

# Interim Fix for WCTME 571 OSGi Agent

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## ***Abstract***

This Interim Fix contains the following features and fixes:

- Adds a production level OSGi agent extension to the WSDD 5.7.x product. The original product as shipped contained only a sample agent extension not suitable for production environments. (109852)
- Support for rebooting your device via a DMS command (112818)
- Fix for when server account userids or passwords contain characters above ASCII 128 or Double Byte characters. These types of characters are found in non-English languages. Without this fix the server will reject the userid or password. (115847)
- Fix for incorrect calculation of resources required on a device when installing a bundle, which prevents bundles from being installed even though there are enough resources available on the device. This fix assumes the maximum resources are available. No bundles will be prevented from installing. (117303)
- Fix for Device Agent download problem on Windows Mobile 2003. Windows Mobile 2003 will cache file writes for a very long time. As a result, the download process consumes a lot of memory and may even fail. (119342)
- Fix for the issue: filesize=0 in http header for Device Agent download. If the HTTP header does not contain the length field, the download fails indicating IP problems. (119343)

## ***Content Overview of this Interim Fix:***

**osgiagent.jar** - The core agent that provides support for processing DMS jobs. This is an update to the existing bundle.

**OSGiAgentExt.jar** - The production level agent extension. This is used for supplying information about the device such as the device ID, model, manufacturer and resources. Either this bundle or the SampleAgentExt bundle can be used at a time, but not both.

**OSGiAgentExtConfig.jar** - A sample configuration. This must be implemented by each customer who wants to change the device id, manufacturer, and model. This new bundle is provided as an example for those customers accepting its functionality.

**dependency.xml** - This updates the ESWE system bundle information in the platform builder.

**osgiagentservlet.jar** - A servlet that can be used to control the OSGi agent via a web browser. The URL is <http://localhost/osgiagentservlet>. This is an update to the existing bundle.

**OSGiAgent.properties** - Template file used to supply the agent with device account information.

## ***Prerequisite products and versions:***

You must have at least WSDD 5.7.1 installed before installing this Interim Fix. You may also install this Interim Fix if any earlier Interim Fixes have been installed. This interim fix supersedes any Interim Fixes with lower numbers. Do not install older Interim Fixes after installing this Interim Fix as you will replace newer files with older ones.

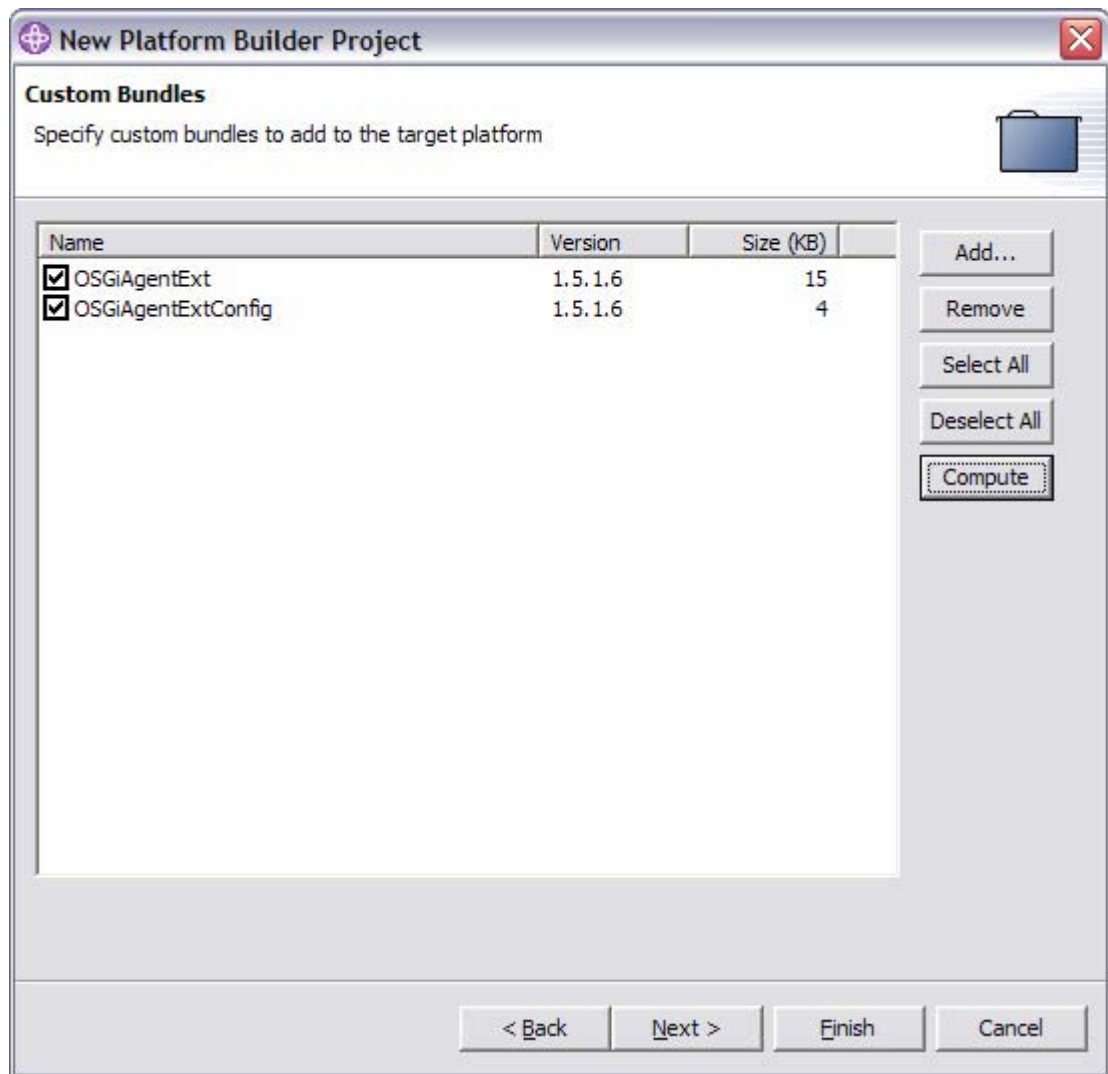
The OSGi Agent provided with this Interim Fix is designed to communicate with WEDM version 5.0.x. You should have WEDM 5.0.1 with Fixpak 2 installed. Please note that the OSGi Agent that is provided in this Interim Fix supersedes the version that comes with WEDM Fixpak 2.

