# Integrated Installation Package (IIP)
# Usage Scenarios

IBM Toronto Lab Installation Factory Team
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About This Guide ..... 4
Introduction to Using IIP to Automate WebSphere Installations ..... 5
Benefits of Using an IIP ..... 5
What is CIP, IIP and IBM Installation Factory ..... 5
Customized Installation Package (CIP) ..... 5
Integrated Installation Package (IIP) ..... 6
Contributions in IIP ..... 6
Contribution Invocations in IIP ..... 7
IBM Installation Factory ..... 7
The General Flow Path Of Creating/Installing an IIP ..... 7
Some Basic IIP Terminology ..... 8
IIP Installer Wizard ..... 8
Scratch Installation ..... 8
Slip Installation ..... 8
Sample 1 – Typical IIP creation and installation flow (Scratch installation, GUI mode) ..... 9
Goal ..... 9
Task 1. Create a WebSphere Application Server CIP ..... 10
Task 2. Create a Feature Pack for Web Services CIP ..... 21
Task 3. Create an IIP that includes a WebSphere Application Server CIP and a Feature Pack for Web Services CIP ..... 26
Task 4. Install the IIP using the IIP installer (GUI mode) ..... 45
Task 5. Check installation result ..... 62
Sample 2 – Typical IIP creation and installation flow (Scratch installation, silent mode) ..... 65
Goal ..... 65
Approach 1. Run IIP installer in GUI mode and install contributions silently ..... 65
Task 1. Create/modify response files for both invocations ..... 65
Task 2. Launch the IIP installer wizard ..... 67
Task 3. Add the response files to individual invocations ..... 67
Approach 2. Run IIP installer without GUI and install contributions in silent mode ..... 75
Sample 3 – Variation of IIP creation flow (for silent installation) ..... 77
Goal ..... 77
Task 1. Open existing build definition file to add response file ..... 77
Sample 4 – Variation of CIP/IIP creation flow (for platforms that do not support ifgui) ..... 85
Goal ..... 85
Approach 1. Use Installation Factory GUI from Linux IA 32 platform to create CIP/IIP for AIX PowerPC64 platform. ..... 85
Approach 2. Use ifcli command to create CIP/IIP on AIX PowerPC64 ..... 87
Sample 5 – Installation/Uninstallation scripts bundled in CIP ..... 92
Goal ..... 92
Sample 6 – Profile customizations bundled in CIP ..... 94
Goal ..... 94
Task 1. Create customized stand-alone application server profile template ..... 94
Task 2. Use Profile Management tool with customized profile templates ..... 96
Task 3. Use manageprofiles command with customized profile templates ..... 97
Sample 7 – Additional files bundled in CIP and IIP ..... 99
Goal ..... 99
Task 1. Bundle additional files in CIP ..... 99
Task 2. Bundle additional files in IIP ..... 100
Trouble Shooting ..... 101
Examining IIP and Other Logs ..... 101
1. Finding the logs for CIP/IIP creation ..... 101
2. Finding the logs for an IIP installation ..... 101
Common Errors and Resolution ..... 103
1. IIP installation returns right away, no error messages on screen ..... 103
2. Could not launch IIP installer in silent mode ..... 103

3. Could not install contributions individually in silent mode ..... 103
4. An unknown status is returned on the IIP installer GUI after an invocation..... 105
5. Cancel does not stop the IIP installation right away ..... 105
6. Bundling WebSphere Application Server fix packs in Feature Pack for Web Services CIP fails validation ..... 105
7. Response file problems..... 105
What to Use When..... 106

# About This Guide

This Integrated Installation Package (IIP) Samples guide provides users with step-by-step instructions for several basic scenarios for creating and installing IIPs for IBM® WebSphere® Application Server and for the Web Services and EJB 3.0 Feature Packs. The instructions illustrate a fast path through IIP creation and installation, using minimal features and mostly default values, to achieve a specific goal. Users can then modify or expand these simpler scenarios to match their own project requirements. There are 9 samples in all, covering a wide range of circumstances, each building in complexity and the number of IIP features used. The samples are:

- Sample 1 – Typical IIP creation and installation flow (Scratch install, GUI mode)
- Sample 2 – Typical IIP creation and installation flow (Scratch install, silent mode)
- Sample 3 – Variation of IIP creation flow (for silent installation)
- Sample 4 – Variation of CIP/IIP creation flow (for platforms that do not support ifgui)
- Sample 5 – Install/Uninstall scripts bundled in CIP
- Sample 6 – Profile customizations bundled in CIP
- Sample 7 – Additional files bundled in CIP and IIP

The samples in this guide are ordered to introduce concepts from the easiest to hardest and from the most important to the lesser important. We suggest to readers to go through the samples in the order which they were written. Among the 7 samples, samples 1 and 2 are typical flows that should be read before all the others.

Readers should have a basic knowledge of IIPs and Installation Factory. For further information about Installation Factory, go to the IBM Information Center at http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/index.jsp. Follow links such as Network Deployment (Distributed platforms and windows). Version 6.1→ Reference →Settings → Installation Factory Overview.

For further information about IIP, go to IBM Information Center at
http://www-306.ibm.com/software/webservers/appserv/was/library/

Link to download Installation Factory 6.1 is http://www-1.ibm.com/support/docview.wss?rs=180&uid=swg24012817

Link to download WebSphere Application Server Fix Packs and interim fixes: http://www-306.ibm.com/software/websphere/support/

Link to the Installation Factory 6.1 readme is http://www-1.ibm.com/support/docview.wss?rs=180&uid=swg27009909.
All the samples were run on a Linux IA 32 platform, and the screen illustrations reflect that platform. Users on other platforms will see similar screens. The instructions assume users are logging on as a nonroot user.

# Introduction to Using IIP to Automate WebSphere Installations

## *Benefits of Using an IIP*

Integrated Installation Packages (IIPs) allow a user to install multiple installation packages in a single installation session instead of having to install them independently one at a time. The installation packages within an IIP are invoked one after the other by the IIP in order to complete the end-to-end install.

The need for IIP support has been driven largely by WebSphere Application Server Feature Packs (FEPs). In WebSphere Application Server version 6, new function was combined with WebSphere Application Server maintenance and delivered in refresh packs (e.g. 6.0.2). Installation Factory provided a way to merge a refresh pack into a Custom Installation Package (CIP) to create a single-step installation that will install WebSphere Application Server at the refresh pack level.

In WebSphere Application Server version 6.1, new function is now being delivered in Feature Packs, which are not like maintenance packages but rather they are standalone, separately-installable packages (with their own installation program) which install into WAS_HOME. This is similar to a stack product like WebSphere Process Server or WebSphere Application Server Extended Edition. A customer who would like to install WebSphere Application Server alongside one or more Feature Packs in a highly repeatable manner can create an IIP which will install all of them together, thereby retaining the convenience that Installation Factory provided for refresh packs in V6.

## *What are CIPs, IIPs and IBM Installation Factory?*

### Customized Installation Package (CIP)

Customized Installation Packages (CIPs) are WebSphere Application Server, Web Services Feature Pack or EJB 3.0 Feature Pack installation images with pre-applied maintenance – Fix packs, interim fixes, and a set of customizations to profiles, etc. CIPs make installing WebSphere Application Server or Feature Packs more convenient because one installation can bring the system to the required level. Users do not need to go through multiple steps involving Update Installer.

CIPs can be created based on the supported product. A WebSphere Application Server CIP can include WebSphere Application Server fix packs, SDK fix packs, WebSphere Application Server interim fixes, profile customizations, and additional user files for example. A Web Services or EJB 3.0 Feature Pack CIP can include Feature Pack fix packs, Feature Pack interim fixes, profile customizations, and additional user files. Users cannot include a WebSphere Application Service fix pack in the Feature Pack for Web Services or EJB 3.0 CIP. A CIP is a vertical bundle of a single product, while IIP is a horizontal bundle of multiple products; a CIP can be a contribution in IIP.

## Integrated Installation Package (IIP)

Integrated Installation Packages (IIPs) allow a user to install multiple installation packages in a single installation session instead of having to install them independently one at a time. The installation packages within an IIP are invoked one after the other by the IIP in order to complete the end-to-end installation.

An IIP cannot be replaced by chaining different installers in a batch or shell script. An IIP has built-in intelligence which will allow the bundled contribution invocations to communicate with each other.

For example, if users want to install the Feature Pack for Web Services, users will have to manually install WebSphere Application Server first, and then install the Feature Pack for Web Services. Imagine if a user has 20 machines, users would have to carry out 40 separate installations.

However, users can use an IIP to perform this task. Users can create an IIP which contains WebSphere Application Server and Feature Pack for Web Services (two contributions), and let each contribution be invoked once. The IIP will automatically set the installation location of the Feature Pack for Web Services to be the same installation location of WebSphere Application Server, and preset all the default values.

## Contributions in an IIP

At its simplest, a contribution is a set of files which contain the ability to create or modify a product on your system. An installation package is an example of a contribution. For instance you can have contributions of the following: WebSphere Application Server installer, Feature Pack for Web Services installer, Feature Pack for EJB 3.0 installer, WebSphere Application Server CIP, or Feature Pack for Web Services CIP.

## Contribution Invocations in an IIP

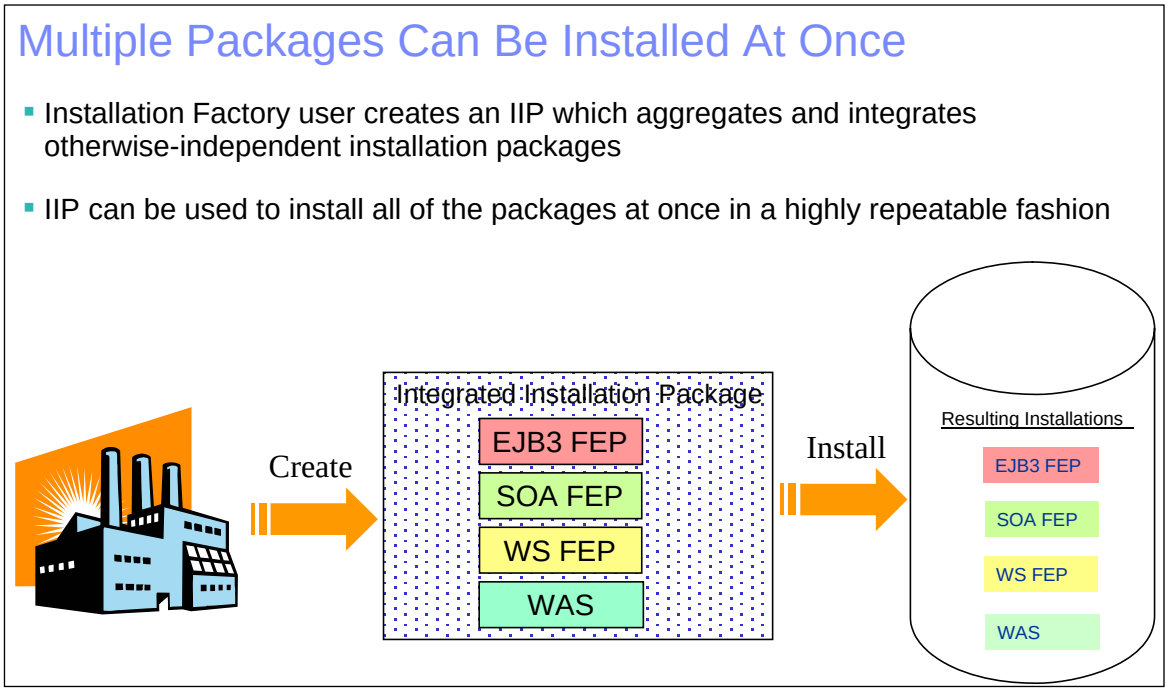
A contribution can be invoked multiple times. A contribution invocation (also called invocation) refers to one invocation of a given contribution.

## IBM Installation Factory

IBM Installation Factory is a tool that is used to create CIPs and IIPs. It has a user interface (ifgui) and a command line utility (ifcli). The result of using the Installation Factory is the creation of CIP or IIP, and the build definition that can be reused. The build definition file describes exactly which packages and configurations are included in the CIP or IIP.

Using Installation Factory GUI (ifgui), users can create CIP/IIP in **Connected** mode or **Disconnected** mode. Connected mode is used when all input is available on the local system, so that users can browse the system and select. Disconnected mode is used when input is not available on local system, such as on Windows, users try to create a build definition file for Linux. When disconnected mode is used, users will have to take the build definition file to the target system and run ifcli there to generate the CIP or IIP there.

## *The General Flow Path Of Creating/Installing an IIP*



## *Some Basic IIP Terminology*

### IIP Installer Wizard

After an IIP is created, the IIP installer can be launched in GUI mode to visualize the installation of each contribution, or can be launched silently.

### Scratch Installation

Scratch installation refers to the installation of a new object (products, feature packs) which is not yet installed on the system.

### Slip Installation

Slip installation refers to installing the delta portion only. For example, if WebSphere Application Server is already installed, a WebSphere Application Server CIP can be slip installed on top to update the fix pack levels.

In one IIP, it is possible that one contribution will perform a scratch installation and another will perform a slip install.

### Synchronization

As of Version 6.1.0.13 you must keep the version levels of the application server and any installed feature packs synchronized to the same maintenance level. It is recommended that you use the Update Installer to synchronize your environment before installing any additional Installation Factory packages. In fact, you will be either be blocked or prompted to upgrade during the installation of a feature pack CIP if your versions are not the same. If you are prompted and do not provide the proper maintenance packages you will be blocked from installing the CIP.

At this time it is also recommended that you use CIPs rather than IIPs to add or upgrade feature pack products if you are using the Installation Factory for a slip install.

For more information, see the Information Center article “Installing and configuring multiple feature packs”:
http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.wsfep.multiplatform.doc/info/ae/ae/tins_install_multiple_feps.html

# Sample 1 – Typical IIP creation and installation flow (Scratch installation, GUI mode)

***Goal***

In this sample, we assume an IIP is created with a WebSphere Application Server CIP at fix pack 6.1.0.16 level and a Feature Pack for Web Services CIP at fix pack 6.1.0.16 level as well. The Web services fix pack level 6.1.0.16 is dependent on WebSphere Application Server being at the same fix pack level which in this case is 6.1.0.16. Note that the maintenance level for Feature Packs needs to be the same as the WebSphere Application Server maintenance level, as well as the same maintenance level as any other Feature Packs installed on the system.

There will be WebSphere Application Server interim fixes bundled in the WebSphere Application Server CIP and Feature Pack for Web Services interim fixes bundled in Feature Pack for Web Services CIP, so that all required fix packs and interim fixes are in one IIP. One installation will give users the required levels.

The IIP will be configured to run interactively i.e. the IIP installer wizard will be displayed, as will the GUIs of each contribution. To see how to get the same IIP installed in silent mode, proceed to sample 2.

A GUI installation of WebSphere Application Server and a silent installation of the Feature Pack for Web Services is also possible. In fact, suppressing the Feature Pack for Web Services GUI makes sense since the main piece of input – the installation location – is automatically defaulted by the IIP to be the same as the WebSphere Application Server installation location.

We also assume that this is a scratch installation. That is, there are no installations of WebSphere Application Server or the Feature Pack for Web Services on the system.

Outlines of major tasks for this sample:

1. Use Installation Factory tool to create a WebSphere Application Server CIP at fix pack level 6.1.0.16, including SDK fix pack and one WebSphere Application Server interim fix.
2. Use Installation Factory tool to create a Web Services CIP at fix pack level 6.1.0.16, including one Web Services interim fix.
3. Use Installation Factory tool to create the IIP with two contributions, the WebSphere Application Server CIP and the web services CIP.
4. Launch IIP installer GUI to install each contribution in GUI mode, in one install.

### *Task 1. Create a WebSphere Application Server CIP*

Content: WebSphere Application Server Version 6.1 installation image, WebSphere Application Server fix pack 6.1.0.16, SDK fix pack 6.1.0.9 and one WebSphere Application Server interim fix. (Note that 6.1.0.16 is a fictitious example being used and is not available)

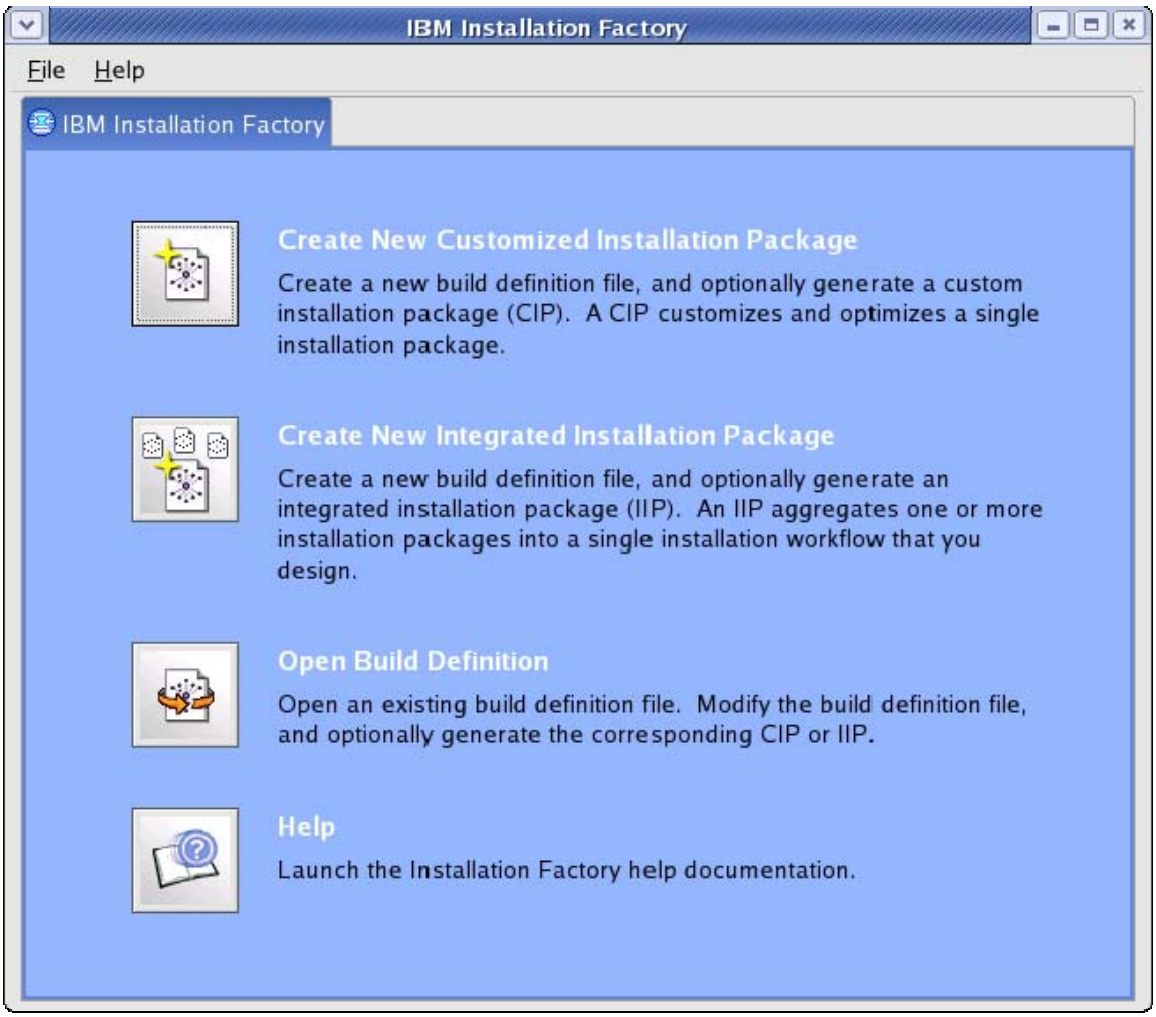
Step 1.1, Sign on to a Linux machine as nonroot user, and download Installation Factory tool to directory /newdisk/IF/.

Step 1.2, Change current directory to /newdisk/IF. Unzip the Installation Factory tool using the following commands
[nonroot@hostname IF]$ gunzip
installfactory.6109.Linux.ia32.tar.gz
[nonroot@hostname IF]$ tar –xvf installfactory.6109.Linux.ia32.tar

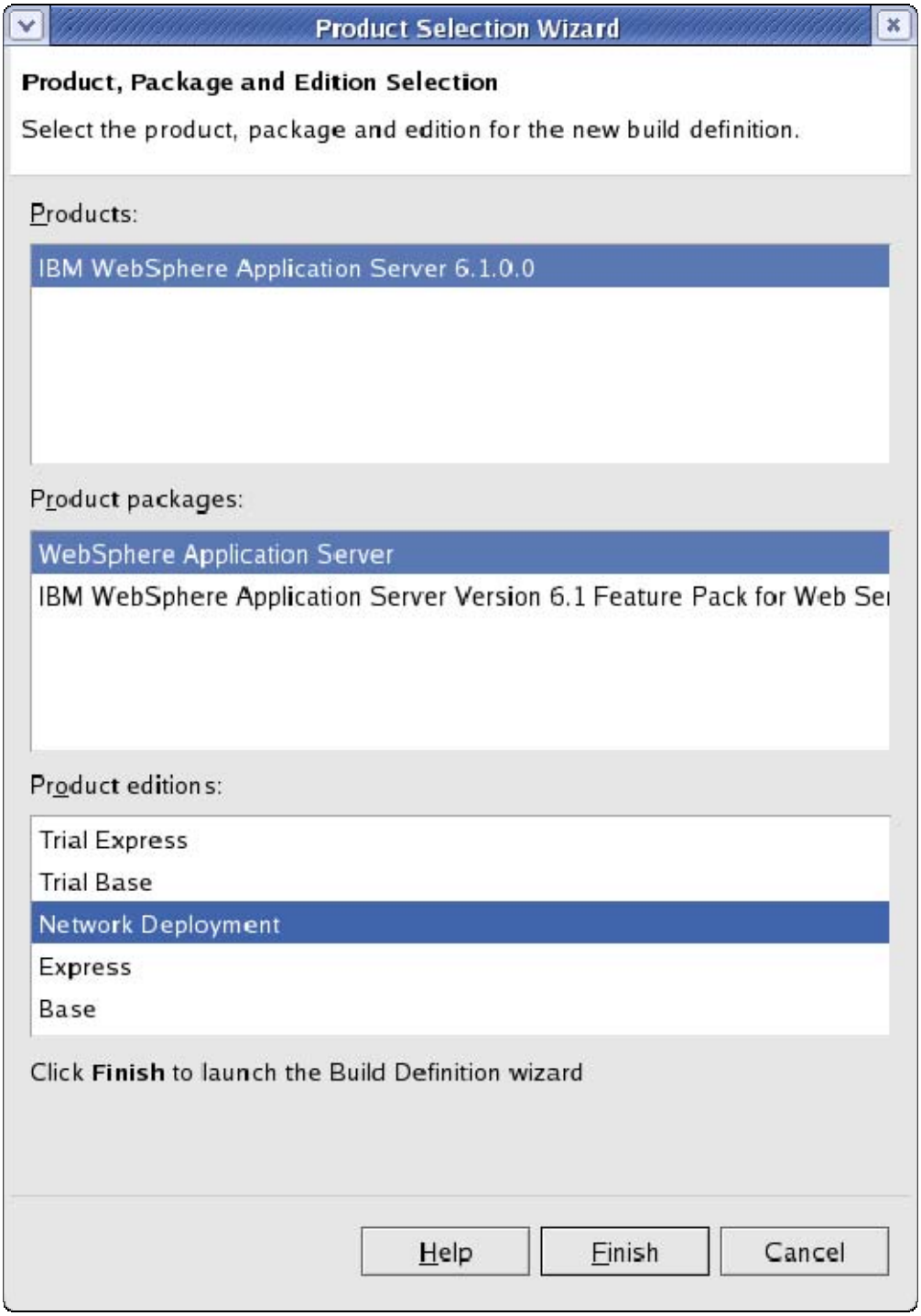
These will set up the Installation Factory in the current directory. The directory structure looks like below:


Step 1.3, Launch Installation Factory in GUI mode
[nonroot@hostname bin]$ ./ifgui.sh

Then click “Create New Customized Installation Package”.

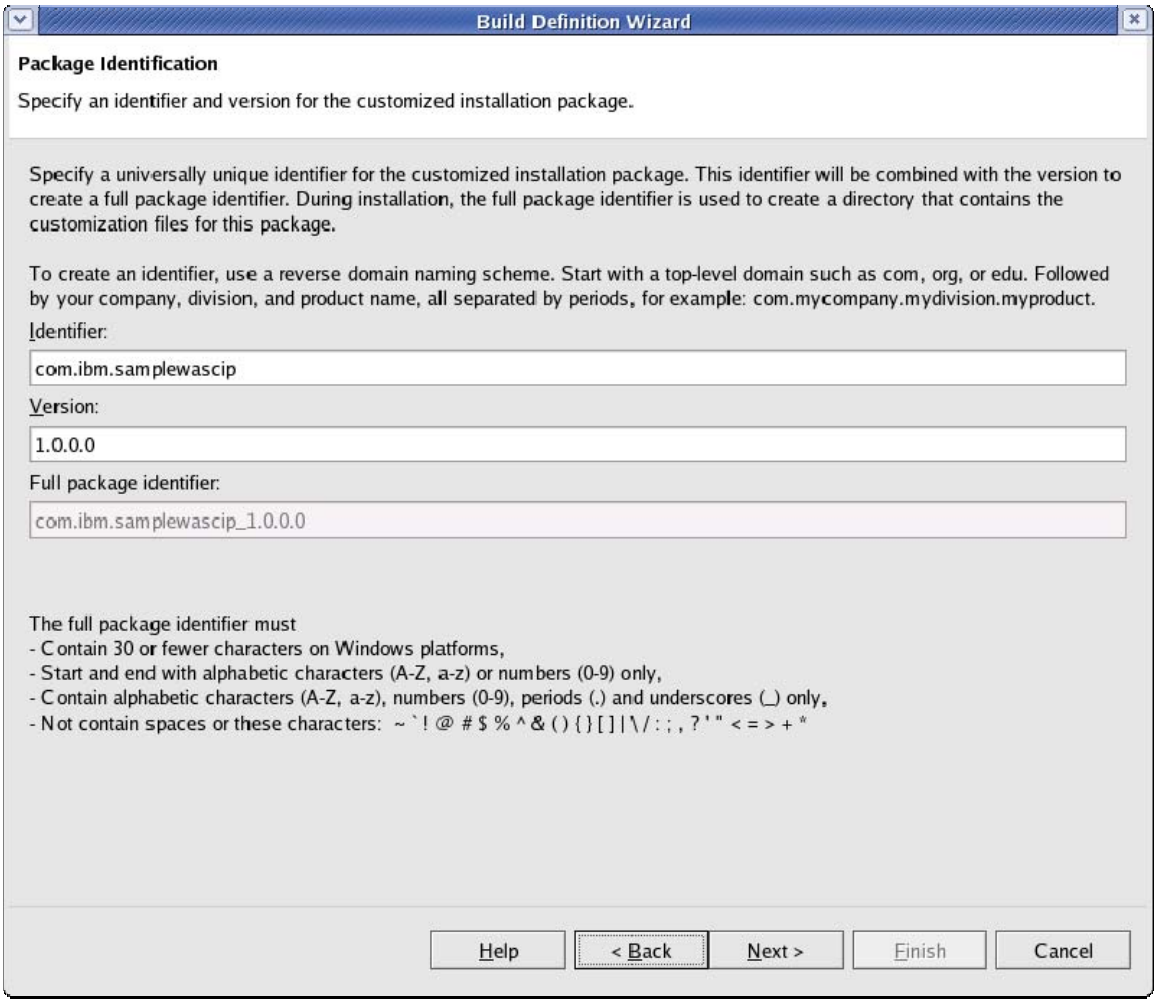



Step 1.4 Choose ‘WebSphere Application Server”, and “Network Deployment” edition. Click Finish button.

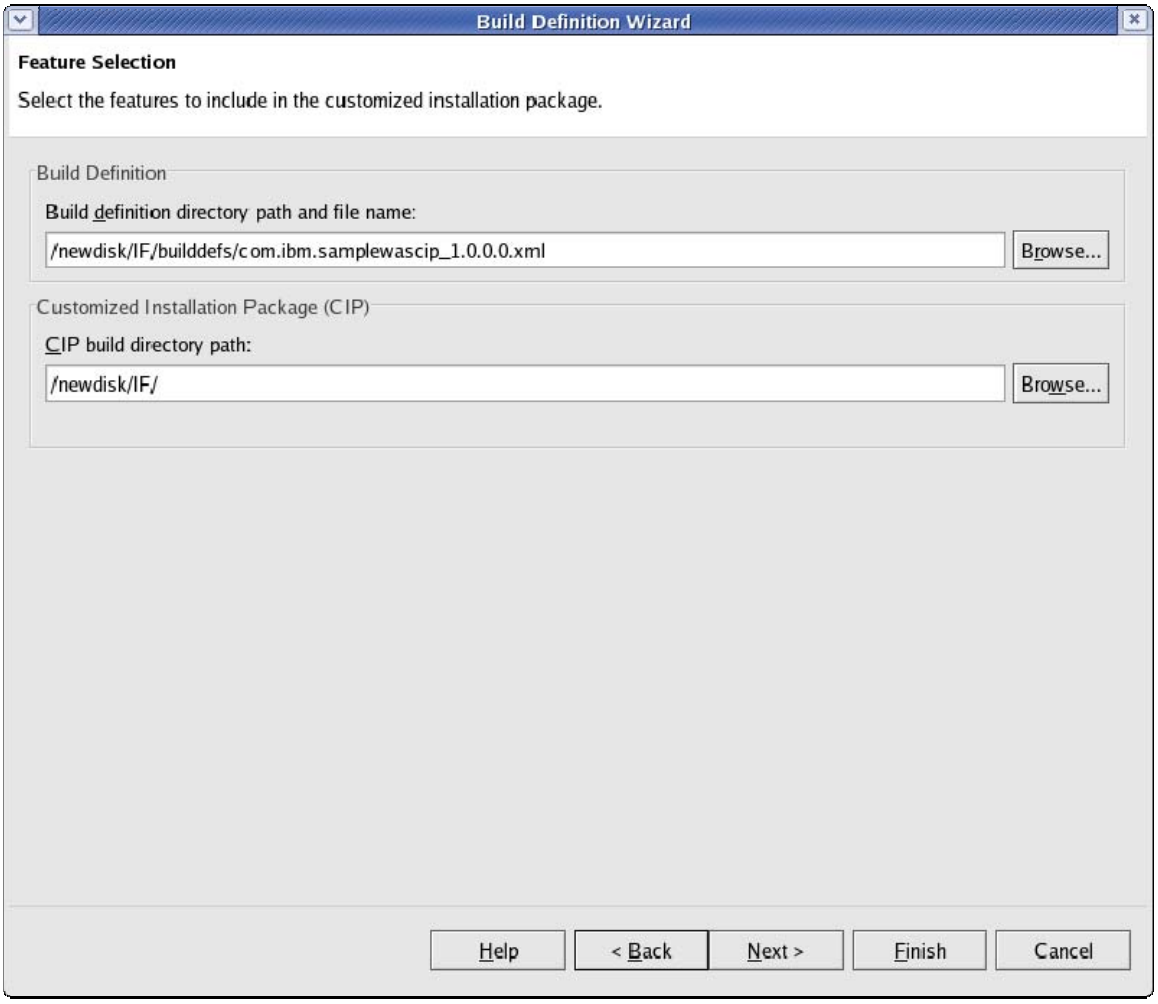



Step 1.5 Take the default “Connected mode” and “Linux IA32” platform on the “Mode selection” panel. Click Next button.

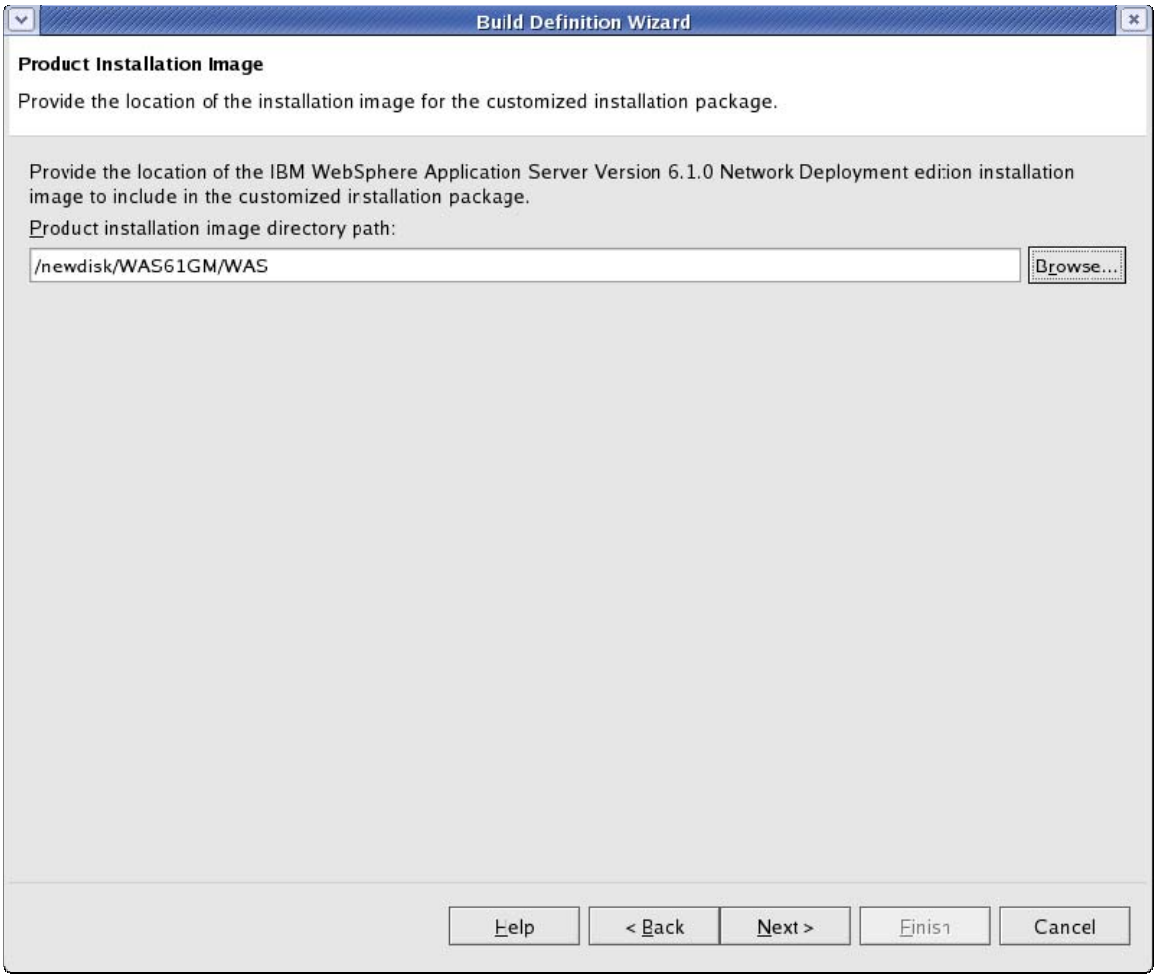
Step 1.6 Change the Identifier to something like “com.ibm.samplewascip” and take the default value for Version (which is 1.0.0.0). Click Next button.



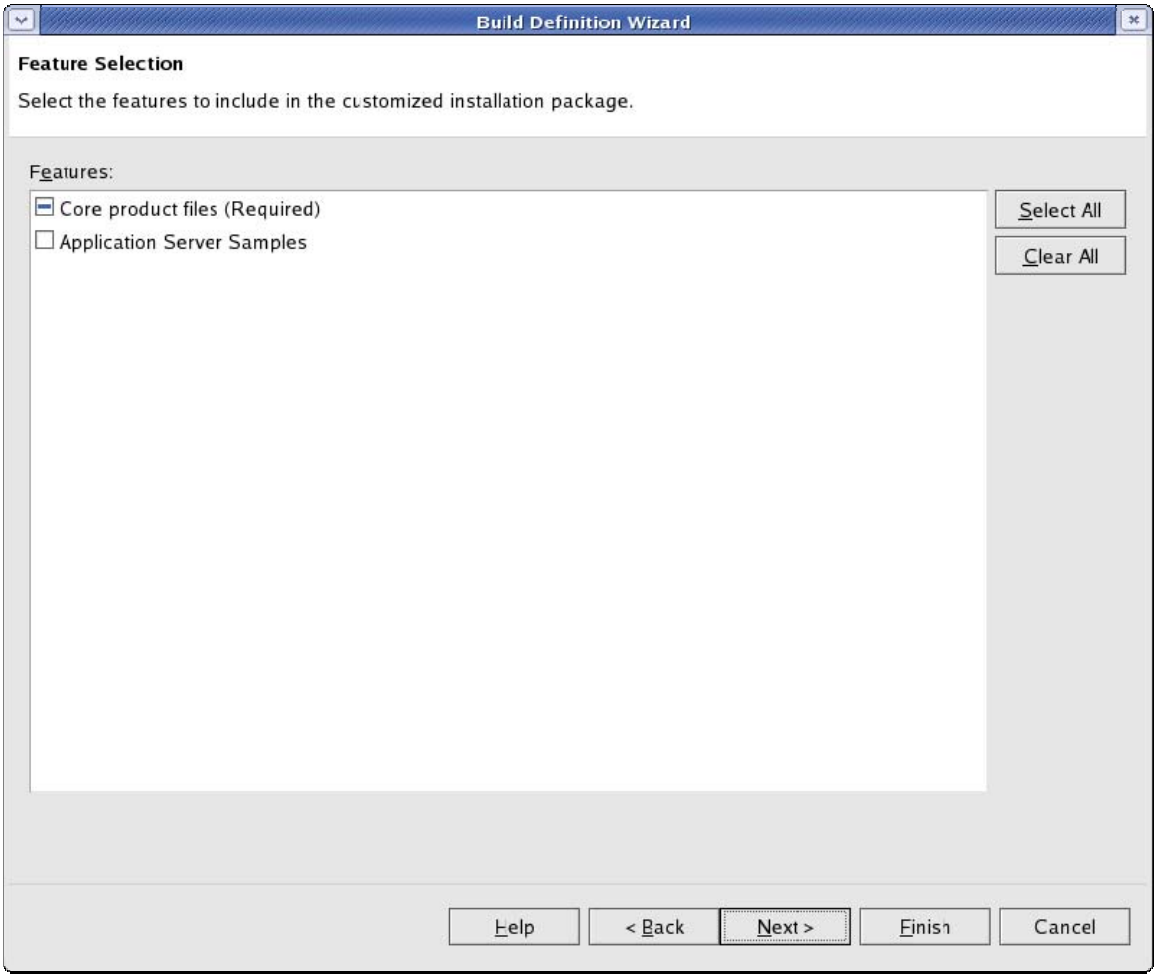
Step 1.7 Leave the default for the Build definition file name and CIP build directory path. Note that on Windows OS, the maximum length of CIP build directory path is 30 characters. Click Next button.



