



IBM Software Group

IBM® Rational® Web Developer V6.0
IBM® Rational® Application Developer V6.0
Server Tools



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This presentation will cover the details around the Server support tools included with IBM Rational Web Developer and IBM Rational Application Developer V6.0 for testing applications on WebSphere Application Server V6.0.

Goals

- Introduce new architecture for testing applications in IBM Rational Web Developer and IBM Rational Application Developer
- Understand the server configuration steps and how it is different from previous version
- Describe application and server resource configuration
- Explain additional test environment options



The goals of this presentation start by introducing the new architecture used by IBM Rational Web Developer and IBM Rational Application Developer V6.0 for working with WebSphere Application Server V6.0 for testing and deployment of J2EE applications. The next goal of the presentation is to detail how different instances of WebSphere Application Server V6.0 can be set up as test servers. Describing how configuring applications and server resources is the next goal before the presentation finishes with the goal of explaining additional options for working with WebSphere Application Server which have been setup as test environments.

Agenda

- Test Environment Architecture
- Preparing Test Environment
- Testing Applications
- Configuring Application and Server Resources
- Other Enhancements



The agenda for this presentation starts with a look at the architecture used by IBM Rational Web Developer and IBM Rational Application Developer for the test environment. This architecture has changed considerably from versions of WebSphere Studio. The presentation will continue with a look at how IBM Rational Web Developer and IBM Rational Application Developer can be set up to use different instances of WebSphere Application Server V6.0 for testing applications. The steps for setup are also very different from versions of WebSphere Studio. The next part of the presentation will look at the options available for testing applications as well as configuring applications and server resources before testing. Finally the presentation will finish up with a look at some of the other features available for configuring and working with test servers.

Section

Test Environment Architecture



This section of the presentation will start with an overview of the test environment architecture.

Overview of Server Enhancements

- New architecture to support deploying and testing on WebSphere® Application Server V6.0 Base and ND
- Test environment configuration through Administrative Console for WebSphere Application Server V6
- Java™ 2 Enterprise Edition (J2EE) Application resource declaration and deployment simplified



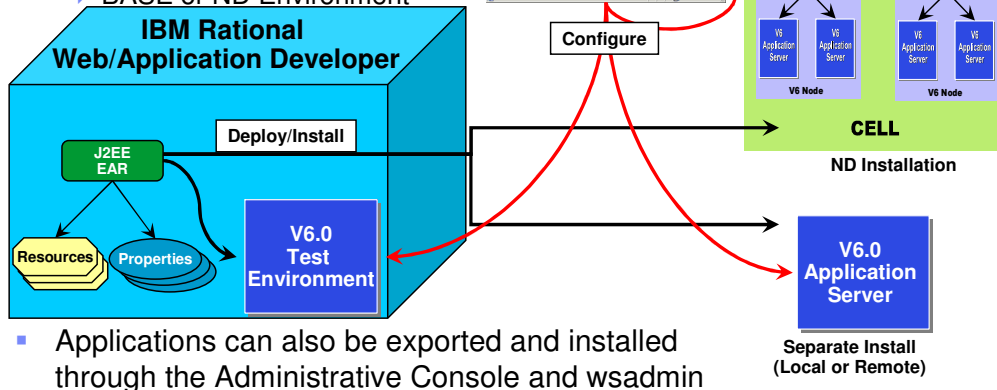
The architecture used by IBM Rational Web Developer and IBM Rational Application Developer for interaction with WebSphere Application Server test environments for version 6 has greatly changed and improved in many ways from the support that was provided with WebSphere Studio. The new architecture applies to all facets of interaction between the development environment and a WebSphere Application Server V6.0 test server. With this new architecture, all types of WebSphere Application Server V6.0 installations can be used as test servers. This includes local single server installations, remote single server installations, and WebSphere Application Server V6 servers which are part of a Network Deployment cell. With WebSphere Studio, only single server installations, local or remote, could be used for testing purposes.

Besides a common architecture for deploying and testing applications on WebSphere Application Server V6.0, there is a single Administrative model which is used for all servers. In WebSphere Studio, a Server Configuration editor was provided for administrating a test server. This editor supported administrating a subset of the functionality of the Web browser Administrative Console and used a “flat editor” approach. With two interfaces for configuring servers, it was confusing as developers moved applications to production environments and needed to locate the different places to specify the same information which was specified differently in the Server Configuration editor. Mistakes were commonly made as incorrect values were specified or missed. With IBM Rational Web Developer and IBM Rational Application Developer, the Administrative Console is used for all servers including the WebSphere V6 Integrated Test Server which can be installed at the time the development product is installed.

The last major enhancement is the way in which resources for applications and other applications specific settings are specified. WebSphere Application Server V6 provides support for Enhanced EAR files. With an Enhanced EAR file, resource definitions used by the application, for such things as data sources, and other application specific settings can be packaged within the EAR file. When the application is installed, the resources will be registered with the WebSphere Application Server runtime environment. With this new

Deployment and Testing

- Deployment, Testing, and Administration identical for all WebSphere Application Server V6.0 servers
 - Test Environment
 - BASE or ND Environment



- Applications can also be exported and installed through the Administrative Console and wsadmin

As stated in the last slide, the deployment and administrative model is identical for all versions WebSphere Application Server V6. The WebSphere V6 Integrated Test Environment, a separate installation of WebSphere Application Server V6 on the same system as IBM Rational Web Developer or IBM Rational Application Developer or on a remote system, and even a server which is part of a WebSphere Application Server V6.0 cell, are all treated the same way with regards to deployment and administration. For deployment, IBM Rational Web Developer and IBM Rational Application Developer allow developers to specify a particular WebSphere Application Server V6, and with a single action applications can be published to the server and started in preparation for testing. If updates are made to an application, the changes can also be scheduled to be published to a server for testing. Applications may also be exported out of IBM Rational Web Developer or IBM Rational Application Developer and be installed using the Administrative Console or the wsadmin command line interface.