## ***Instructions for installing this Interim Fix into WSDD 5.7.x for use by the Platform Builder:***

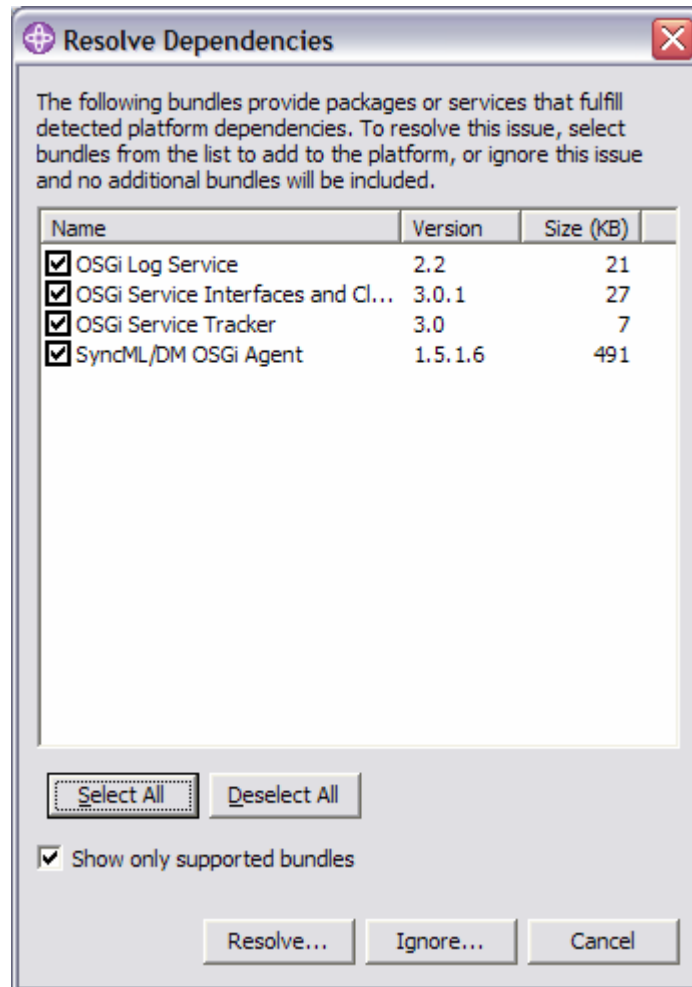
This Interim Fix will require you to replace four files in WSDD. Please backup any files before overwriting them. After following the instructions in this section, you will be able to use the Platform Builder to produce platforms using this updated OSGi agent. References to <WSDDHOME> indicate the location to which WSDD 5.7.x was installed.

Unzip the zip file into a temporary directory on your WSDD workstation

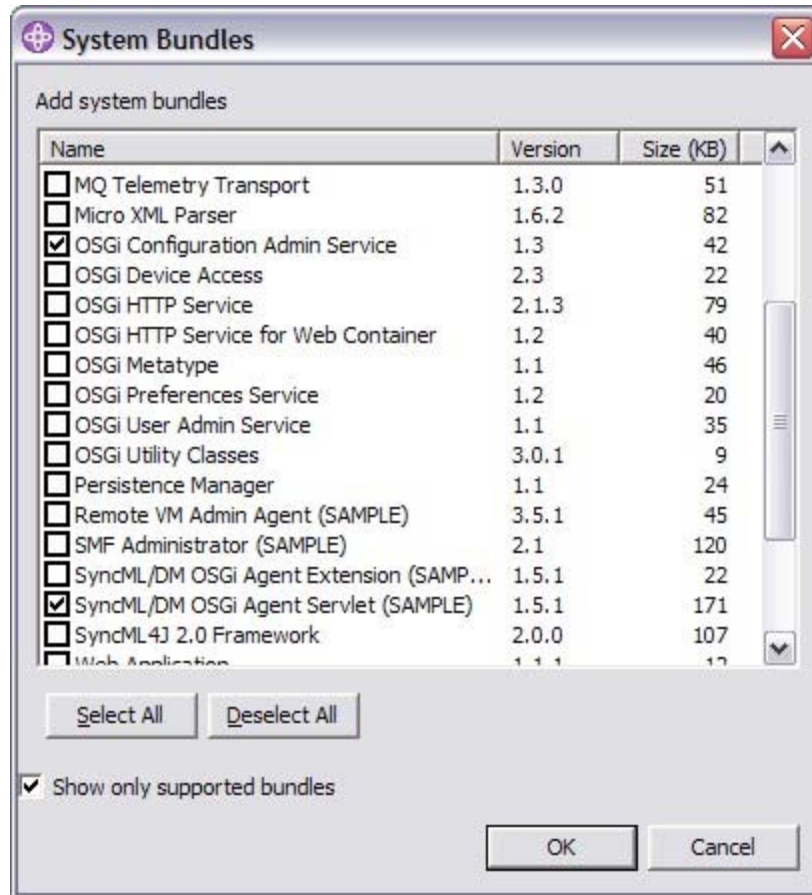
1. Close WSDD 5.7.x if it is running.
2. Backup the old osgiagent.jar file located in  
<WSDDHOME>\wsdd5.0\technologies\eswe\bundlefiles and replace it with the new osgiagent.jar found in the Interim Fix's temporary directory.
3. Backup the old osgiagentservlet.jar file located in  
<WSDDHOME>\wsdd5.0\technologies\eswe\bundlefiles and replace it with the new osgiagentservlet.jar found in the Interim Fix's temporary directory.
4. Backup the old dependency.xml file located in  
<WSDDHOME>\wsdd5.0\eclipse\plugins\com.ibm.eswe.builder\_5.7.\*\resources and replace it with the new dependency.xml found in the Interim Fix's temporary directory.
5. Backup the old file OSGiAgent.properties located in  
<WSDDHOME>\wsdd5.0\technologies\eswe\files\deviceagent and replace with the new OSGiAgent.properties found in the Interim Fix's temporary directory.
6. Launch WSDD 5.7.x and then create a new Platform Builder Project
7. Since some of the file names have changed since WSDD 5.7.x we cannot simply place these files in the default eswe/bundlefiles directory for Platform Builder. We will have Platform Builder treat them as custom bundles. On the custom bundles page select **Add...** and add OSGiAgentExt.jar and OSGiAgentExtConfig.jar from Interim Fix's temporary directory. Select the bundles as shown in the image below.