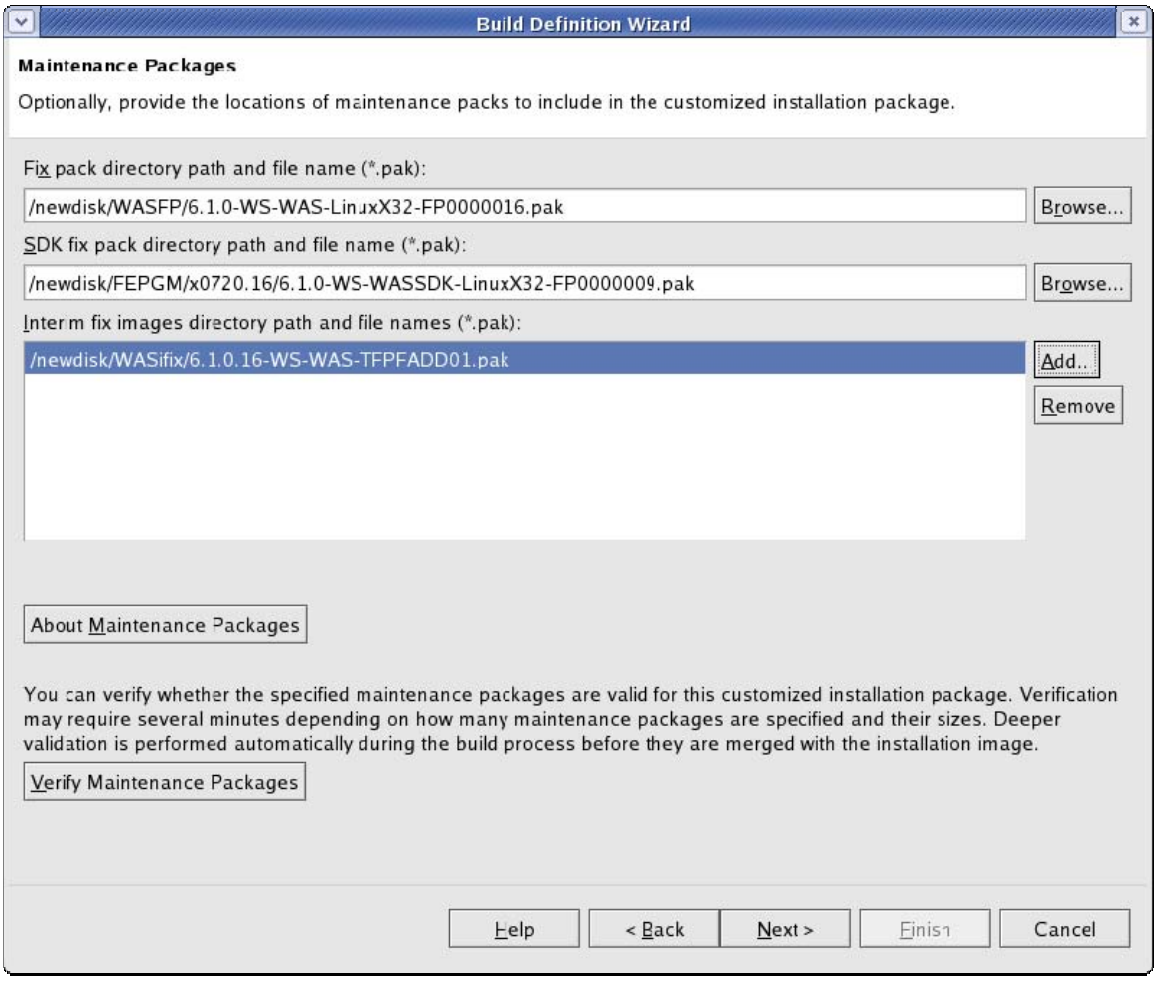
Step 1.8 Browse to the WebSphere Application Server Version 6.1 installation image location. Note that this image is the installable image from a CD or download location which can be used to install WebSphere Application Server. It is not the image that has already been installed on a system.



Step 1.9 Take the default of “Feature Selection” panel. Click Next button.



Step 1.10 Input the WebSphere Application Server fix pack 6.1.0.16, SDK fix pack 6.1.0.9 (which comes with the Feature Pack for Web Services installation image in this example), and a WebSphere Application Server interim fix. Users may want to click “Verify Maintenance Packages” button to make sure the input on this panel is good. Note that if this button is grayed out, verification will take place when you click the Next button. Click Next button.

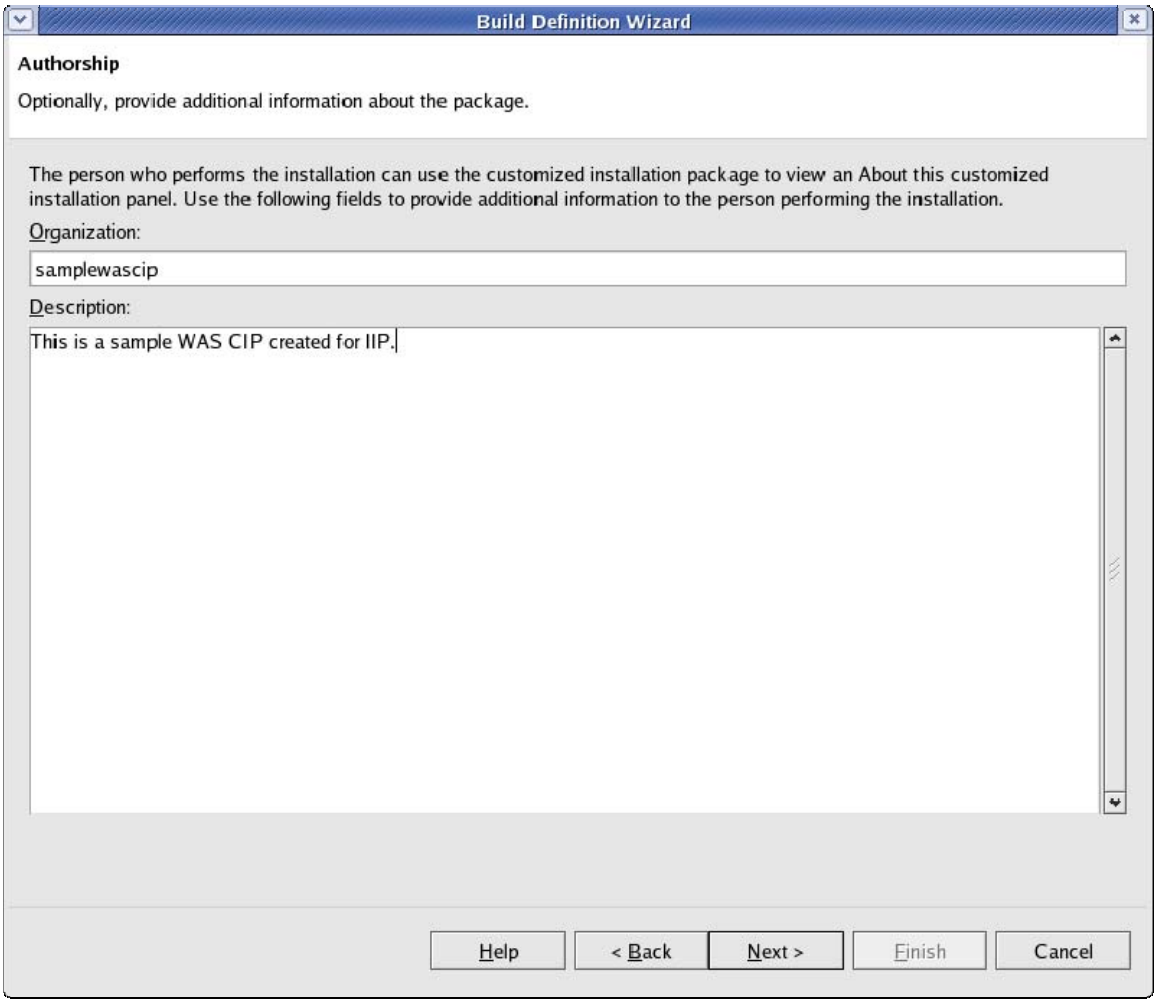


Step 1.11 Take the default of “Installation and Uninstallation Scripts” panel. Click Next button. Examples of how to use installation/uninstallation scripts can be found in Sample 5.

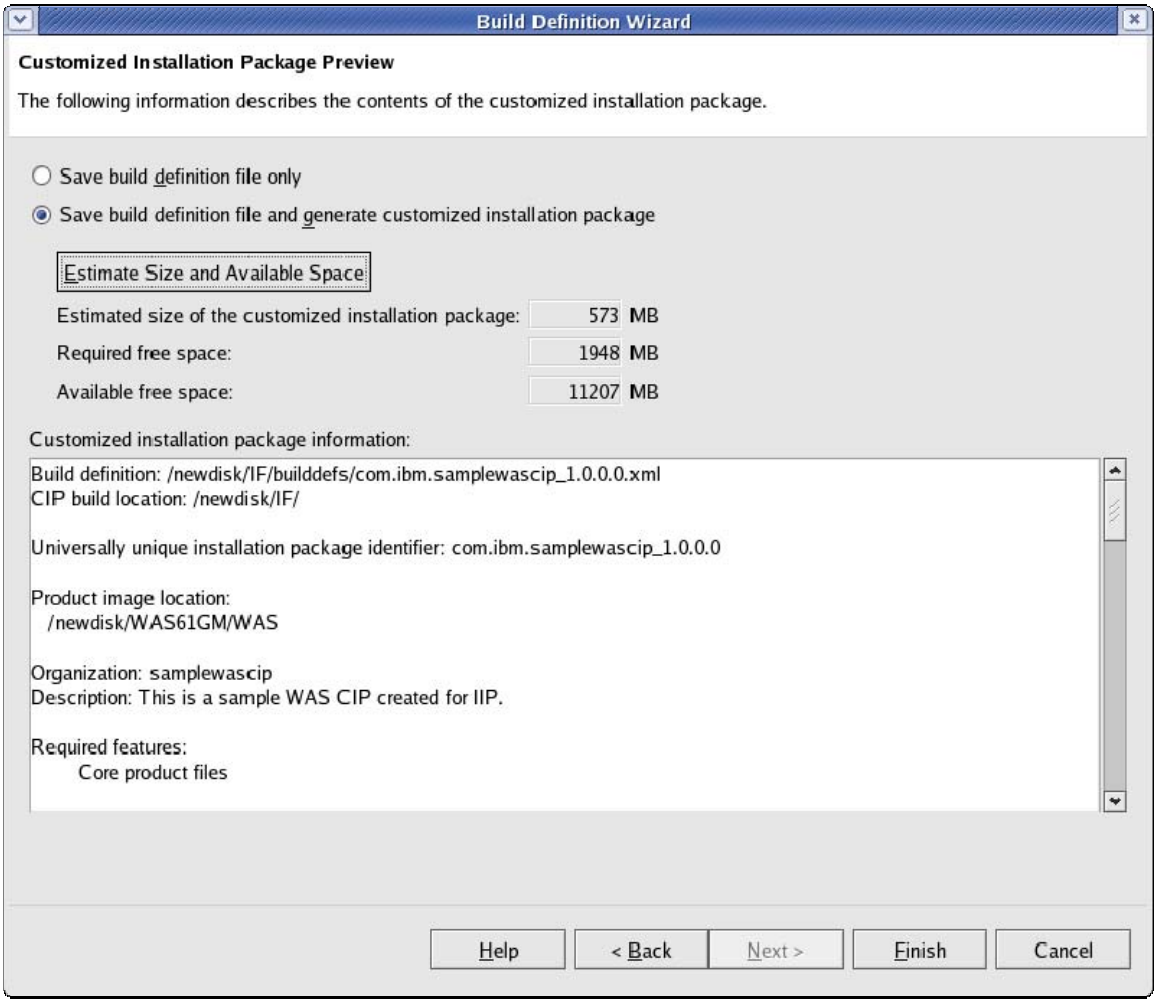
Step 1.12 Take the default of “Profile Customization” panel. Click Next button. Examples of how to use profile customization can be found in Sample 6.

Step 1.13 Take the default of “Additional Files” panel. Click Next button. Examples of how to use additional files (user files) can be found in Sample 7.

Step 1.14 In the “Authorship” panel, input the Organization and Description of the CIP. Click Next button.



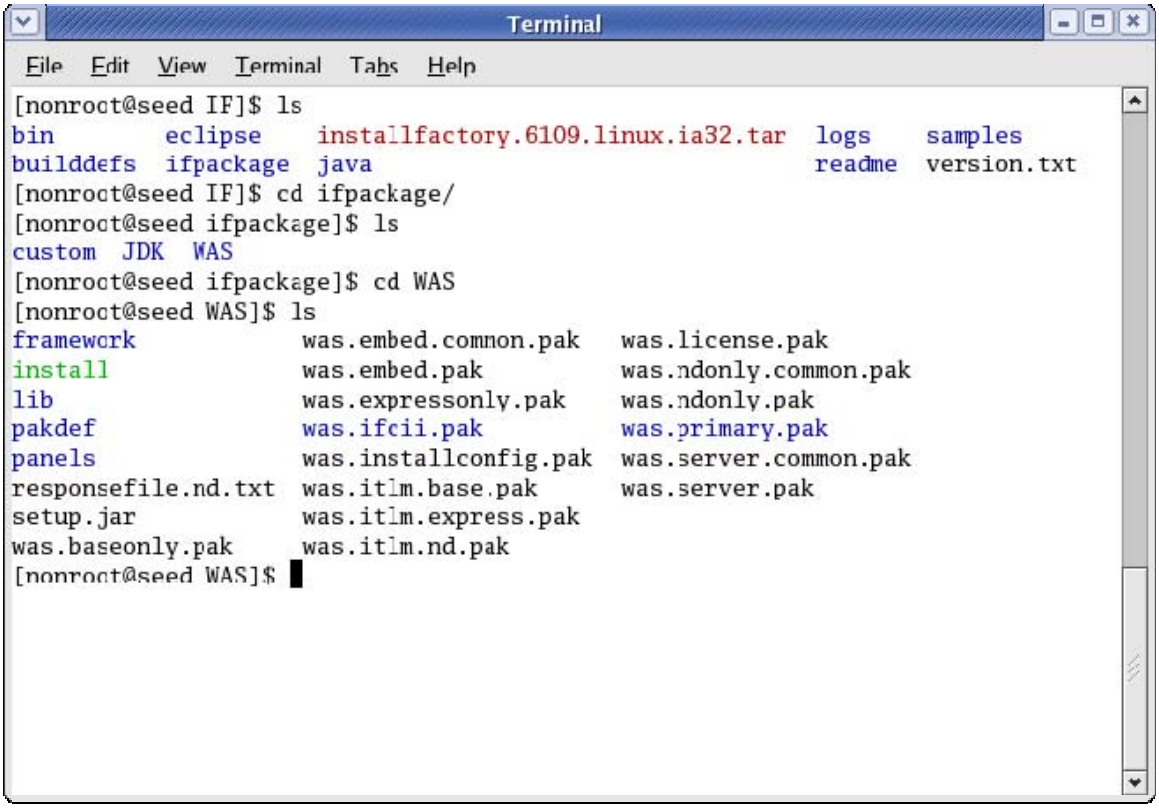
Step 1.15 Click “Save build definition file and generate customized installation package” radio button. Click “Estimated Size and Available Space” button to check space. Then click Finish button.



Step 1.16 Watch the progress of CIP generation.

Step 1.17 After the CIP is created successfully, click OK button in the confirmation window. Leave Installation Factory GUI open to create a Feature Pack for Web Services CIP in task 2.

Now users have successfully created a WebSphere Application Server CIP. The CIP build looks like the following under /newdisk/IF/ifpackage/. The CIP installation command is located at /newdisk/IF/ifpackage/WAS/install. The sample silent response file (responsefile.nd.txt) is located at the same directory as installation command.

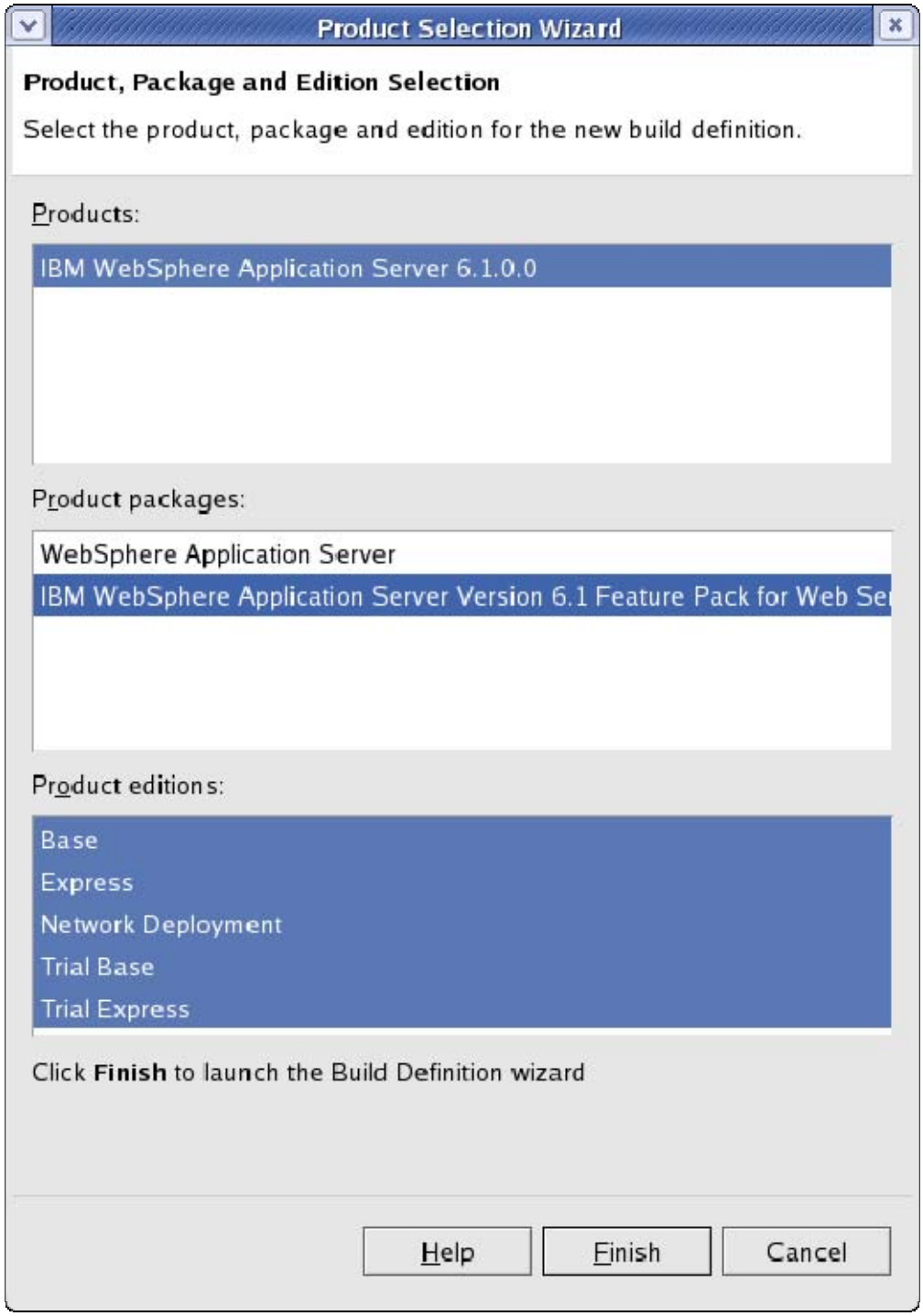


## *Task 2. Create a Feature Pack for Web Services CIP*

Content: Feature Pack for Web Services 6.1, Feature Pack for Web Services fix pack 6.1.0.16 and a Feature Pack for Web Services interim fix.

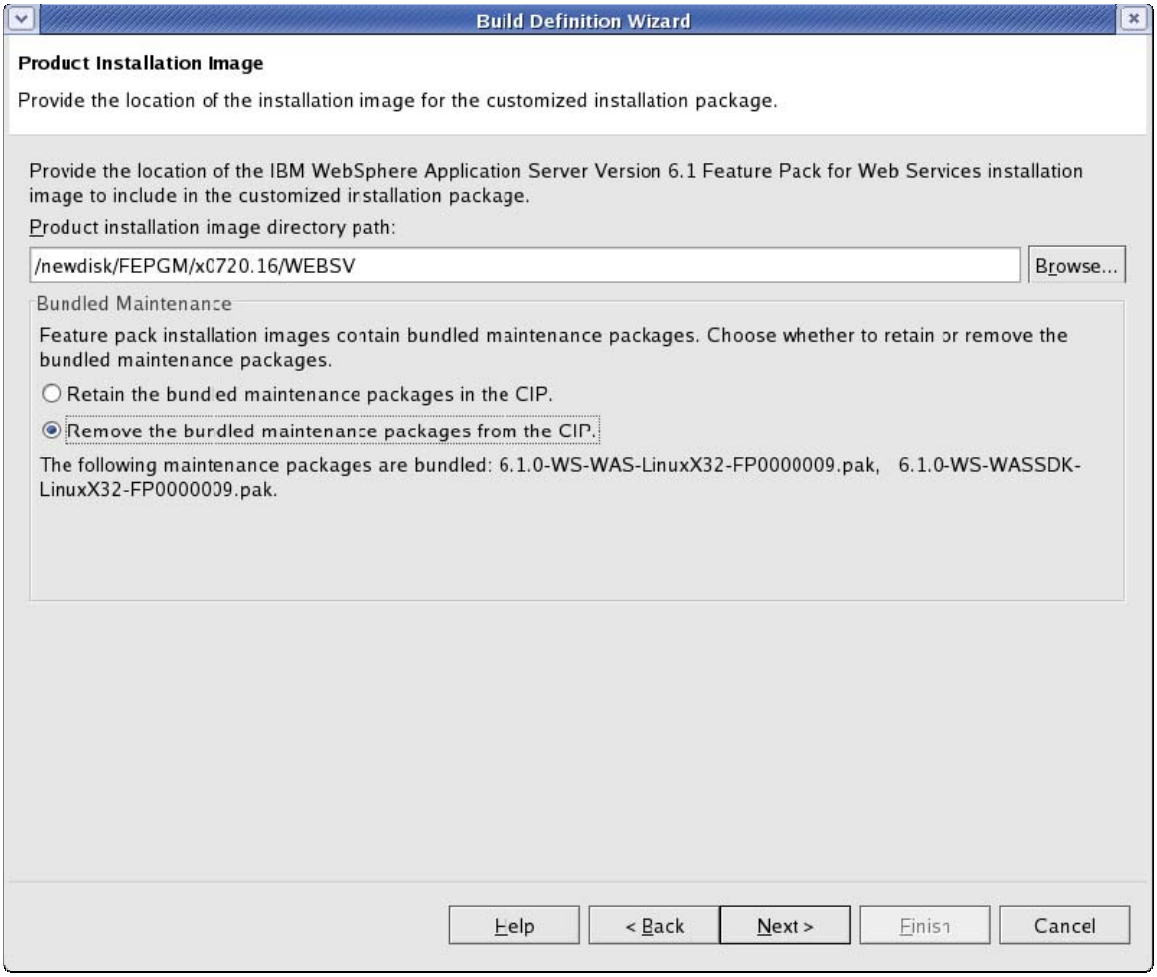
Step 2.1 If the Installation Factory GUI is still open, click “Create New Customized Installation Package”.

Step 2.2 In the “Product, Package and Edition Selection” panel, select “IBM WebSphere Application Server Version 6.1 Feature Pack for Web Services”. By default, all product editions will be pre-selected. This is due to the fact that feature pack applies to all WebSphere Application Server editions. Click Finish button.


Product Selection Wizard
Product, Package and Edition Selection
Select the product, package and edition for the new build definition.
Products:
IBM WebSphere Application Server 6.1.0.0
Product packages:
WebSphere Application Server
IBM WebSphere Application Server Version 6.1 Feature Pack for Web Se
Product editions:
Base
Express
Network Deployment
Trial Base
Trial Express
Click Finish to launch the Build Definition wizard
Help
Finish
Cancel

Step 2.3 In the Package Identification panel, fill in the identifier and version. Click Next button. In the “Build Information” panel, leave the default values for the “Build definition directory path and file name” and the “CIP build directory path”.

Step 2.4 In the “Product Installation Image” panel, browse to the Feature Pack for Web Services product image location. Click radio button “Remove the bundled maintenance packages from the CIP”. The reason is that the bundled packs are at 6.1.0.9 level. Since we will use WebSphere Application Server CIP at 6.1.0.16 level, the minimum bundle is not needed. This will save the disk space for Feature Pack for Web Services CIP. Click Next button.




Step 2.5 In the “Maintenance Packages” panel, input the Feature Pack for Web Services fix pack 6.1.0.16 and a Feature Pack for Web Services interim fix. Click Next button.

Step 2.6 Take the default of “Installation and Uninstallation Scripts” panel. Click Next button. Examples of how to use installation/uninstallation scripts can be found in Sample 5.

Step 2.7 Take the default of “Profile Customization” panel. Click Next button. Examples of how to use profile customization can be found in Sample 6.

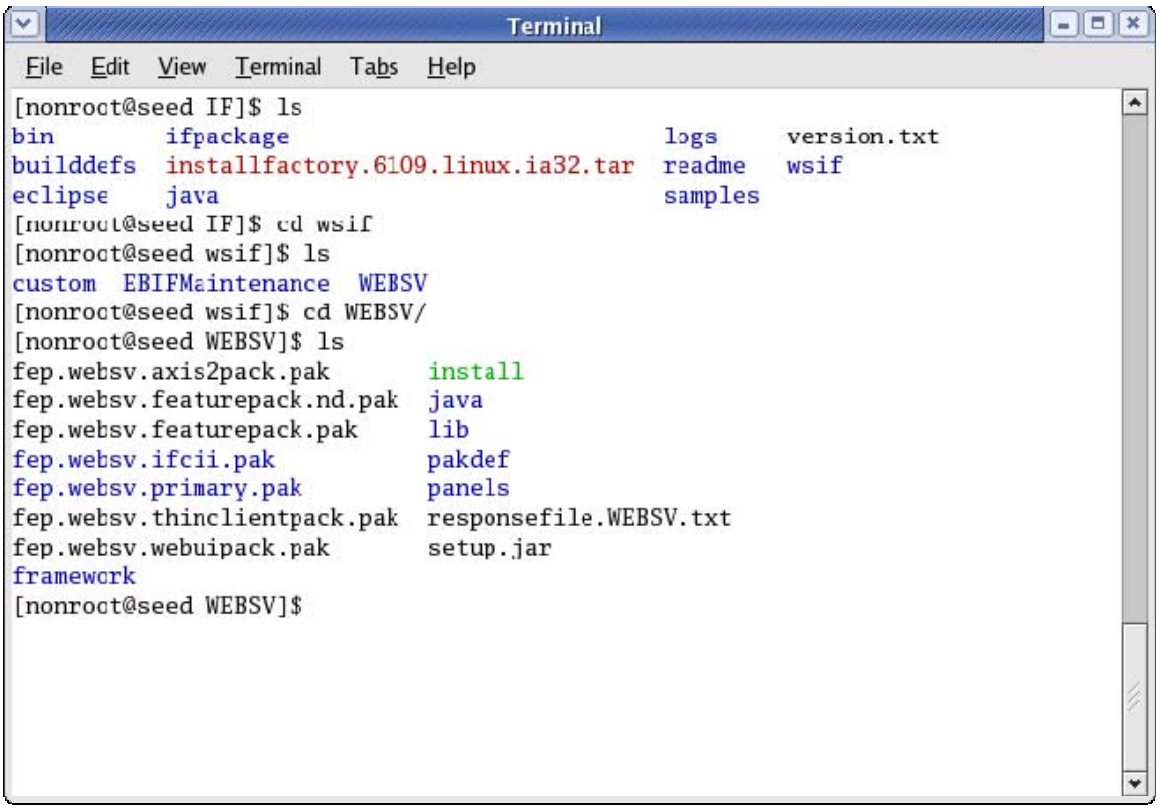
Step 2.8 Take the default of “Additional Files” panel. Click Next button. Examples of how to use additional files can be found in Sample 7.

Step 2.9 In the “Authorship” panel, input the Organization and Description of the CIP. Click Next button.

Step 2.10 Click “Save build definition file and generate customized installation package” radio button. Click “Estimated Size and Available Space” button to check space. Then click Finish button.

Step 2.11 Click OK button when the Feature Pack for Web Services CIP is created. Leave the Installation Factory GUI open to create the IIP in task 3.

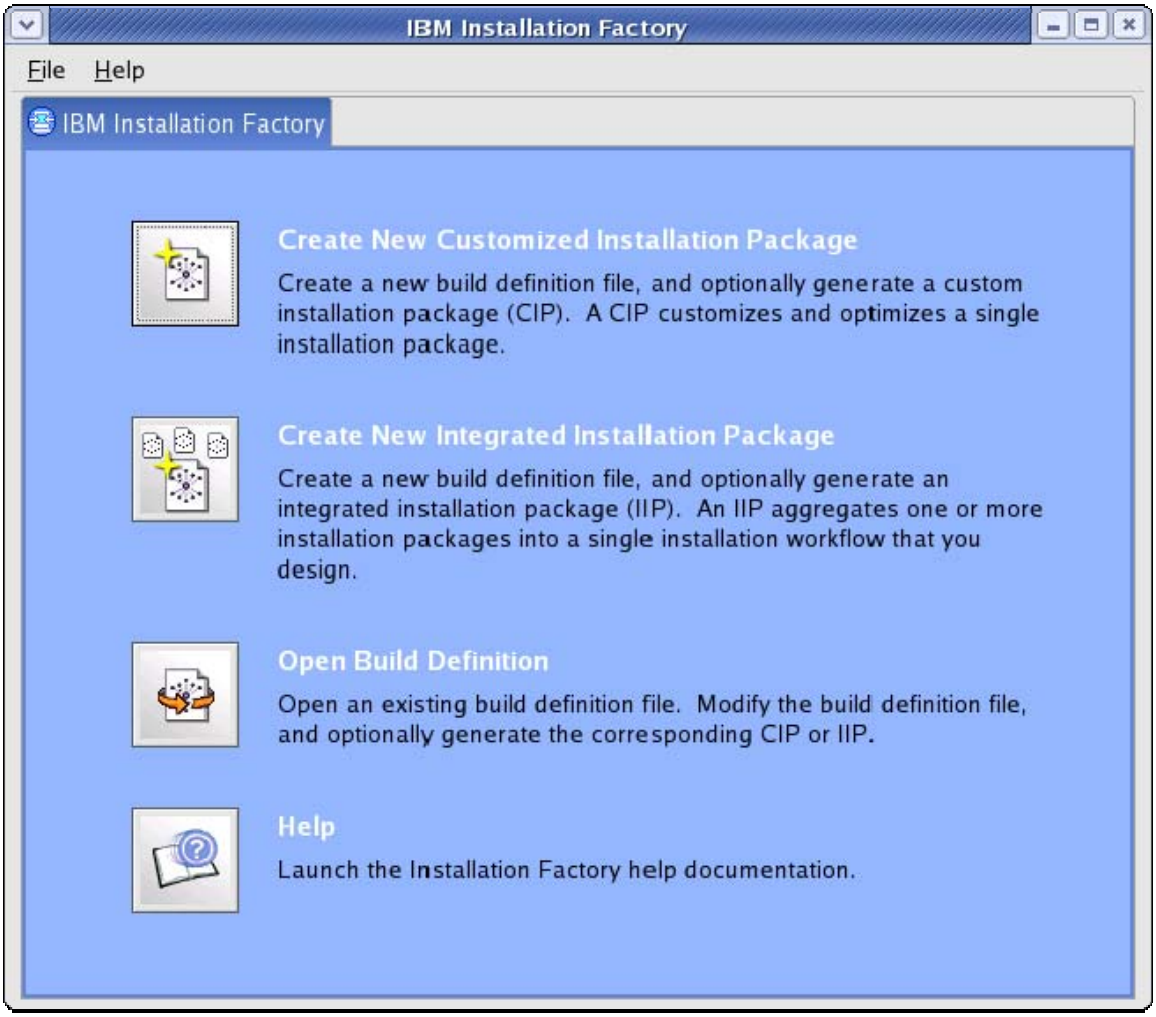
Now users have successfully created the Feature Pack for Web Services CIP. The CIP build looks like the following under /newdisk/IF/wsif. The Feature Pack for Web Services CIP installation command is located at /newdisk/IF/wsif/WEBSV/install. The sample silent response file (responsefile.WEBSV.txt) is located at the same directory as installation command.


Terminal
File Edit View Terminal Tabs Help
[nonroot@seed IF]$ ls
bin ifpackage logs version.txt
builddefs installfactory.6109.linux.ia32.tar readme wsif
eclipse java samples
[nonroot@seed IF]$ cd wsif
[nonroot@seed wsif]$ ls
custom EBIFMaintenance WEBSV
[nonroot@seed wsif]$ cd WEBSV/
[nonroot@seed WEBSV]$ ls
fep.websv.axis2pack.pak install
fep.websv.featurepack.nd.pak java
fep.websv.featurepack.pak lib
fep.websv.ifcii.pak pakdef
fep.websv.primary.pak panels
fep.websv.thinclientpack.pak responsefile.WEBSV.txt
fep.websv.webuipack.pak setup.jar
framework
[nonroot@seed WEBSV]$

### *Task 3. Create an IIP that includes a WebSphere Application Server CIP and a Feature Pack for Web Services CIP*

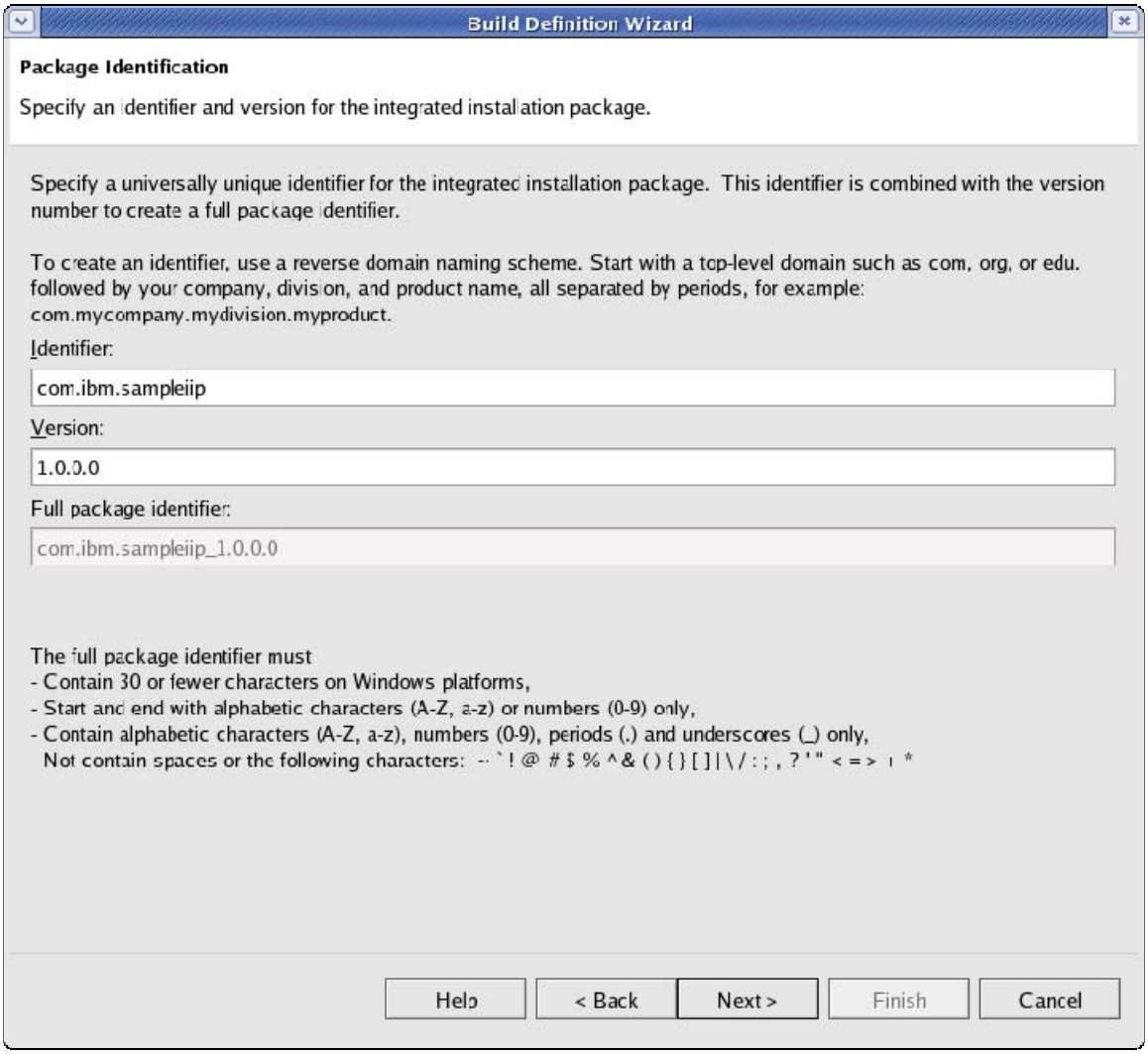
Content: Two contributions. The first one is WebSphere Application Server CIP; the second one is Feature Pack for Web Services CIP.

Step 3.1 If the Installation Factory GUI is still open, click “Create New Integrated Installation Package”.