As indicated by the diagram, resources and properties for the application can also be created and packaged within an EAR file before it is published to a version 6 WebSphere Application Server.

WebSphere V6 Test Environment Architecture

- WebSphere V6 Test Environment, Base, and ND Server environments treated identical
 - ▶ Test Environment server is a WebSphere V6 Base server
- All communication with all WebSphere V6 servers occurs through calls to SOAP Connector Port
 - ▶ Start, Stop, Install Applications, Get Status
 - ▶ Default port 8880 used for communications
- Remote Agent Controller not required for application deployment to WebSphere Application Server V6
 - ▶ Profiling still requires Remote Agent Controller



The same deployment and administrative model can be used for all version 6 WebSphere Application Servers as every server is treated the same way as part of the architecture. Another important difference from WebSphere Studio is the WebSphere V6 Test Environment is a complete installation of WebSphere Application Server V6. With WebSphere Studio and the WebSphere V5 Integrated Test Environment, there was a very tight integration with the development environment. The test environment was basically laid out on the file system rather than properly installed in a supported way. While this did allow for applications to be easily added to a test server and log files from the server could be shown easily within the Console view, this different install behaved differently compared to a proper install of WebSphere Application Server V5. From a support standpoint, in some instances it was difficult to use standard problem determination steps in determining deployment and runtime problems as the WebSphere V5 Integrated Test Environment was not a proper installation. For a separate install on the same system or a remote system, the same capabilities were not as fluent and required a different set of steps which increased the complexity and learning curve of deploying to a different server. All of these issues are resolved for the WebSphere V6.0 Integrated Test Environment.

With the consistent architecture for all version 6 WebSphere Application Servers, IBM Rational Web Developer and IBM Rational Application Developer predominately interact with a WebSphere Application Server V6 server over the SOAP Connector Port. When restart, stop, and install or remove applications commands are performed, a command is sent to the system, either local or remote, and on a particular port which the WebSphere Application Server is listening upon as the SOAP Connector Port (default is 8880). To retrieve the status of a server for display in the Servers view or to display the SystemOut.log and SystemErr.log contents in the Console view, a call is sent to the server and port as well. The appropriate information will be returned and then displayed in the views. Again remember, this is used for all interaction with version 6 WebSphere Application Servers including the locally installed WebSphere V6 Integrated Test Environment. Start server commands are the only exception to using the SOAP

Summary of Servers

Runtime Available Server	Integrated Server	External Server	Supported Projects
WebSphere Application Server V6.0	Yes*	Yes	J2EE 1.2, 1.3, 1.4
WebSphere Application Server V5.1 (v5.1.1)	Yes	Yes	J2EE 1.2, 1.3
WebSphere Application Server V5.1 - Express	Yes	N/A	J2EE 1.2, 1.3 (Except Enterprise Javabeans)
WebSphere Application Server V5.0 (V5.0.2.7)	Yes	Yes	J2EE 1.2, 1.3
WebSphere Application Server V5.0 - Express	Yes	N/A	J2EE 1.2, 1.3 (Except Enterprise Javabeans)
WebSphere Portal V5.1	Yes	Yes	Portal J2EE 1.2, 1.3
WebSphere Portal V5.0 (V5.0.2.2)	Yes	Yes	Portal J2EE 1.2, 1.3
Tomcat (3.2, 4.0, 4.1, 5.0)	Yes	No	Web Project
J2EE Publishing Server	N/A	Yes	Any Project
Static Web Publishing Server	N/A	Yes	Only Static Web Projects

*Additional fix required to exactly match WebSphere Application Server V6.0 GA release



Section

Preparing Test Environment

Local Test Environment

- Profile “default” created when WebSphere Application Server V6.0 Integrated Test Environment feature is selected during Rational Web/Application Developer installation
- Server “default” is available to all workspaces
 - ▶ Every workspace starts with a Server pointing to server “default”
 - ▶ Server is ready for testing; nothing else needs to be created
- Creating a new Server in Rational Web/Application Developer only creates a new pointer to “default” profile
 - ▶ No configuration files are created
- Steps for creating a new local test environment server
 - ▶ New profile must be created for a new server with Profile Creation Tool first
 - <IRAD install dir>\runtimes\base_v6\bin\ProfileCreator\pctWindows.exe
 - ▶ New Server created and set to point to new profile

Creating a New Local Test Environment

Initial WebSphere V6.0 Test Environment (installed)



The screenshot shows a file explorer window on the left with the path: Local Disk (C:) > Program Files > IBM > RSDP > 6.0 > runtimes > base_v6 > profiles > default. A red arrow points from this path to the 'default' folder. On the right, the 'Servers' console shows a table with one entry: 'WebSphere Application Server v6.0' on 'localhost' with a status of 'Stopped'.