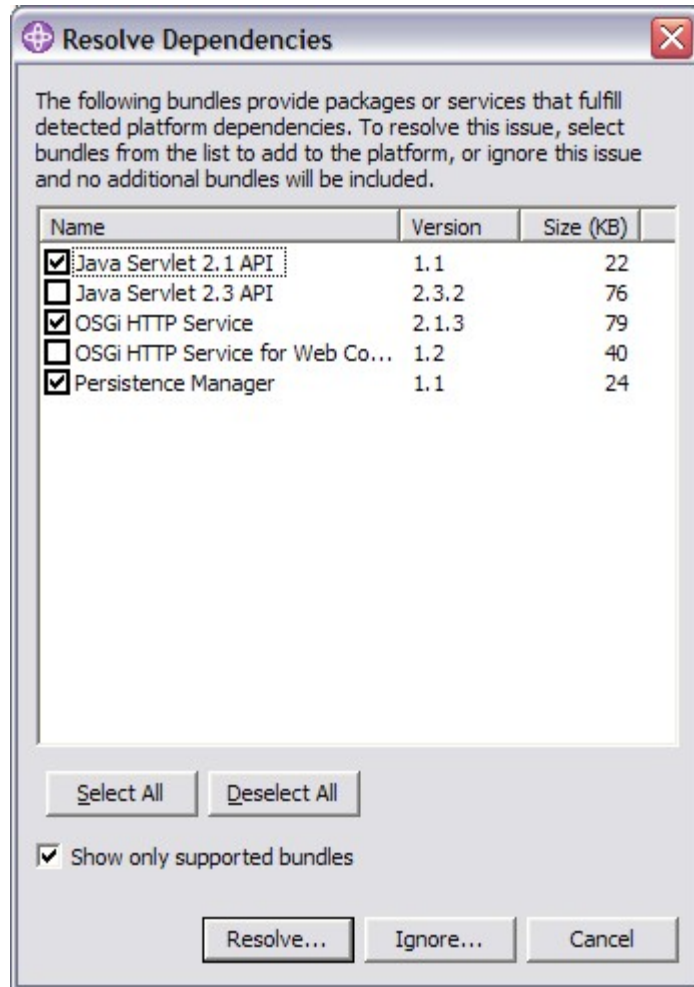
8. Click **Compute** to compute the dependencies, and then select the bundles as shown below. Please be aware that these instructions apply to building a simple platform containing only this new updated agent. If you are adding your own custom bundles to the platform, you may need to resolve dependencies differently.



9. Click **Resolve...** and it should tell you that all dependencies have been resolved.
10. Click **Next** to go to the System Bundles page.
11. Select the **"Add..."** button on the right side of the page. Select the OSGi Configuration Admin Service bundle. Optionally you can select the SyncML/DM OSGi Agent Servlet (SAMPLE) bundle if you would like a sample browser based admin utility.



12. Click **OK**
13. Click **Compute** to compute the dependencies, and then select the bundles as shown below. Please be aware that these instructions apply to building a simple platform containing only this new updated agent. If you are adding your own custom bundles to the platform, you may need to resolve dependencies differently. For example, if you have a web application, you would need to select Java Servlet 2.3 API rather than Java Servlet 2.1 API and OSGi HTTP Service for Web Container instead of OSGi HTTP Service.



14. Click **Resolve...** and it should tell you that all bundles on the target platform have been resolved. Click **OK**.
15. Click **Next** again to go to the Summary
16. Click **Finish** to build the platform.

Once this is completed your platform.zip file will be in the output folder. Unzip platform.zip onto your device and begin using it.