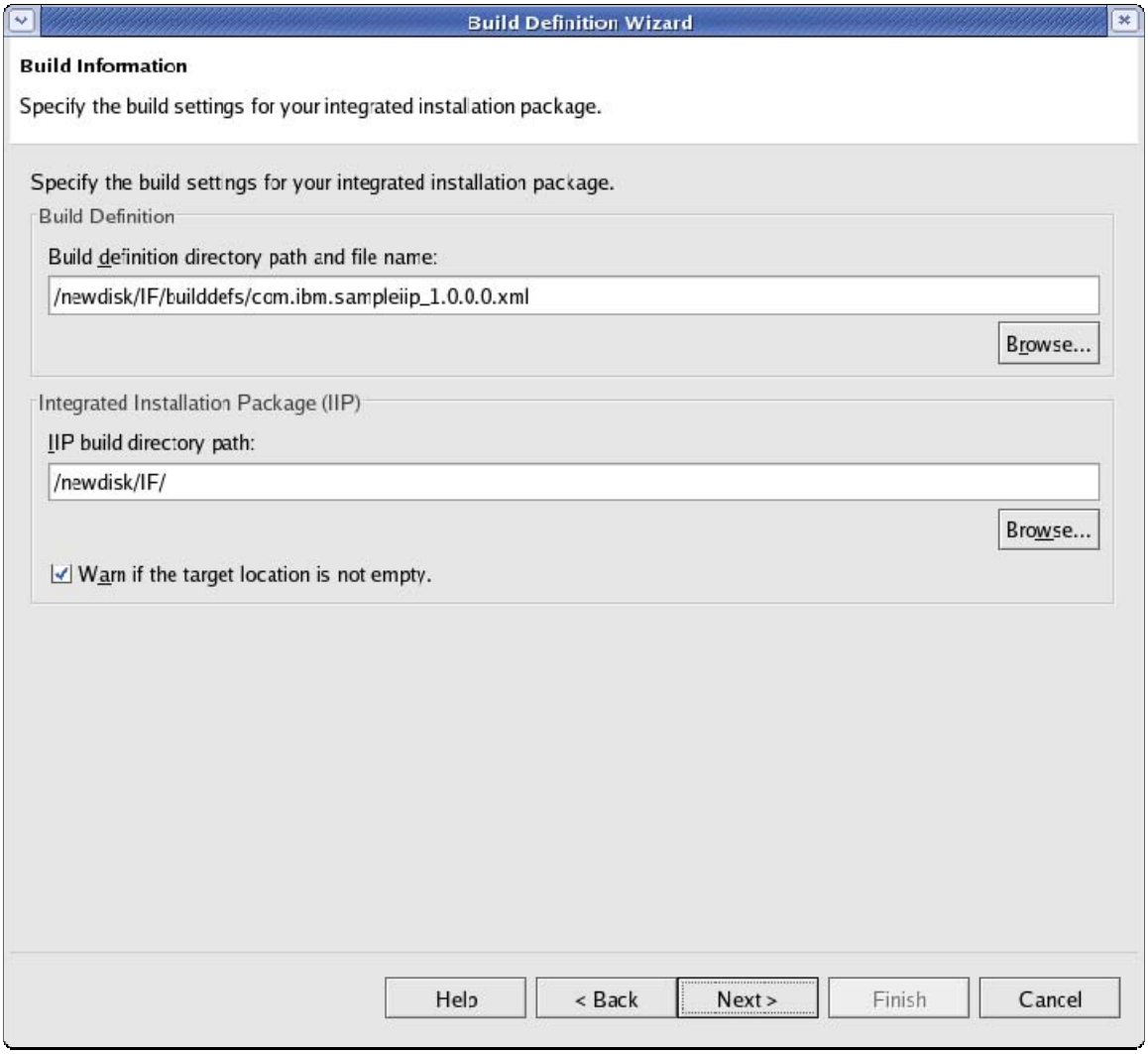


Step 3.2 Take the default in “Mode Selection” panel. Click Next button.

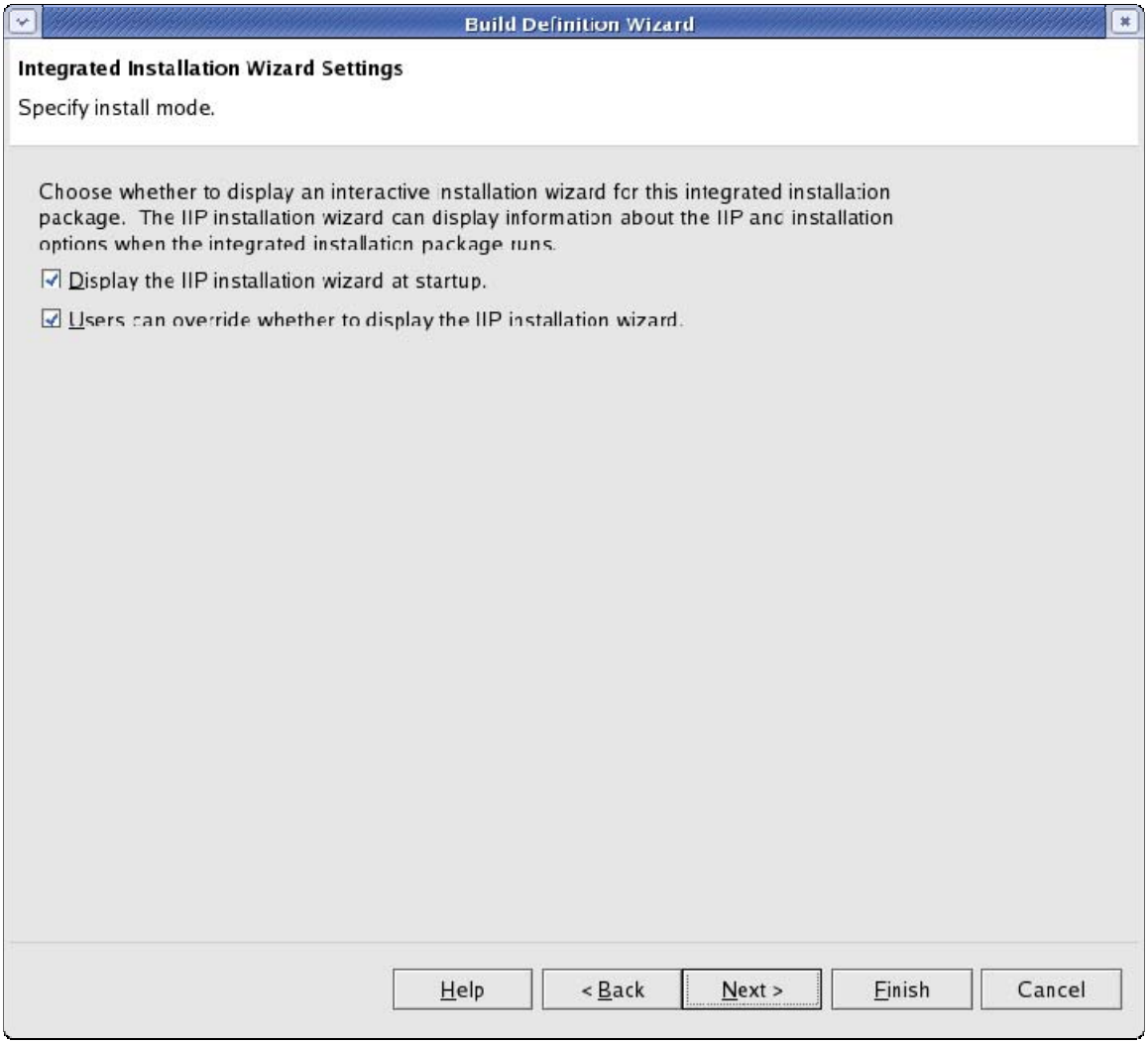
Step 3.3 In the “Package Identification” panel, change identifier and click Next button.



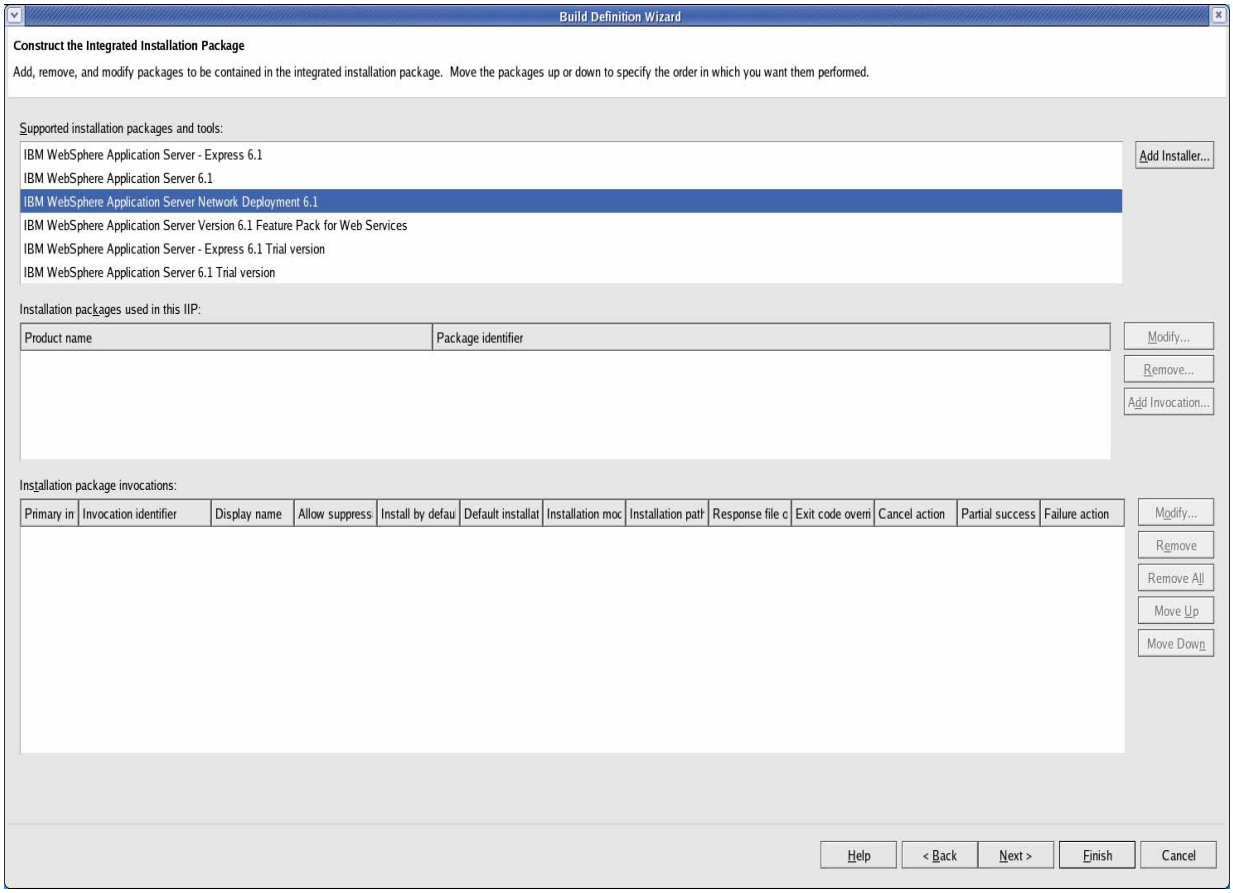
Step 3.4 In the “Build Information” panel, leave the default values for the Build definition directory path and file name, and the IIP build directory path. Click Next button.



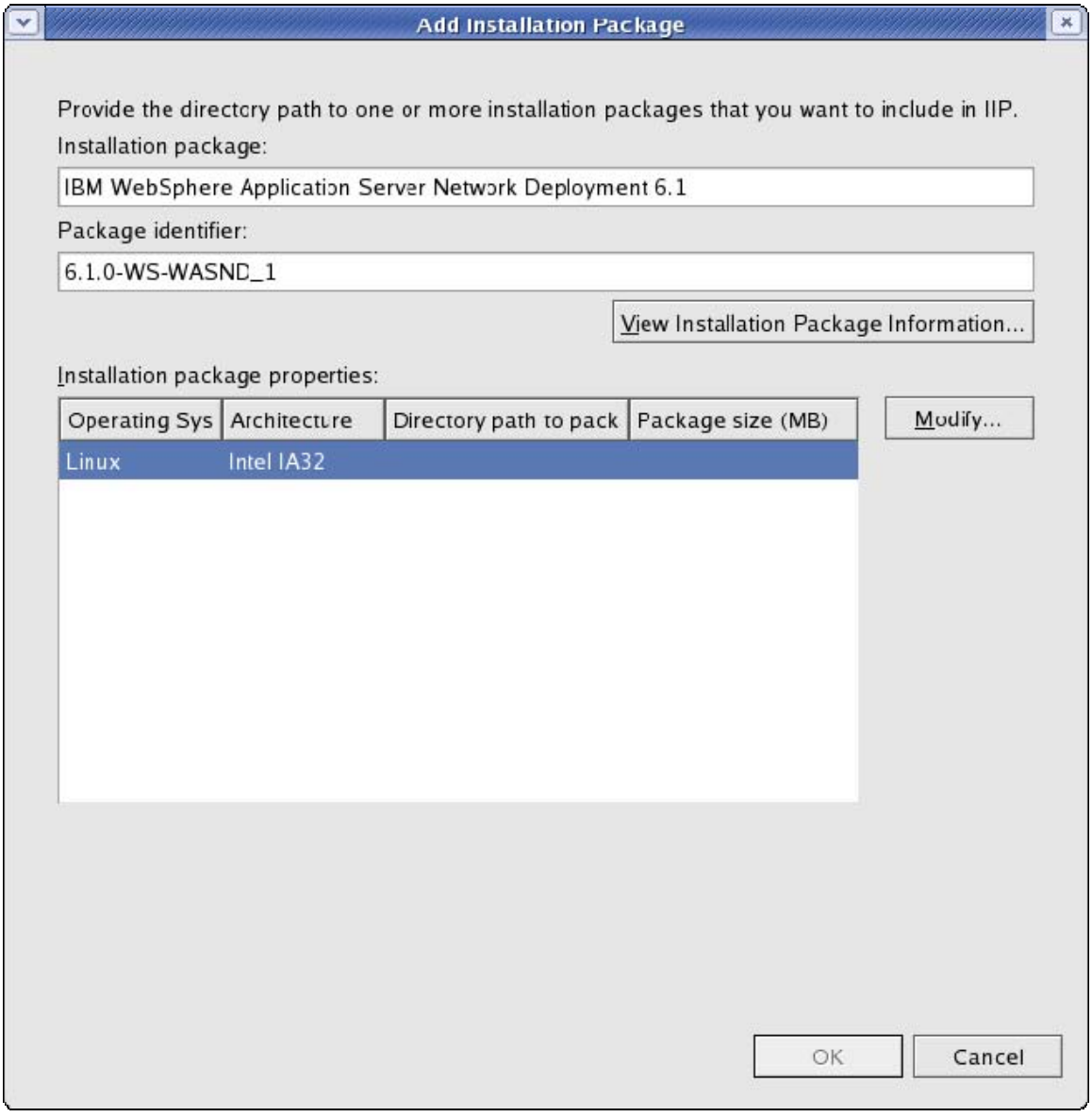
Step 3.5 Take the default of the “Integrated Installation Wizard Settings”, which will display the IIP installation wizard at startup, and user can override it to be IIP silent installation, with the –iipNoGUI option. Click Next button.



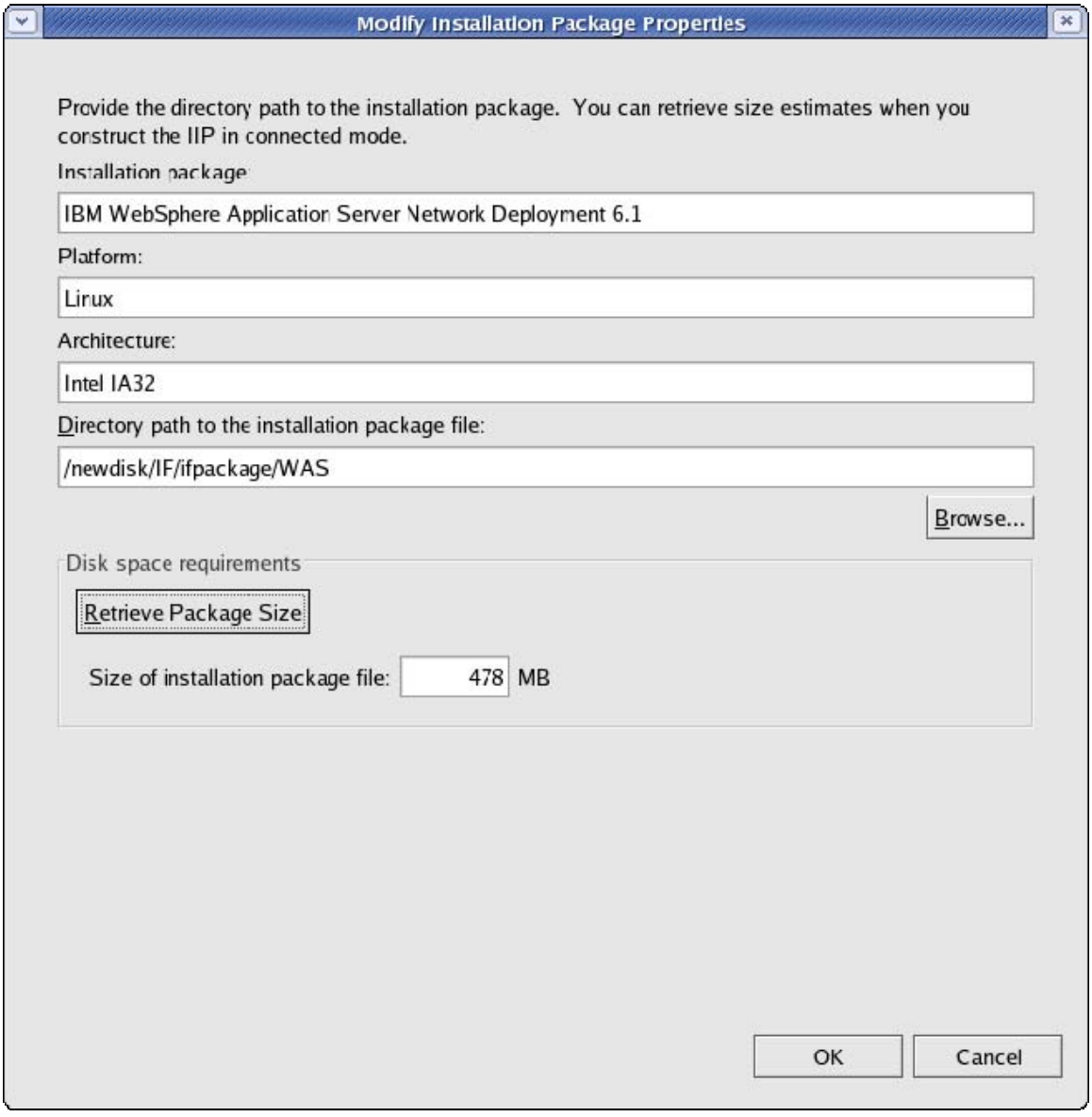
Step 3.6 In the “Construct the Integrated Installation Package” panel, select the “IBM WebSphere Application Server Network Deployment 6.1” from the list, then click “Add Installer” button.



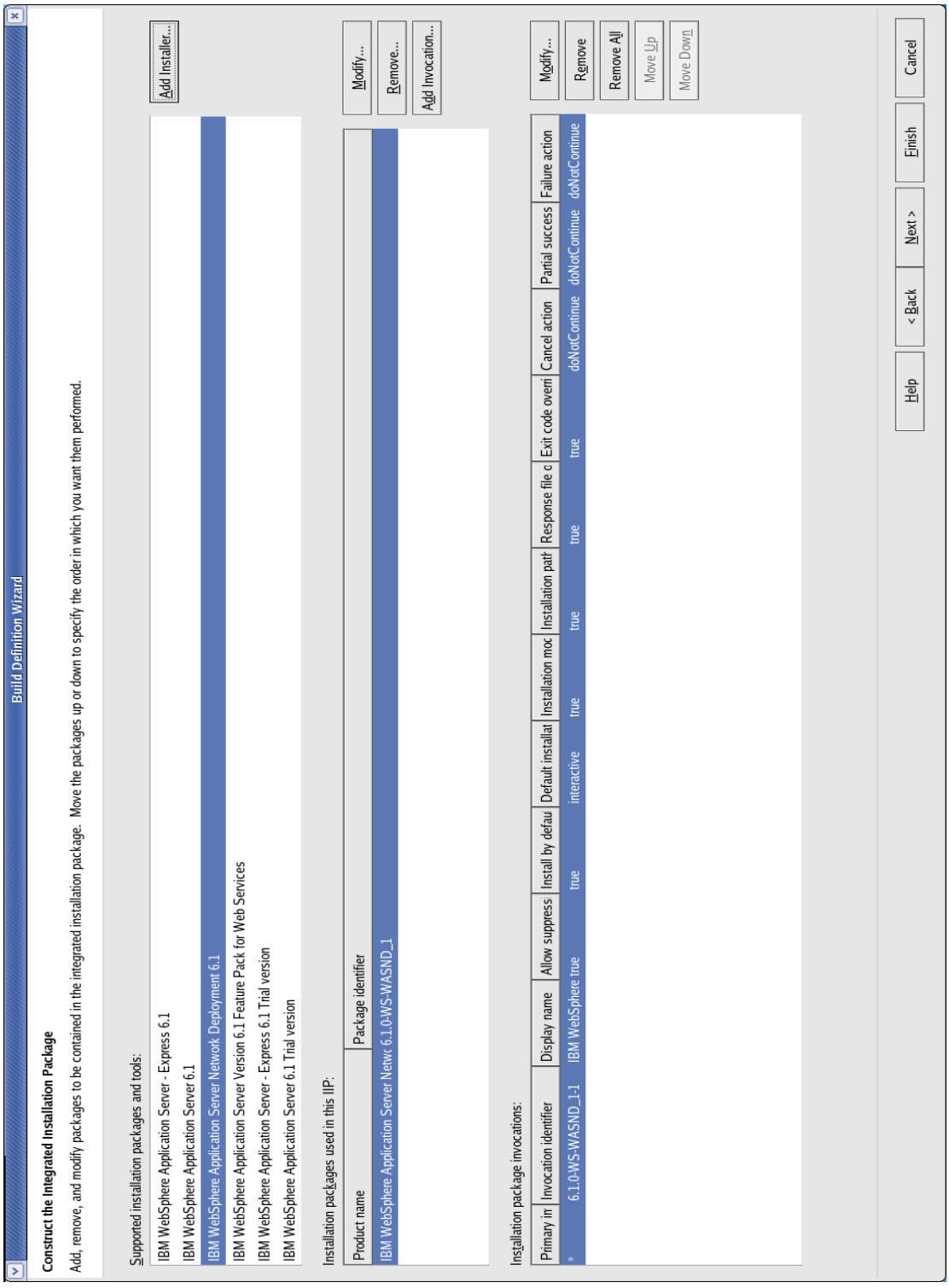
Step 3.7 In the popup “Add Installation Package” window, click “Modify” button to input the location of first contribution – WebSphere Application Server CIP.



Step 3.8 In the popup “Modify Installation Package Properties” window, browse to the location of the WebSphere Application Server CIP, then click “Retrieve Package Size” button. Click OK button.

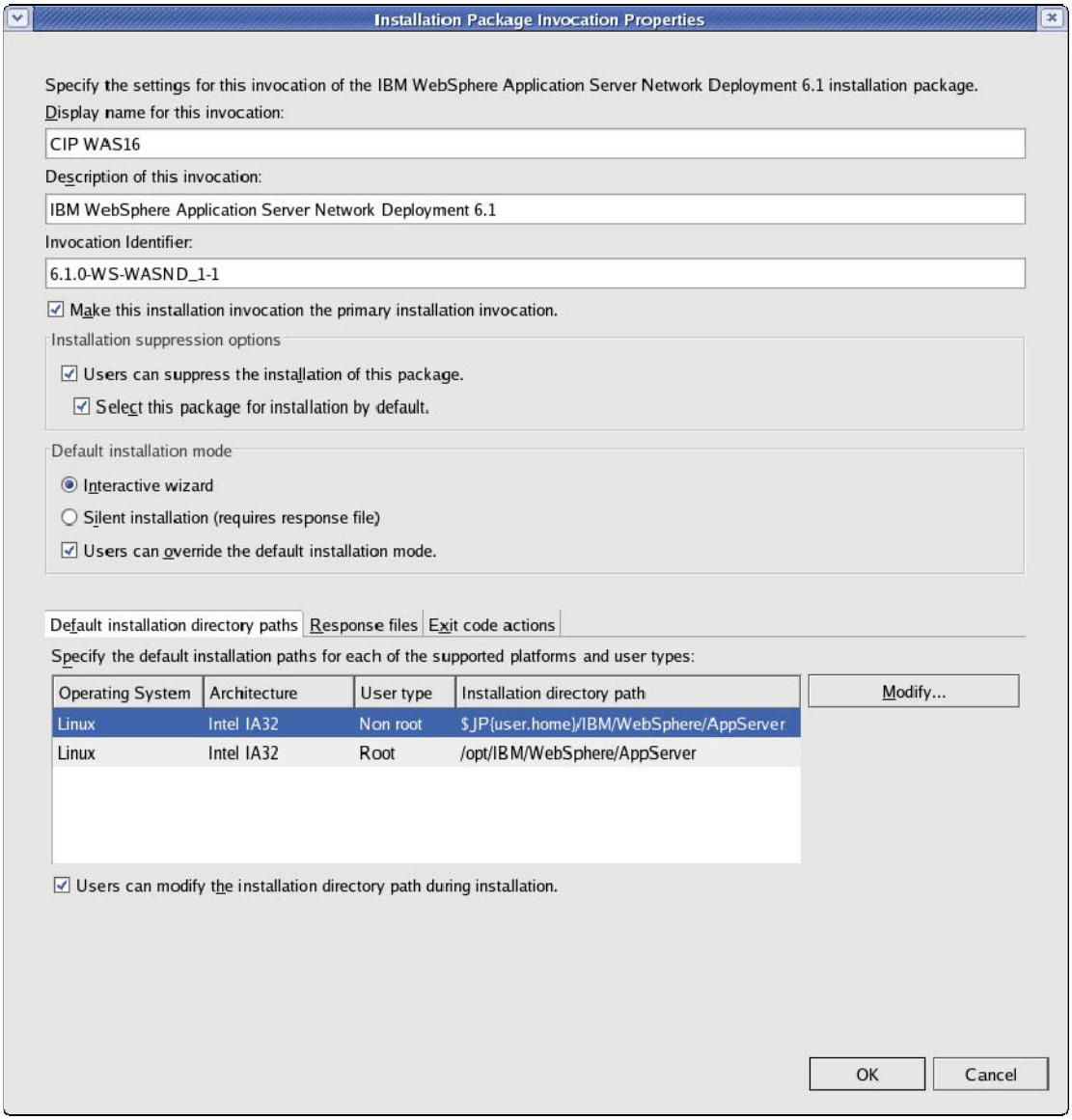


Step 3.9 Now users are back to the “Add Installation Package” window. Click OK button to return to the “Build Definition Wizard”. Users will see the following. If users want to change the default display name for the first contribution, click the “Modify” button beside the “Installation package invocations” list.

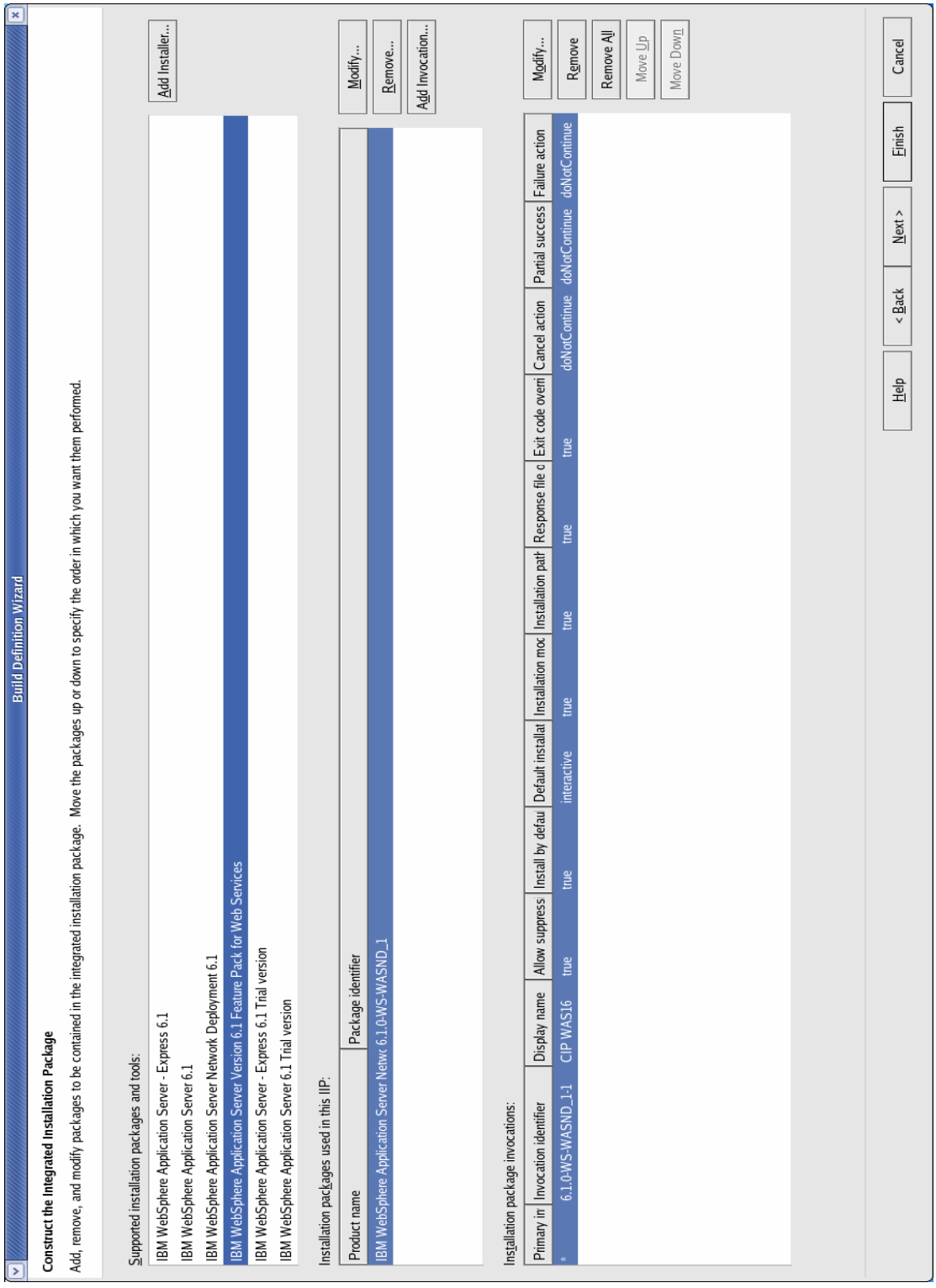


Step 3.10 In the popup “Installation Package Invocation Properties” window, users will be able to change several properties of the current contribution. Users may notice that this invocation is set as primary installation invocation by default, and the default installation mode is “interactive” (GUI) mode. And users can override the installation mode to be silent at IIP installation time.

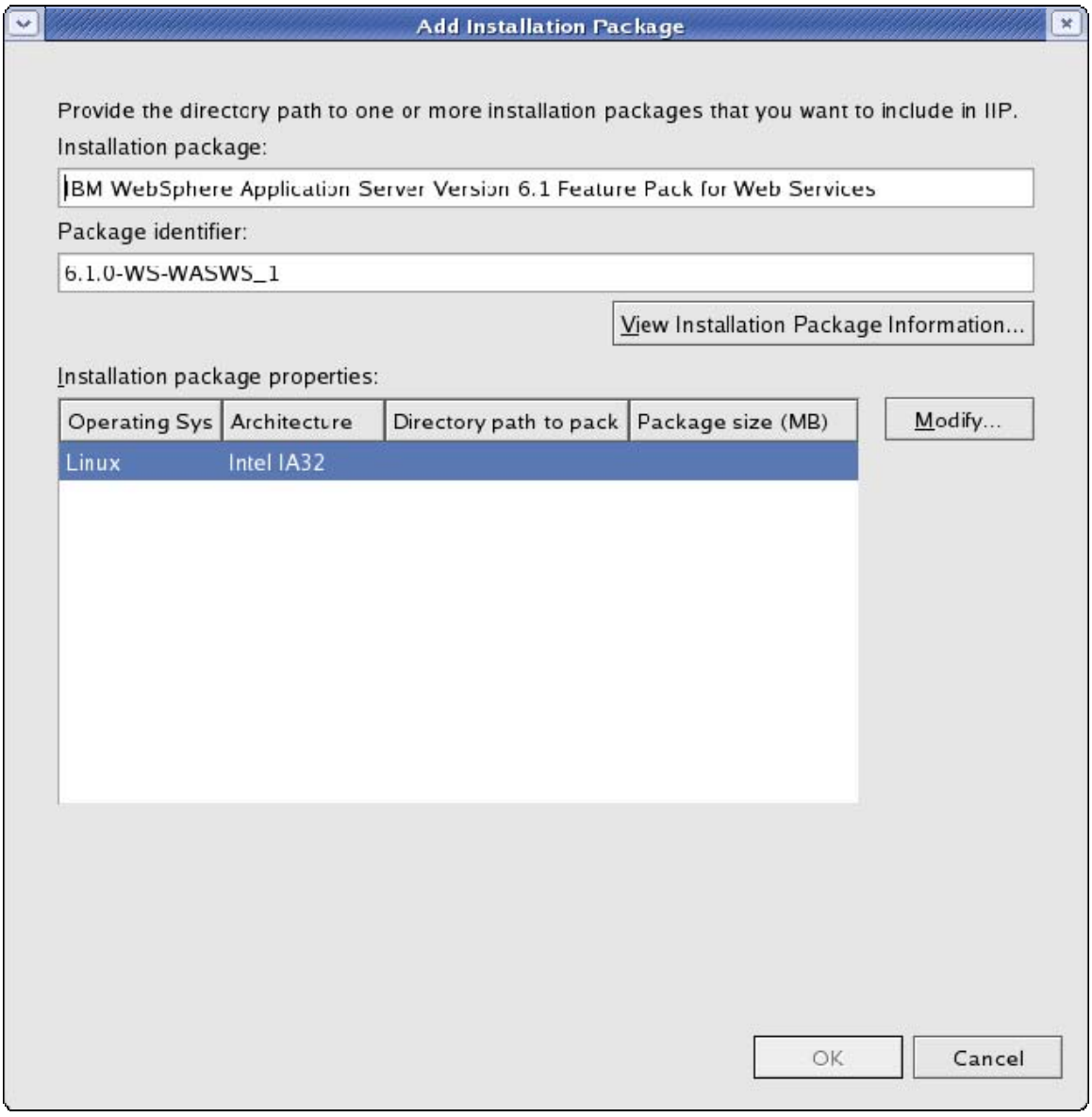
There are two sets of values for “Default installation directory paths”, “Response files”, and “Exit code actions”, as shown in the table near the bottom of the panel. One set is for non root user type and the other is for root user type. The default “Installation directory path” for non root user is $JP{user.home}/IBM/WebSphere/AppServer. For root user, it is /opt/IBM/WebSphere/AppServer. $JP{user.home} is a macro which will be resolved to /home/nonroot in our case. We leave the default values for now and show how they can be changed at installation time (in Task 4). Click OK button.


Installation Package Invocation Properties
Specify the settings for this invocation of the IBM WebSphere Application Server Network Deployment 6.1 installation package.
Display name for this invocation:
CIP WAS16
Description of this invocation:
IBM WebSphere Application Server Network Deployment 6.1
Invocation Identifier:
6.1.0-WS-WASND_1-1
Make this installation invocation the primary installation invocation.
Installation suppression options
Users can suppress the installation of this package.
Select this package for installation by default.
Default installation mode
Interactive wizard
Silent installation (requires response file)
Users can override the default installation mode.
Default installation directory paths
Response files
Exit code actions
Specify the default installation paths for each of the supported platforms and user types:
Operating System
Architecture
User type
Installation directory path
Modify...
Linux
Intel IA32
Non root
$JP{user.home}/IBM/WebSphere/AppServer
Linux
Intel IA32
Root
/opt/IBM/WebSphere/AppServer
Users can modify the installation directory path during installation.
OK
Cancel

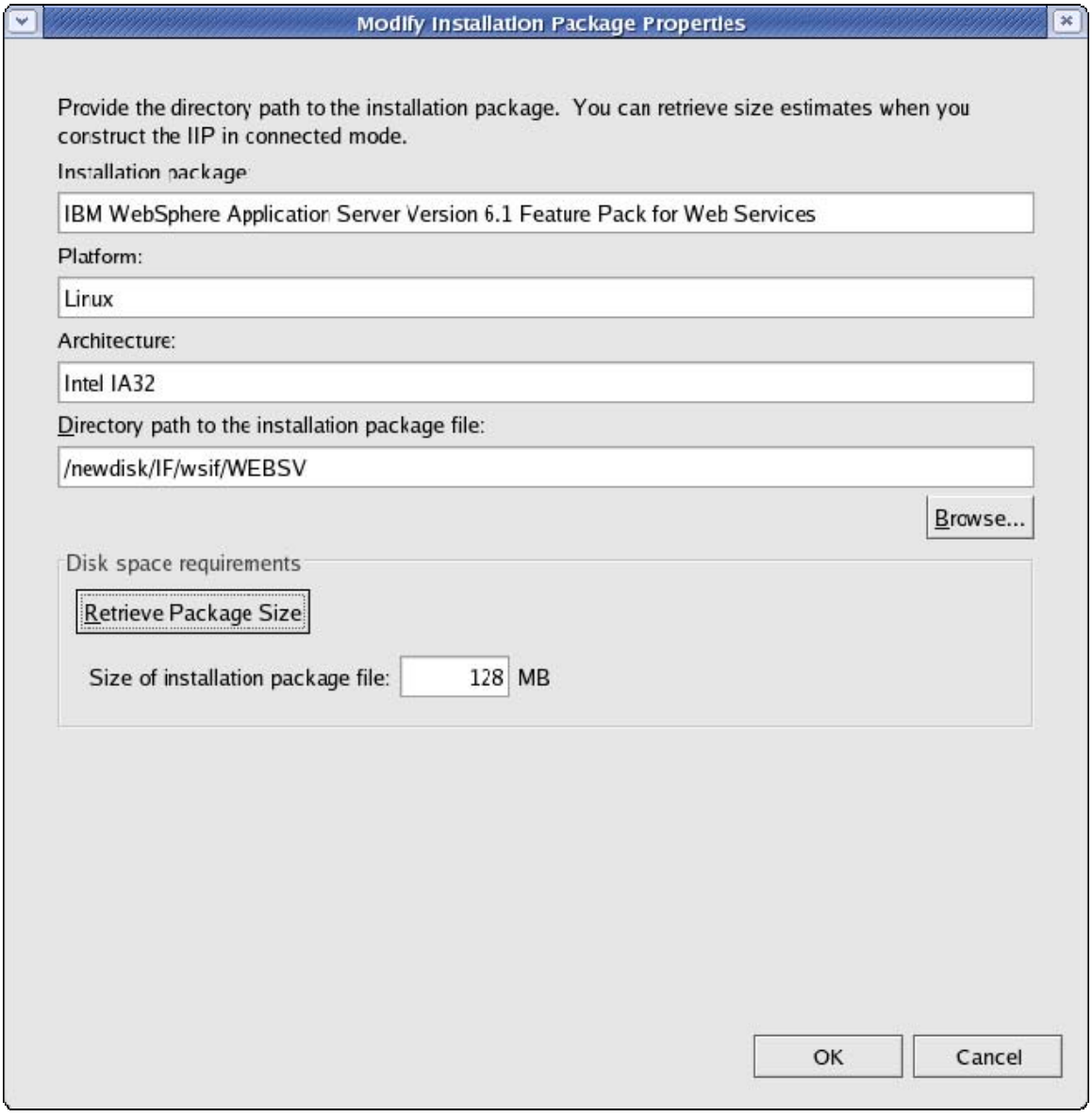
Step 3.11 Now users are back to the “Build Definition Wizard”. Add the second contribution for Feature Pack for Web Services CIP. Select “IBM WebSphere Application Server Version 6.1 Feature Pack for Web Services” from the list, click “Add Installer” button.