Create a new profile with the Profile Creation Tool

The screenshot shows the 'Profile Creation Tool' dialog box in the center. On the left, the file explorer shows the path: Local Disk (C:) > Program Files > IBM > RSDP > 6.0 > runtimes > base_v6 > profiles > profile2. A red arrow points from the 'profile2' folder to the dialog box.

Create a new Server (specify correct SOAP connector port)

The screenshot shows the 'Servers' console with two entries: 'WebSphere Application Server v6.0' and 'WebSphere v6.0 Server @ localhost', both on 'localhost' and with a status of 'Stopped'.

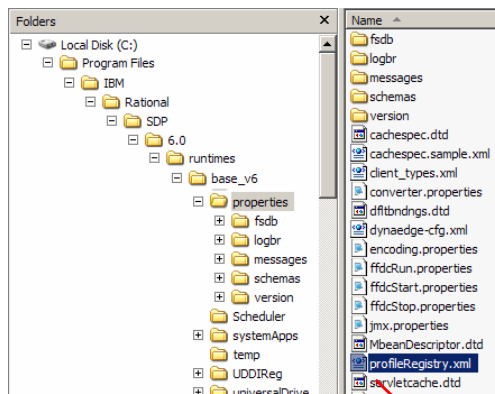
Local Test Environment: Separate Install

-  Separate installations of WebSphere Application Server V6.0 on the same system as Rational Web/Application Developer can be set as test environments
- Installed Server Runtime Environment must be configured with location of separate installation
 - ▶ Windows > Preferences > Server > Installed Runtimes
- New Server must point to separate install and appropriate profile
 - ▶ Separate installation can have any number of Profiles
 - ▶ Set correct SOAP connector port

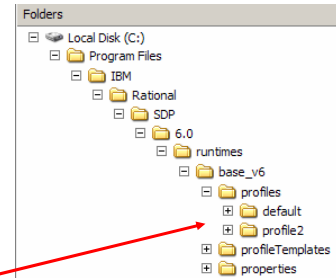
Managing Test Environments

- IBM Rational Web and IBM Rational Application Developer read local test environment information from WebSphere V6 Integrated Test Environment installation
 - ▶ Workspace not used to hold configuration information
- Installed runtime location and profileRegistry.xml are used to determine which profiles (configurations) are available as test servers
 - ▶ Installed runtime location can be the default (`${IRAD_INSTALL_DIR}\runtimes\base_v6`) or separate installation
 - ▶ profileRegistry.xml points to available profiles
 - `${IRAD_INSTALL_DIR}\runtimes\base_v6\properties\profileRegistry.xml`
- Wasprofile tool available for managing profiles
 - ▶ List, delete, and validate commands available in case profile directories are deleted directly from the file system
 - ▶ Located at `${IRAD_INSTALL_DIR}\runtimes\base_v6\bin`

Managing Test Environments (cont.)



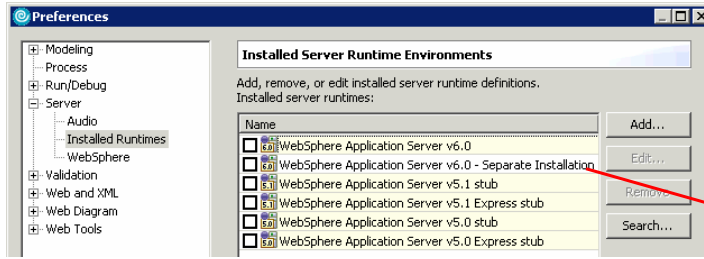
- Installed Runtime location and profileRegistry.xml provide list of profiles available for servers



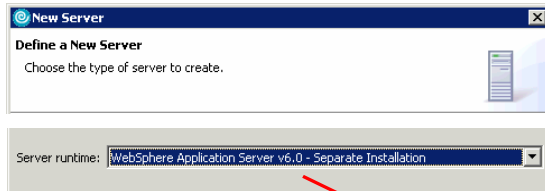
```
<?xml version="1.0" encoding="UTF-8"?>
<profiles>
  <profile isDefault="true" name="default"
    path="C:\Program Files\IBM\Rational\SDP\6.0\runtimes\base_v6\profiles\default"
    template="C:\Program Files\IBM\Rational\SDP\6.0\runtimes\base_v6\profileTemplates\default"/>
  <profile isDefault="false" name="profile2"
    path="C:\Program Files\IBM\Rational\SDP\6.0\runtimes\base_v6\profiles\profile2"
    template="C:\Program Files\IBM\Rational\SDP\6.0\runtimes\base_v6\profileTemplates\default"/>
</profiles>
```

Use the wasprofile command to managed the profileRegistry.xml file. The profileRegistry.xml file should not be edited by hand.

