among development teams using the remote client in a team programming environment.

You can install and run WebSphere® Integration Developer on a Citrix presentation server so that multiple users can then connect remotely from their Citrix presentation server clients. WebSphere Integration Developer version 6.1.2 has enabled the standard Eclipse keyboard shortcuts to help those developers that use Eclipse and WebSphere Integration Developer concurrently. With these enhancements you can now cut or copy BPEL activities from one BPEL editor and paste to another BPEL editor. However, you cannot perform those actions for partners, correlations sets, or correlation properties. In addition, you can copy and paste inputs, outputs, and faults from one interface editor to another.

Summary

- **Ease of use enhancements**
  - Basis of enhancements
  - Performance enhancements
  - WBPM Suite integration
  - Business space
  - Rational Asset Manager
  - Business calendar
  - Quality of service usability improvements
  - Substitution groups
  - Improved array support for XML maps
  - Manage server profiles
  - Sticky notes
  - View and publish changes to server
  - Refactoring
  - CICS MQ Support
  - Array Support in Lotus Forms clients
  - BPEL editor enhancements
  - Visual snippet enhancements
  - Rational ClearCase remote client support
  - Citrix presentation server support
  - Consistent actions between editors

WebSphere. Integration Developer
Version 6.1.2

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In summary, the enhancements are split between two major themes. The first were ease of use enhancements. The second, covered in a separate presentation, are problem determination enhancements. You first covered the basis of the WebSphere Integration Developer version 6.1.2 enhancements, the performance enhancements, and integration between the WebSphere Business Process Management suite of products. This section continued to cover Business Space and the Rational Asset Manager products. Then you covered the Business calendar, Quality of service usability improvements, introduce substitution groups, and the improved array support for XML maps, and the Manage Server Profiles feature. Continuing with the ease of use enhancements, you learned about sticky notes, a new dialog to view and publish changes to server, and two refactoring enhancements. There has been added support for CICS MQ, arrays in Lotus Forms clients, Rational ClearCase Remote Client, and Citrix presentation server. In addition, there are several BPEL editor enhancements, visual snippet enhancements, and consistent actions between editors.

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