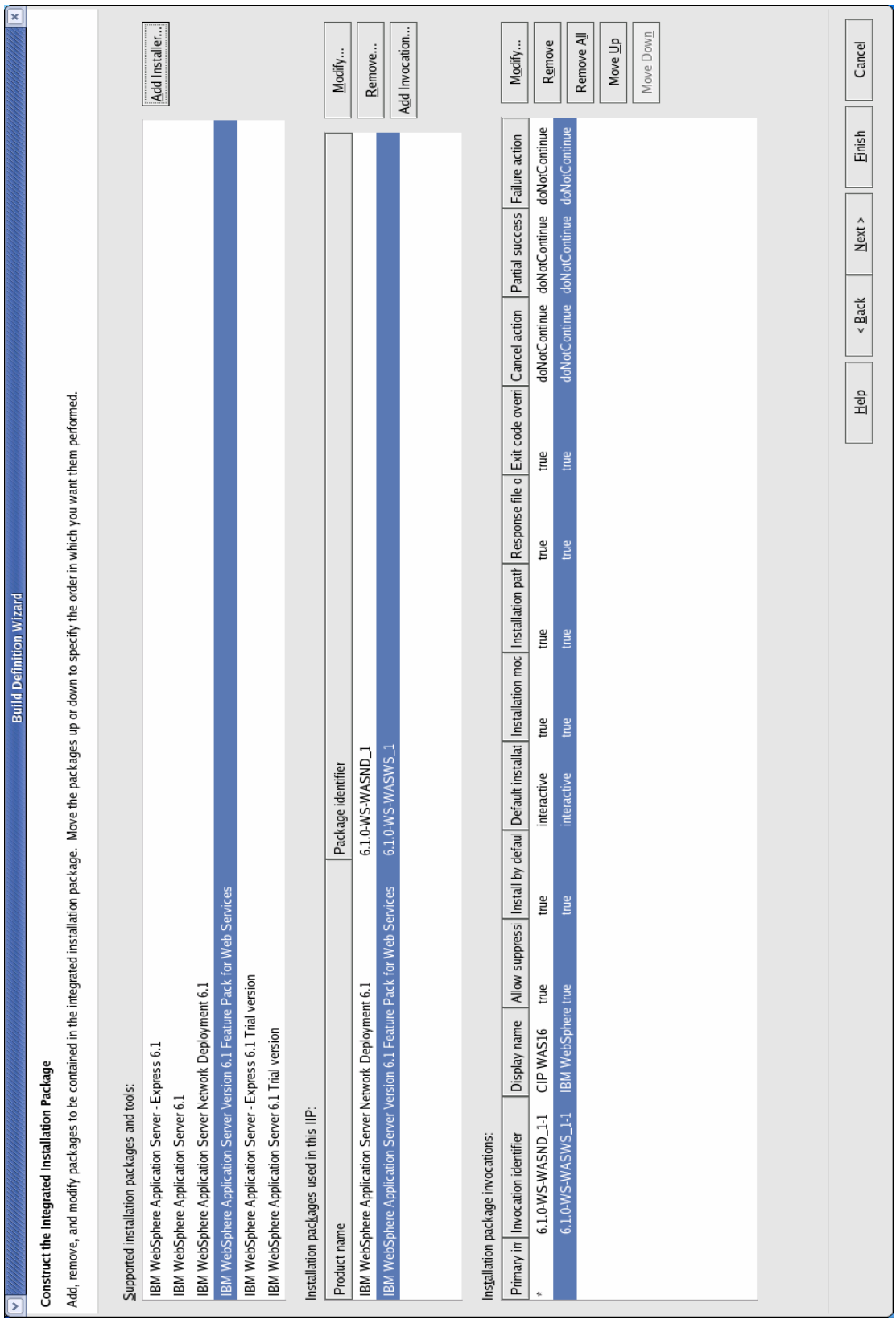
Step 3.12 In the popup “Add Installation Package” window, click “Modify” button to input the location of the Feature Pack for Web Services CIP.



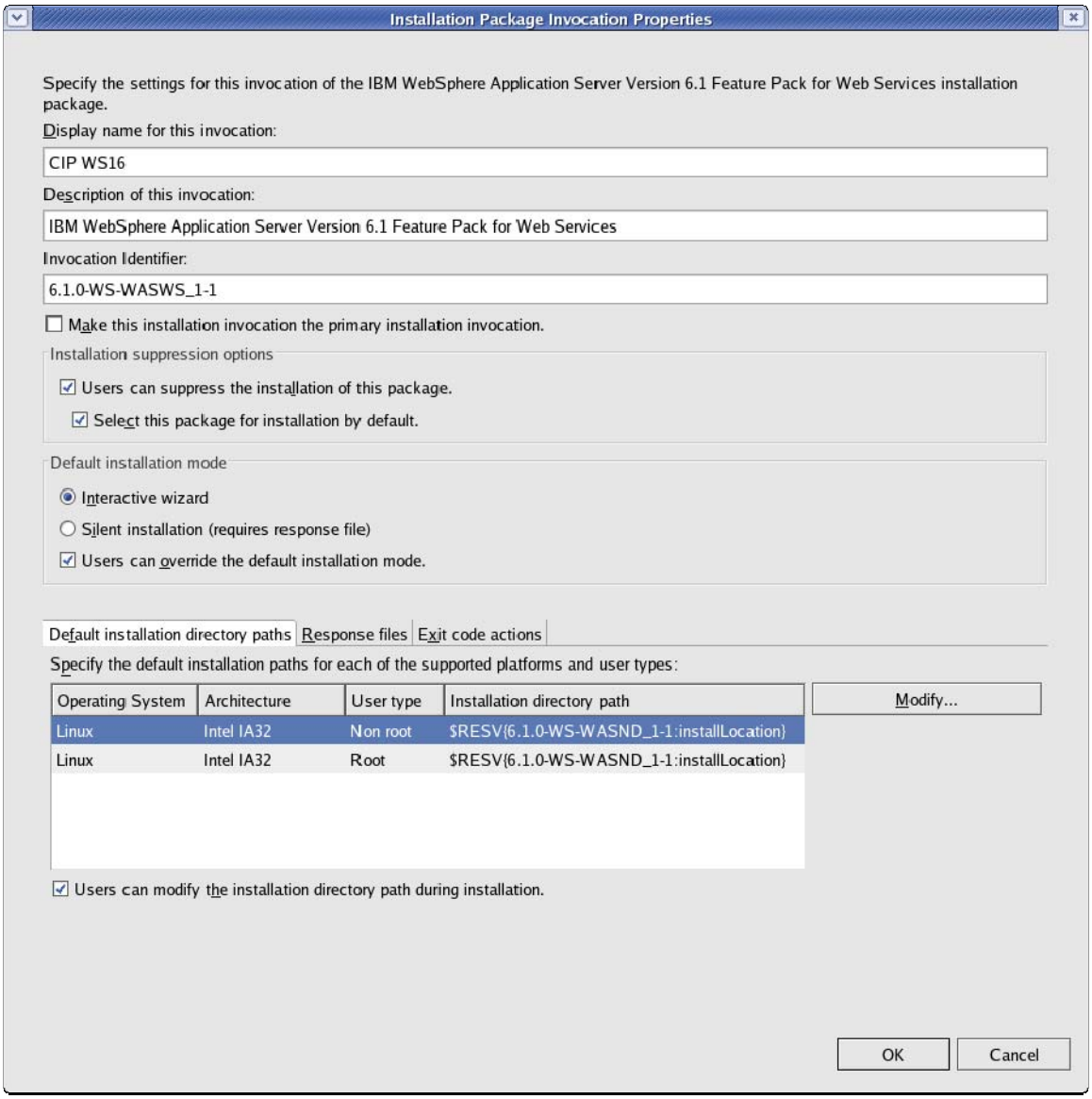
Step 3.13 In the popup “Modify Installation package Properties” window, browse to the directory where Feature Pack for Web Services CIP was built, then click “Retrieve Package Size” button. Click OK button.



Step 3.14 Now users are back to the “Build Definition Wizard”. Note that the second invocation is added.

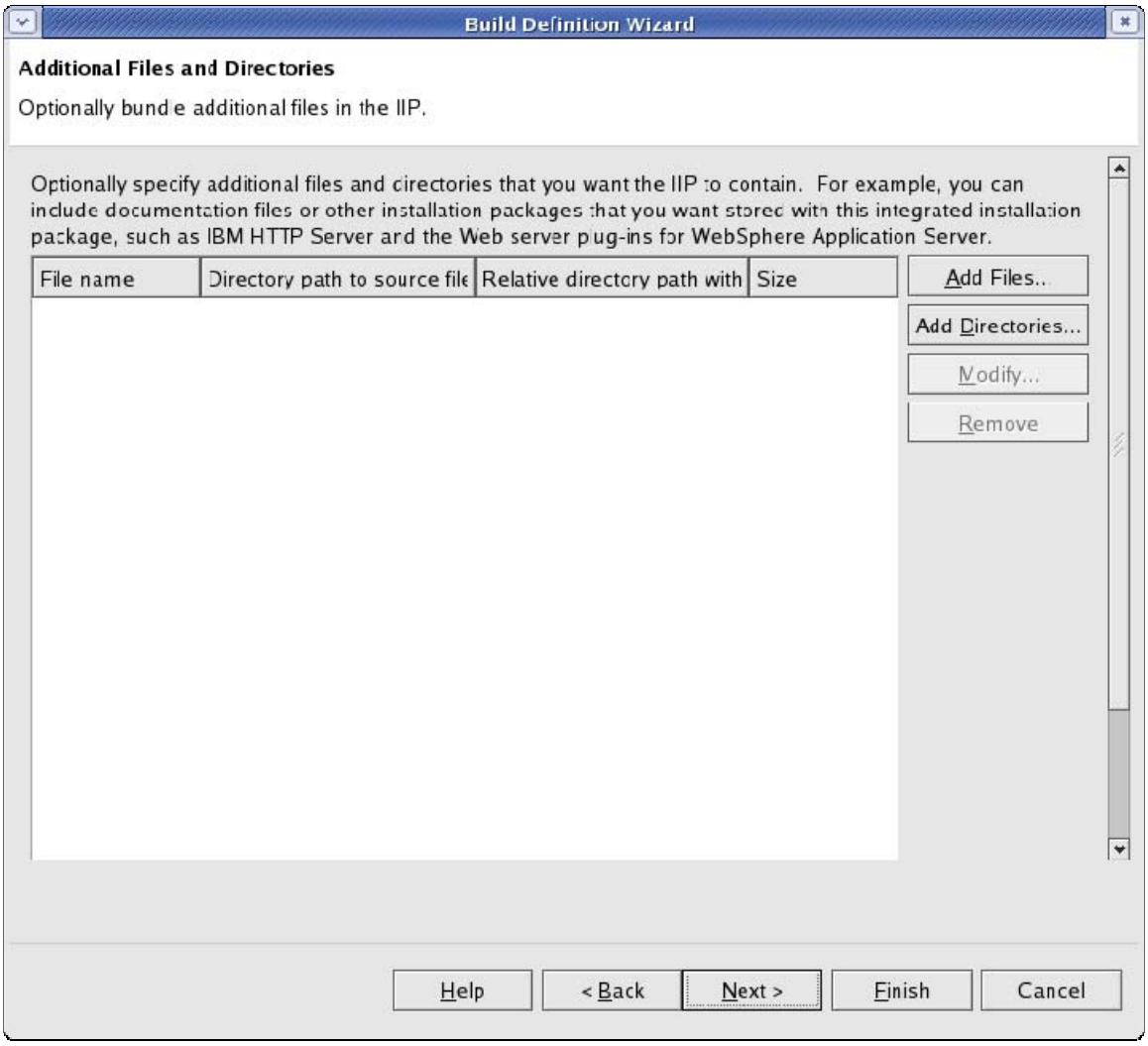


To view the properties of the second invocation, highlight the second invocation, then click “Modify” button beside the “Installation package invocations” list. Change the “Display name of this invocation” to be “CIP WS16”. Users may find that the “Installation directory path” is set to the WebSphere Application Server CIP installation location by using a macro $RESV{}.

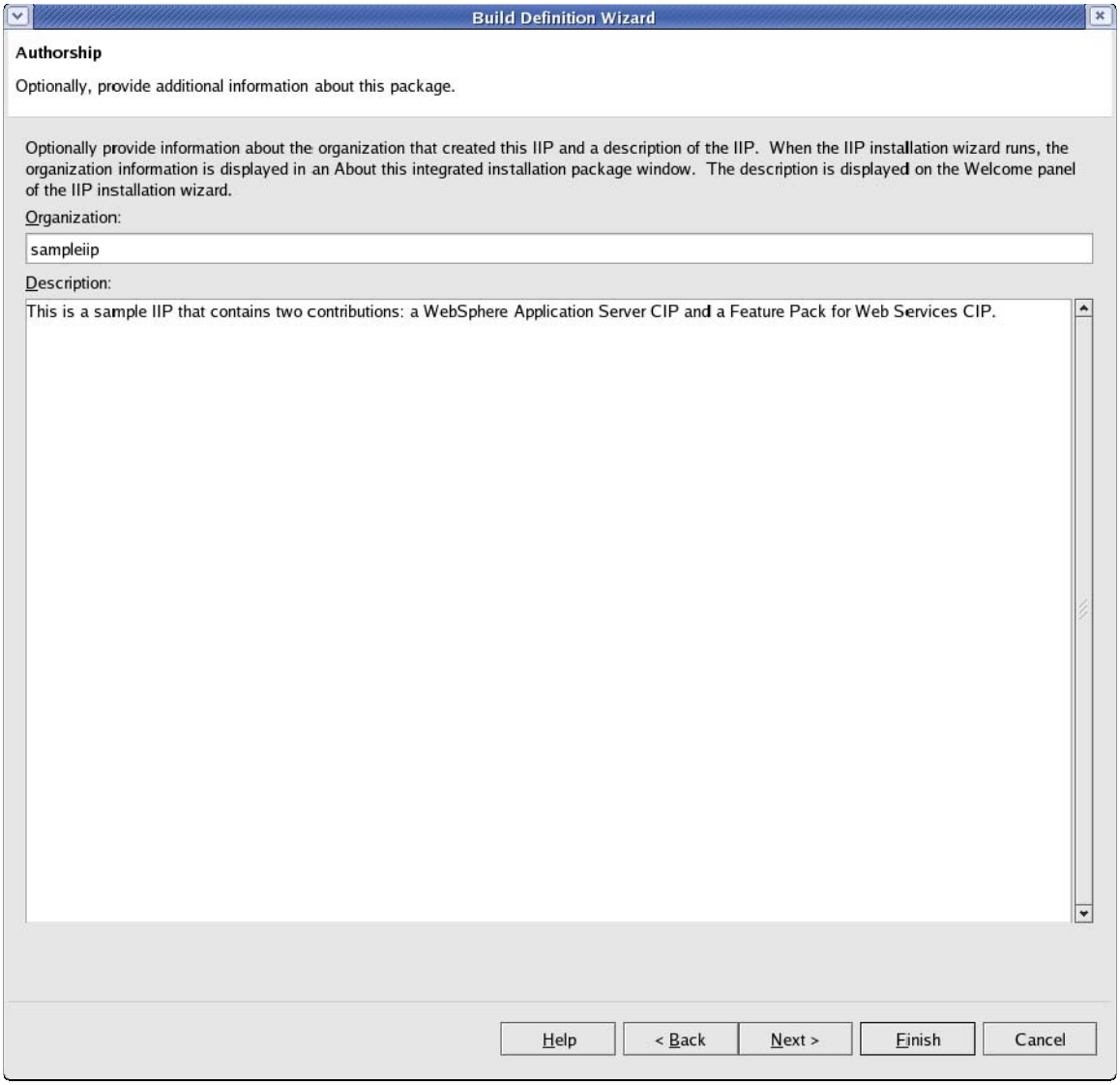


Step 3.15 Click OK to close the window, then click Next button.

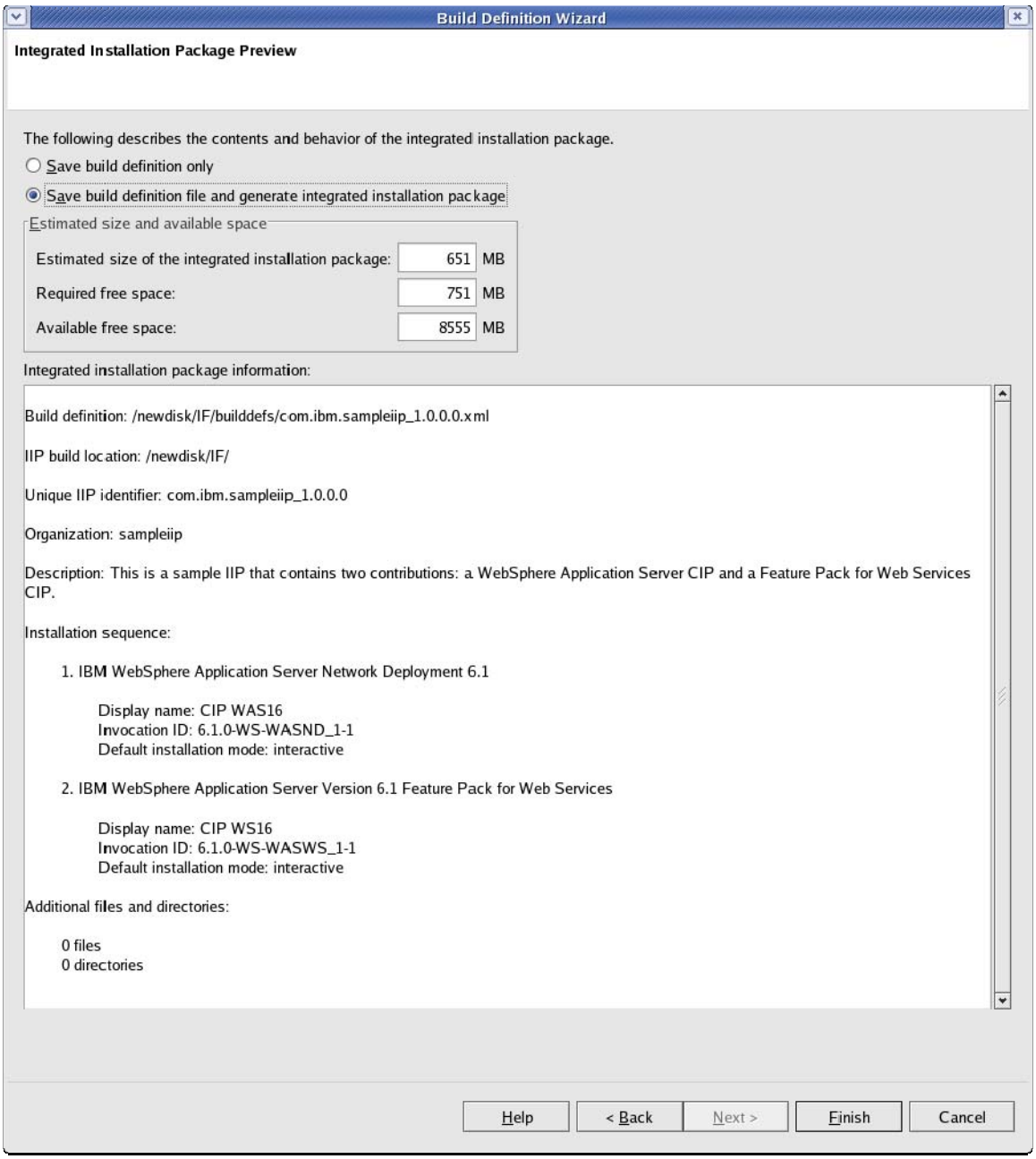
Step 3.16 Leave the default of “Additional Files and Directories”. Click Next button.



Step 3.17 In the Authorship panel, input the Organization and Description of the IIP. Click Next button.

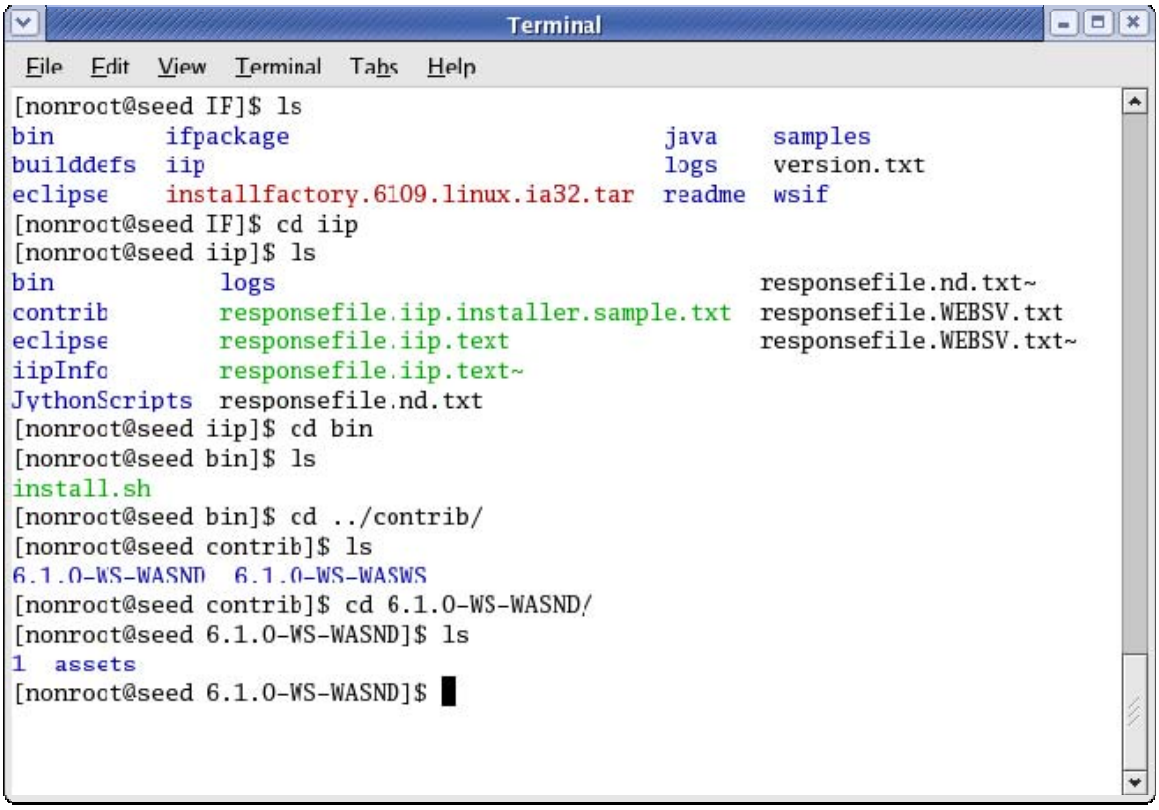


Step 3.18 Click “Save build definition file and generate integrated installation package” radio button. Then click Finish button.




Step 3.19 When the IIP is generated successfully, click OK button in the confirmation window. At this point, Installation Factory GUI can be closed.

Now users have successfully built the IIP. The IIP build looks like the following under /newdisk/IF/iip.
The IIP installation command is located at /newdisk/IF/iip/bin/install.sh.
The sample IIP silent response file is located at /newdisk/IF/iip/responsefile.iip.installer.sample.txt.
The two contributions are located at /newdisk/IF/iip/contrib folder.

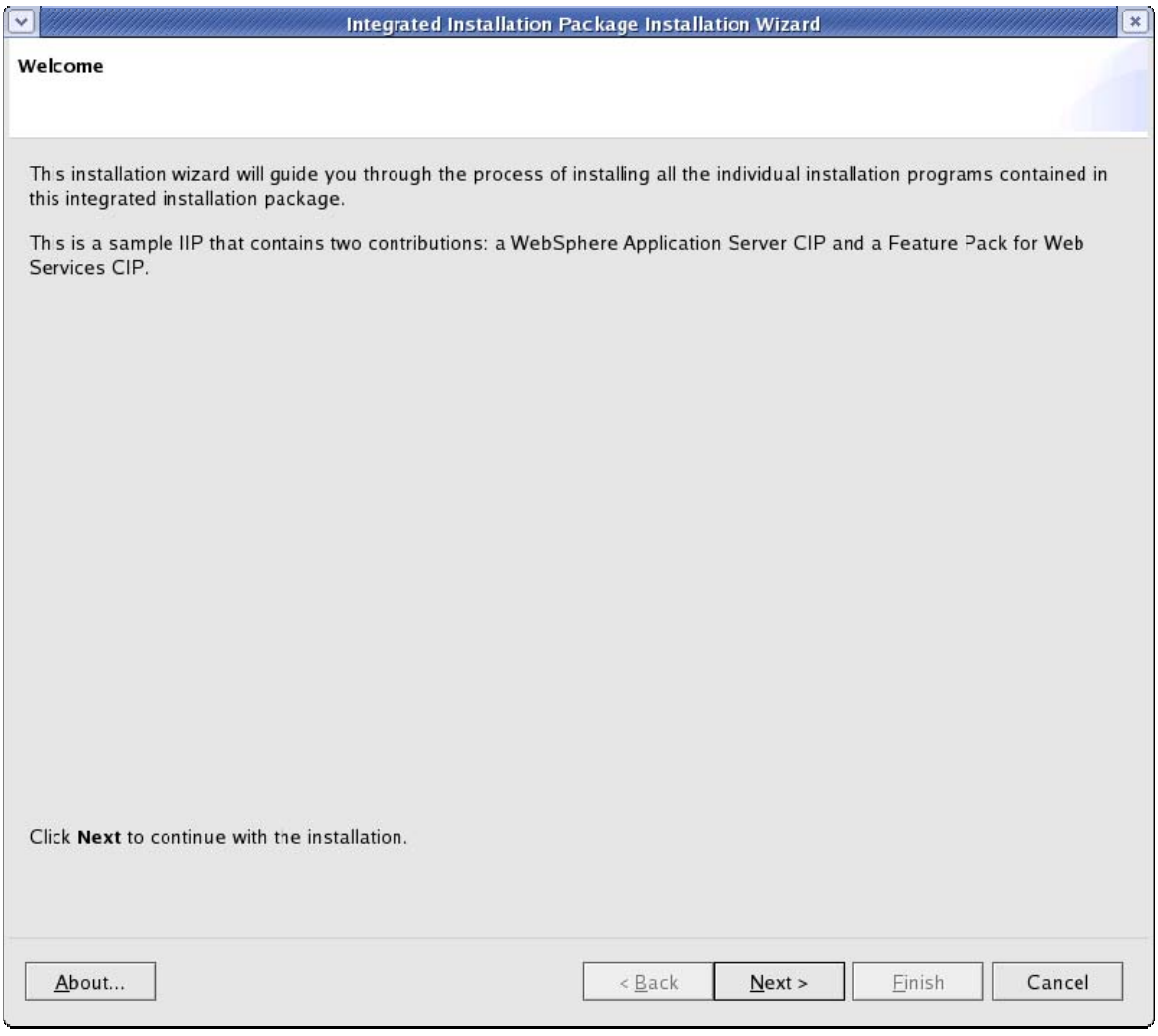


## *Task 4. Install the IIP using the IIP installer (GUI mode)*

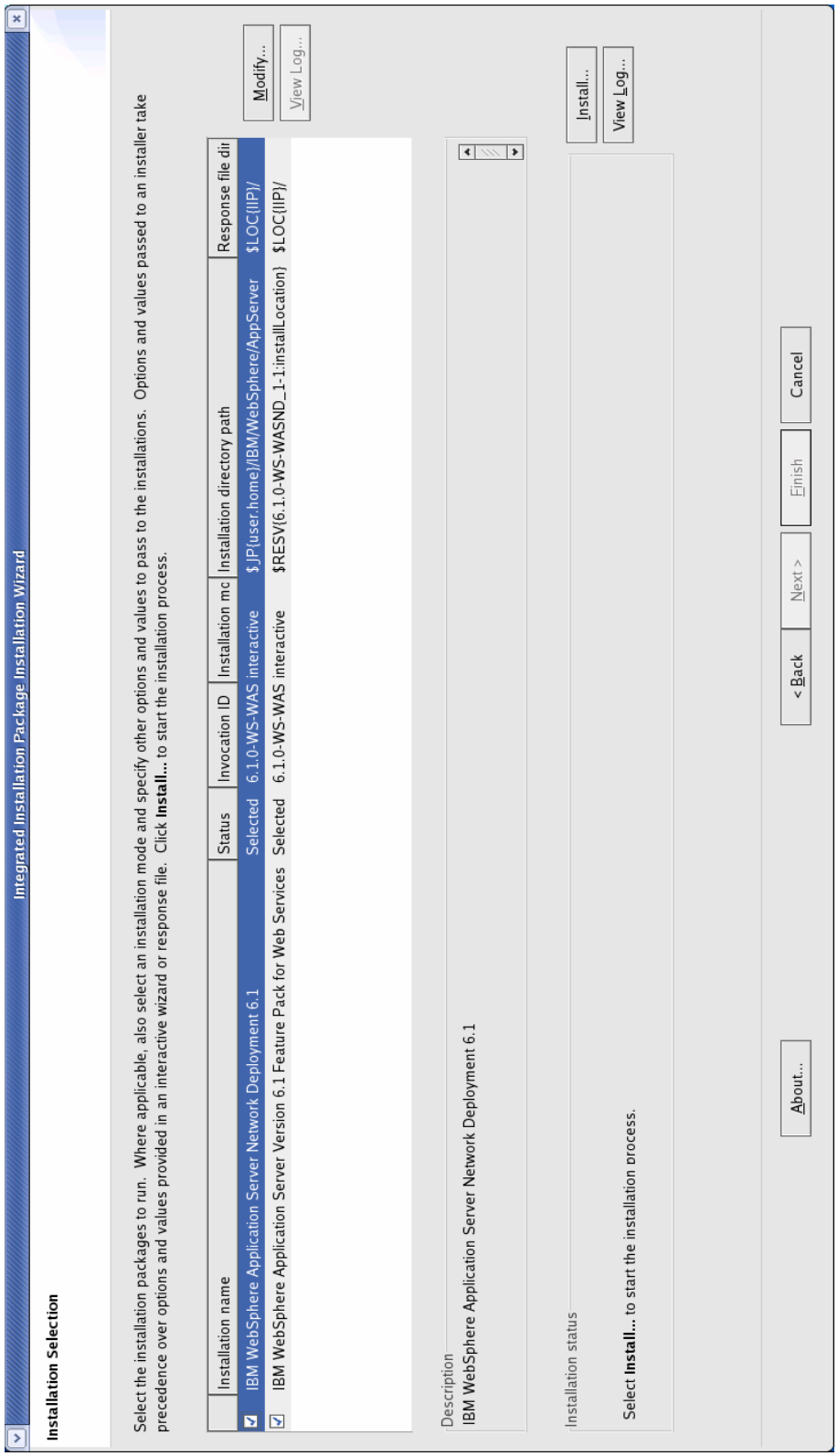
Step 4.1 Launch the IIP installer GUI from /newdisk/IF/iip/bin
[nonroot@hostname bin]$ ./install.sh –iipUserType=nonroot

The reason to have –iipUserType is to pick up the right set of values from the IIP build definition, either for non root user type (nonroot) or root user type (root).

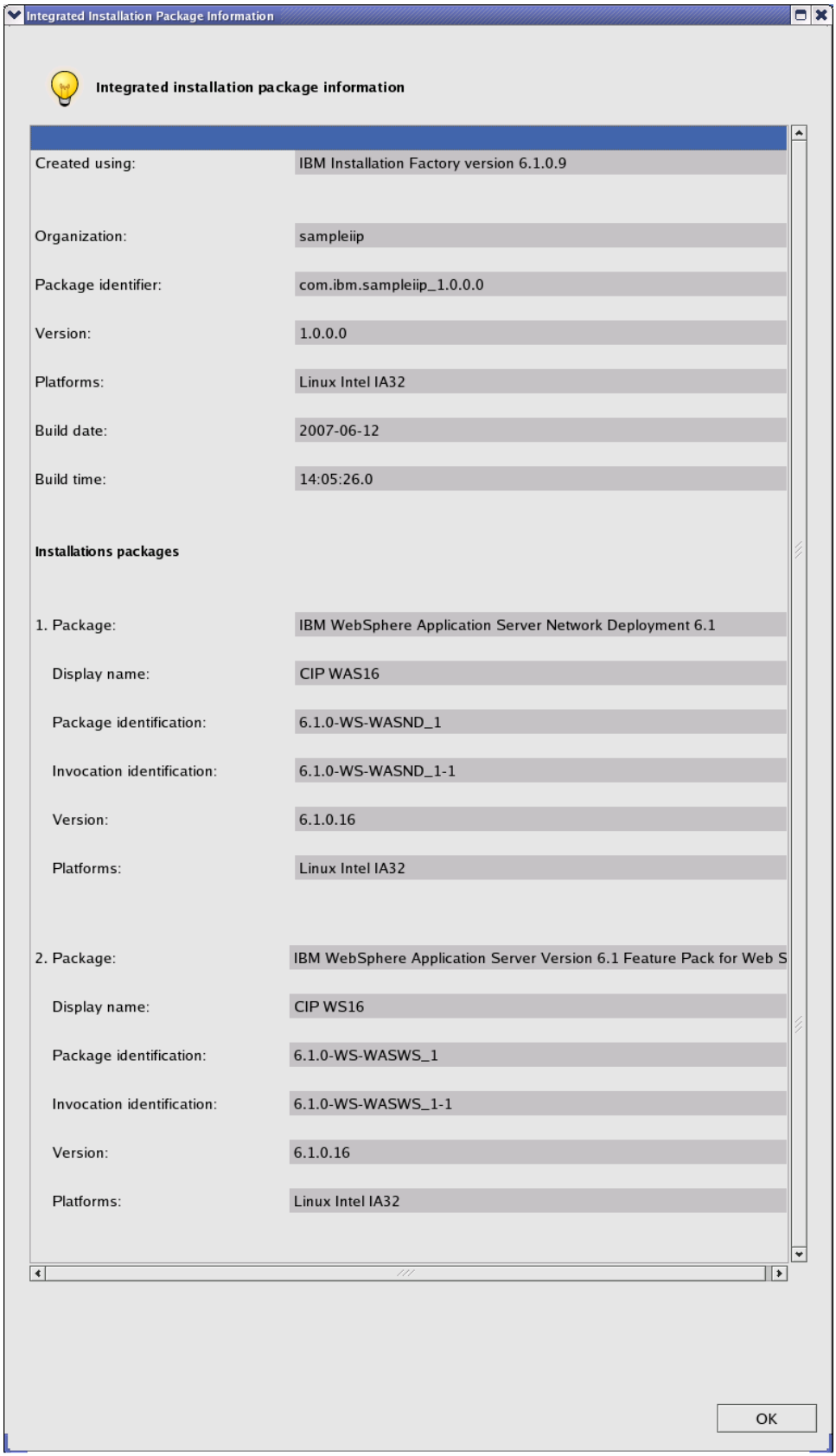
In the Welcome panel, click Next button.



Step 4.2 The “Installation Selection” panel will show the two invocations that were created in Task 3.