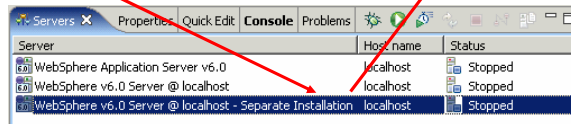
New Test Environment: Separate Install



Register separate installation location

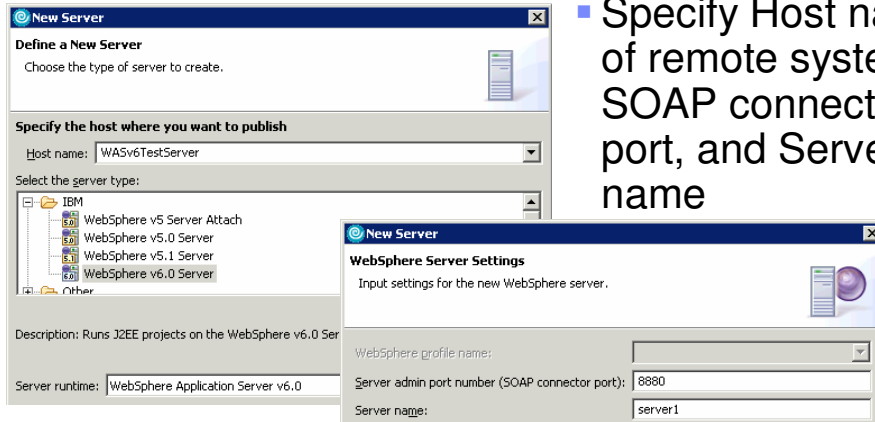


Create server which points to separate installation location



Remote Test Environment

- Remote installations of WebSphere Application Server V6.0 can also be configured as Test Environments



The Remote Agent Controller is not required for interaction with a remote installation of WebSphere Application Server V6.

Preparing to Test on a ND Environment

- New v6
 - Servers which are part of a Cell (ND environment) can be test servers
 - Server must be created and pointed to the server
 - ▶ Specify server Deployment Manager SOAP connector port; not server or Node Agent
 - ▶ Specify Network deployment server name
 - Example: 2kserverb8Cell01/2kserverb8Node02/server1
 - ▶ Specify Server type
 - Use Detect capabilities if unsure

New Server

WebSphere Server Settings
Input settings for the new WebSphere server.

WebSphere profile name: default

Server admin port number (SOAP connector port): 8880

Server name: server1

Run server with resources within the workspace

Server type:

BASE or Express server

Network deployment server

Network deployment server name: 2kserverb8Cell01/2kserverb8Node02/ser

The server name is in the form of:
<cell name>/<node name>/<server name>
For example, localhost/localhost/server1.

Click this button to detect the server type.

The SOAP connector port in a Deployment Manager can be found in the Administrative console under System administration > Deployment manager and then expand Ports under Additional Properties (SOAP_CONNECTOR_ADDRESS).

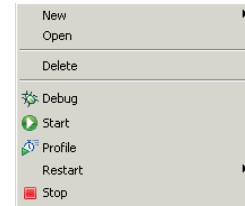
Location of a Test Server

- Key fields in the Server can be checked to determine type and location of server

The screenshot shows the 'Server Overview' configuration page for a WebSphere v6.0 Server. The page is divided into several sections: General, Security, Publishing, and Network Deployment. Callouts highlight key fields: 'Check Host name' points to the 'Host name' field (2kserverb8); 'Runtime - check Preferences for install location' points to the 'Runtime' dropdown (WebSphere Application Server v6.0); 'Verify SOAP connector port' points to the 'Server admin port number (SOAP connector port)' field (8880); and 'Network deployment server' points to the 'Network deployment server name' field (2kserverb8Cell01/2kserverb8Node02/server1). The 'Network Deployment' section is selected, showing 'Server type' as 'Network deployment server' and a 'Detect' button.

Commands to Manage Servers

- **Debug**
 - ▶ Only available on local Servers
- **Start**
 - ▶ Only available on local Servers
- **Profile**
 - ▶ Only available on local Servers
- **Restart**
 - ▶ Available on all active WebSphere V6.0 Servers
 - ▶ Restart in different modes (Normal, Debug, and Profile)
- **Stop**



Section

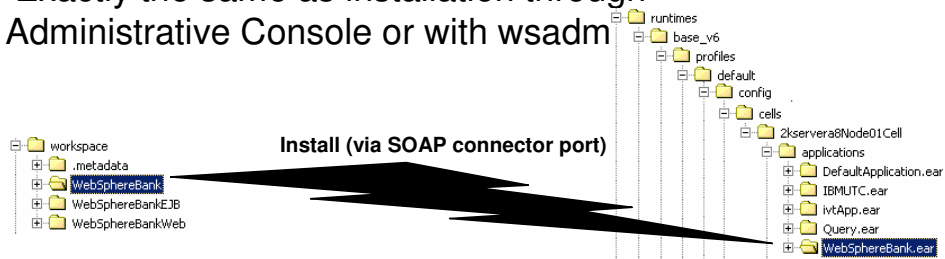
Testing Application

Adding Applications to Test Servers

- Run on Server (Debug on Server, Profile on Server)
 - ▶ Select or define new Server for application
 - ▶ Server is started if not already started (local only)
- Add/Remove Projects
 - ▶ Server is started if not already started (local only)

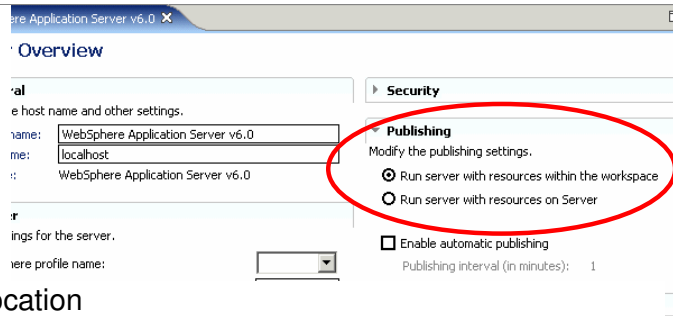
Adding Applications to Test Servers

- Applications are added through communication through the SOAP connector port and installed on the server
 - ▶ Applications added to Server configuration and registered in serverindex.xml as part of installation process
 - ▶ Exactly the same as installation through Administrative Console or with wsadm



