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
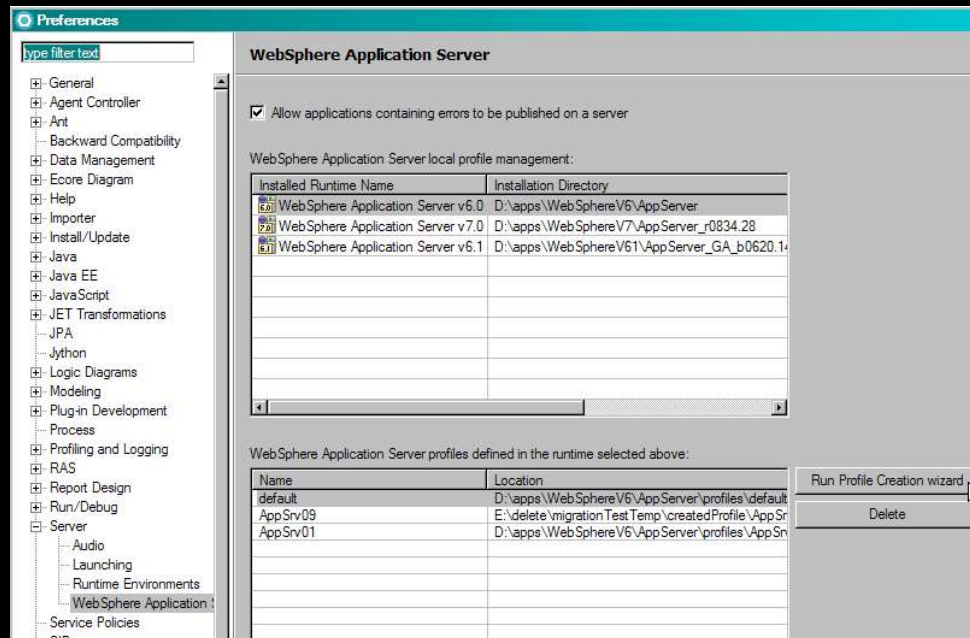- Other considerations

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*

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

RAD Server Tools Profile Management – March 2009

Reproducing server configuration settings on each profile
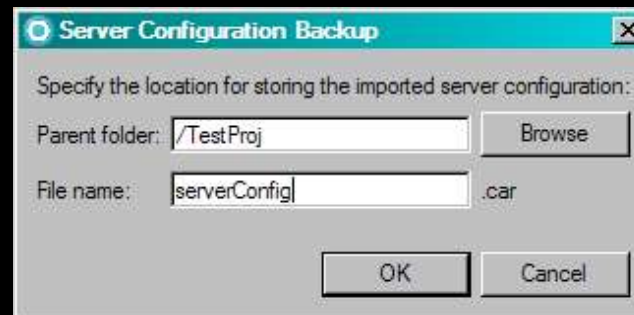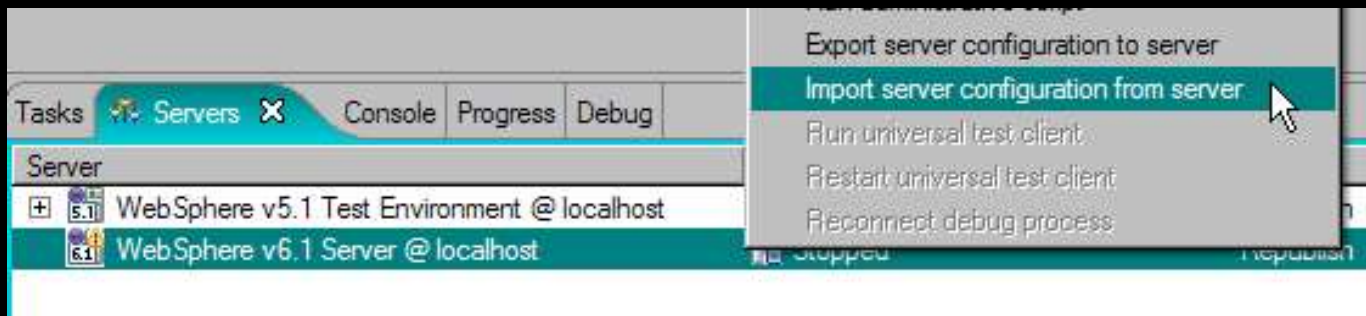
- There are two main scenarios for reproducing the server configuration settings on a profile:

  1. Server level configuration
     - Server configuration import and export tool

  2. Application level configuration
     - Enhanced EAR configuration

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.

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)

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.