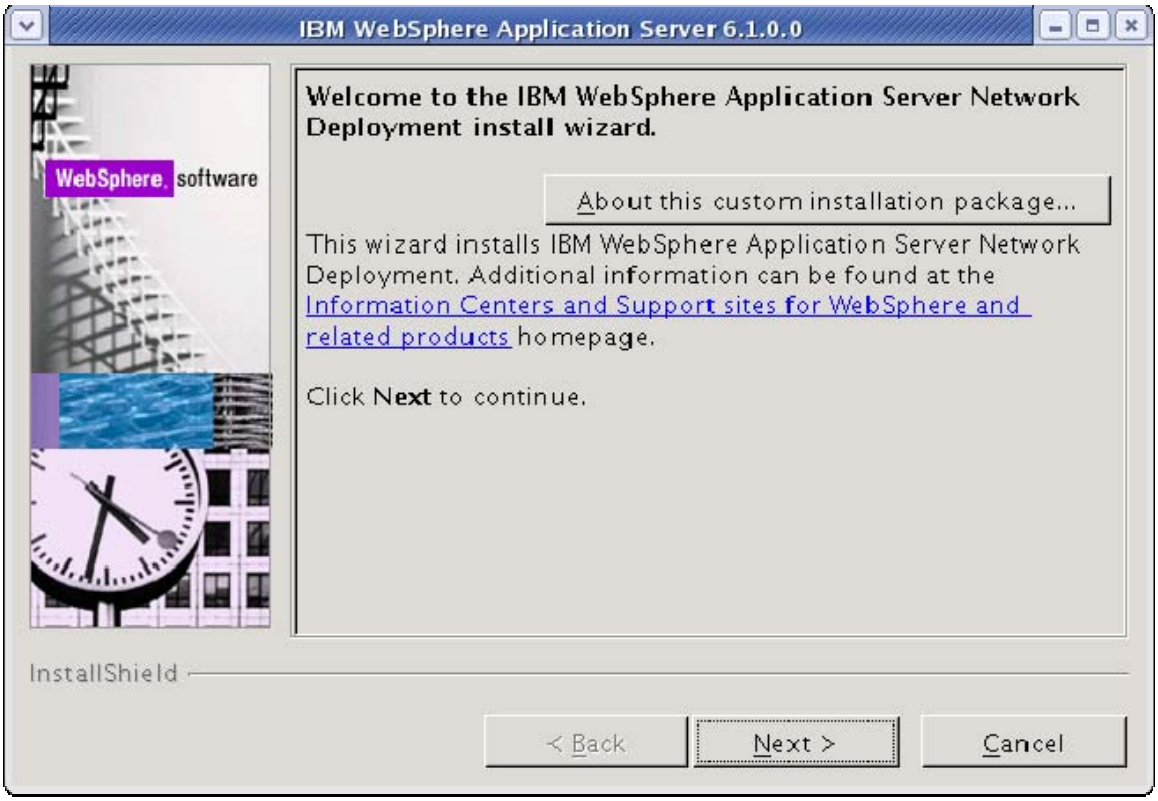


Click the “About…” button to view the IIP information.



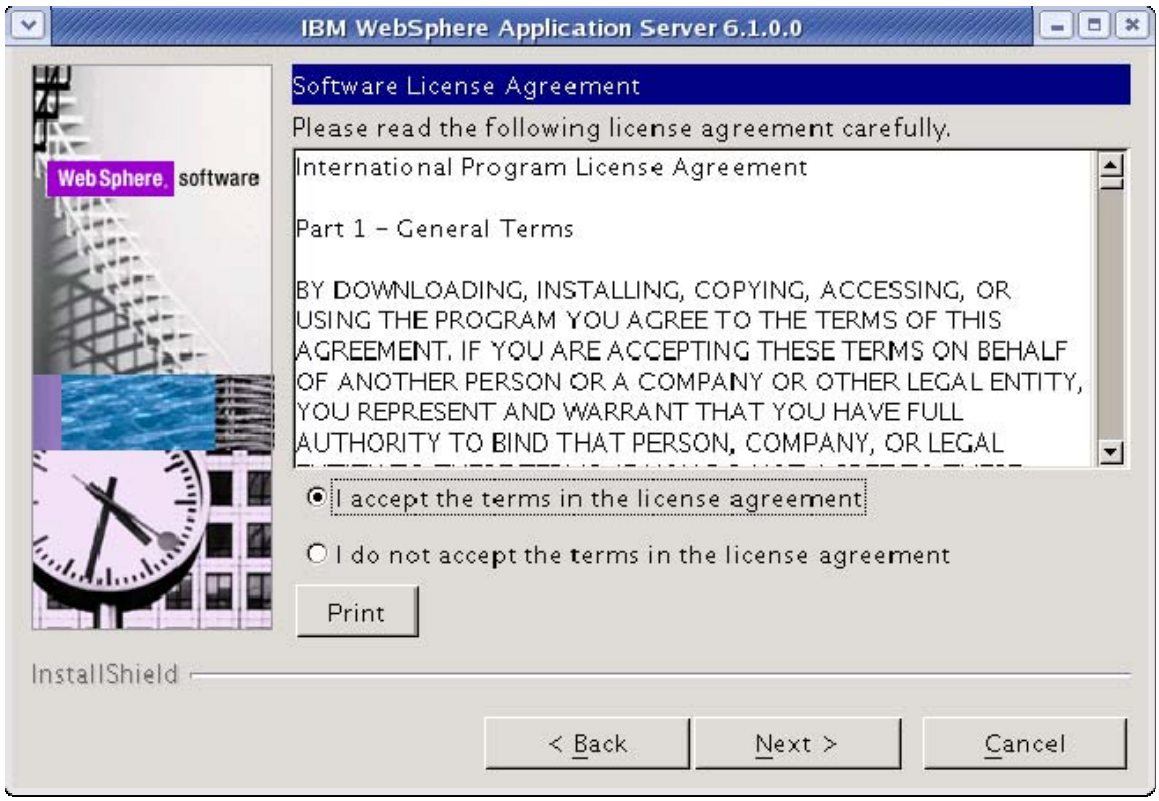
Click OK button to return to the “Installation Selection” panel. Click “Install…” button to start installing the first invocation, which is WebSphere Application Server CIP.

Step 4.3 The CIP installer will pop up.

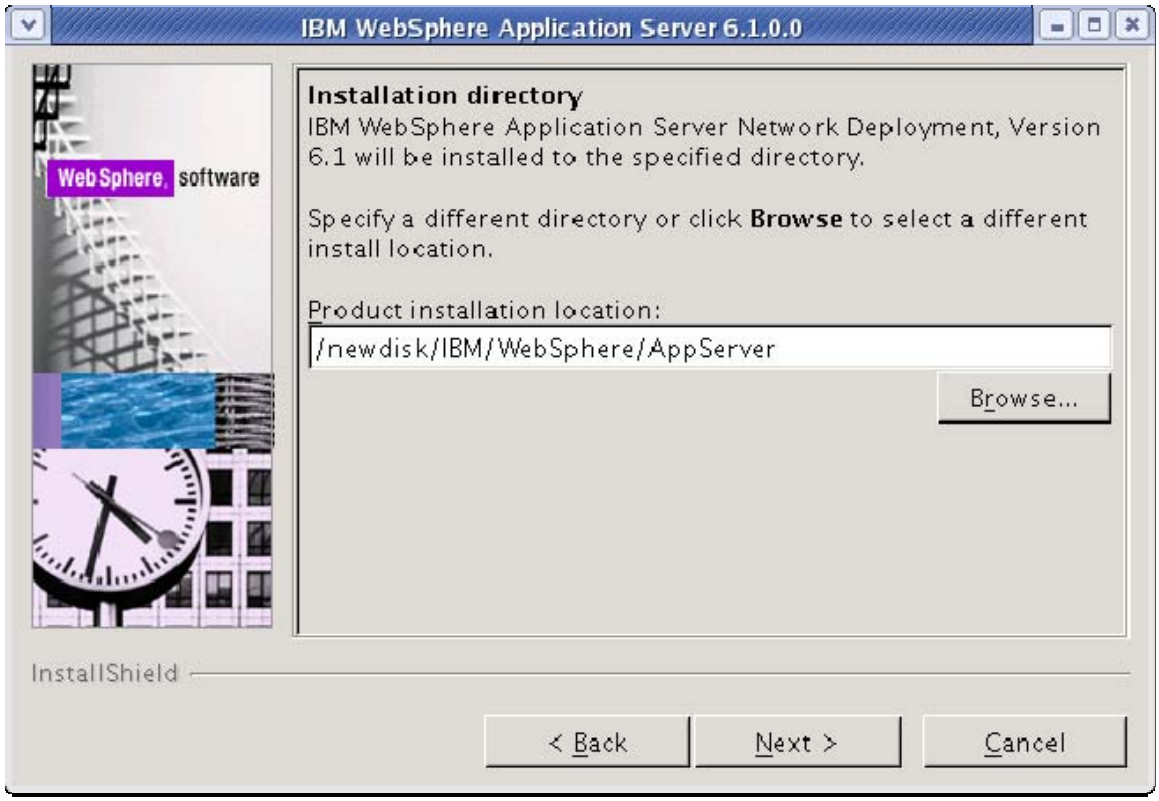



Step 4.4 Click “About this custom installation package…” to see the description of the CIP. Then click OK button to close it.

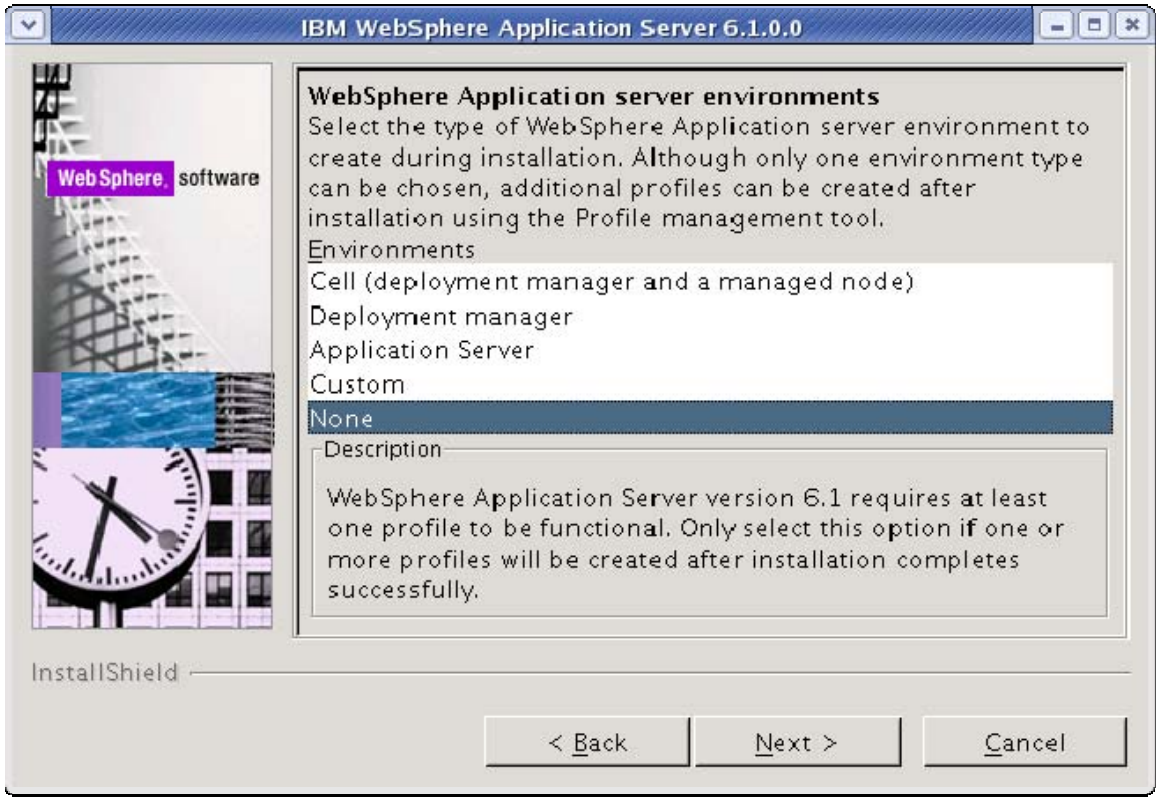
Step 4.5 Follow the normal CIP installation flow to complete the installation. Users will see the License Agreement panel. Choose to accept the license. Then users will see system prerequisite checking panel, non-root user detection panel. Click Next for each of the above panels to continue.


IBM WebSphere Application Server 6.1.0.0
WebSphere. software
Software License Agreement
Please read the following license agreement carefully.
International Program License Agreement
Part 1 - General Terms
BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, OR USING THE PROGRAM YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BEHALF OF ANOTHER PERSON OR A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND THAT PERSON, COMPANY, OR LEGAL
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

Step 4.6 In the “Installation directory” panel, the default “Product installation location” is /home/nonroot/IBM/WebSphere/AppServer. /home/nonroot is the resolved value for $JP{user.home} displayed in step 4.2. For our sample, we change the default to /newdisk/IBM/WebSphere/AppServer. The IIP will automatically take whatever location users specify here for WebSphere Application Server and will use it as the installation location for the Feature Pack for Web Services CIP later on (remember the macro in step 3.14?). Click Next button.

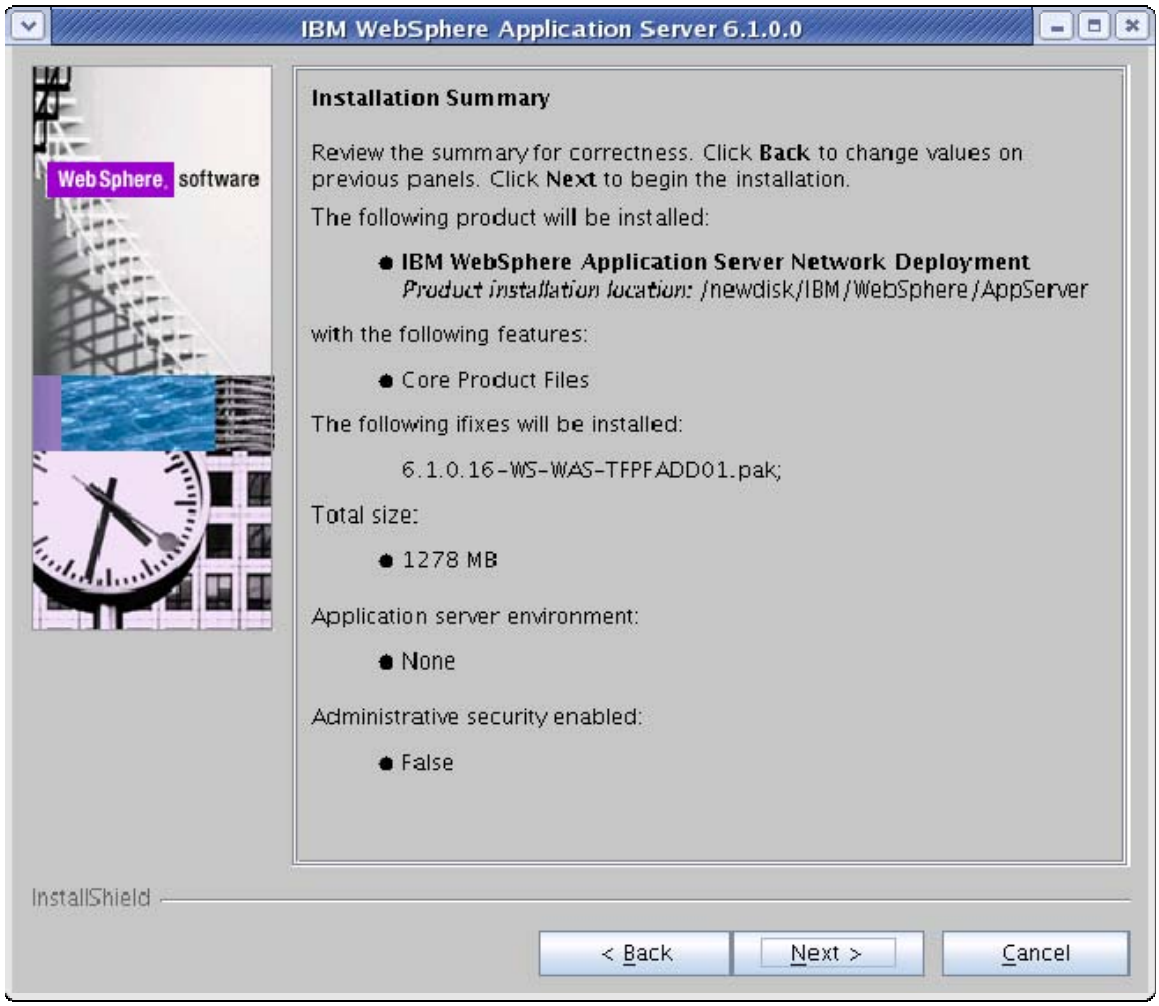


Step 4.7 When ‘WebSphere Application server environments” panel comes up, choose None from the list for this sample. We would like to have a profile created after Feature Pack for Web Services CIP installation is done.

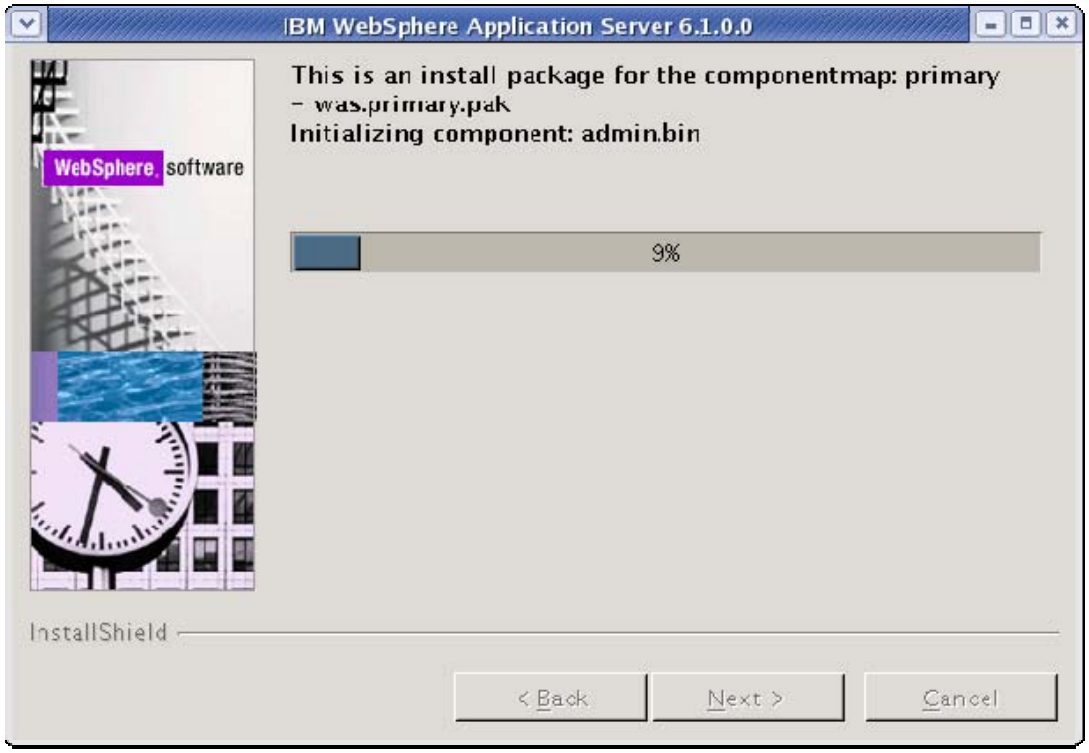



When user clicks Next button, a warning window will pop up. Click Yes button.

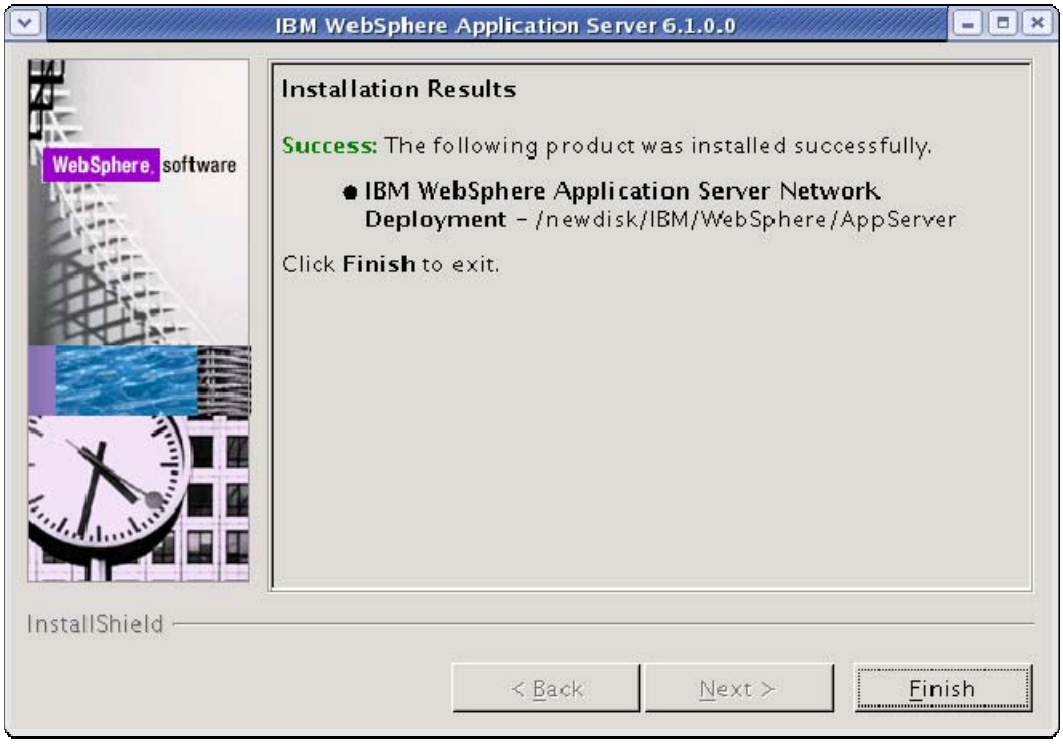
Step 4.8 Installation Summary will be displayed. Click Next button to start the installation of the WebSphere Application Server CIP.



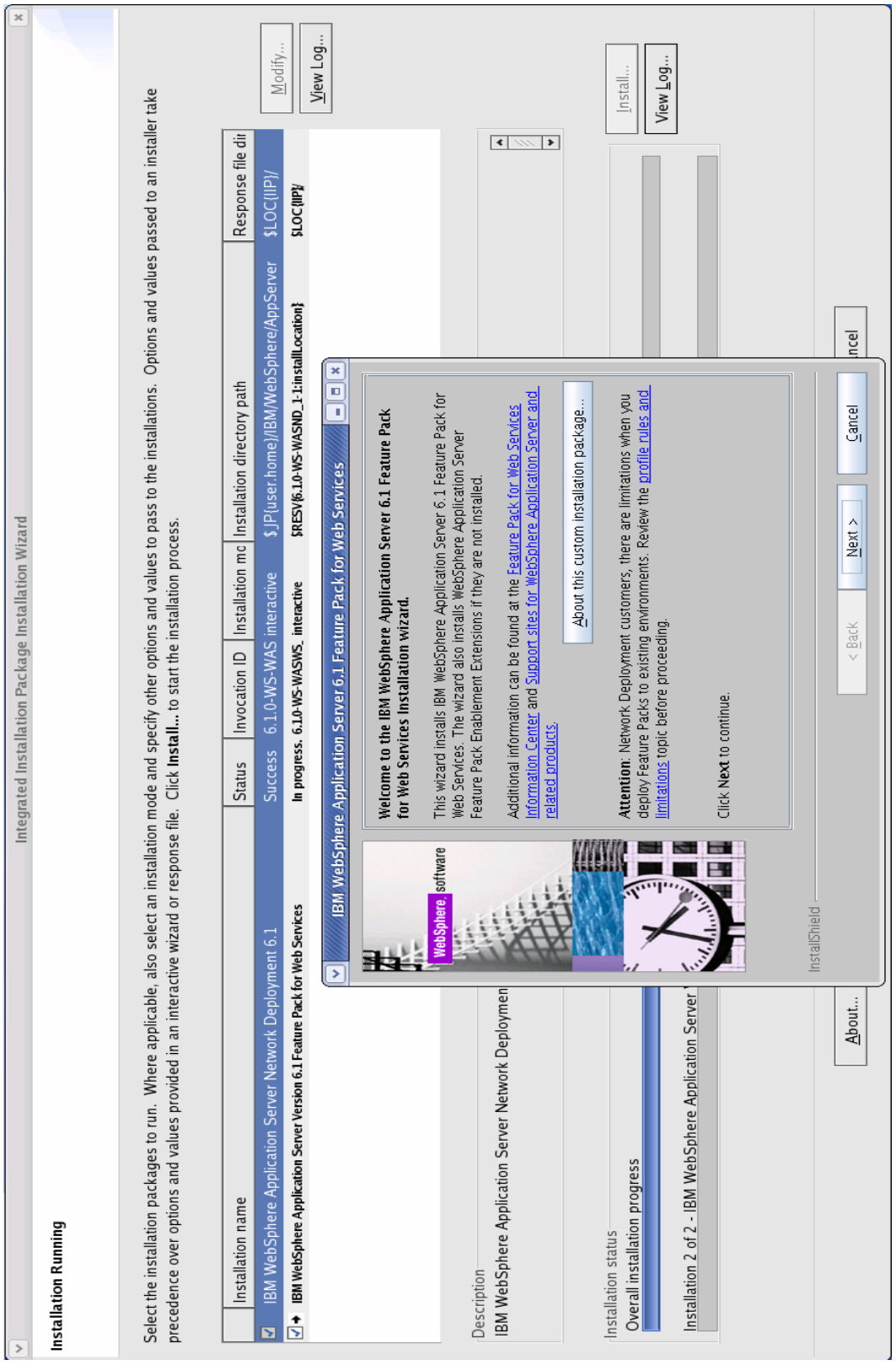
Step 4.9 Watch the progress of installation.



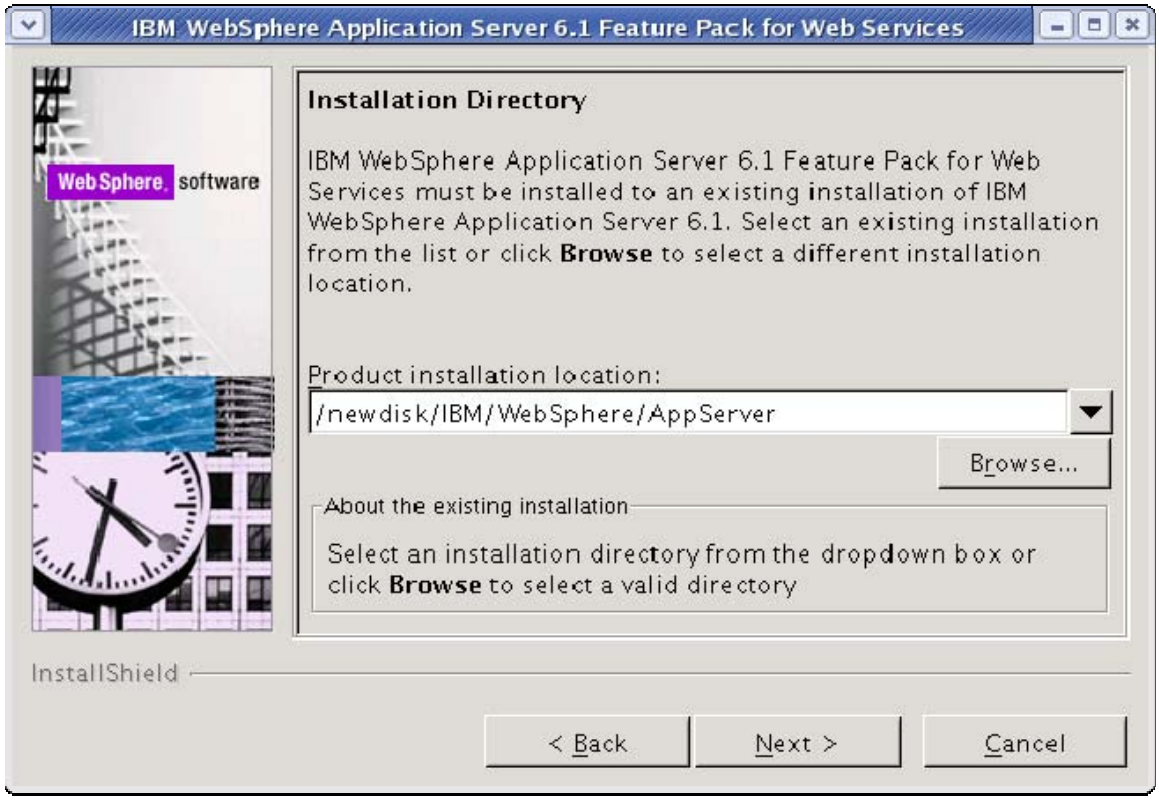

When it finishes, click the Finish button in the “Installation Results” window.



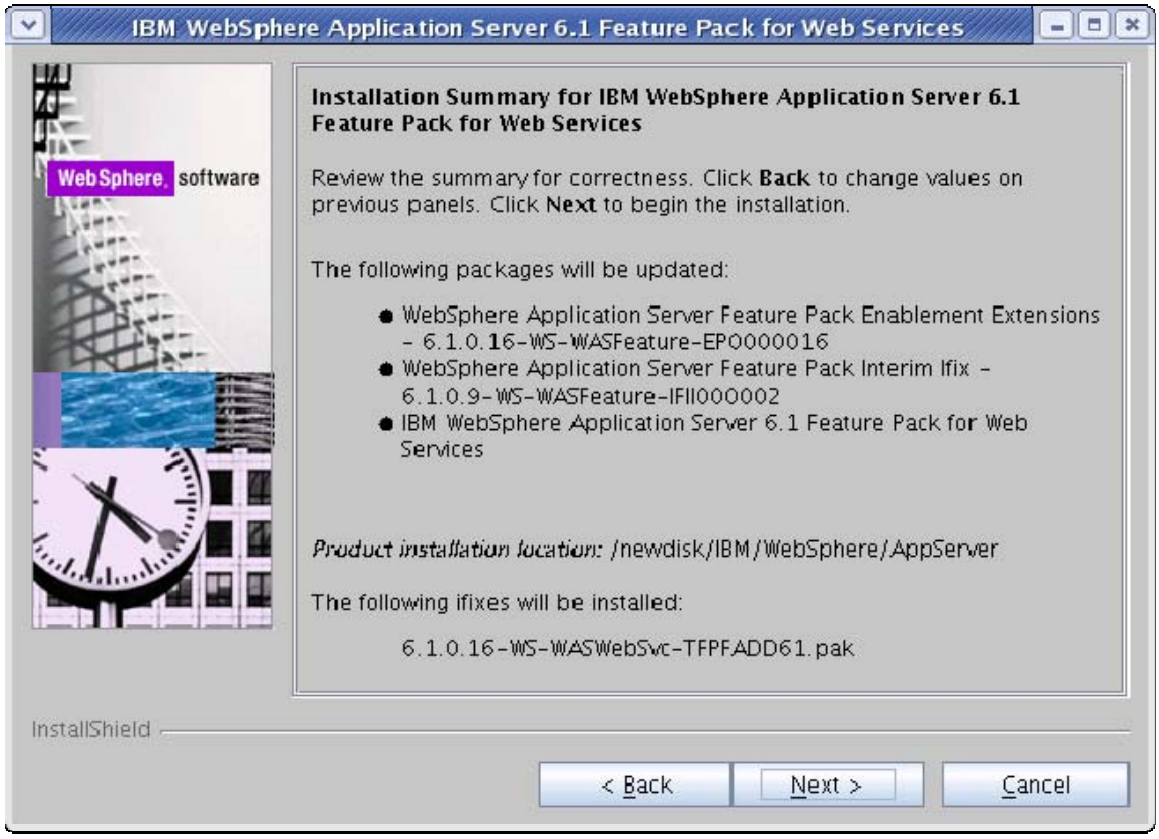
Step 4.10 Now the IIP installation wizard will show the status of the first installation is “Success”, and trigger the second installation automatically.



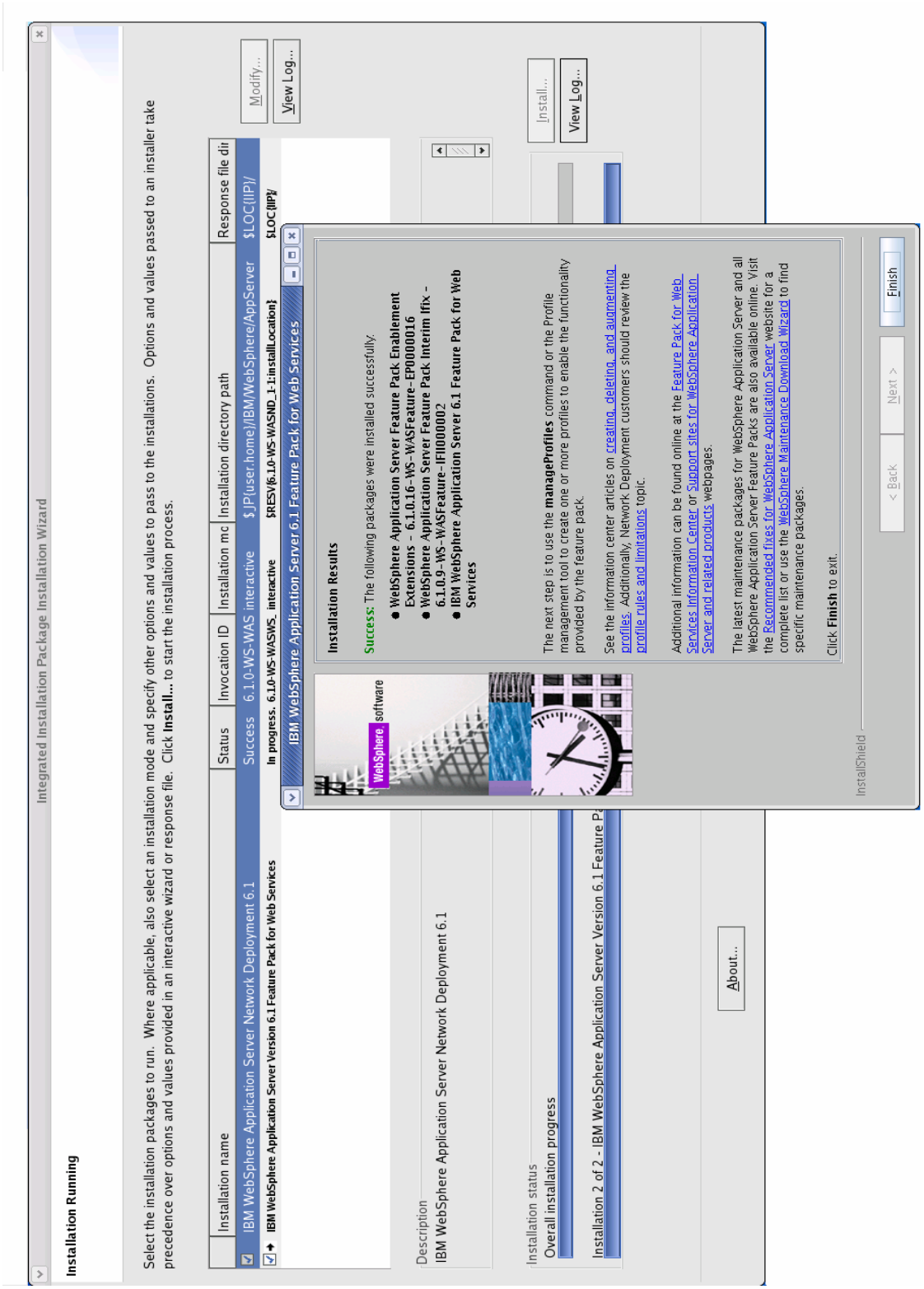
Step 4.11 Follow the similar procedure to install the second contribution – Feature Pack for Web Services CIP to the same location as the WebSphere Application Server CIP. Users will find the default installation location is correctly pre-filled with /newdisk/IBM/WebSphere/AppServer which was set during installing the previous invocation.



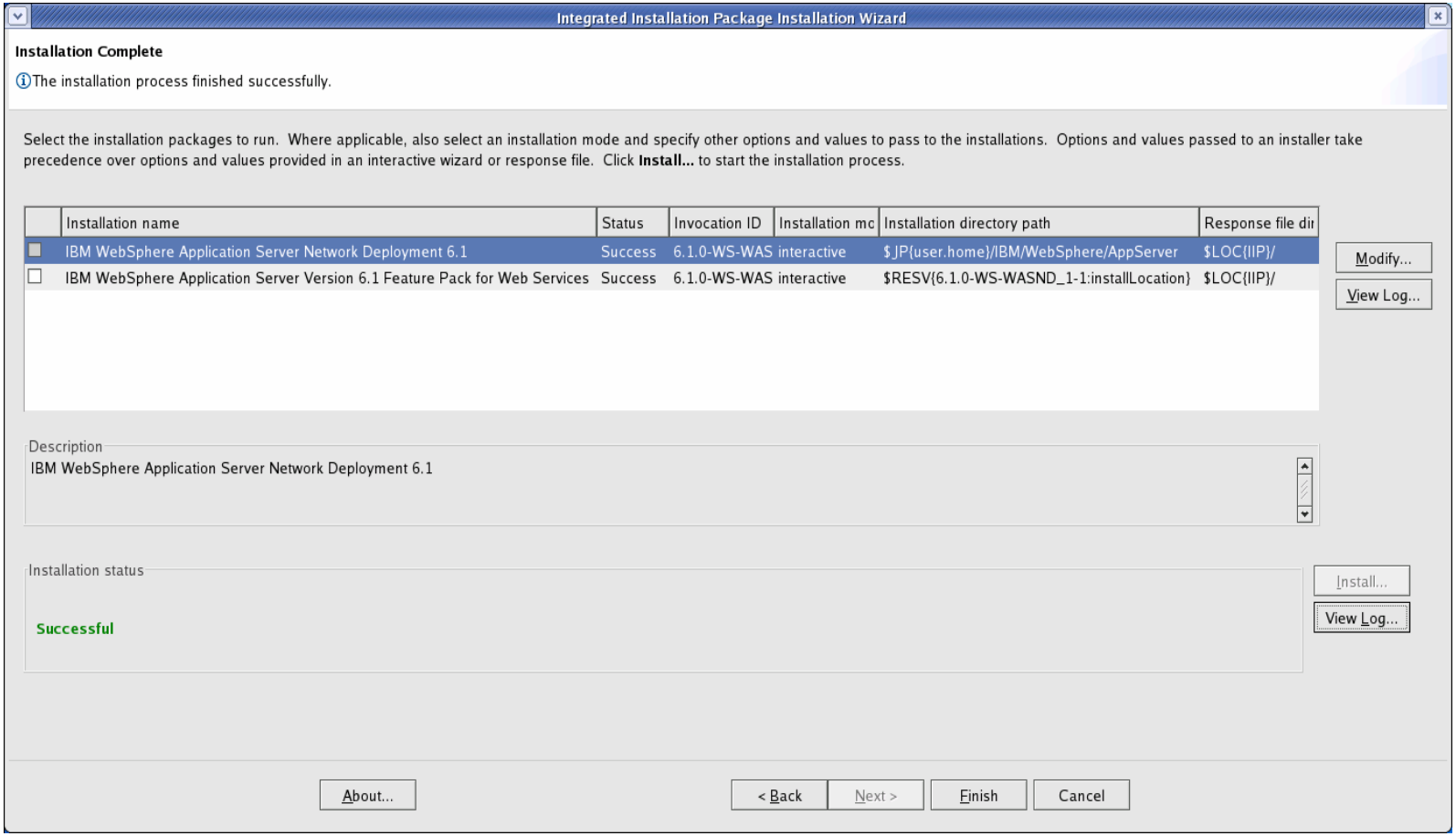
Step 4.12 Check the Installation Summary for IBM WebSphere Application Server 6.1 Feature Pack for Web Services. Then click Next button to start installation.