Consideration for Adding Applications

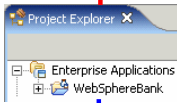
- When Applications are added to a local test server or separate local installation, the actual binaries can be located in different places
- Application binaries location
 - ▶ Workspace (Run server with resources within the workspace)
 - Certain changes made to applications will be picked up automatically
 - Test Server will contain orphaned applications if workspace containing applications deleted
 - ▶ Server (Run server with resources on Server)
 - Changes to applications will need to be published
- Setting applies to all applications added from a workspace
- Removal of applications via Add/Remove Projects or the Administrative Console does not remove projects from a workspace



Consideration for Adding Applications (cont.)

Publishing
 Modify the publishing settings.

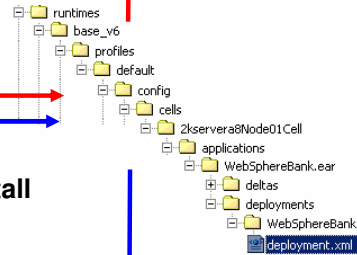
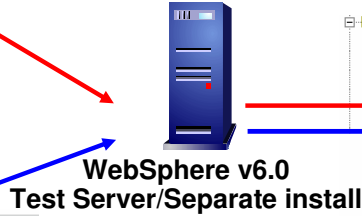
- Run server with resources within the workspace
- Run server with resources on Server



Publishing
 Modify the publishing settings.

- Run server with resources within the workspace
- Run server with resources on Server

```
<?xml version="1.0" encoding="UTF-8" ?>
<appdeployment:Deployment .....>
  <deployedObject xmi:type="appdeployment:ApplicationDeployment" .....
    binariesURL="c:\temp\workspace\WebSphereBank"
    useMetadataFromBinaries="true" enableDistribution="false" .....>
```



```
<?xml version="1.0" encoding="UTF-8" ?>
<appdeployment:Deployment xmi:version="2.0" .....>
  <deployedObject xmi:type="appdeployment:ApplicationDeployment" .....
    binariesURL="$(APP_INSTALL_ROOT)/2kservera8Node01Cell/WebSphereBank.ear"
    useMetadataFromBinaries="false" enableDistribution="true" .....>
```


Changes to Applications

- Changes to installed applications (resources on server) can be published manually (default) or automatically to a test server
 - ▶ Code changes, Deployment Descriptor updates, Module additions/removals
 - ▶ Utilizes WebSphere Fine Grain Application Update support
- Manual
 - ▶ Application can be removed and added again through Add/Remove Projects to pick up changes
 - ▶ Restart Project will publish new changes
 - ▶ Restart Server when restart is invoked from workspace
- Automatic publish
 - ▶ Enabled through setting Server document

▼ Publishing
Modify the publishing settings.

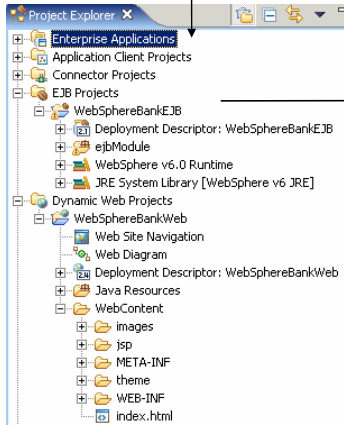
Run server with resources within the workspace

Run server with resources on Server

Enable automatic publishing
Publishing interval (in minutes):

Changes to Applications

Add/Change/Remove file or module



- Changes to applications are captured in preparation for publish

Builder runs and starts ApplnStaller

ApplnStaller determines type of change ("delta")



"Delta" published to server



WebSphere v6.0 Application Server (Test Server)

Automatic Publish of Changes

Action in Rational Application Developer	Automatic Publish Action (WebSphere Fine Grained Update)	Result on Server
Web module added to EAR	Module Update sent to server	Module added to EAR on server and module started
Web module removed from EAR	Module Update sent to server	Module removed, EAR remains started
EJB module Added to EAR	Full Application Update sent to server	EAR replaced and restarted
EJB module removed from EAR	Full Application Update sent to server	EJB module removed and EAR restarted
Enhanced EAR information added/changed in EAR	Full Application Update sent to server	EAR replaced and restarted
JSP added/changed/removed to Web module	Single File Update sent to server	JSP added to Web module
JSP removed from Web module	Single File Update sent to server	JSP removed and Web module remains started.
Servlet added/changed/removed to Web module or web.xml (IBM Extensions and Bindings) changed	Module Update sent to server	Web module added to EAR and Web module restarted
EJB added/changed/removed or ejb-jar.xml (IBM Extensions and Bindings) changed	Full Application Update sent to server	EAR replaced and restarted

Considerations with Automatic Publish

- If applications are set to run from the workspace, changes will be picked up and take affect without publishing
- Test server restarts are minimized with Automatic Publish enabled
 - ▶ Enabled defined resources
 - Datasources at server level and above, JMS resources
 - ▶ Debugging applications
 - ▶ Profiling servers
 - ▶ Enabling Security
 - ▶ Changing JVM values on application server
- Automatic Publish may slow system and development/test if making a large number of changes
- Automatic Publish requires server to be started that requires more system resources