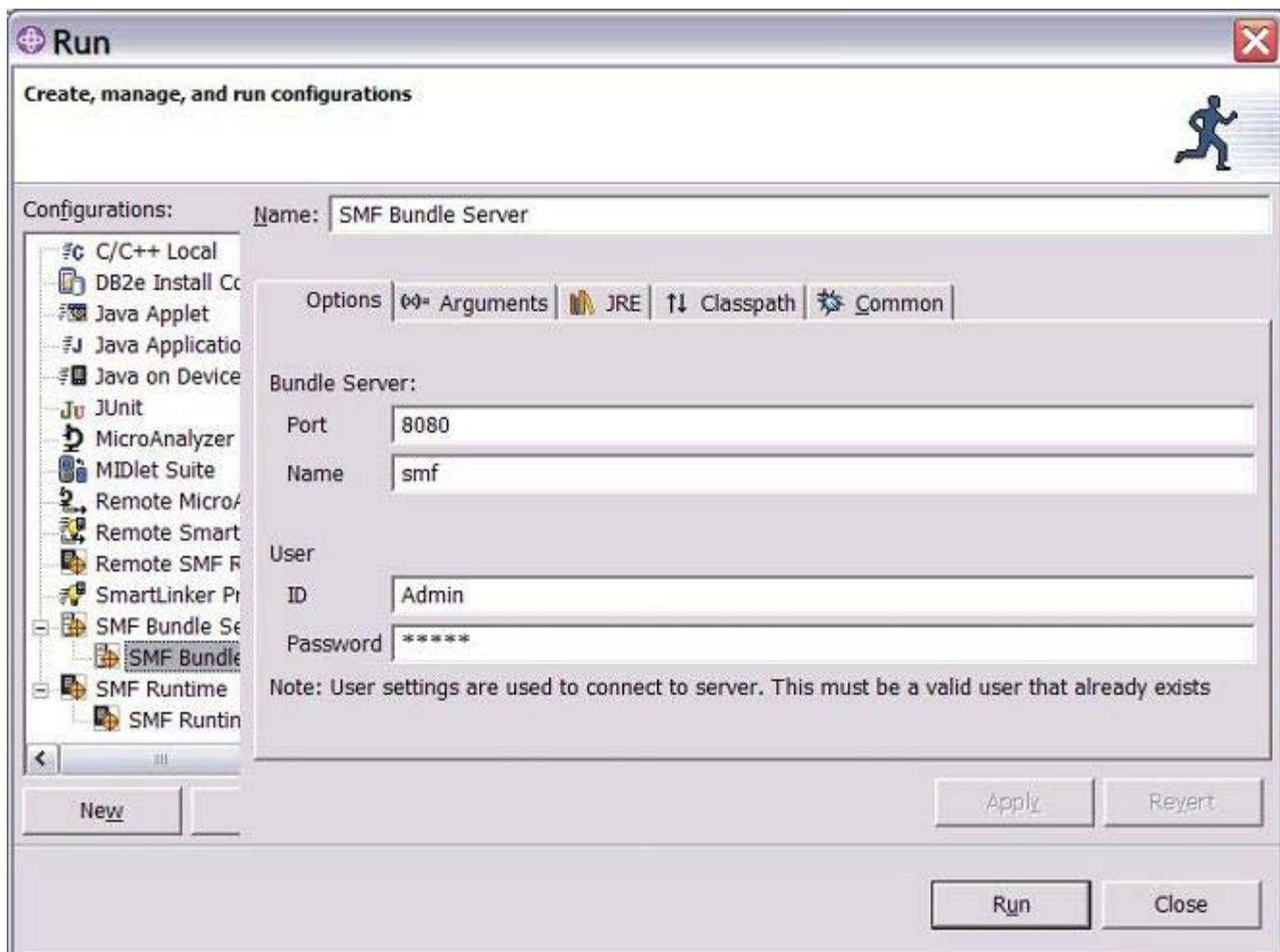
**NOTE:** The zip file contains an OSGiAgent.properties file that configures the device account information. You may hand edit this file if you wish to change the default values. Also, prior to building, this file may be edited in your WSDD project under the path "file/smf/OSGiAgent.properties".

## ***Instructions for importing this Interim Fix into a WSDD 5.7.x SMF Bundle Server***

These steps must be followed for all SMF Bundle Servers that you have created.

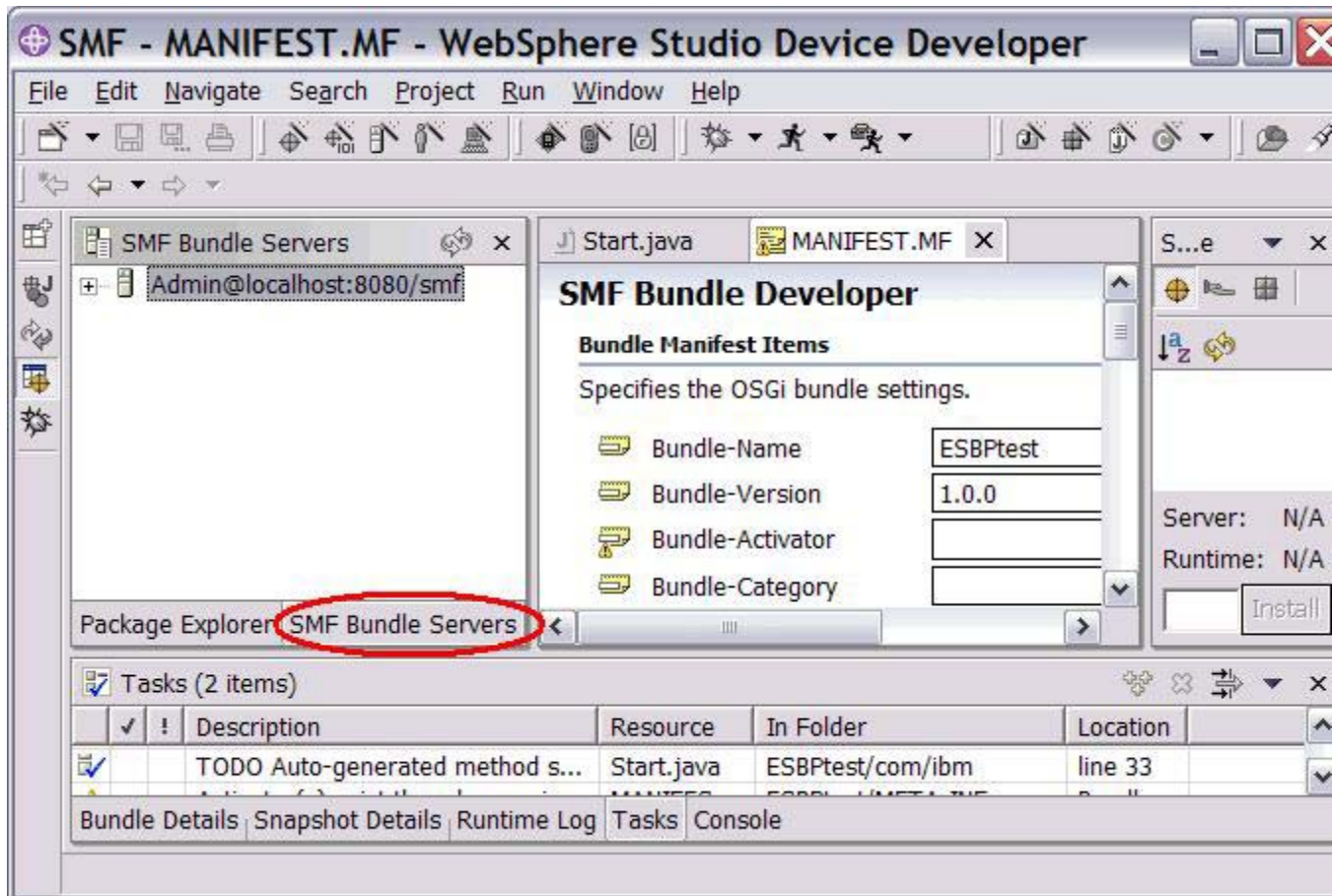
1. Start an SMF Bundle Server in WSDD/AD.
  - From the SMF perspective, select **Run -> Run ..**