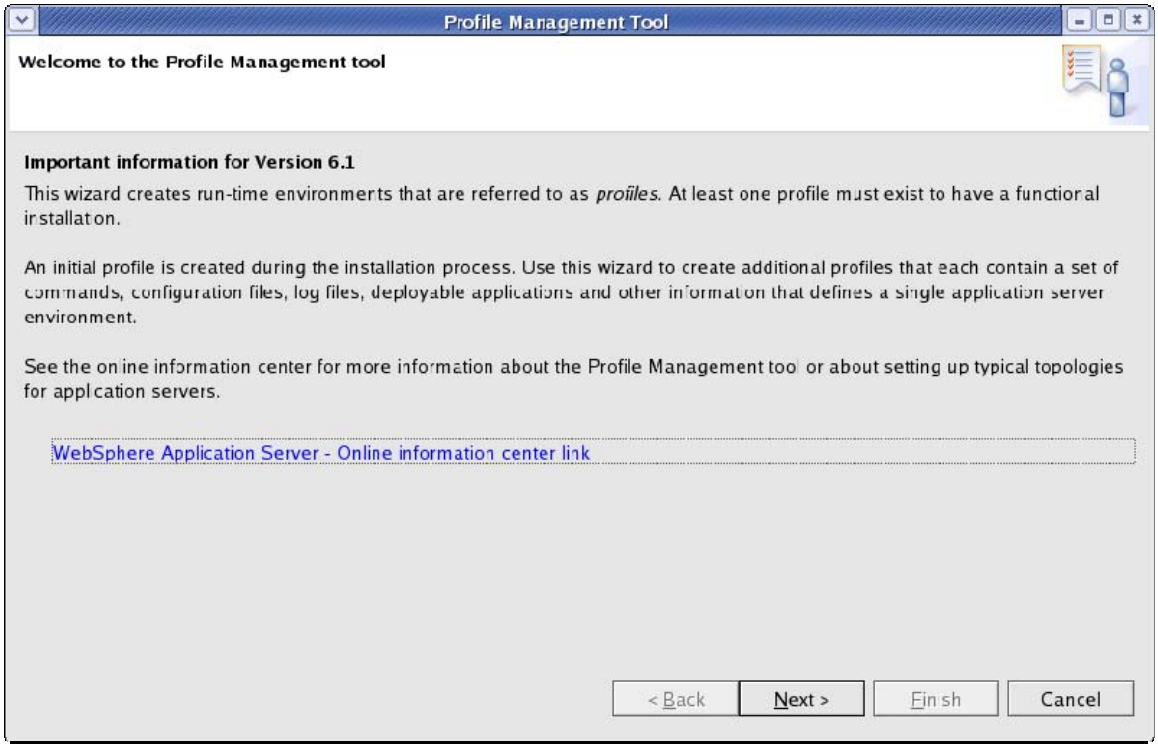
Step 4.13 When installation finishes, click Finish button in the confirmation window.



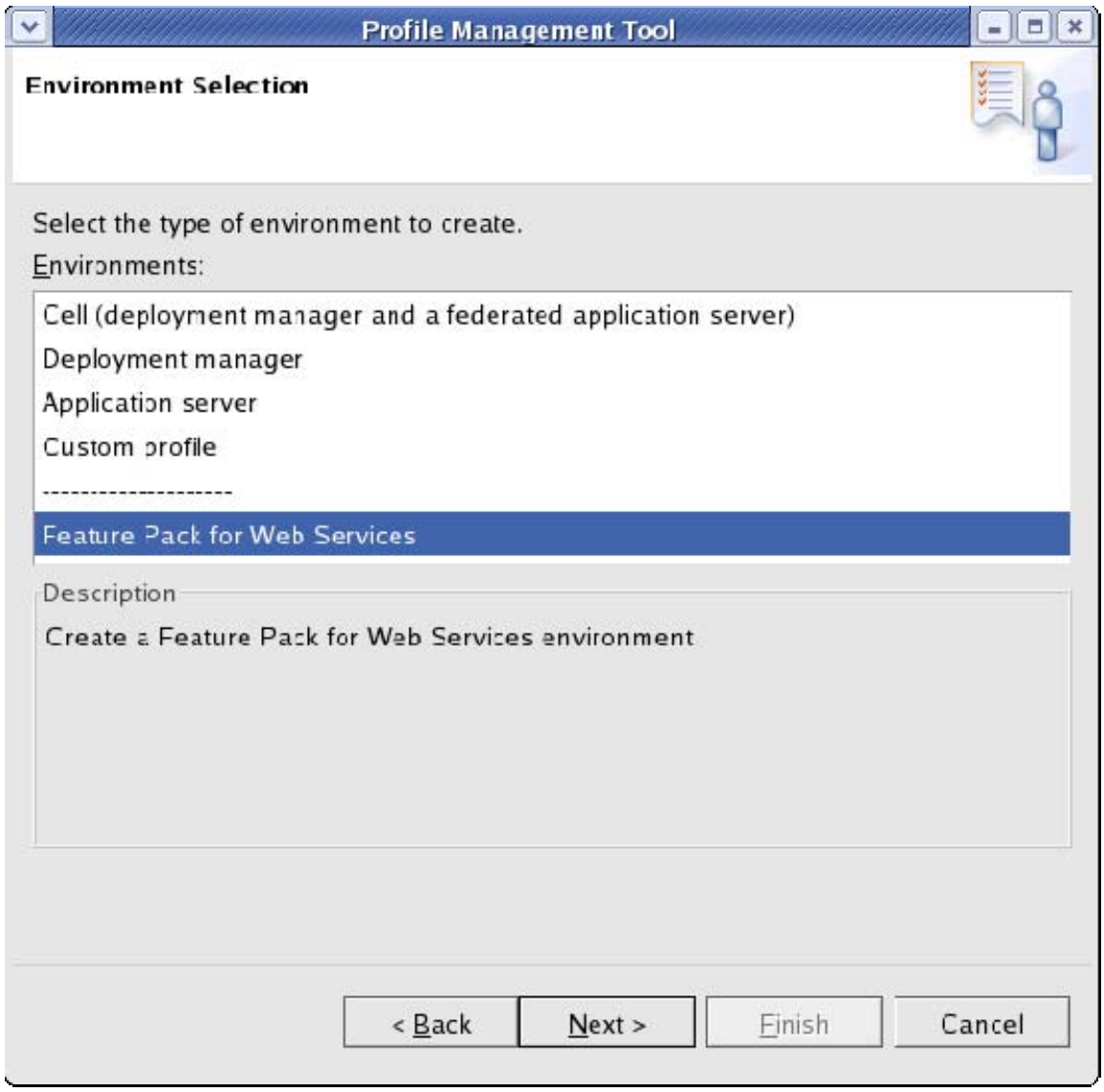
Step 4.14 Now users are back to the IIP installation wizard, where it shows both invocations are installed successfully. Click Finish button to exit the IIP installer wizard.


Integrated Installation Package Installation Wizard
Installation Complete
The installation process finished successfully.
Select the installation packages to run. Where applicable, also select an installation mode and specify other options and values to pass to the installations. Options and values passed to an installer take precedence over options and values provided in an interactive wizard or response file. Click Install... to start the installation process.
Installation name
Status
Invocation ID
Installation mc
Installation directory path
Response file dir
IBM WebSphere Application Server Network Deployment 6.1
Success
6.1.0-WS-WAS
interactive
$JP{user.home}/IBM/WebSphere/AppServer
$LOC{IIP}/
IBM WebSphere Application Server Version 6.1 Feature Pack for Web Services
Success
6.1.0-WS-WAS
interactive
$RESV{6.1.0-WS-WASND_1-1:installLocation}
$LOC{IIP}/
Modify...
View Log...
Description
IBM WebSphere Application Server Network Deployment 6.1
Installation status
Successful
Install...
View Log...
About...
< Back
Next >
Finish
Cancel

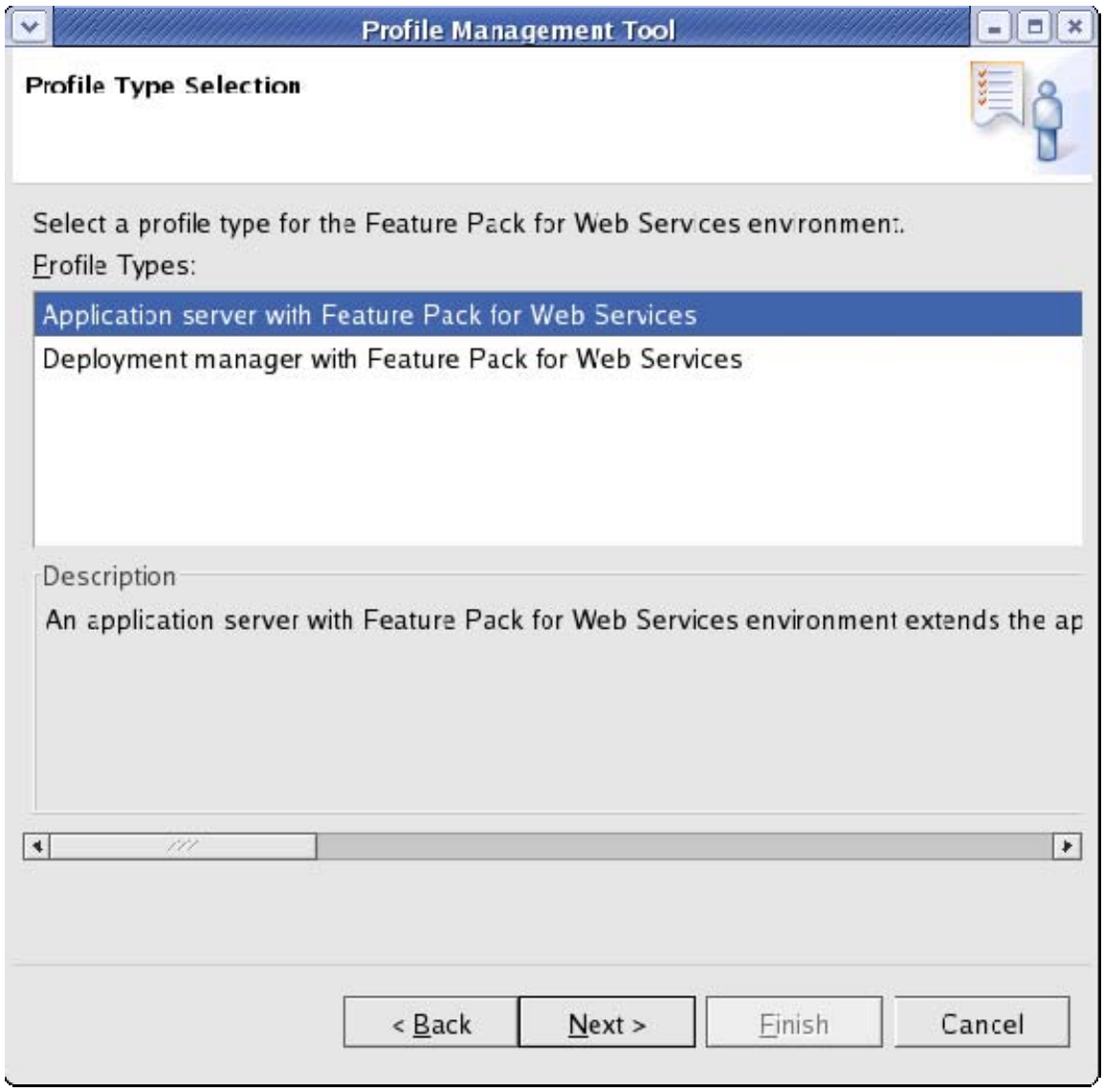
Step 4.15 Create a profile by launching the Profile Management tool  in GUI mode.
Go to /newdisk/IBM/WebSphere/AppServer/bin/ProfileManagement, and run the following command:
[nonroot@hostname ProfileManagement]$ ./pmt.sh




Click Next button.



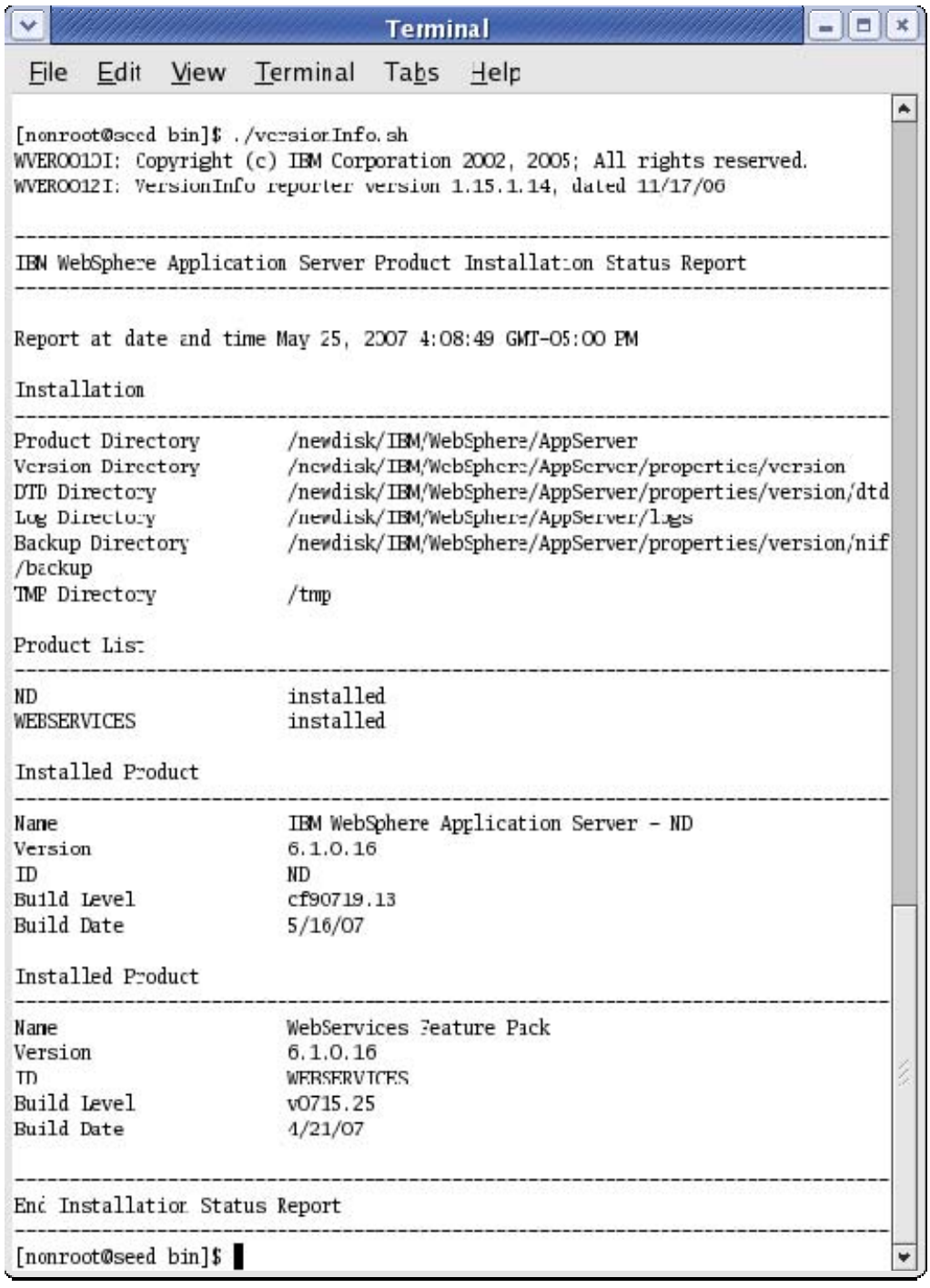

Highlight the “Feature Pack for Web Services” and click Next button, there will be two profile types which have enhanced functions with Web Services environment.




## *Task 5. Check installation result*

A good check point now is the product version. Type the following command from /newdisk/IBM/WebSphere/AppServer/bin directory.
[nonroot@hostname bin]$ ./versionInfo.sh

Users will find both WebSphere Application Server and Feature Pack for Web Services are installed at 6.1.0.16 level.


Terminal
File Edit View Terminal Tabs Help
[nonroot@seed bin]$ ./versionInfo.sh
WVER0010I: Copyright (c) IBM Corporation 2002, 2005; All rights reserved.
WVER0012I: VersionInfo reporter version 1.15.1.14, dated 11/17/06
IBM WebSphere Application Server Product Installation Status Report
Report at date and time May 25, 2007 4:08:49 GMT-05:00 PM
Installation
Product Directory /newdisk/IBM/WebSphere/AppServer
Version Directory /newdisk/IBM/WebSphere/AppServer/properties/version
DTD Directory /newdisk/IBM/WebSphere/AppServer/properties/version/dtd
Log Directory /newdisk/IBM/WebSphere/AppServer/logs
Backup Directory /newdisk/IBM/WebSphere/AppServer/properties/version/nif
/backup
TMP Directory /tmp
Product List
ND installed
WEBSERVICES installed
Installed Product
Name IBM WebSphere Application Server - ND
Version 6.1.0.16
ID ND
Build Level cf90719.13
Build Date 5/16/07
Installed Product
Name WebServices Feature Pack
Version 6.1.0.16
ID WEBSERVICES
Build Level v0715.25
Build Date 4/21/07
End Installation Status Report
[nonroot@seed bin]$

To view interim fixes that are installed, use the following command:
[nonroot@hostname bin]$ ./versionInfo.sh –long > version_long.txt

Users will find WebSphere Application Server interim fix bundled in the WebSphere Application Server CIP, the Feature Pack for Web Services interim fix bundled in the Feature Pack for Web Services CIP are both installed. Also the two enabling interim fixes (one common and one specific to Feature Pack for Web Services) are also installed.

# Sample 2 – Typical IIP creation and installation flow (Scratch installation, silent mode)

## *Goal*

In this example, we will reuse the IIP created in Sample 1 to install the IIP silently.

There are two ways to install the IIP silently: run IIP installer wizard in GUI mode but install the contributions silently, or run IIP installer without GUI and install contributions silently.

## *Approach 1. Run IIP installer in GUI mode and install contributions silently*

In this task, we will install contributions in silent mode but we will run the IIP installer in GUI mode.

### Task 1. Create/modify response files for both invocations

We are going to install the invocations in silent mode. We need to create/modify response files for both invocations. Users can either create a brand new response file for each invocation, or take the existing sample and modify on top. In this example, we will modify existing sample response file. For the detailed information on how to create/modify a response file, refer to IBM WebSphere Application Server online help.

**Response file for the WebSphere Application Server CIP:**
The default sample response file for WebSphere Application Server CIP is /newdisk/IF/ifpackage/WAS/responsefile.nd.txt. Users can backup and modify the following values in this response file.

```
-OPT silentInstallLicenseAcceptance="true"
-OPT if_cip_modifyexistinginstall="customizationAndMaintenance"
-OPT installType="installNew"
-OPT feature="noFeature"
-OPT profileType="none"
-OPT PROF_enableAdminSecurity="false"
```

Also uncomment the following entry for non root installation:
-OPT allowNonRootSilentInstall=”true”

In this example, after modification, we copy this response file to /newdisk/IIP/iip/responsefile.nd.txt. Users will see this entry in task 3.

**Response File for Feature Pack for Web Services CIP:**
The default sample response file for Web Services CIP is /newdisk/IF/wsif/WEBSV/responsefile.WEBSV.txt. Users can backup and modify the following values in this response file.

```
-OPT silentInstallLicenseAcceptance="true"
-OPT if_cip_modifyexistinginstall="customizationAndMaintenance"
-OPT installType="installNew"
-OPT PROF_enableAdminSecurity="false"
```

For non root installation, also uncomment the following entry:

```
-OPT allowNonRootSilentInstall="true"
```

If a standalone profile is to be created as part of the install, use the following options:

```
-OPT createProfile="true"
-OPT profileType="standAlone"
################################################################################
##
# Uncomment the following when creating a stand alone application server profile.
################################################################################
##
#
## Profile Settings
# -OPT PROF_profilePath=
# -OPT PROF_profileName=
# -OPT PROF_isDefault="true"
## Node, Host, and Cell Names
# -OPT PROF_hostName=
# -OPT PROF_nodeName=
# -OPT PROF_cellName=
# -OPT PROF_isDeveloperServer="false"
## Optional Application Deployment
# -OPT PROF_omitAction="samplesInstallAndConfig"
## Port Value Assignment and Validation
# -OPT PROF_defaultPorts="true"
# -OPT PROF_startingPort=
# -OPT PROF_portsFile=
# -OPT PROF_validatePorts="true"
## Windows Service Creation
# -OPT PROF_winserviceCheck="true"
# -OPT PROF_winserviceAccountType=
# -OPT PROF_winserviceUserName=
# -OPT PROF_winservicePassword=
# -OPT PROF_winserviceStartupType="automatic"
## Linux Service Creation
# -OPT PROF_enableService="true"
# -OPT PROF_serviceUserName=
## Web Server Definition
# -OPT PROF_webServerCheck="false"
```

```
# -OPT PROF_webServerType=
# -OPT PROF_webServerOS=
# -OPT PROF_webServerName=
# -OPT PROF_webServerHostname=
# -OPT PROF_webServerPort=80
# -OPT PROF_webServerInstallPath=
# -OPT PROF_webServerPluginPath=
```

In this example, after modification, we copy this response file to /newdisk/IIP/iip/responsefile.WEBSV.txt. Users will see this entry in task 3.

Users may have noticed that the installation locations are not specified in the response file. We will set the installation location later on in the IIP installer wizard, which demonstrates how to make Feature Pack for Web Services installed on WebSphere Application Server automatically.

The installation location could be specified in the response file and omitted from the IIP installer wizard. Or, finally, that it could be specified in both places, in which case the one in the wizard will be used instead of the one in the response file.

## Task 2. Launch the IIP installer wizard

Change the current directory to the newly created IIP from sample 1, and launch the IIP installer in GUI mode by executing the install.sh in /newdisk/IF/iip/bin directory.

```
[root@hostname bin]$ ./install.sh
```

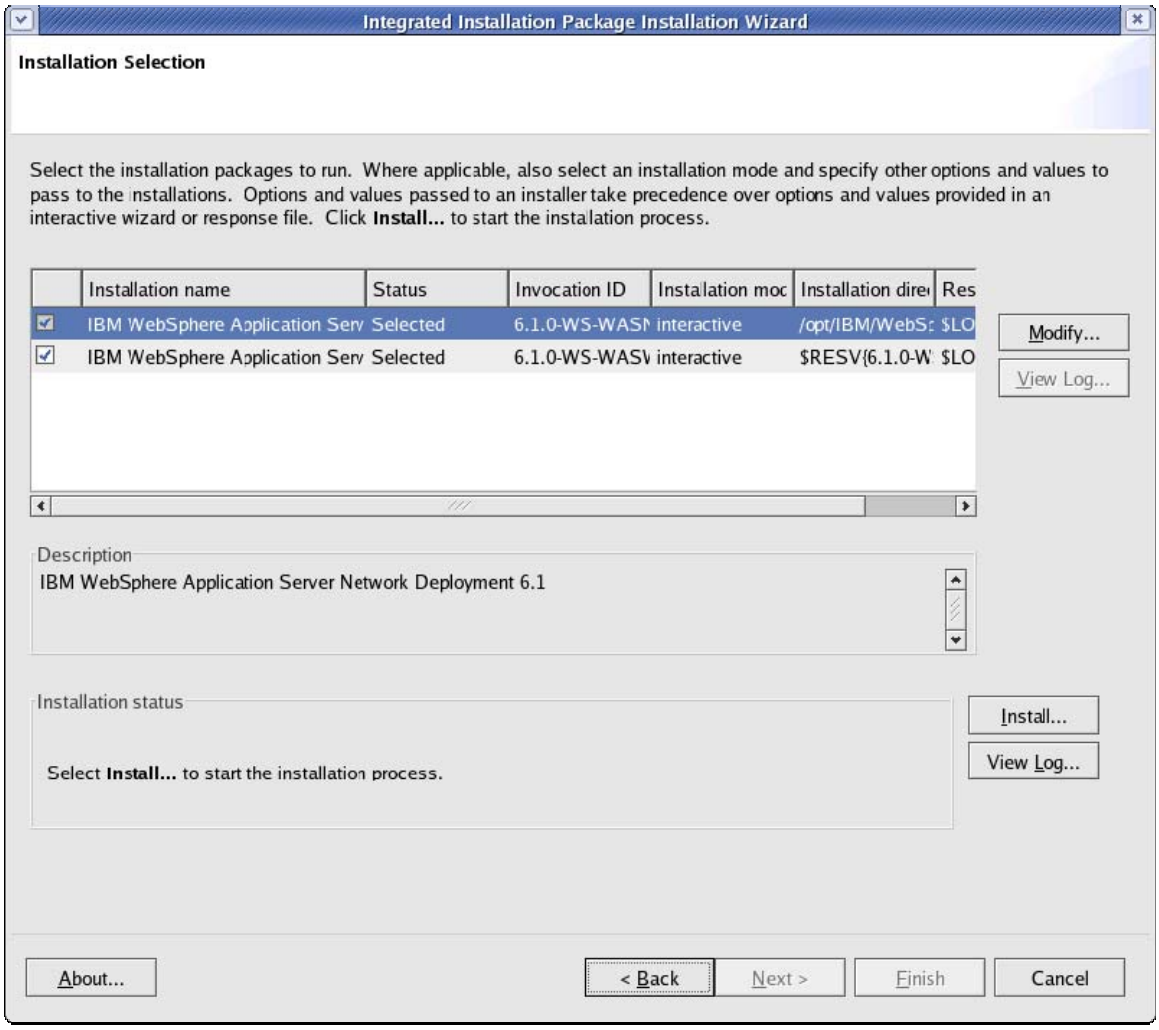
We omitted the –iipUserType parameter in the command. By default, it is set to root. User will find the value set picked up in the IIP installer wizard is for root user.

Once the IIP installation wizard comes up, click “Next” on the wizard.

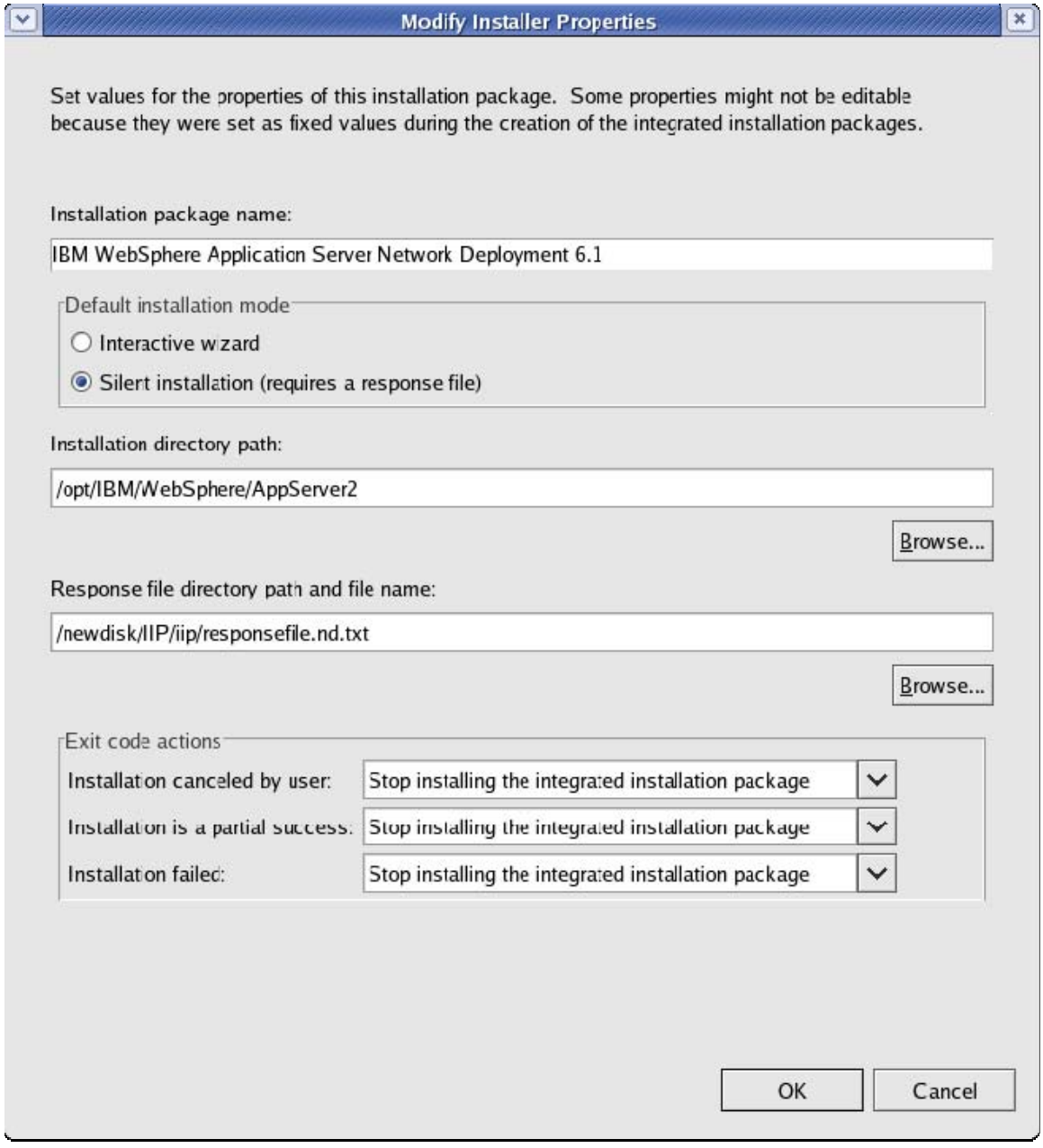
## Task 3. Add the response files to individual invocations

In Task 1, we didn’t specify the installation locations. We can specify them in this task. Since we are going to install the invocations in silent mode, we also need to specify the response files.

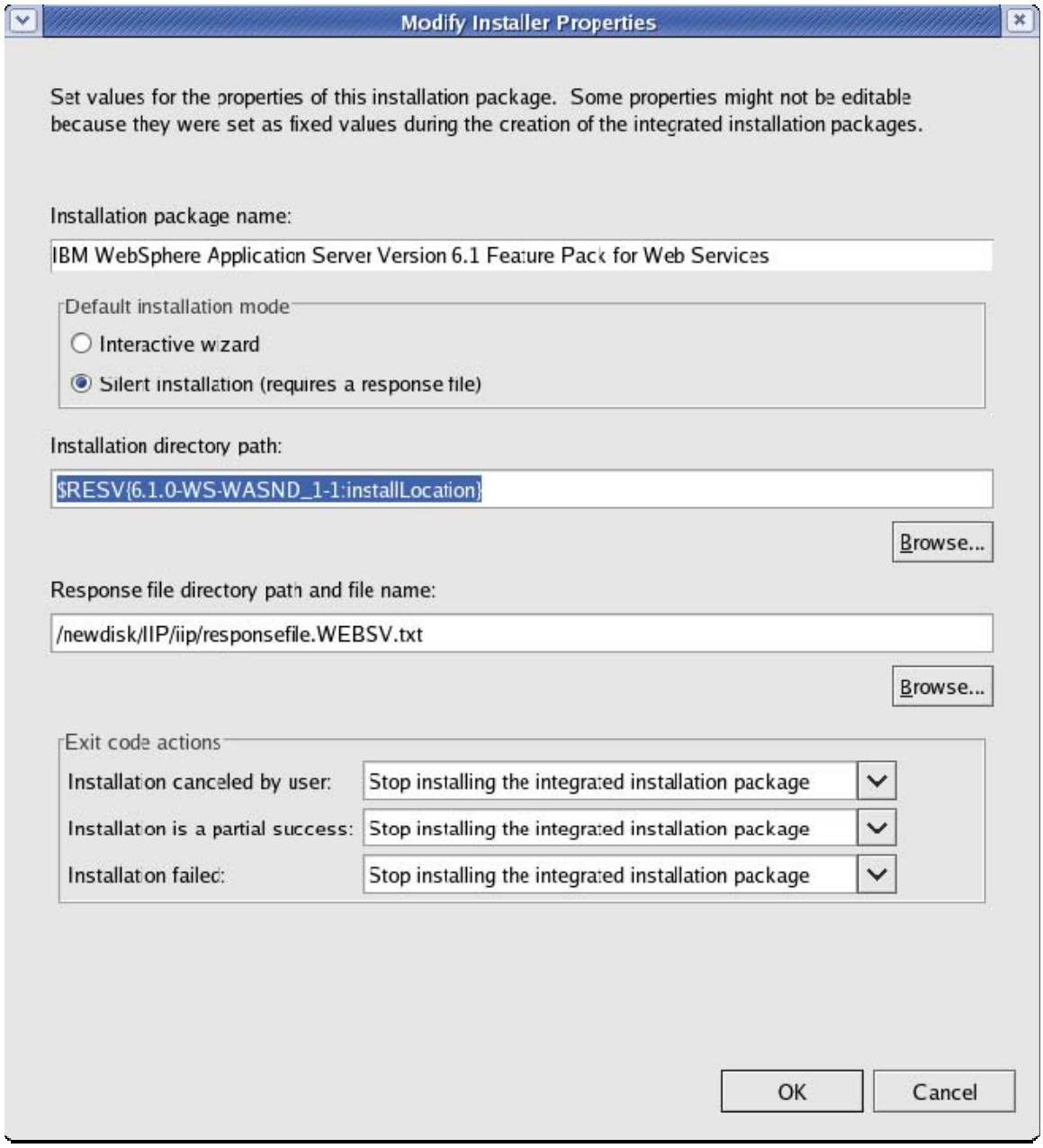
Highlight the fist invocation (WebSphere Application Server CIP), and click ‘Modify…” button:


Integrated Installation Package Installation Wizard
Installation Selection
Select the installation packages to run. Where applicable, also select an installation mode and specify other options and values to pass to the installations. Options and values passed to an installer take precedence over options and values provided in an interactive wizard or response file. Click Install... to start the installation process.
Installation name
Status
Invocation ID
Installation moc
Installation dire
Res
IBM WebSphere Application Serv
Selected
6.1.0-WS-WASI
interactive
/opt/IBM/WebS
$LO
IBM WebSphere Application Serv
Selected
6.1.0-WS-WASV
interactive
$RESV{6.1.0-W
$LO
Modify...
View Log...
Description
IBM WebSphere Application Server Network Deployment 6.1
Installation status
Select Install... to start the installation process.
Install...
View Log...
About...
< Back
Next >
Finish
Cancel

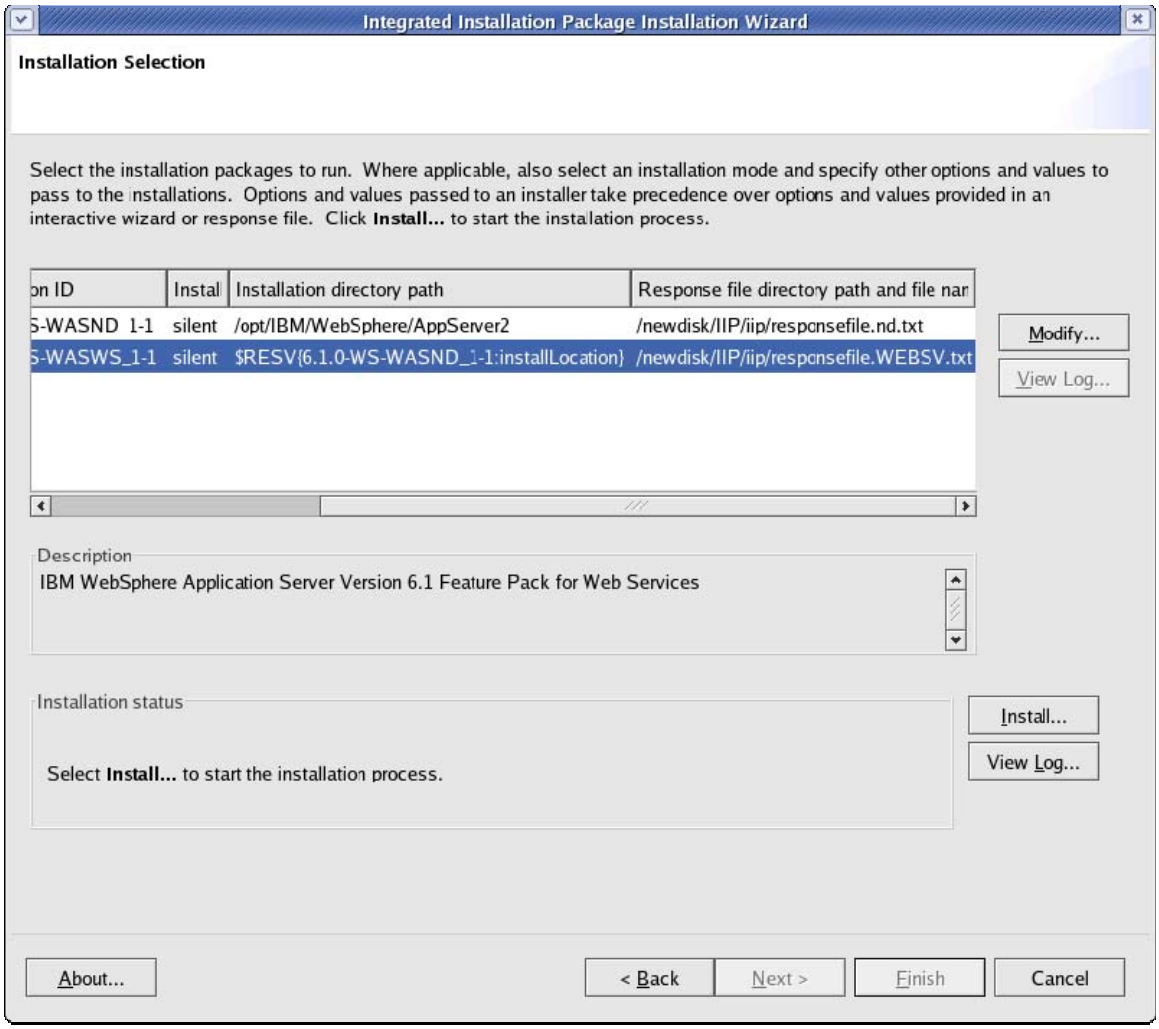
Users will see the “Modify Installer Properties” dialog. Select “Silent installation (requires a response file)” option to indicate this invocation will be invoked in silent mode. This will override the interactive mode set during the IIP creation time (remember the override option is enabled?). Specify the installation location of WebSphere Application Server CIP to: /opt/IBM/WebSphere/AppServer2, also specify the file name and path of the WebSphere Application Server response file: /newdisk/IIP/iip/responsefile.nd.txt. Click OK on the dialog.