Testing Applications

- Console view is refreshed with SystemOut.log every ~5 seconds
 - ▶ Log file is not verbose
- All messages may not appear immediately
- Messages printed as server is shutdown may not be shown

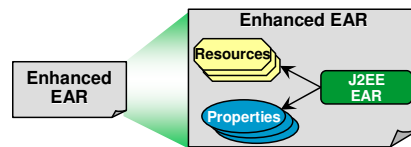
Section

Configuring Application and Server Resources



Configuring Application Resources

- Application related properties and data sources can be defined within an application to simplify deployment
 - ▶ Stored within EAR file
- Properties are used when application is installed
- Data source is registered with WebSphere Application Server V6.0 server when application is started
- Configuration variables can be defined for substitution with server values when application is installed



Creating Enhanced EAR in Tool

- Using the new Deployment tab in the Application DD Editor
- Can add following deployment info:
 - ▶ Virtual Host
 - ▶ JAAS Auth. Entries
 - ▶ Shared Library
 - ▶ Application class loader settings
 - ▶ JDBC resources
- Deployment information saved under application META-INF/ibmconfig directory



Application Deployment Descriptor Editor

WebSphere v6.0 Deployment

Data Sources
Allows the installed applications to access data from databases.

JDBC provider list:

Name	Implementation Class Name	Add...	Edit...	Remove
Cloudscape JDBC Provider (XA)	com.ibm.db2.jdbc.DB2XADataSource			

Data source defined in the JDBC provider selected above:

Name	JNDI Name	Type	Add...	Edit...	Remove
DefaultEJBTimerDataSource	jdbc/DefaultEJBTimerDataSource	V5			

Resource properties defined in the data source selected above:

Name	Value	Add...	Edit...	Remove
databaseName	\${USER_INSTALL_ROOT}/databases/EJBTimers/\${S...			
shutdownDatabase				
dataSourceName				

Application
Displays the applications to be deployed onto the :

Applications: WebSph...

Substitution Variables
Substitutes a parameter for any value in the serve

Variables list:

Name	Value	Add
------	-------	-----

Overview | Module | Security | Extended Services | **Deployment** | Source

Variable Example

- Enhanced EAR configuration can contain WebSphere Variables (defined on the server) or Substitution Variables (defined in the Enhanced EAR)
 - `${variable_name}`
- Substitution Variables can override WebSphere Variables and specify values specific for the application

Variable

Name	Value
databaseName	\$(CLOUDSCAPE_LOCATION)/bankdata
shutdownDatabase	
dataSourceName	

Substitution Variable

Substitution Variables
Substitutes a parameter for any value in the server configuration.

Variables list:

Name	Value	Add	Edit	Remove
CLOUDSCAPE_LOCATION	C:/temp			

WebSphere Administrative Console

Select	Name	Value
<input type="checkbox"/>	CLOUDSCAPE_LOCATION	c:/databases

WebSphere Variables

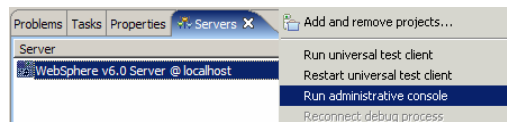
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Data Persistence for Applications

- Data store for applications with 2.x CMP EJBs can be created to simplify deployment and testing
 - ▶ Create Cloudscape Database and Tables
 - ▶ Create DB2 Tables
 - ▶ Create Oracle Tables
 - ▶ Create Microsoft SQL Server 2000 Tables
- JDBC Provider and Datasource definition added to Enhanced EAR
- Cloudscape database created at <IRAD install dir>\runtimes\base_v6\cloudscape\<<DB name>
- Applications which use SDO will also have JDBC Provider and Datasource definition added to Enhanced EAR

Configuring Server Resources

- The Administrative console is the primary interface for configuring WebSphere Application Server V6.0 test servers (local and remote)
 - ▶ Common interface for all servers
- Server Configuration editor replaced with Server editor
 - ▶ Server editor only contains details which points Rational Web and Application Developer to test server
- Server must be started
 - ▶ Administrative Console does not need to be enabled



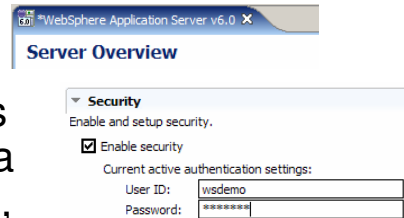
Setting up Messaging Resources

- All Messaging Resources are setup through the Administrative Console
 - ▶ Service Integration Bus, Bus Member, Messaging Engine, Bus Destinations, JMS Destinations
 - ▶ Follow WebSphere Application Server documentation for setting up resources
- 2.1 Message-driven beans
 - ▶ Must bind to ActivationSpec JNDI name, Authentication Alias, and Destination JNDI name
 - ▶ Listenerport is only for 2.0 Message-driven beans
- EJB or Web messaging client
 - ▶ Message references must bind to messaging resources (Similar to V5)

The screenshot displays the WebSphere Administrative Console interface. On the left, the 'EJB Deployment Descriptor' window shows a tree view of beans, with 'BankListener' selected. A yellow callout bubble labeled '2.1 MDB' points to this bean. A red arrow points from 'BankListener' to the 'WebSphere Bindings' window on the right. The 'WebSphere Bindings' window shows the configuration for the selected bean, with 'JCA Adapter' selected. A yellow callout bubble labeled '2.0 MDB Binding' points to the 'JCA Adapter' section. Another yellow callout bubble labeled 'Items configured in server' points to the configuration fields: 'ActivationSpec JNDI name' (eis/BankActivationSpec), 'ActivationSpec Authorization Alias' (zksrver\MDBAlias), and 'Destination JNDI name' (BankJMSQueue). The bottom of the slide features a decorative bar with the text 'Server Tools' and '© 2005 IBM Corporation'.