- If you have already created an SMF bundle Server, then select it and click Run.
- If you have no bundle servers defined, click on the SMF Bundle Server, then click the **New** button, then click Run

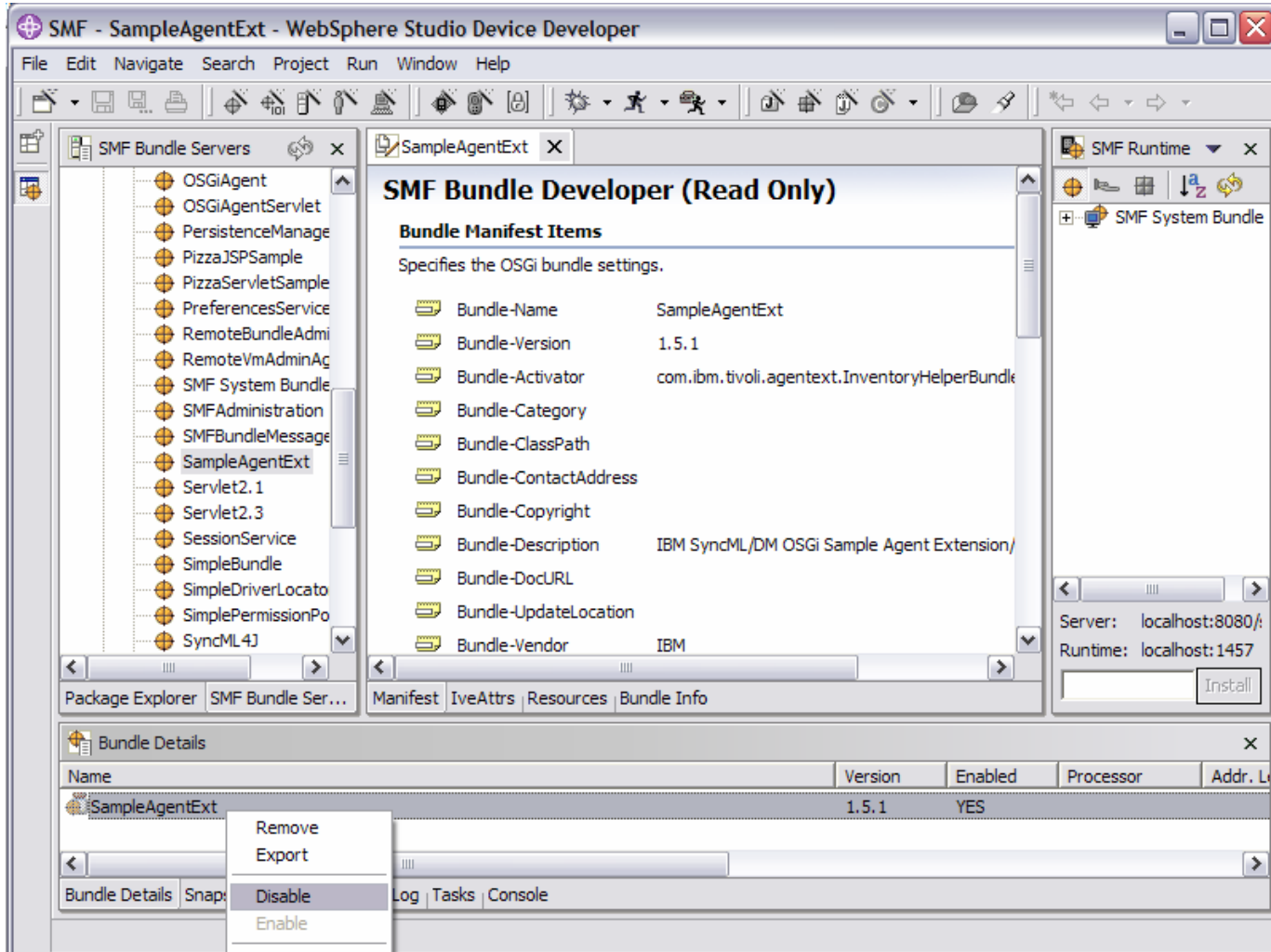




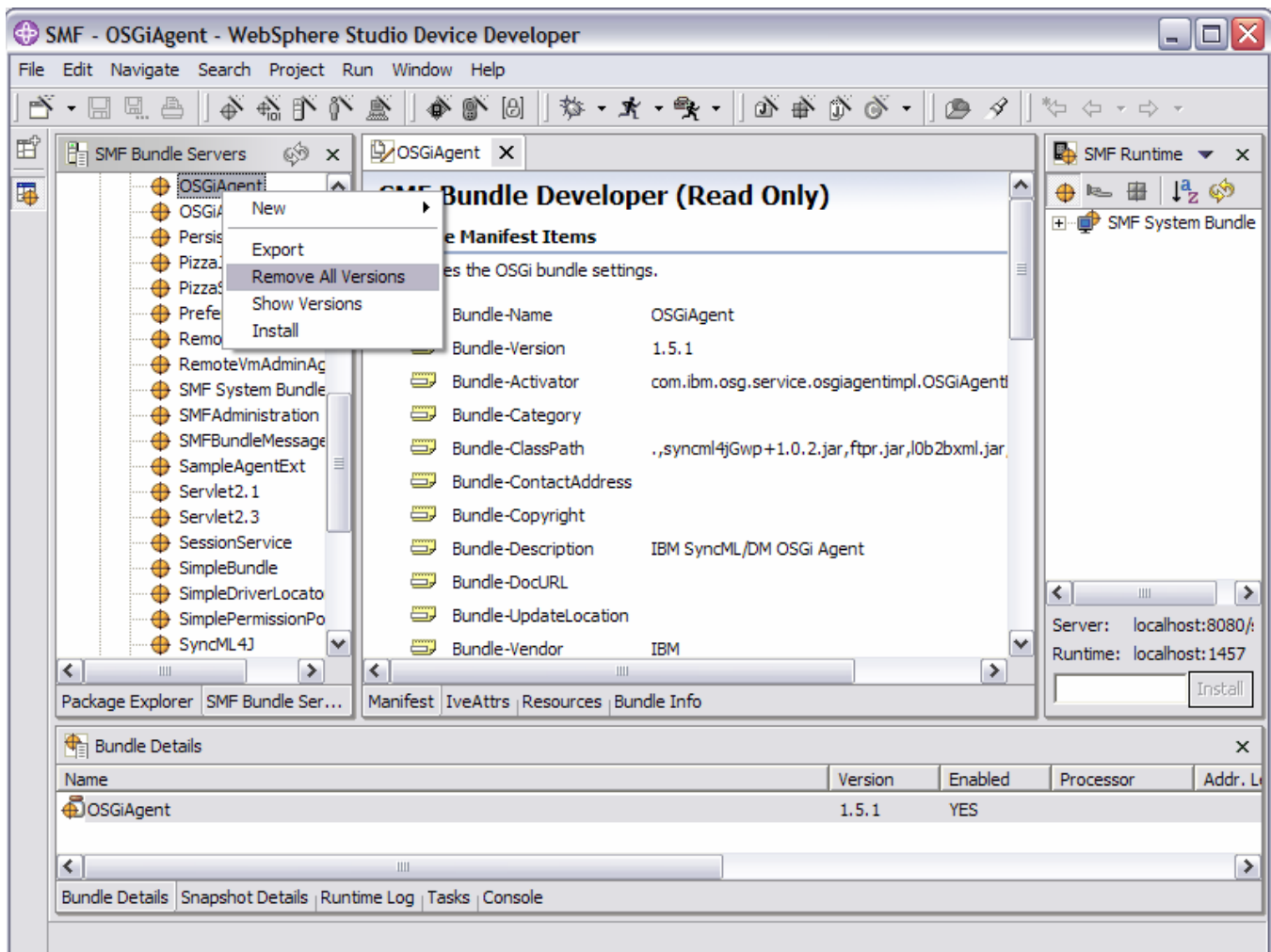
2. In the SMF perspective, open up the Bundle Server view (click the **SMF Bundle Servers** tab):



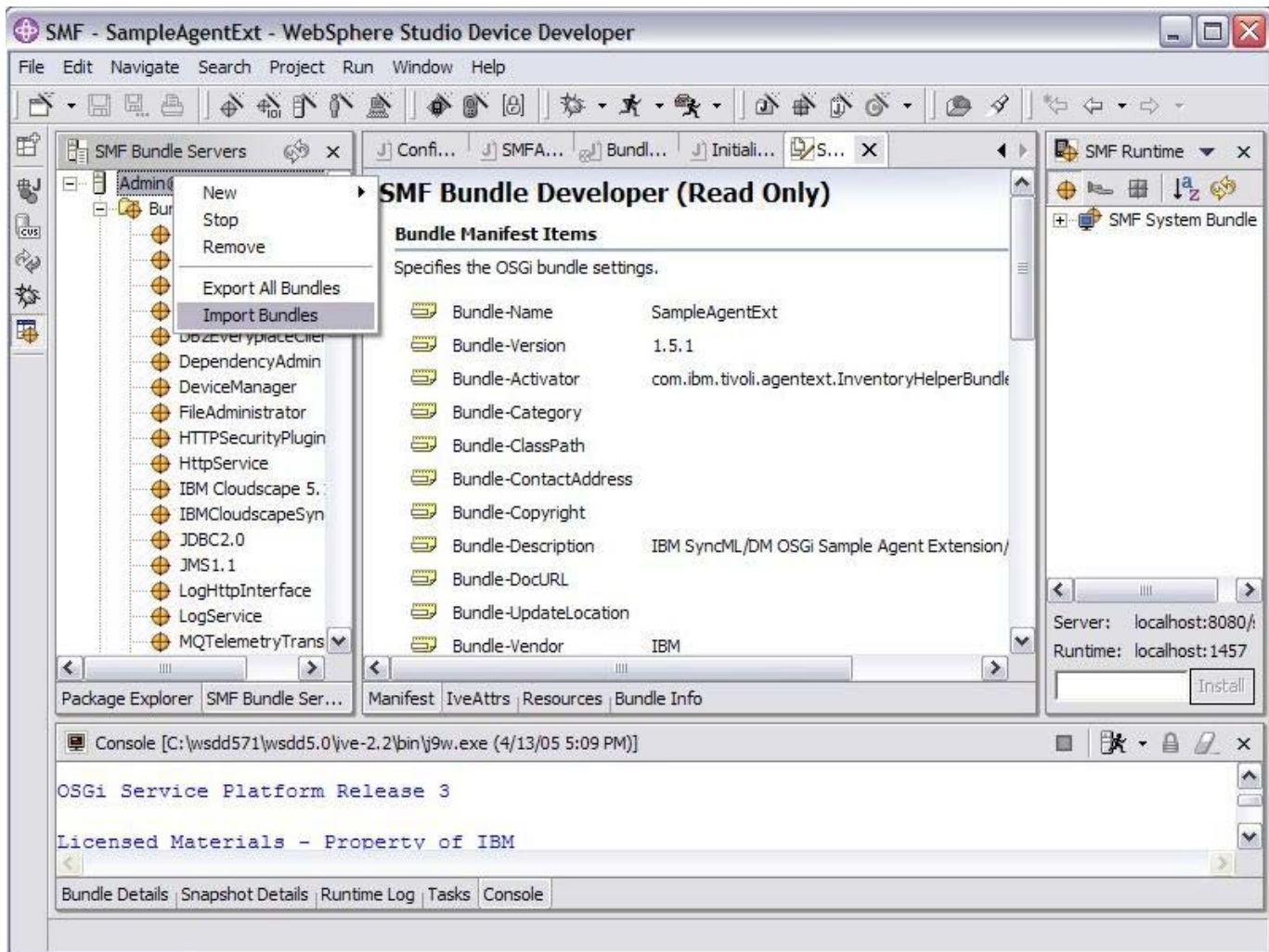
3. Expand the tree for the bundle server and locate the **SampleAgentExt** bundle. Right Click on this bundle and select **Show Versions**. In the **Bundle Details** tab at the bottom, right click **SampleAgentExt** and click **Disable**. SampleAgentExt is an agent extension designed for demonstration and evaluation purposes only. The OSGiAgentExt bundle is a production level agent extension. You should not have both enabled in the SMF Bundle Server at the same time.