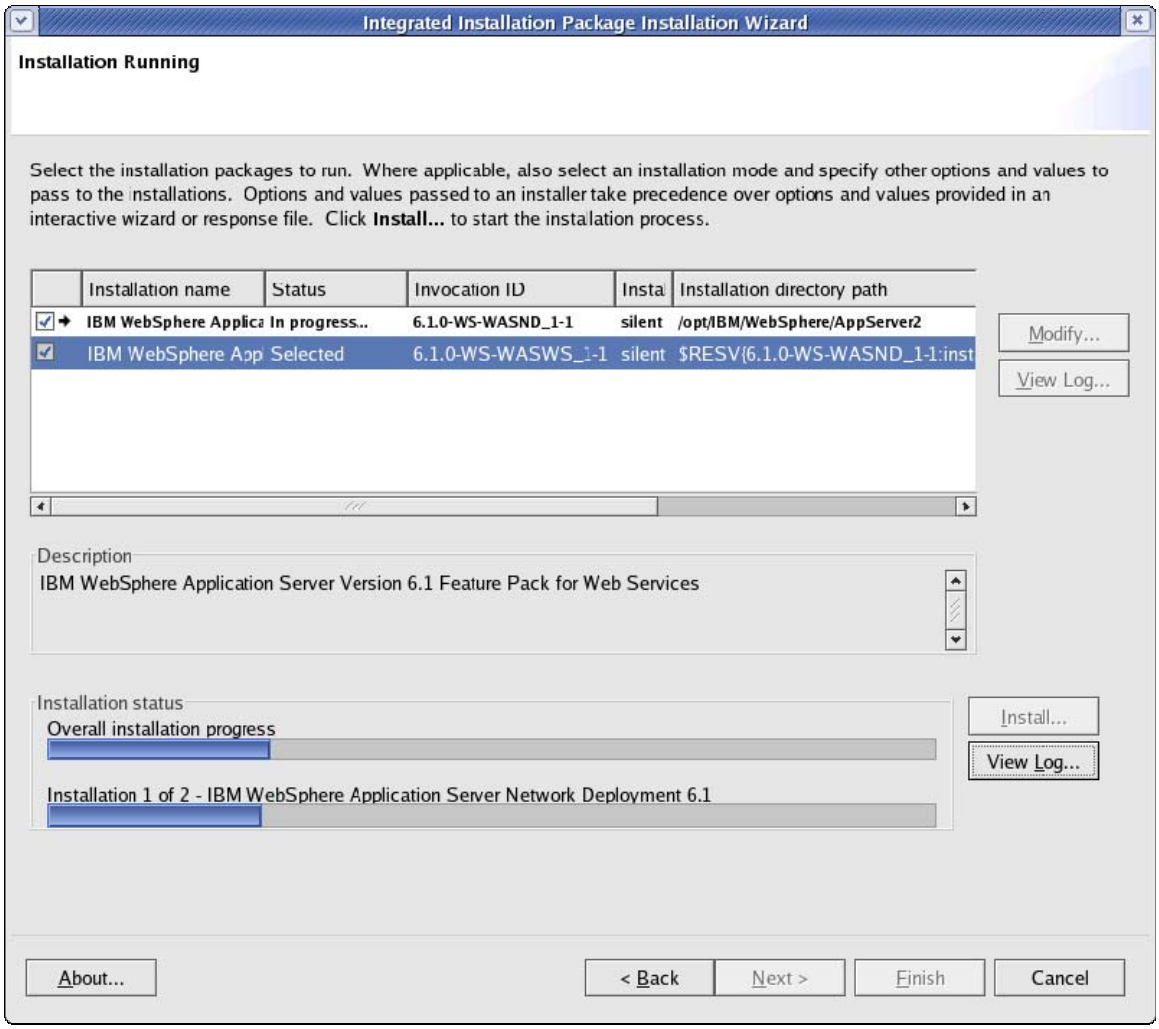
Repeat the same steps for Feature Pack for Web Services CIP. Select silent installation option. Specify the response file name and path. Keep the default installation directory path: $RESV{6.1.0-WS-WASND_1-1:installLocation}. The macro will ensure that Feature Pack for Web Services CIP will be installed in the same location as invocation 6.1.0-WS-WASND_1-1, the WebSphere Application Server CIP.



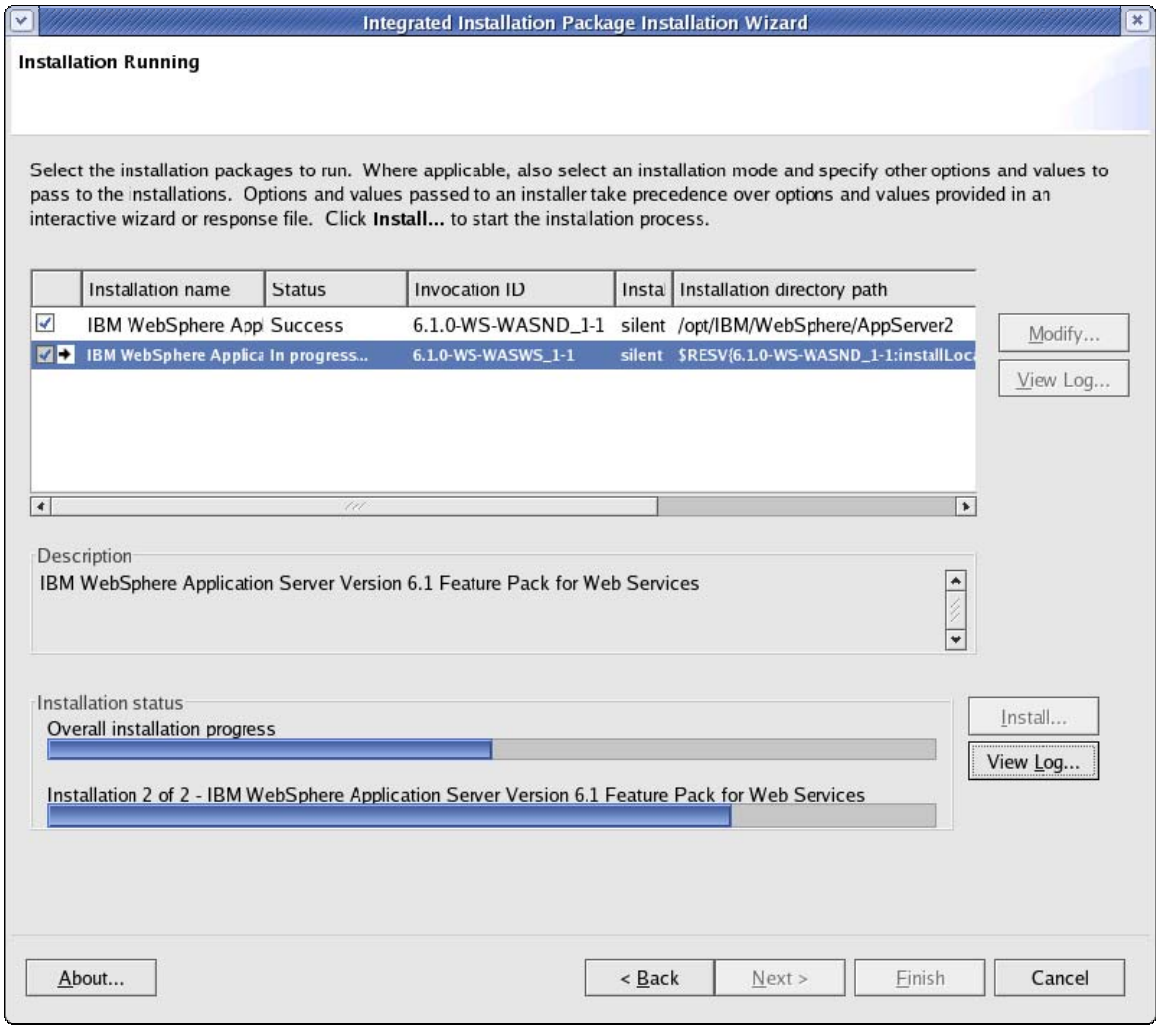
Now click the “Install…” button on the dialog:



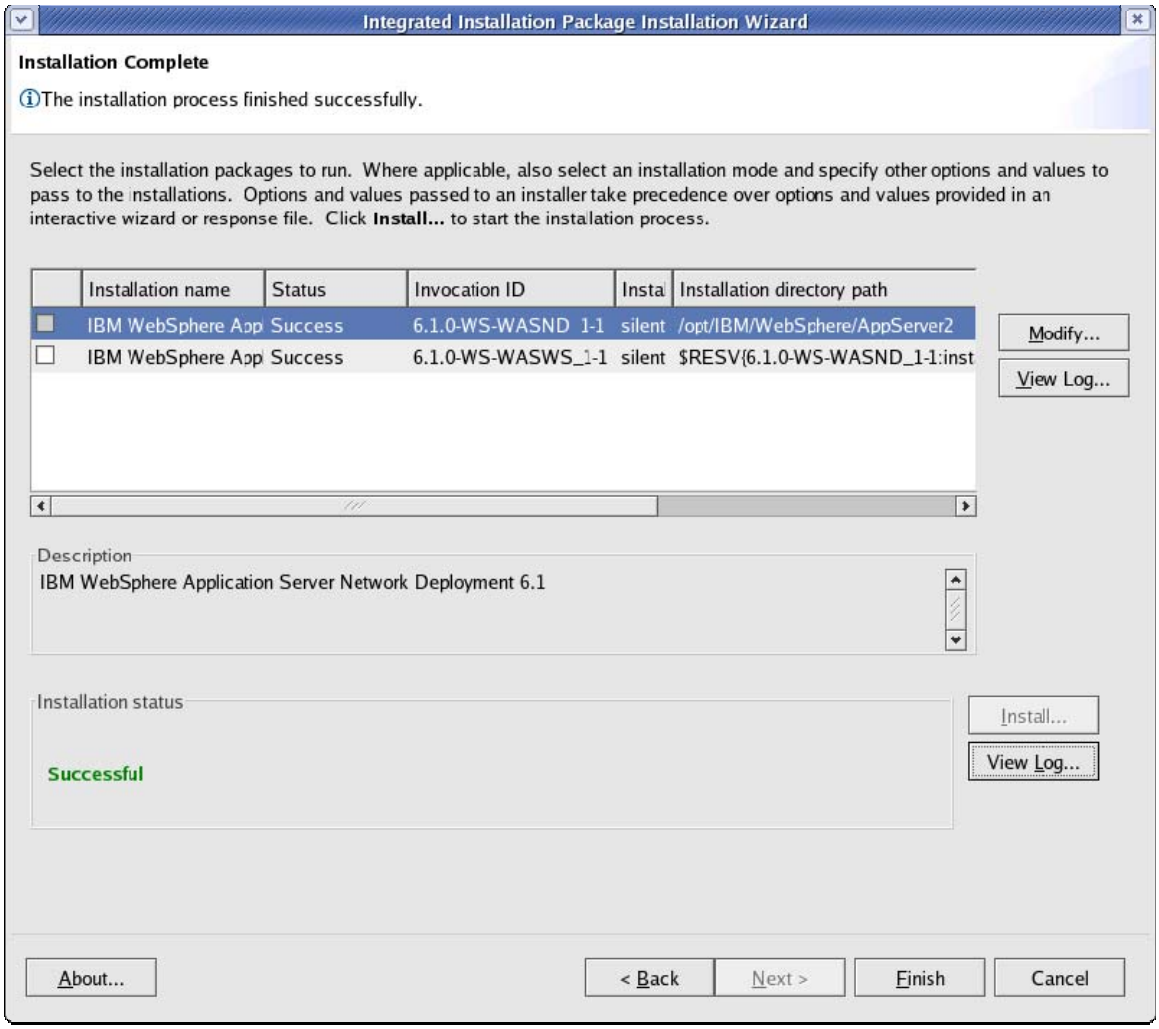
The IIP wizard will start to install WebSphere Application Server CIP in silent mode:



After it finishes installing WebSphere Application Server CIP, it automatically starts to install Feature Pack for Web Services CIP in silent mode:



Both invocations are installed successfully:




Click Finish to exit from the IIP installation wizard. Now we can run versionInfo command to check the product version. Refer to sample 1 for details.

## *Approach 2. Run IIP installer without GUI and install contributions in silent mode*

In Approach 1, we launch the IIP installer wizard in GUI mode, and installed two contributions silently. The second approach is to launch IIP installer also in non interactive mode (does not show the IIP installer wizard at start up) and install each contribution in silent mode. This is often used in automation.

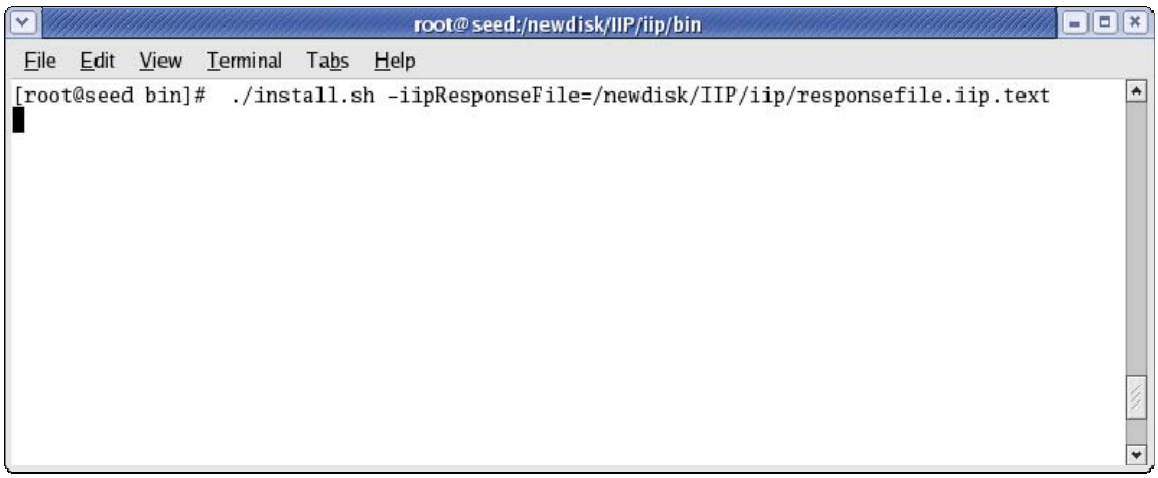
In order to run the IIP installer without GUI, we may create an IIP response file for IIP installer, or use command line to provide the silent installation options. Compared with command line options, using IIP response file makes the invocation simpler and more easily repeatable. There is a sample IIP response file created for each IIP. It is located at <IIP_build_location>/iip/. In our example, it is under /newdisk/IF/iip/. For detailed information on IIP installer response file, refer to IIP online help. Here is the copy we modified based on the sample response file:

Response file for IIP installer:

```
################################################################################
#
# Run the IIP without showing the IIP GUI.
-iipNoGUI
################################################################################
# Passing options to contributions
################################################################################
#
# The -iipOptionSet option is used to pass options into the IIP upon
# invocation.
# Exception: Users can omit this option if passing options to a PRIMARY
# contribution; see below.)
#
# For example, install -iipNoGUI -iipOptionSet=IBM_WAS_AS -OPT
# installLocation='
# C:\Program Files\newinstall' -options D:\WAS\responseFile.txt -silent
# -iipOptionSet=IBM_WASWS_AS -OPT installLocation
# ='C:\Program Files\newinstall' -options D:\WASWS\responseFile.txt –
# silent
#
# Enclose all values that contain spaces within a single pair of single
# quotes.
# Otherwise, no quotes are required.
#
-iipOptionSet=6.1.0-WS-WASND_1-1
-OPT installLocation=/opt/IBM/WebSphere/AppServer3
-options /newdisk/IIP/iip/responsefile.nd.txt
-silent
-iipOptionSet=6.1.0-WS-WASWS_1-1
-OPT installLocation=$RESV{6.1.0-WS-WASND_1-1:installLocation}
-options /newdisk/IIP/iip/responsefile.WEBSV.txt
-silent
```

The following command is used to pass in the response file to IIP installer:

install.sh –iipResponseFile=/newdisk/IF/iip/responsefile.iip.text




After a few minutes, both contributions are installed silently.

Use the versionInfo command to confirm the WebSphere Application Server CIP and Feature Pack for Web Services CIP are installed correctly.

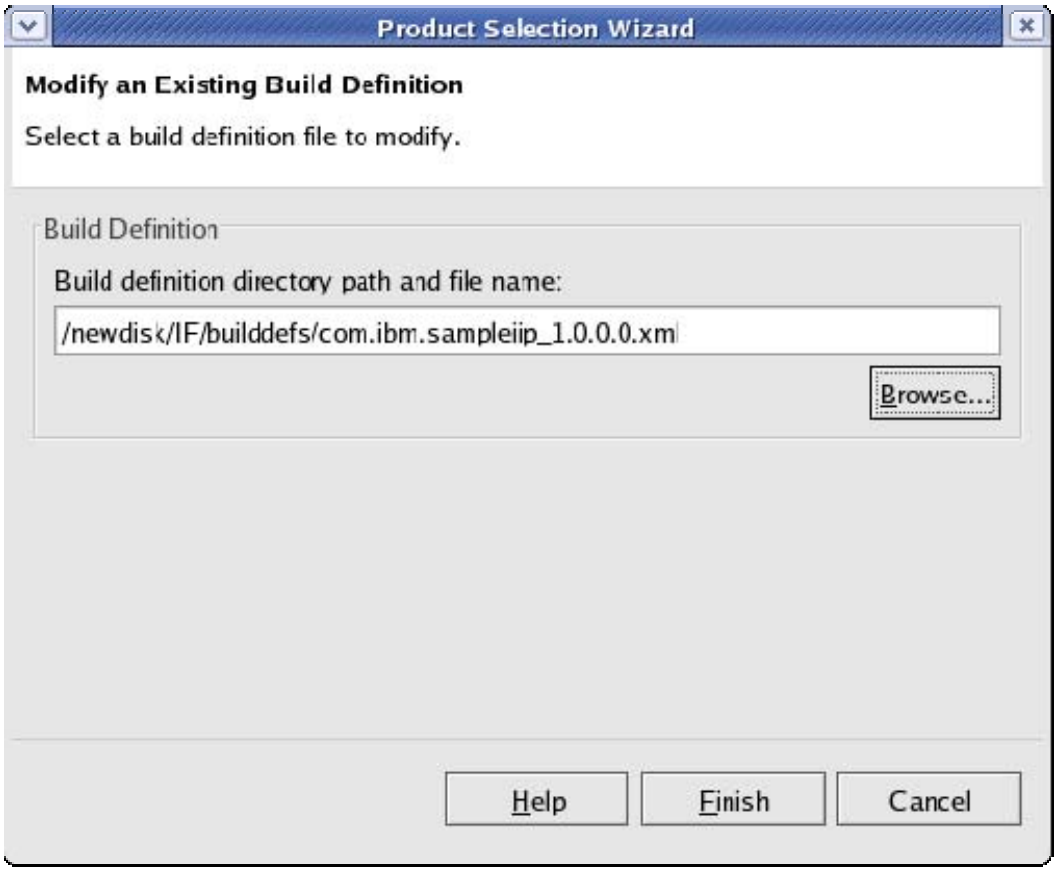
# Sample 3 – Variation of IIP creation flow (for silent installation)

## *Goal*

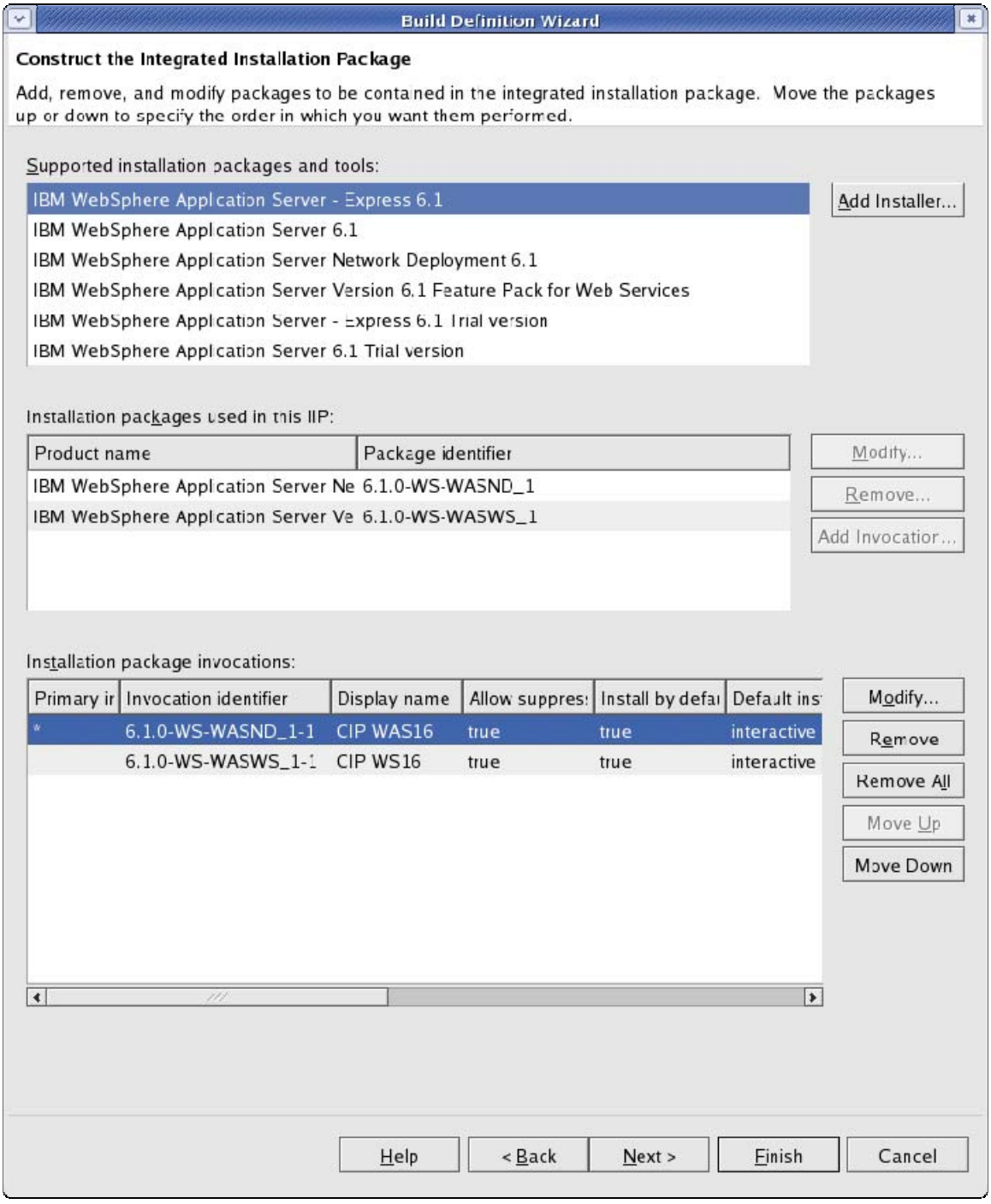
In this example, we will be creating an IIP for silent installation. The most important thing in silent installation is the response file. This example demonstrates how to add the response files to individual invocations at IIP creation time. We will use the build definition file created in Sample 1 as a template, modify it to add the response file for individual invocation.

## *Task 1. Open existing build definition file to add response file*

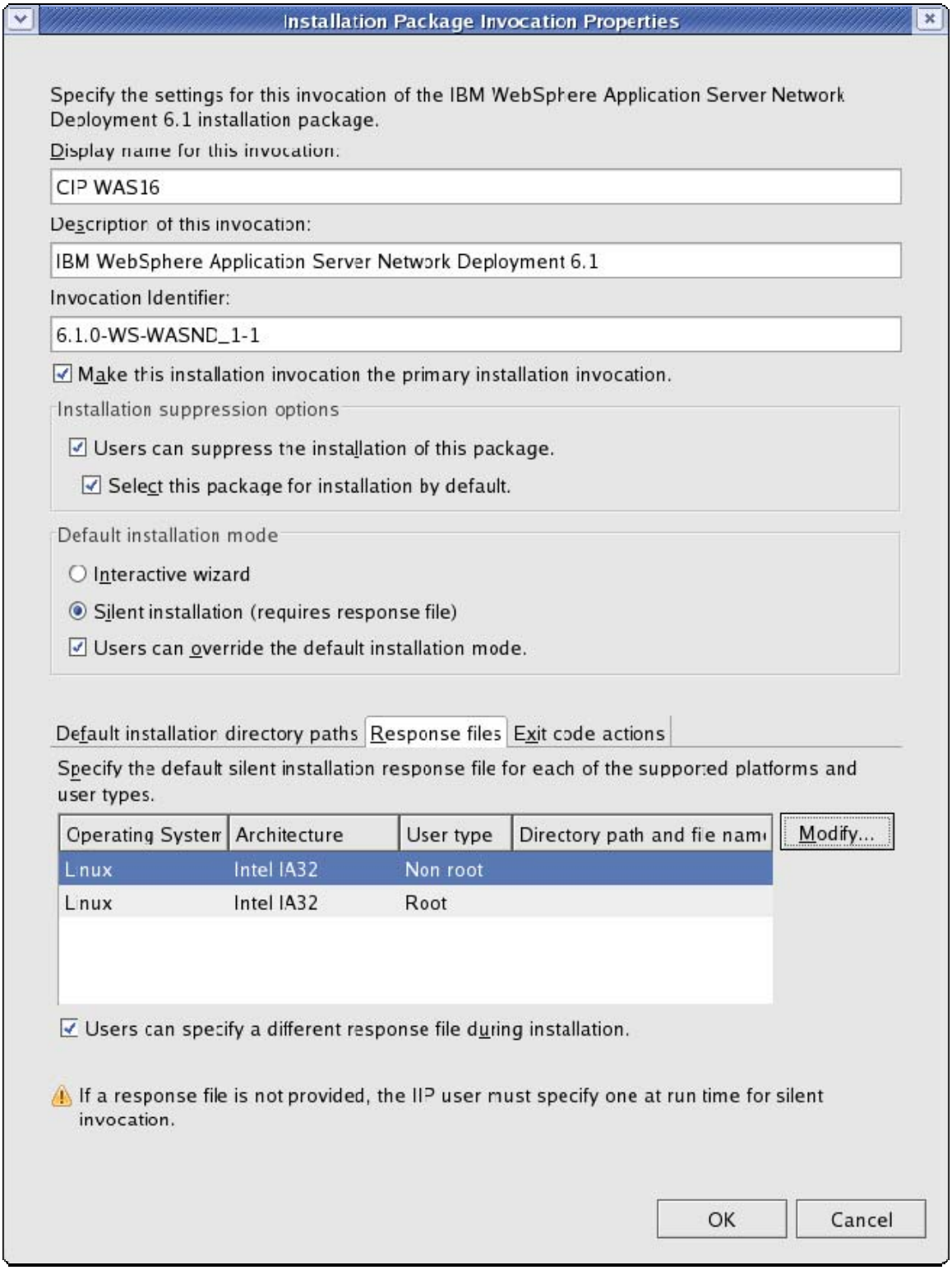
1. Launch Installation Factory in GUI mode by running ifgui.sh on Linux.
2. Click “Open Build Definition”.
3. On the “Modify Existing Build Definition” dialog, click Browse button, select the com.ibm.sampiip.1.0.0.0.xml created in sample 1.



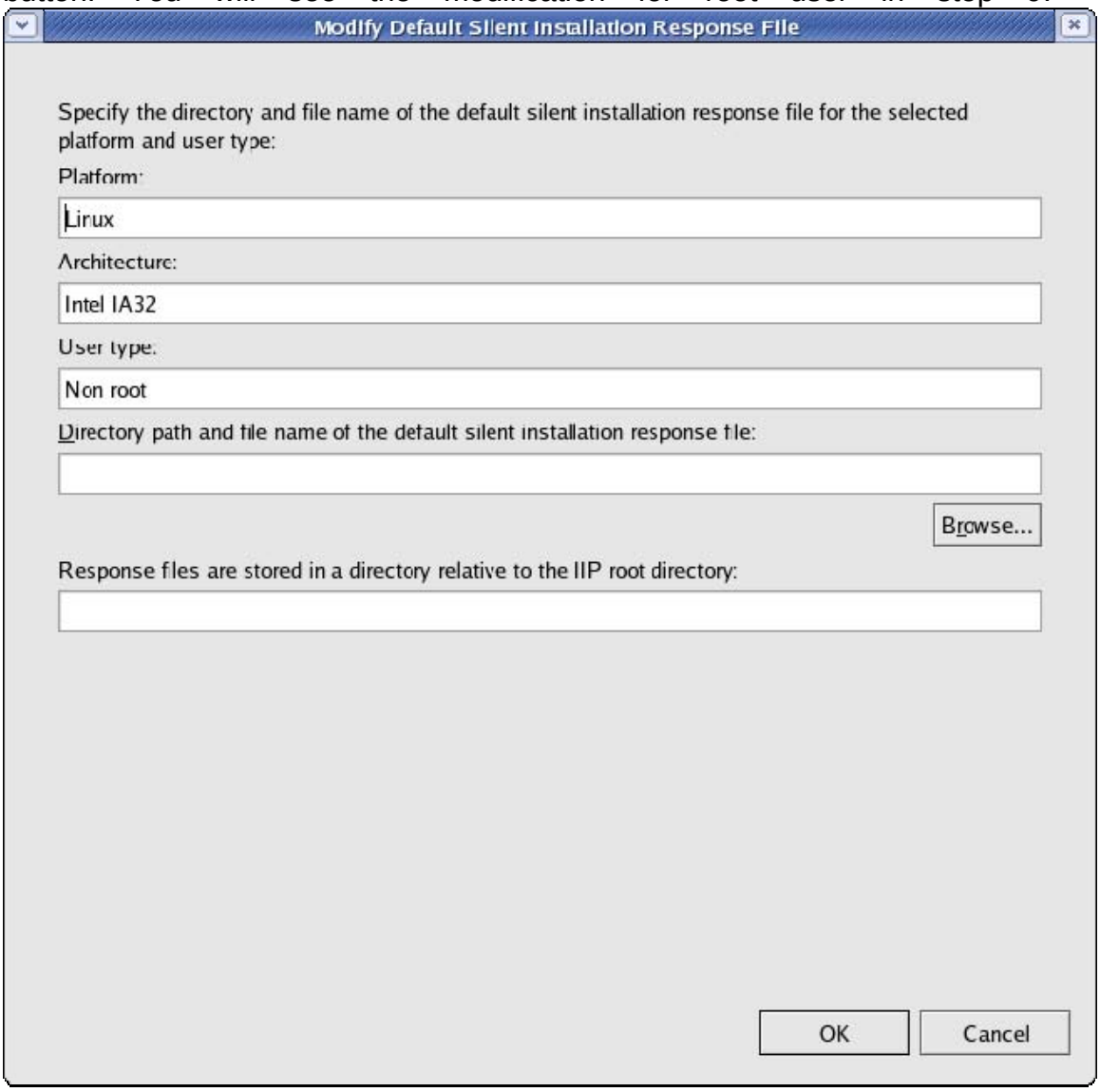
4. The “Build Definition Wizard” comes up. Click Next button on “Mode selection” panel, “Package Identification” panel, “Build Information” panel, and “Integrated Installation Wizard Settings” panel, since we are not going to change anything on these panels.
5. On “Construct Integrated Installation Package” panel, highlight the first invocation in the “Installation Package Invocations” table, and click “Modify…” button next to it.



6. The “Installation Package Properties” dialog comes up. Select “Silent installation (Requires Response File)” radio button and click “Response Files” tab.

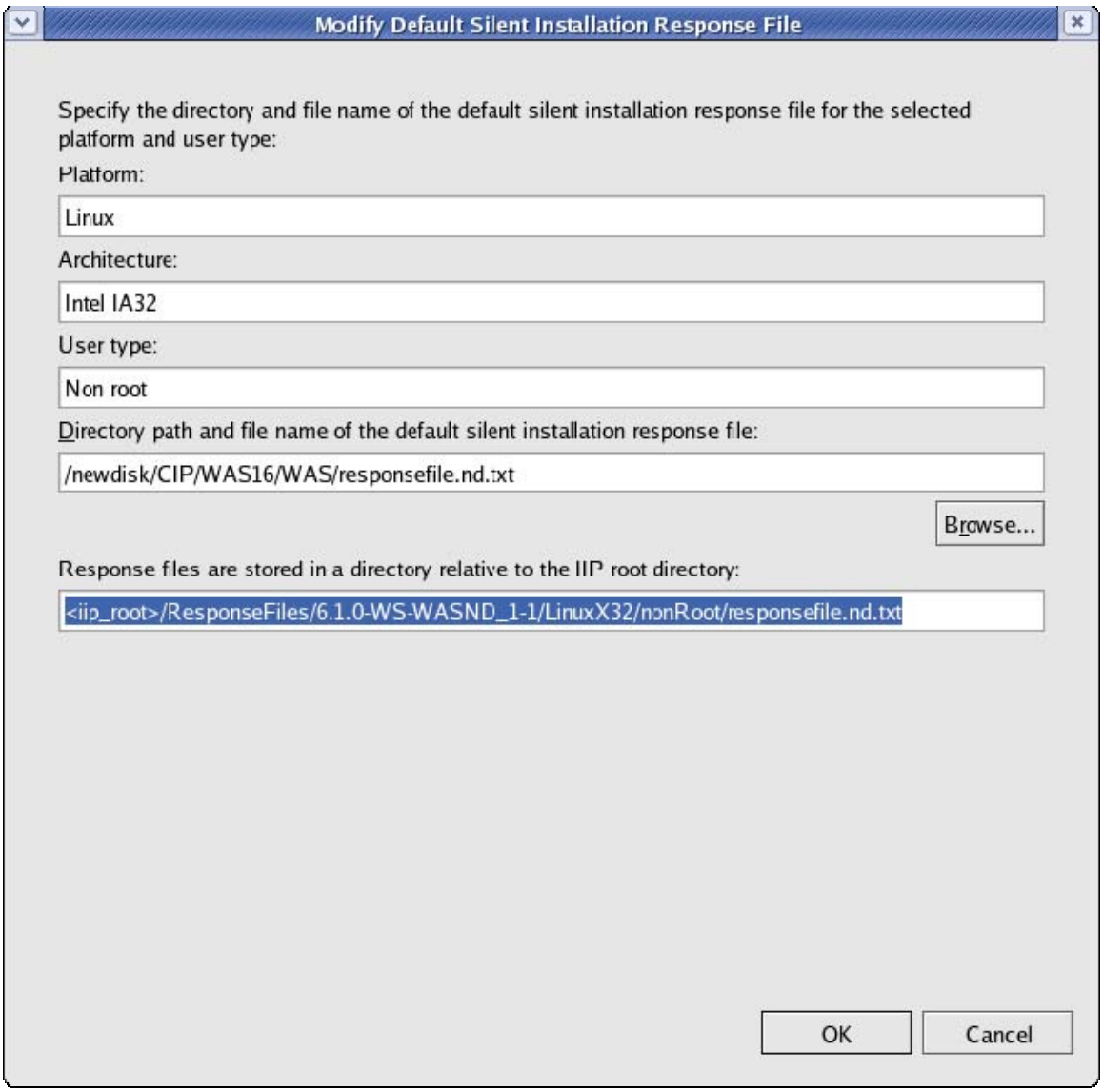


7. Highlight the “Non-Root” response item in the table and click “Modify…” button. You will see the modification for root user in step 9.