Setting up Security

- Security for test environment servers must be enabled through the Administrative Console
- User ID and password fields are used to authenticate to a running server to find status, publish applications, stop or restart servers
 - ▶ User ID and password are not used for execution of server

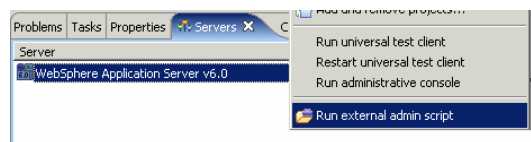


Section

Other Enhancements

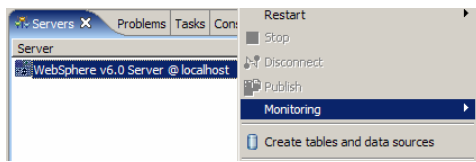
Running External Administrative Script

- Jacl or Jython scripts can be executed against a specific (started) test server
- wsadmin through SOAP connector Port
- Results outputted to the Console view

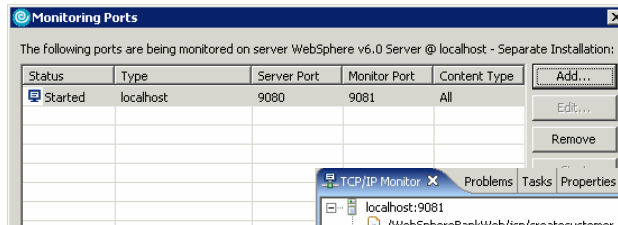


Parameters can not be passed to script.

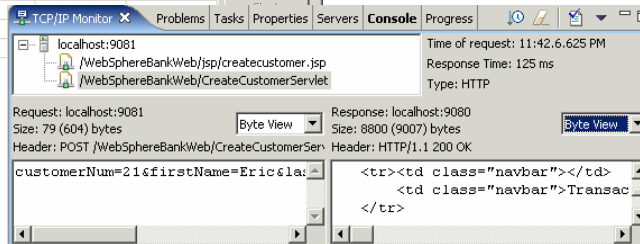
Monitoring Server Traffic



- WebSphere Application Server V5, V6 and TomCat server traffic can be monitored



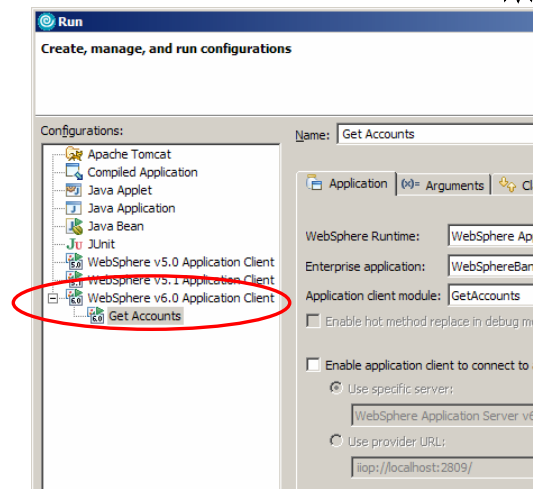
- Replaces TCP/IP Monitoring Server



Client Launch Configurations



- Provide list of configurations to select
 - ▶ Allow to create new launch configuration
- Associate a perspective with different launch configurations
- A different perspective may be associated with each supported launch mode
 - ▶ Optionally be activated when a configuration is launched



Section

Summary and Reference

Summary

- Flexible definition for integrated and remote servers provides seamless integration for WebSphere Application Server V6.0 with Rational Application Developer
- Server administration for integrated and remote servers through WebSphere Administrative Console
- Define data source resources and other application settings within application for easy portability between WebSphere Application Server V6.0 servers

Section

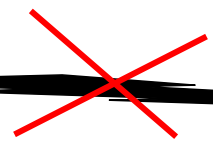
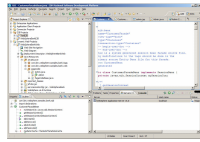
Reference

Profiles

- Profiles and the WebSphere Runtime location are required for starting **local** servers
 - ▶ WebSphere V6.0 Test Environment included with Rational Web and Application Developer install
 - ▶ Separate WebSphere Application Server V6.0 installation
- Profile and WebSphere Runtime location do not apply to remote servers
 - ▶ No support for starting remote servers
- Different combinations of Profiles and WebSphere Runtime locations provide the differentiating factor for local servers

Starting Servers (Same install/Different profile)

Rational Application Developer
localhost



Remote Install
wassrv01.acme.com:8880



Test Environment
Profile: \${IRAD_HOME}\runtimes\Base_v6\profiles\default2
localhost:8881