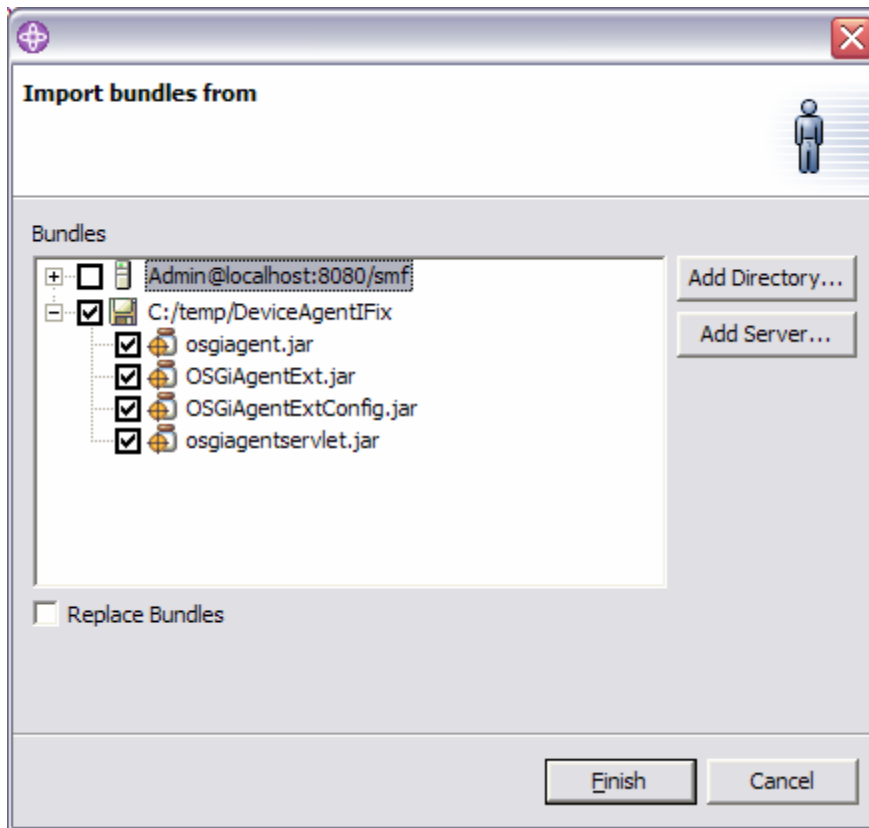
4. Locate the **OSGiAgent** bundle. Right Click this bundle and select **Remove All Versions**. We will install the replacement bundle in the next step. Repeat this step for the following bundles if they exist: **SyncML4J**, **OSGiAgentExt**, **OSGiAgentExtConfig**, and **OSGiAgentServlet**



5. Right click on the SMF Bundle Server, and select **Import Bundles**



6. Select the **Add Directory** button. Browse to the folder where you unzipped the Interim Fix.
7. You can expand the folder view to see the bundles that will be imported to the server.
8. Be sure to select **Replace Bundles**. If you do not, the two new jars will be imported into the bundle server, but the three that are being updated will not overwrite the original bundles and you will see an error message warning you of this.



9. Select **Finish**.

Now when a user deploys one of their projects to a runtime, and the project depends on the device agent, the bundle server will automatically provide the updated bundles.

## ***How to initiate a device reboot***

### **DMS Node Discovery and Custom Command Jobs**

Initiating a device reboot is done via the use of DMS Node Discovery and Custom Command jobs. This outlines how to initiate a reboot on the device.

#### **Guided method**

The following steps describe how to change properties for the agent, making use of multiple jobs to perform this task. Because there are multiple jobs, these steps may take longer, but more information is pre-populated in the dialogs. These steps also make changes only to a single device. To apply changes to multiple devices simultaneously, use the **Advanced Method** listed below.

These steps illustrate changing the `./SystemCommand/Reboot` value.

1. On the WEDM console, select Devices.
2. Select Use New Query and Return anything as your search criteria.
3. Select OK.
4. The DM console will show a list of enrolled devices.
5. Select your device, right click and select Submit Job.
6. Select Next.
7. Select the Job Type as Node Discovery (Use default settings for all the other job attributes).
8. Select Next.
9. Select Add Group.
10. Enter `./SystemCommand` as the Target URI.

