

WebSphere Application Server Profile Management in Rational Application Developer

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Agenda

- What is profile?
- Profile sharing across different workspaces
- Profile creation
- Reproducing server configuration settings on each profile
- Best practice for working on different projects at once
- Other considerations

What is Profile?

- A profile defines the runtime environment. The profile includes all of the files that the server processes in the runtime environment and that you can change.
- Profile is part of the WebSphere Application Server so the same profile can be reused across different RAD workspace or even different RAD installations.
- In RAD:
 - Each server will point to a specific profile under a Application Server installation.
 - Each profile has its specific server connection information associated with it which is defined in the server settings.
 - The server connection information needs to match the actual settings on the profile before the tool can communicate to the server.

Profile sharing across different workspaces

- Sharing of profile across different workspaces is generally not recommended unless there is only one active workspace at a given time. There are things that need to be aware of when sharing the same profiles across different workspaces:
 - Do not try to develop the same application at the same time to avoid changes on one workspace overrides the changes on the other.
 - Starting and stopping a shared profile will affect the server state of the other sharing workspaces.
 - Only one workspace is allowed to debug a given the server process of a profile at a given time when running the server in debug mode.

Profile creation

- There are a couple of ways to create profiles:
 - Launch the Profile Management Tools (PMT) from RAD:
 - -Windows->Preferences, select Server->WebSphere RAD 7.5 only: Server->WebSphere Application Server

O Preferences			
type filter text	WebSphere Application Server		
General Agent Controller Ant Backward Compatibility Data Management	 Allow applications containing errors to WebSphere Application Server local profil 	•	
Ecore Diagram	Installed Runtime Name	Installation Directory	
	WebSphere Application Server v6.0	D:\apps\WebSphereV6\AppServer	
	ACT I TO A T	D:\apps\WebSphereV7\AppServer_r0834.28	
⊡ Install/Update		D:\apps\WebSphereV61\AppServer_GA_b0620.1	
i Java			
🕀 Java EE			
JPA			
Jython			
Plug-in Development	4		
Process			
Profiling and Logging	WebSphere Application Server profiles de	fined in the runtime selected above:	
E RAS	Name	Location	Run Profile Creation wizard
Report Design	default	D:\apps\WebSphereV6\AppServer\profiles\default	Nun Fronie Creation wizaro
⊞ Run/Debug	App Srv 09	E:\delete \migration Test Temp \created Profile \App Sr	Delete
E Server	AppSrv01	D:\apps\WebSphereV6\AppServer\profiles\AppSn	
Audio			
Launching			
- Runtime Environments			
Web Sphere Application ! Service Policies			
SID			

Profile creation (continued)

- -Launch the PMT from RAD (continued):
 - -This is the recommended approach if you want the create the profile and use it without restarting RAD.
 - –Profile deletion on the same preference page
- Managing profiles using the command line:
 <app_server_root>\bin\manageprofiles.bat
 Use this if you want to automate/script the profile creation.
 More information can be found on:
 http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/ com.ibm.websphere.base.doc/info/aes/ae/rxml_manageprofiles.html
 - Launching the PMT directly on command line: <app_server_root>\bin\ProfileManagement\pmt.bat

Reproducing server configuration settings on each profile

- There are two main scenarios for reproducing the server configuration settings on a profile:
 - 1.Server level configuration

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- Server configuration import and export tool
- 2. Application level configuration
 - Enhanced EAR configuration

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Server configuration import and export tool

- Type of configurations that fit into the server level configuration settings are:
 - global settings on the server level, e.g. JVM settings on a server.
 - settings that are required across multiple EAR applications published on the same server, e.g. the same data source is reused on multiple EAR applications.
- Provides a way to import (backup) and export (restore) the server configuration on an existing profile.



Server configuration import and export tool (continued)

The server configuration will be mostly replaced during a server configuration export. Some settings that are preserved to make it portable across different machines, e.g. host name, port numbers.

	Export server configuration to server		
	Import server configuration from server		
Tasks Servers X Console Progress Debug	Run universal test client	N	
Server	Restart universal test client		
표 🚮 WebSphere v5.1 Test Environment @ localhost	Reconnect debug process	h	
WebSphere v6.1 Server @ localhost		าอุมินมแลก	

O Server C	Configuration Backup	×
Specify the I	ocation for storing the impor	ted server configuration:
Parent folder	r: /TestProj	Browse
File name:	serverConfig	.car
	OK	Cancel



Server configuration import and export support (continued)

- The server configuration import function backup the server configuration that is currently defined in the server profile.
- The generated ".car" file will be stored in the workspace. It can be checked into team repository or exported into the file system for server configuration sharing.
- RAD 7.5 only: menu reorganized Import function: Server Configuration ->Backup... Export function: Server Configuration ->Restore...



Enhanced EAR configuration

- The type of configuration that fit into the application level configuration settings is:
 - Server configuration settings that are required for a particular application, e.g. class loader setting of an EAR, data source definition that is only need for a particular EAR application.
- The enhanced EAR configuration editor can be accessed on the *Deployment* page of the EAR deployment descriptor editor. Support the most common application level settings, e.g. Data source definitions, class loader settings, etc.

Enhanced EAR configuration (continued)

		Application Dep	iloyment Descriptor 🗙			- 6
		WebSpher	e Deployment			<u>ا ا</u>
		- Data Source	e s applications to access da	ta fram databassa		
		JDBC provider list:	applications to access da	la nom ualabases.		
		Name			Implementation Cla	Add
		Derby JDBC F	rovider (XA)		org.apache.derby.j	Edit
		4			F	Remove
Embedded J2C Options	-		d in the JDBC provider se	lected above:	JNDI Name	
		the second se	Name			Add
 Application Displays the applications to be deployed onto the servers. 		Data source 1			jdbc/ds1	Edit
Applications:	epioyeu onto the servers.	Overview Module	Security Deployment E	extended Services Source		×
earProj4EJB jar WAR clas	Classloader mode: PARE WAR classloader policy: MODU Start weight: 10	NT_FIRST	Name Name Authentication	Val		
			Shared Library			
			 Virtual Hosts 			



Enhanced EAR configuration (continued)

- Server configuration information is packaged within the EAR application.
- Server configuration takes effect when publishing application to server. However, the enhanced EAR configuration cannot be viewed from the administrative console.
- RAD 7.5 only: It supports publishing applications that uses a new property file based configuration file on the application level.

Best practice for working on different projects at once

- If a developer is working on different projects at once:
 - Recommended to use separate profiles for each project. This setting will avoid any conflicts between projects but only if the hardware is sufficient.
- If the projects are using different applications and does not involve conflicting server level settings, e.g. JVM settings:

– Profiles can be reused on both projects.

Other considerations

- Administrator versus non-administrator user
 - RAD user needs to have both read and write access to all files under each profile directory and its subdirectories.
 - Refer to this document for assigning the correct permissions for standalone WebSphere Application Server installations.
 - Operating system may affect user permission to profiles directory.