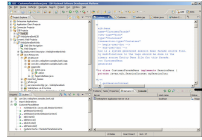


Test Environment
Profile: \${IRAD_HOME}\runtimes\Base_v6\profiles\default
localhost:8880

Servers may be
started at the same
time

Starting Servers (Same install/Different profile)

Rational Application Developer
localhost



Remote Install
wassrv01.acme.com:8880



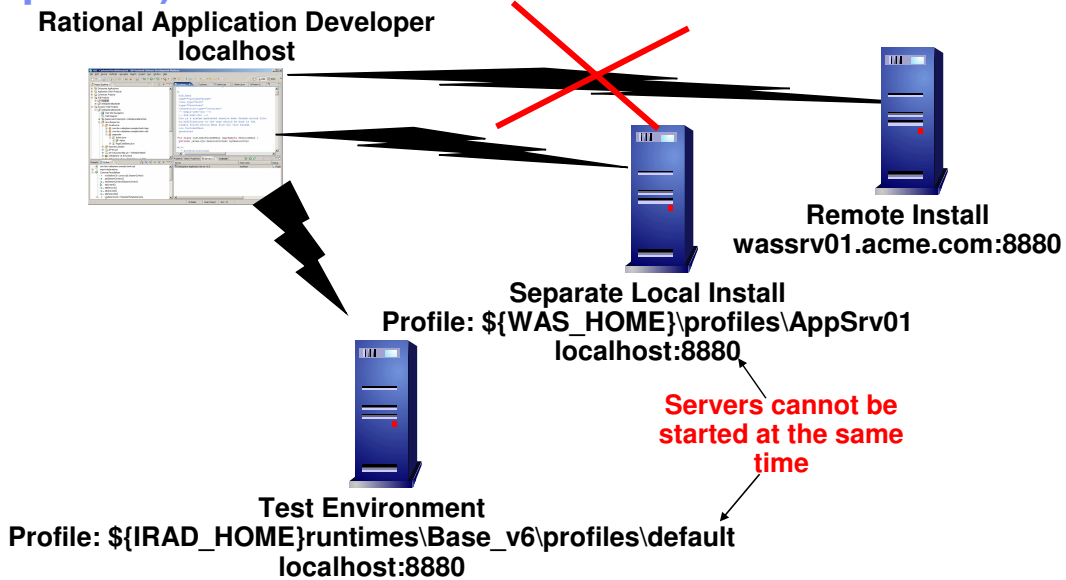
Test Environment
Profile: \${IRAD_HOME}\runtimes\Base_v6\profiles\default2
localhost:8880



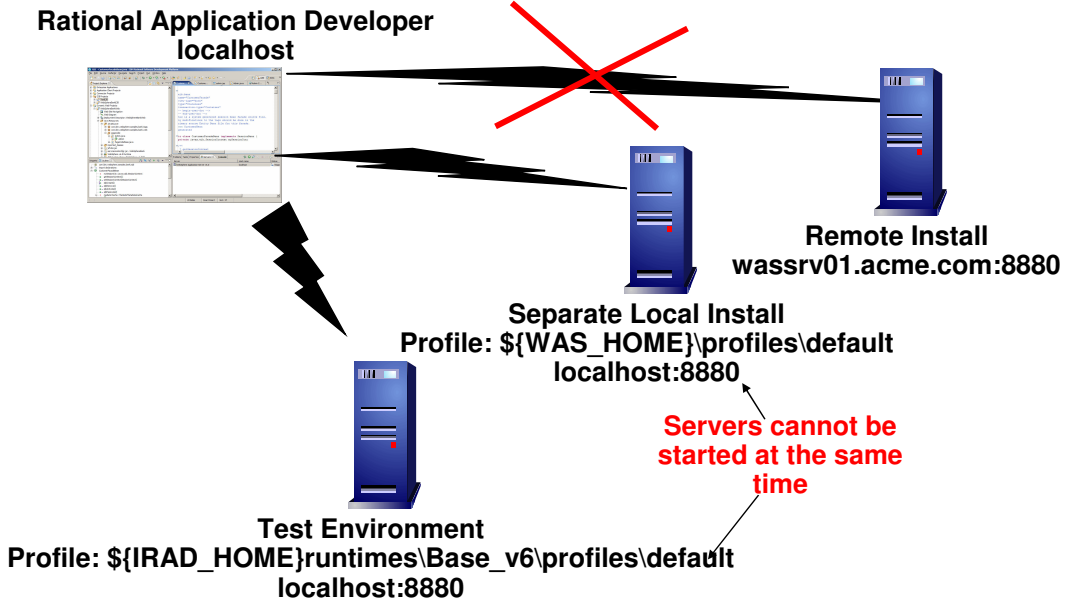
Test Environment
Profile: \${IRAD_HOME}\runtimes\Base_v6\profiles\default
localhost:8880

Servers cannot be started at the same time

Starting Servers (Different install/Different profile)



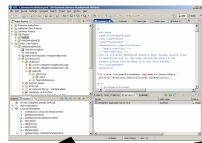
Starting Servers (Different install/same profile)



Server Interaction (Non Starting Operations)

- Stopping, restarting, application install/remove, retrieve server status, and retrieve log files works off the hostname and port of the server

**Rational Application Developer
localhost**



**Test Environment
localhost:8880**



**Separate Local Install
localhost:8880**



**Remote Install
wassrv01.acme.com:8880**

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