11. Enter a Search depth of 2.

Submit Job: Job Parameters

Group 1

Target URI  
/SystemCommand  
Example Text: /DevDetail

Store path nodes  
No

Search depth  
2

Remove

Add Group

Back Next Cancel Help

12. Select Next.

13. Select OK.

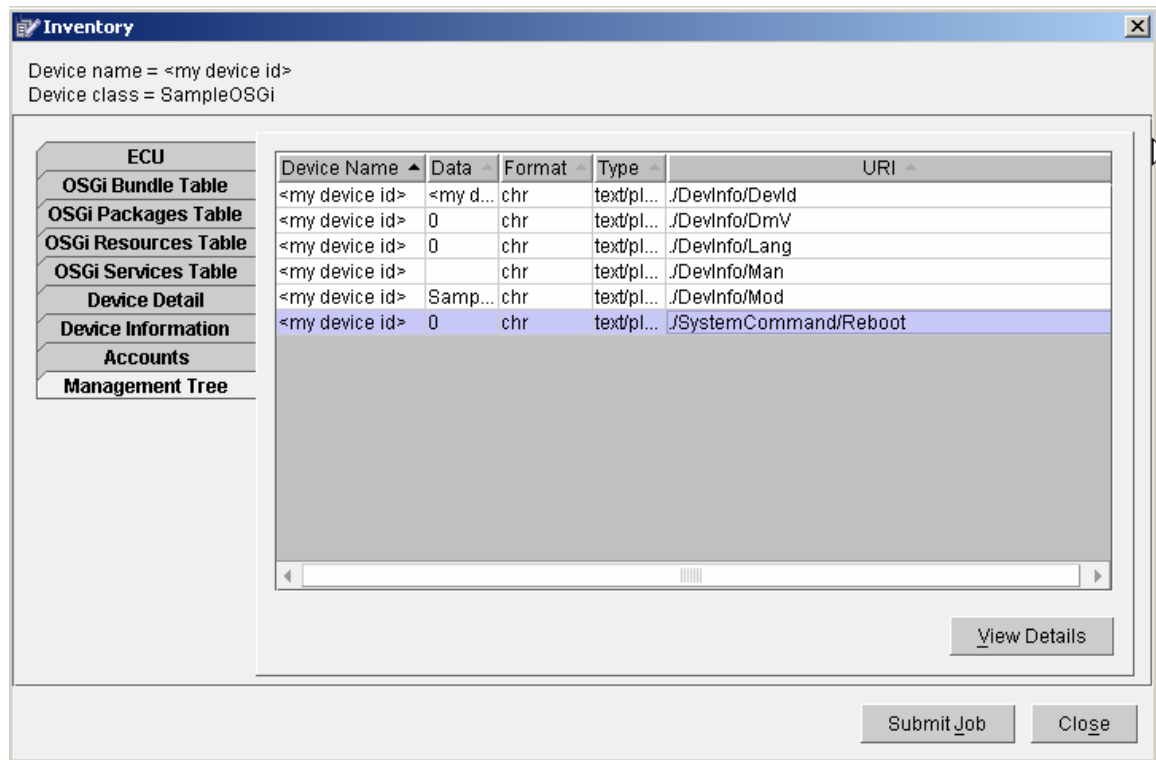
14. The job has been submitted. Select Close.

15. You will need to wait for the job to complete (this will depend upon the configured polling interval).

Once the job has completed, select the device, then click View Inventory...

16. Then select Management Tree.

17. Select the entry with the URI: ./SystemCommand/Reboot.



18. Select Submit Job.

19. Select Next.

20. Leave the defaults as supplied in the panel, then select Next.

21. Enter 1 for the Command Number Field.



22. Set the Data value to reboot

The screenshot shows a dialog box titled "Submit Job: Job Parameters". On the left is a vertical menu with the following options: "UI Alert Command", "Add Command", "Copy Command", "Delete Command", "Exec Command", "Get Command", and "Replace Command". The main area of the dialog is for configuring "Group 1". It includes a "Command grouping" dropdown set to "no selection", a "Command number" text box containing "1", a "Target URI" text box containing "SystemCommand/Reboot", an "Alternate data source" dropdown set to "no selection", and a "Data" text box containing "reboot". There are "Remove" and "Add Group" buttons. At the bottom are "Back", "Next", "Cancel", and "Help" buttons. A mouse cursor is pointing at the "Data" text box.

23. Select Next.

24. Select OK.

25. Select Close.

26. Select Close.

27. Wait for the job to complete.

**Advanced method**

The following steps describe how to change properties for the agent, but allow you to change the properties for multiple devices. Less information is pre-populated in the dialogs.

These steps illustrate changing the `./SystemCommand/Reboot` value.

1. Select File > Submit Job... > All New...
2. Select OSGi as the device class.
3. Select Currently Enrolled for the status of the target devices, since you are configuring agent specific properties.
4. Select Next.
5. Select the Job Type as Custom Command (use default settings for all other job attributes).
6. Select Next.
7. Select Replace Command, then click Add Group.
8. Enter 1 as the Command Number.
9. Enter `./SystemCommand/Reboot` as the Target URI.
10. Enter reboot as the Data.

**Submit Job: Job Parameters**

**UI Alert Command**  
**Add Command**  
**Copy Command**  
**Delete Command**  
**Exec Command**  
**Get Command**  
**Replace Command**

**Group 1**

Command grouping: no selection (Remove)

Command number: 1

Target URI: SystemCommand/Reboot

Alternate data source: no selection

Data: reboot

Add Group

Back Next Cancel Help

11. Select Next.
12. Select OK.
13. Select Close.
14. Wait for the job to complete.

After this job is complete, a file by the name of reboot.txt is placed on the file system specified by the system property `java.io.tmpdir` with the contents of "reboot now". A script monitoring this directory for the presence of the file can now perform actions on the system.