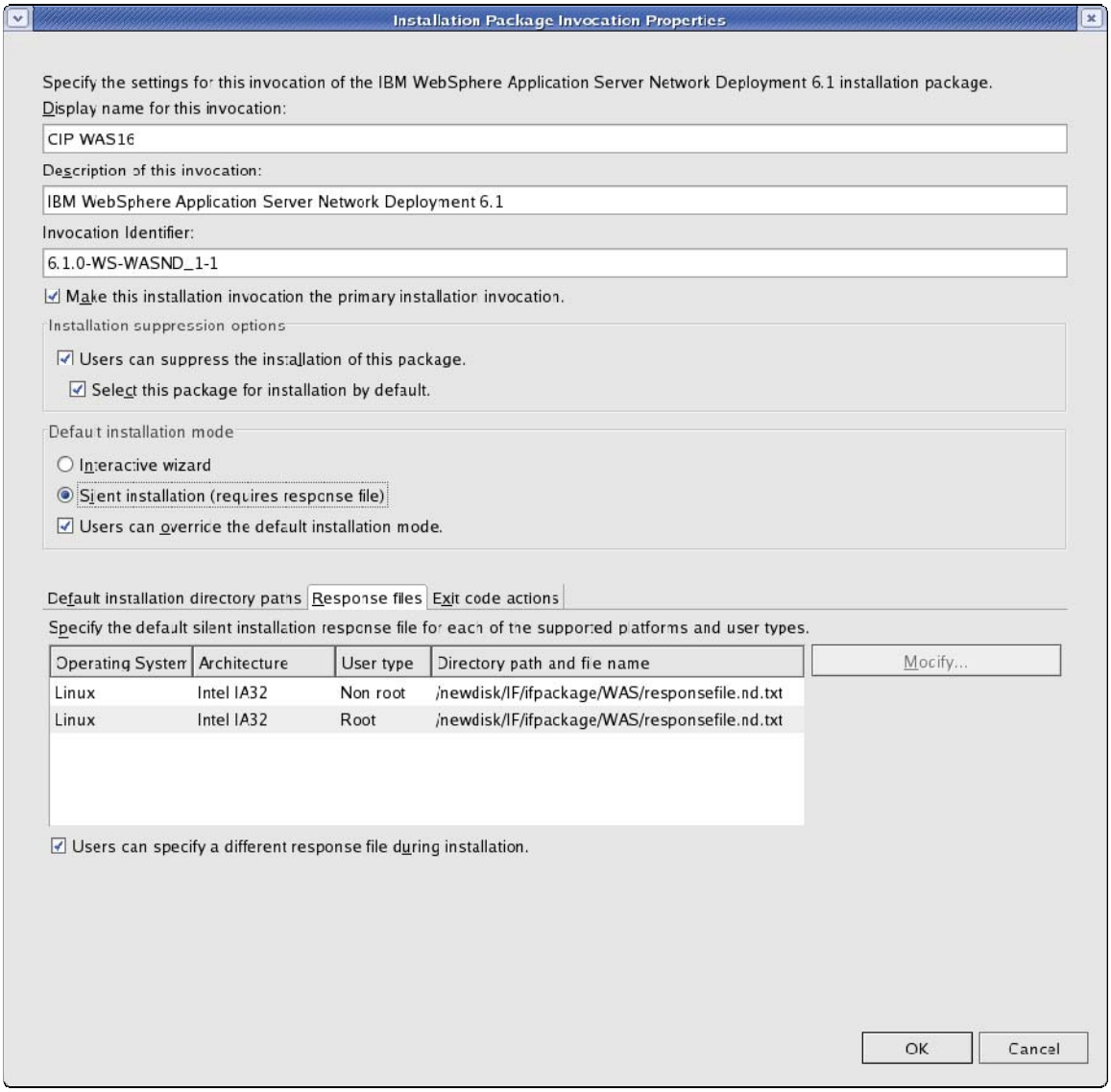

8. Click “Browse...” button to select the response file users want to include for this invocation. The text box below it with label “Response files are stored in a directory relative to the IIP root directory” indicates that during the IIP creation time, the response file input from the “Directory path and file name of the default silent installation response file” field will be copied to “<iip_build_location>/ResponseFiles/6.1.0-WS-WASND_1-1/LinuxX32/nonRoot/responsefile.nd.txt”. Therefore the original file is not touched. After the IIP is created, users may want to modify the response file at “<iip_root>/ResponseFiles/6.1.0-WS-WASND_1-1/LinuxX32/nonRoot/responsefile.nd.txt” if there are changes necessary for the silent installation.

One thing should be noticed is that the installation location in response file has lower priority. Since users can specify the installation location at "Installation Package Invocation Properties" dialog, users can safely remove the installation location parameter in the response file.

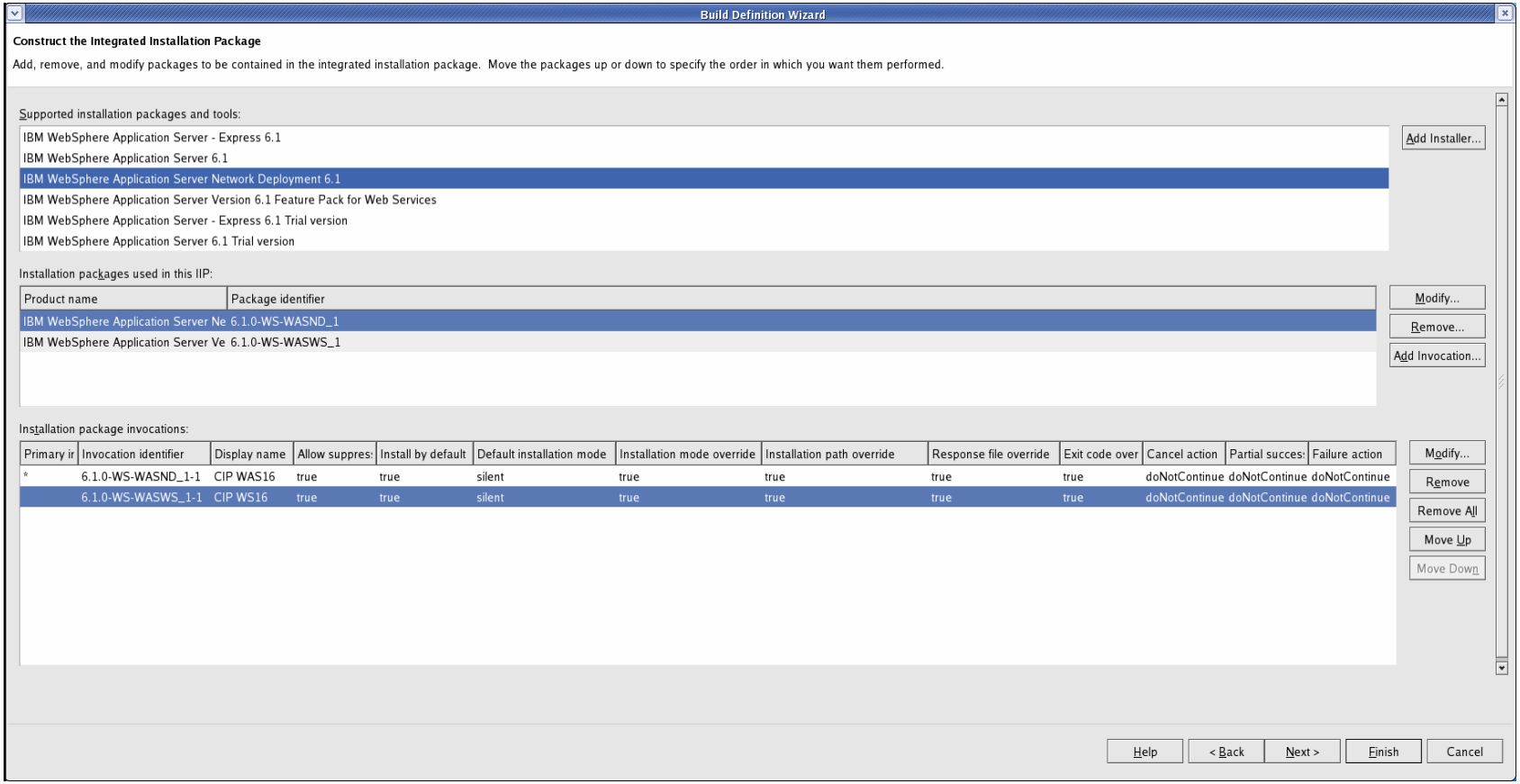



Click OK on this dialog.

9. Repeat the same steps for "root" user, in case users want to perform a root installation. Now the "Installation Package Invocation Properties" should look like:




10. Click “OK” on the “Installation Package Invocation Properties” dialog. Repeat same steps for the next invocation. After filling in the response file for each invocation, the “Construct of Integrated Installation Package” panel looks like the following:


Build Definition Wizard
Construct the Integrated Installation Package
Add, remove, and modify packages to be contained in the integrated installation package. Move the packages up or down to specify the order in which you want them performed.
Supported installation packages and tools:
IBM WebSphere Application Server - Express 6.1
IBM WebSphere Application Server 6.1
IBM WebSphere Application Server Network Deployment 6.1
IBM WebSphere Application Server Version 6.1 Feature Pack for Web Services
IBM WebSphere Application Server - Express 6.1 Trial version
IBM WebSphere Application Server 6.1 Trial version
Add Installer...
Installation packages used in this IIP:
Product name
Package identifier
IBM WebSphere Application Server Ne
6.1.0-WS-WASND_1
IBM WebSphere Application Server Ve
6.1.0-WS-WASWS_1
Modify...
Remove...
Add Invocation...
Installation package invocations:
Primary ir
Invocation identifier
Display name
Allow suppres:
Install by default
Default installation mode
Installation mode override
Installation path override
Response file override
Exit code over
Cancel action
Partial succes:
Failure action
*
6.1.0-WS-WASND_1-1
CIP WAS16
true
true
silent
true
true
true
true
doNotContinue
doNotContinue
doNotContinue
6.1.0-WS-WASWS_1-1
CIP WS16
true
true
silent
true
true
true
true
doNotContinue
doNotContinue
doNotContinue
Modify...
Remove
Remove All
Move Up
Move Down
Help
< Back
Next >
Finish
Cancel

11. Click “Next” button all the way to the “Summary” page. On the “Summary” page, select “Save Build Definition and Generate an Integrated Installation Package” button and click “Finish” button to generate the IIP. Once the IIP is successfully generated, users will see the response files are copied into /newdisk/IF/iip/ResponseFiles directory. Feel free to modify these response files if needed.

12. From /newdisk/IF/iip/bin, launch the IIP installer wizard by executing install.sh (for root user type). Click “Next” on the “Welcome” panel, and “Install” on the “Installation Selection” panel, the IIP installer will install both invocations in silent mode.

13. After installation finishes, run the versionInfo command to verify the installation.

# Sample 4 – Variation of CIP/IIP creation flow (for platforms that do not support ifgui)

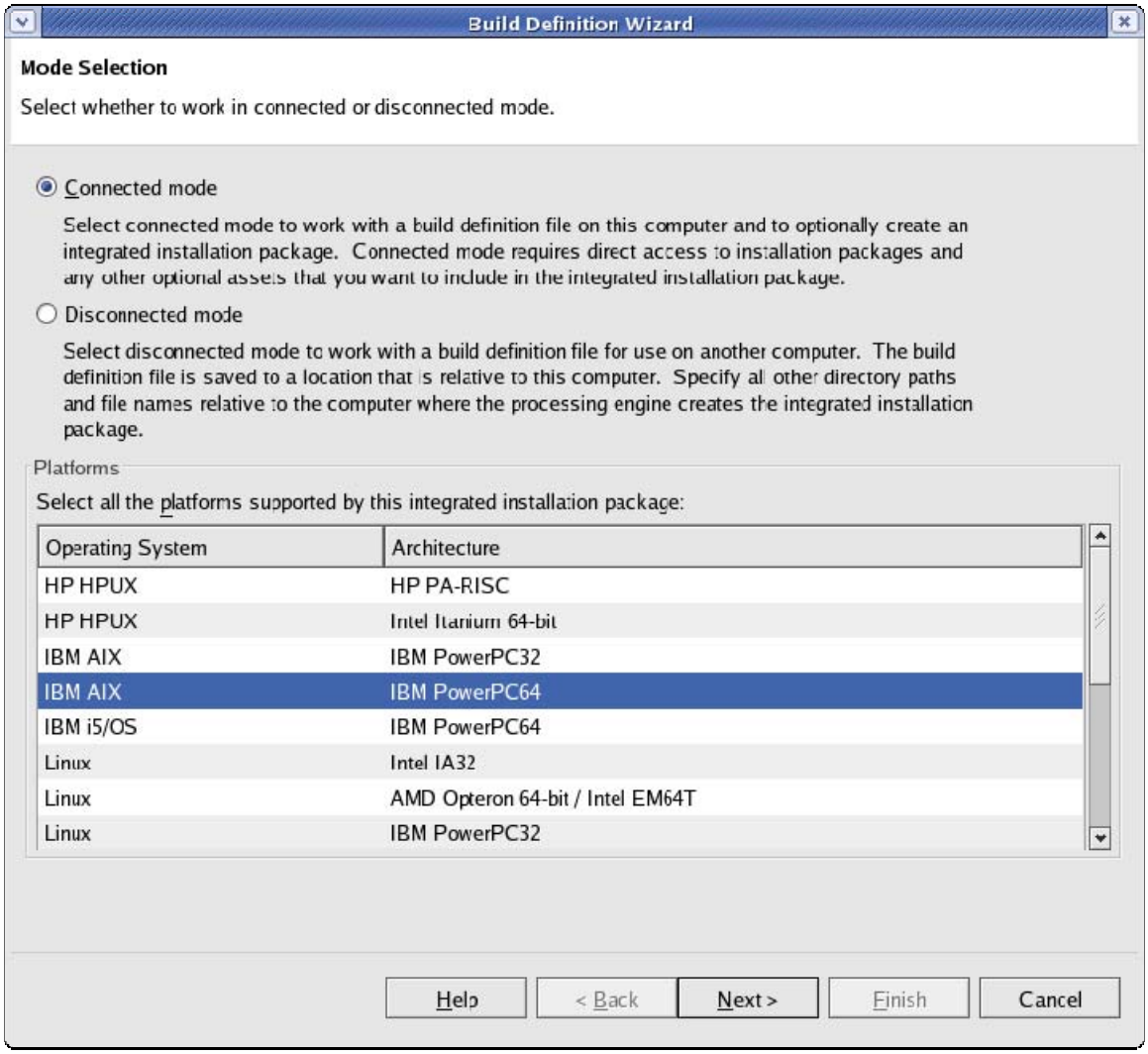
## *Goal*

On some platforms where Eclipse is not currently supported, there is no Installation Factory GUI (ifgui) to create a CIP or IIP. There are two ways to accomplish the task. One is to do a “cross platform CIP/IIP generation” in Connected mode. The other is to use ifcli command with pre-existing build definition file to create the CIP/IIP on target platform. For a list of supported architectures and details on systems which support the ifgui, go to the Installation Factory readme at http://www-1.ibm.com/support/docview.wss?rs=180&uid=swg27009909#steps.

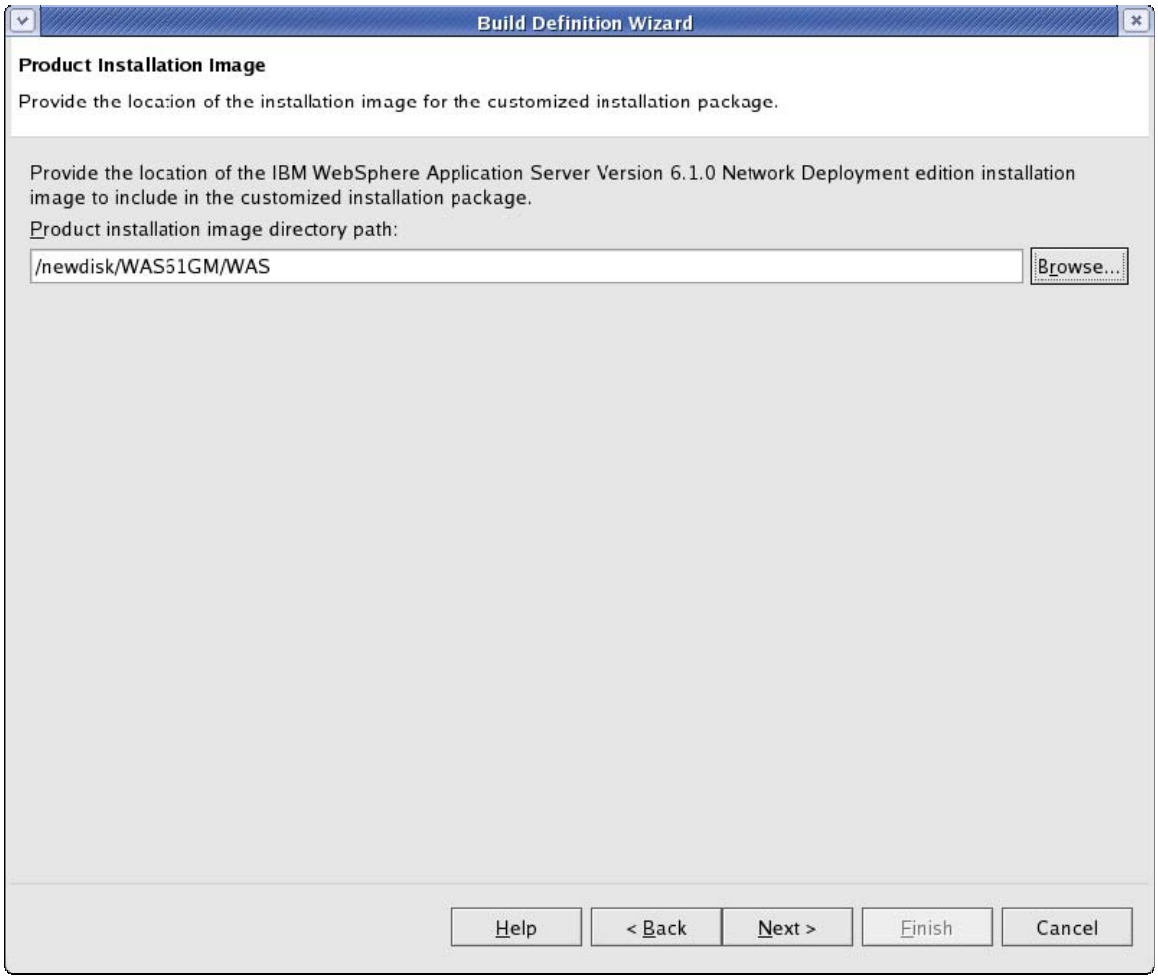
For the first time user, cross platform CIP/IIP generation might be easier. Users can use one platform where Installation Factory GUI is supported to create the CIP or IIP for the target platform. This can be done in Connected mode, with all input from the target platform available on the machine running ifgui.

## *Approach 1. Use Installation Factory GUI from Linux IA 32 platform to create CIP/IIP for AIX PowerPC64 platform.*

After users launch ifgui.sh from Linux IA 32 platform, go to the “Mode Selection” pane, choose “Connected mode” and “IBM PowerPC64” as target platform from the list of platforms.




Then in the subsequent flow where input is needed for AIX PowerPC64, make sure browsing to the input which is for the AIX PowerPC64 platform. For example, if a WebSphere Application Server CIP is to be created for AIX PowerPC64, download the WebSphere Application Server Version 6.1 installation image for AIX PowerPC64 to the Linux machine. Then browse to WebSphere Application Server Version 6.1 installation image for AIX PowerPC64 to input into the “Product Installation Image” panel.

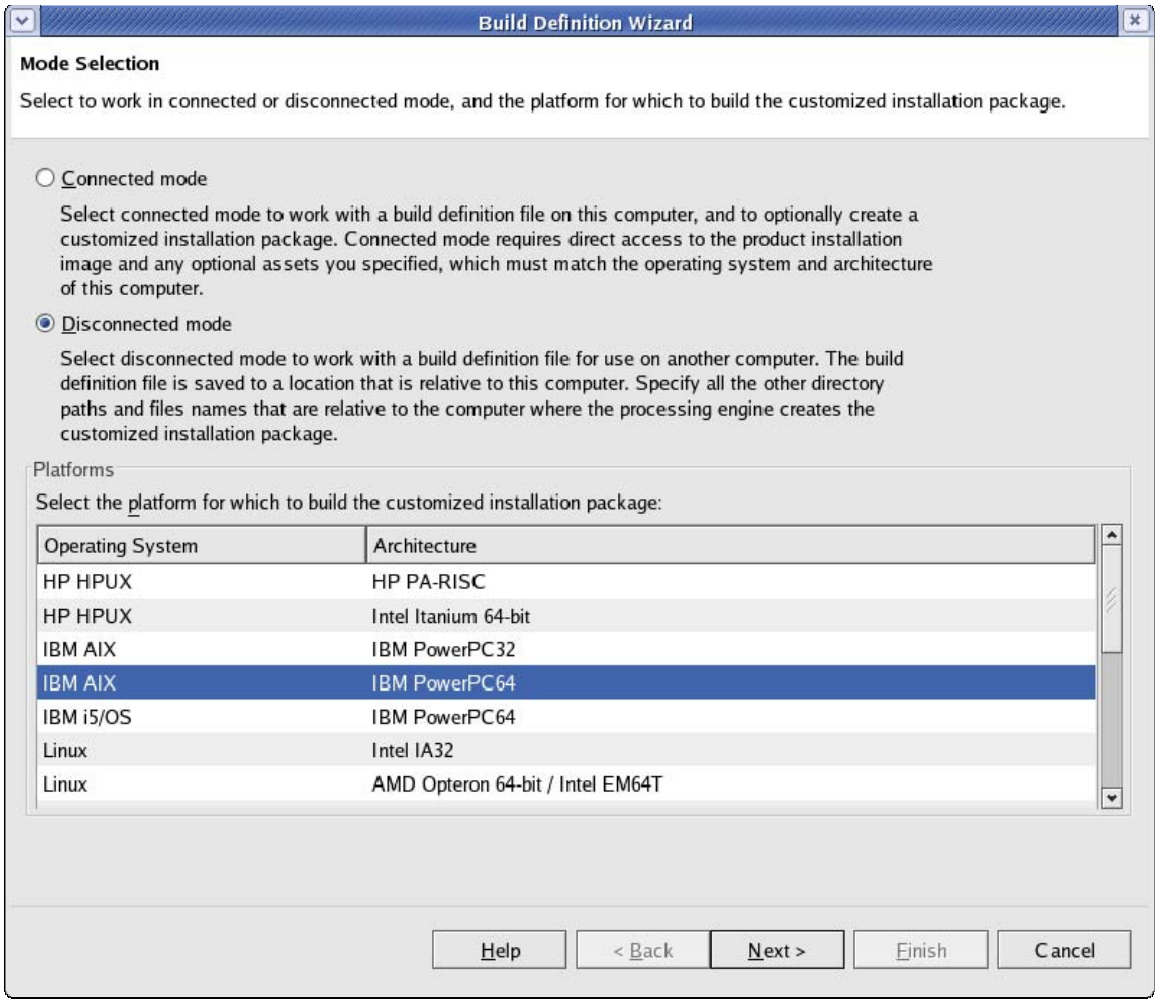



Keep in mind that all the AIX files reside on the Linux machine where ifgui.sh is launched, including WebSphere Application Server Version 6.1 installation image, fix packs, interim fixes, and build definition file as well as the CIP build.

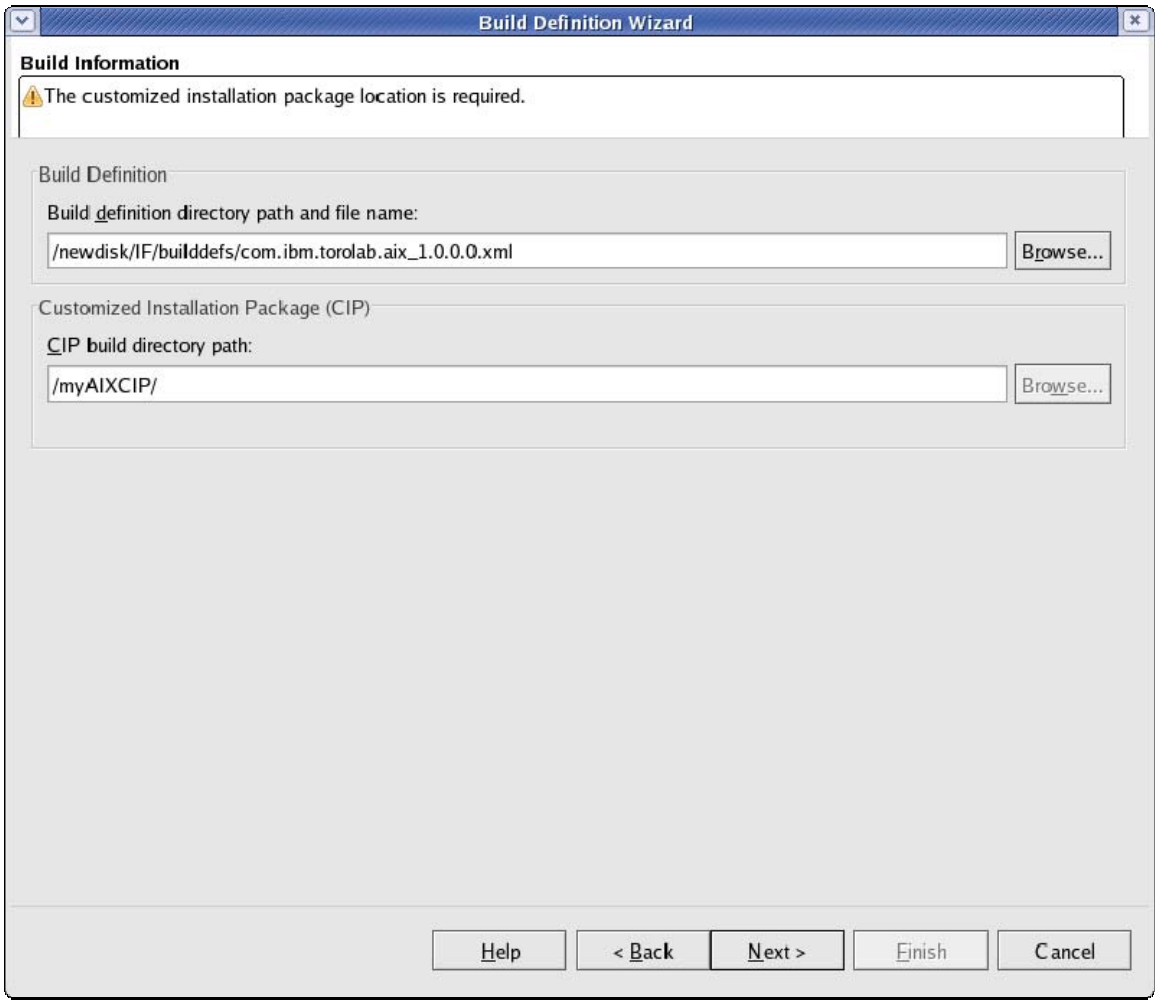
## *Approach 2. Use ifcli command to create CIP/IIP on AIX PowerPC64.*

With this approach, users need to create the build definition file for AIX PowerPC64 first. Then use the following command on AIX PowerPC64 machine to generate the CIP or IIP:
./ifcli.sh –buildDef <build_definition_file_name>

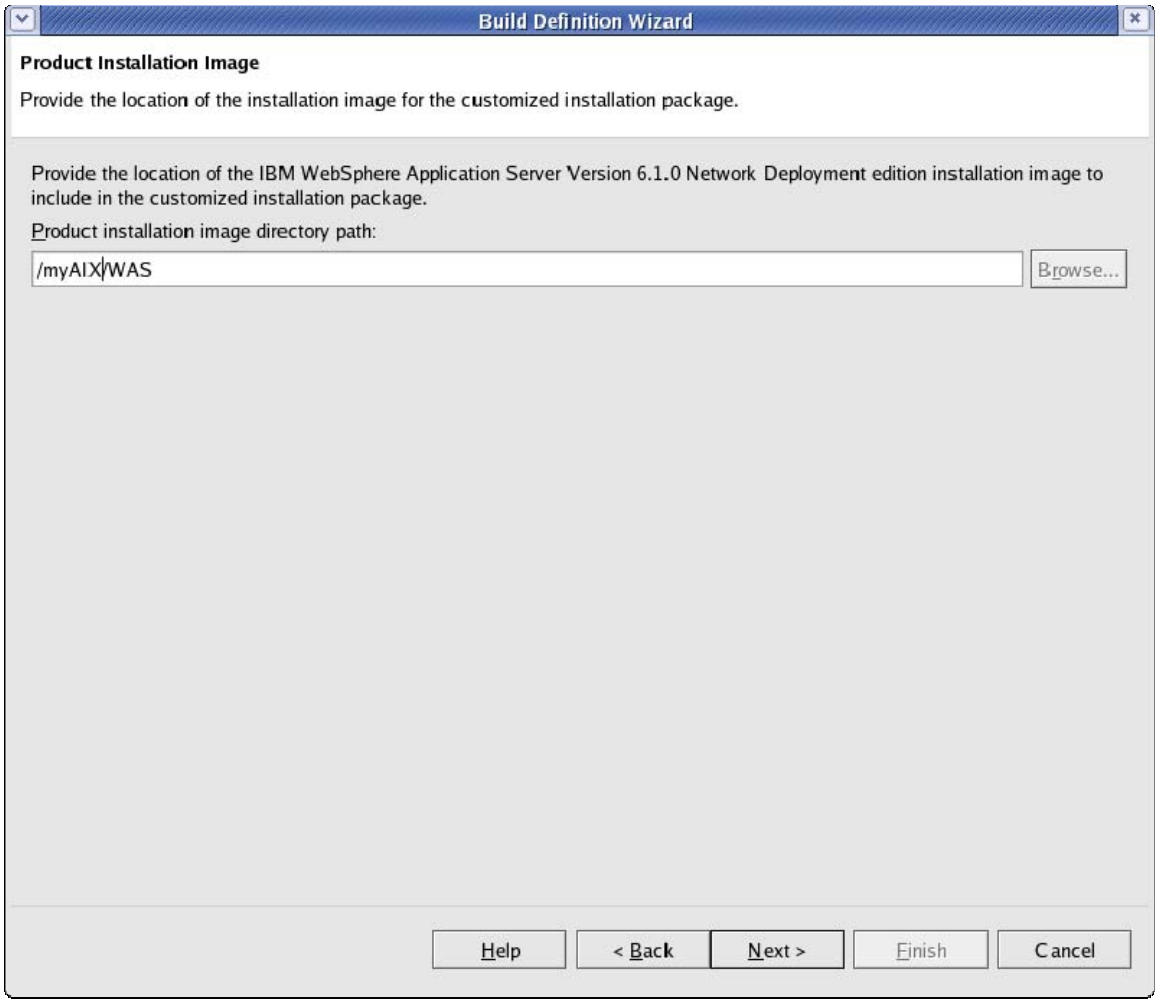
In order to create the build definition file for AIX PowerPC64, users will rely on ifgui again (or the other choice is to manually craft the build definition file for AIX). Launch the ifgui.sh from Linux, in the Mode Selection panel, choose the “Disconnected mode” and “IBM AIX PowerPC64” as target platform.



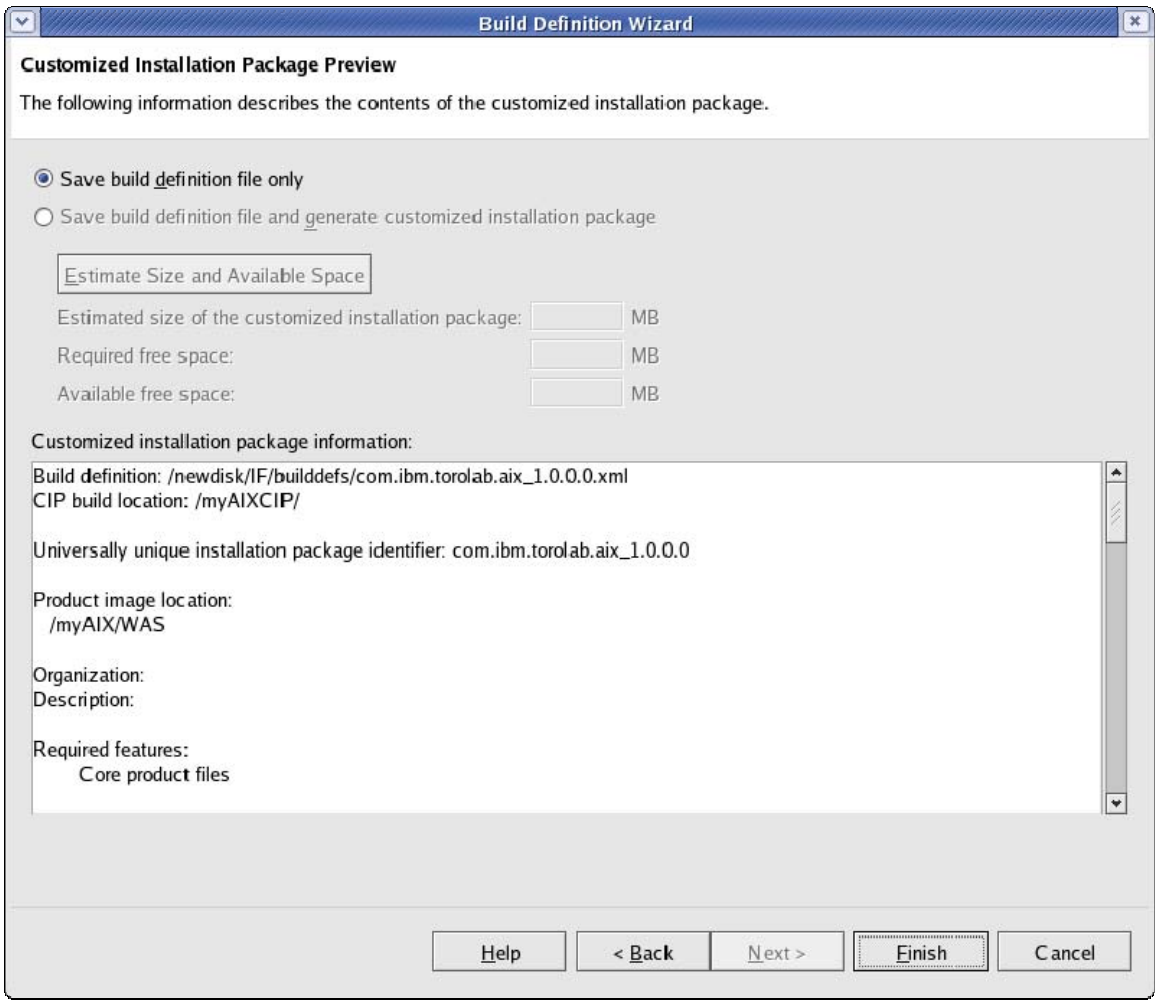
Click Next button, and provide the “CIP build directory path”. This should be the path on the AIX machine, since the creation will be done on AIX machine.



Click Next button, and provide the location of WebSphere Application Server Version 6.1 installation image sits on AIX machine. Note that this should be the directory on the AIX machine instead of Linux, since users will run the creation on AIX later on. The “Browser” button is disabled.



Do the same for other input. Make sure the paths are correct on AIX machine. Then in the “Customized Installation Package Preview” panel, users will notice that only one option is available - “Save build definition file only”. This will finish creating the build definition file on Linux machine. Next step is to copy this file to the AIX machine and run ifcli.sh from there.



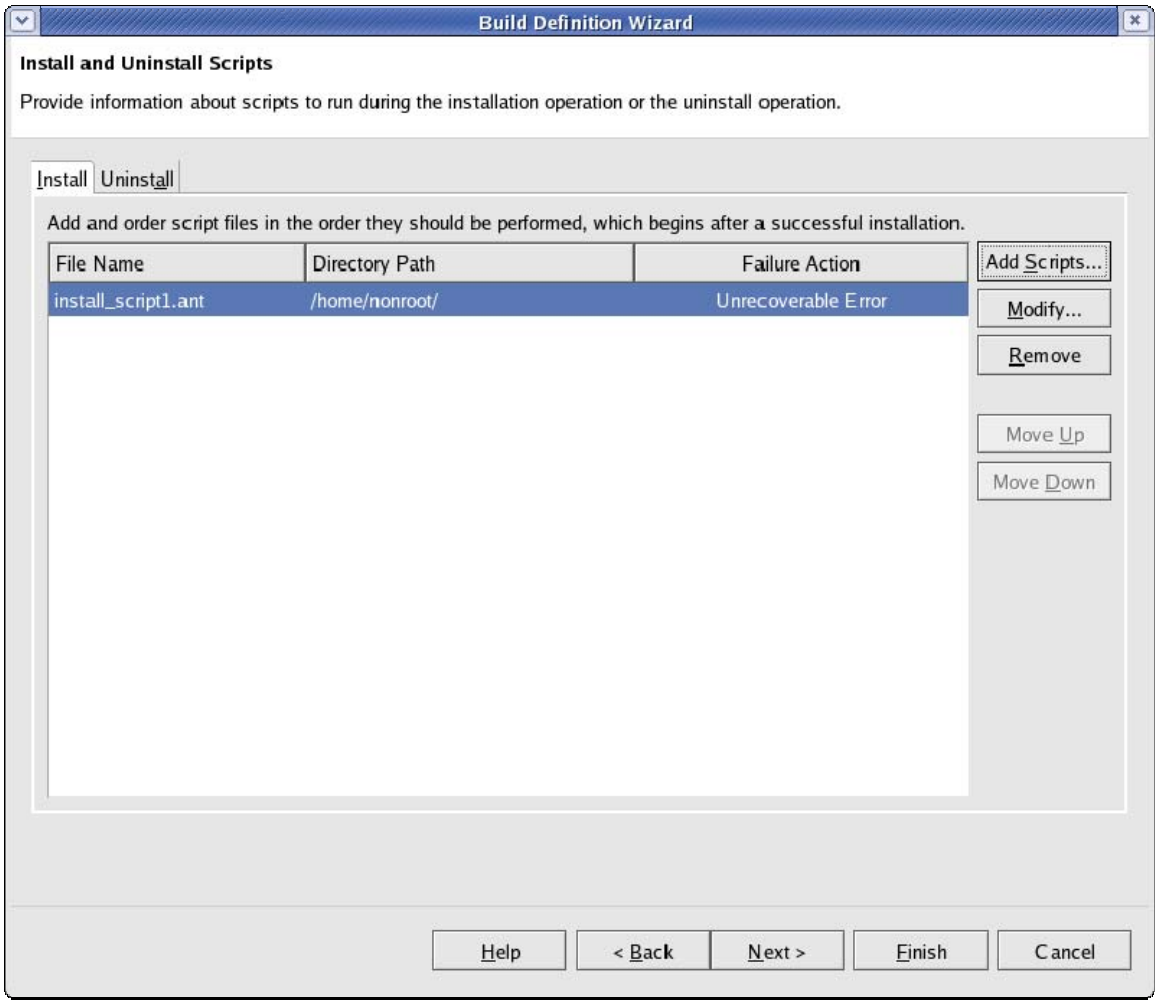

Since two Installation Factory images are needed with approach 2, one for creating build definition file on Linux, and the other for generating CIP/IIP on AIX, it is easier to use approach 1 which requires only one Installation Factory image (Linux).

# Sample 5 – Installation/Uninstallation scripts bundled in CIP

## *Goal*

One of the flexibility CIP provided is at the installation time, it allows users to run additional scripts after the primary installation flow finishes. This will help users when there are some actions to further configure the installation. At the uninstallation time, it also allows to run additional scripts before the primary uninstallation flow starts.

The place to provide these installation/uninstallation scripts in Installation Factory GUI is as follows:




The failure action can be **Unrecoverable**, meaning if the script fails, stop the installation right away, or **Continue**, meaning the results of executing the script is

not critical to the whole installation flow. Even if it fails, installation should continue.

# Sample 6 – Profile customizations bundled in CIP

## *Goal*

Profile customization is another important feature provided via CIP. It can streamline the normal profile creation and augmentation into one step by creating the augment templates through CIP creation.

## *Task 1. Create customized stand-alone application server profile template*

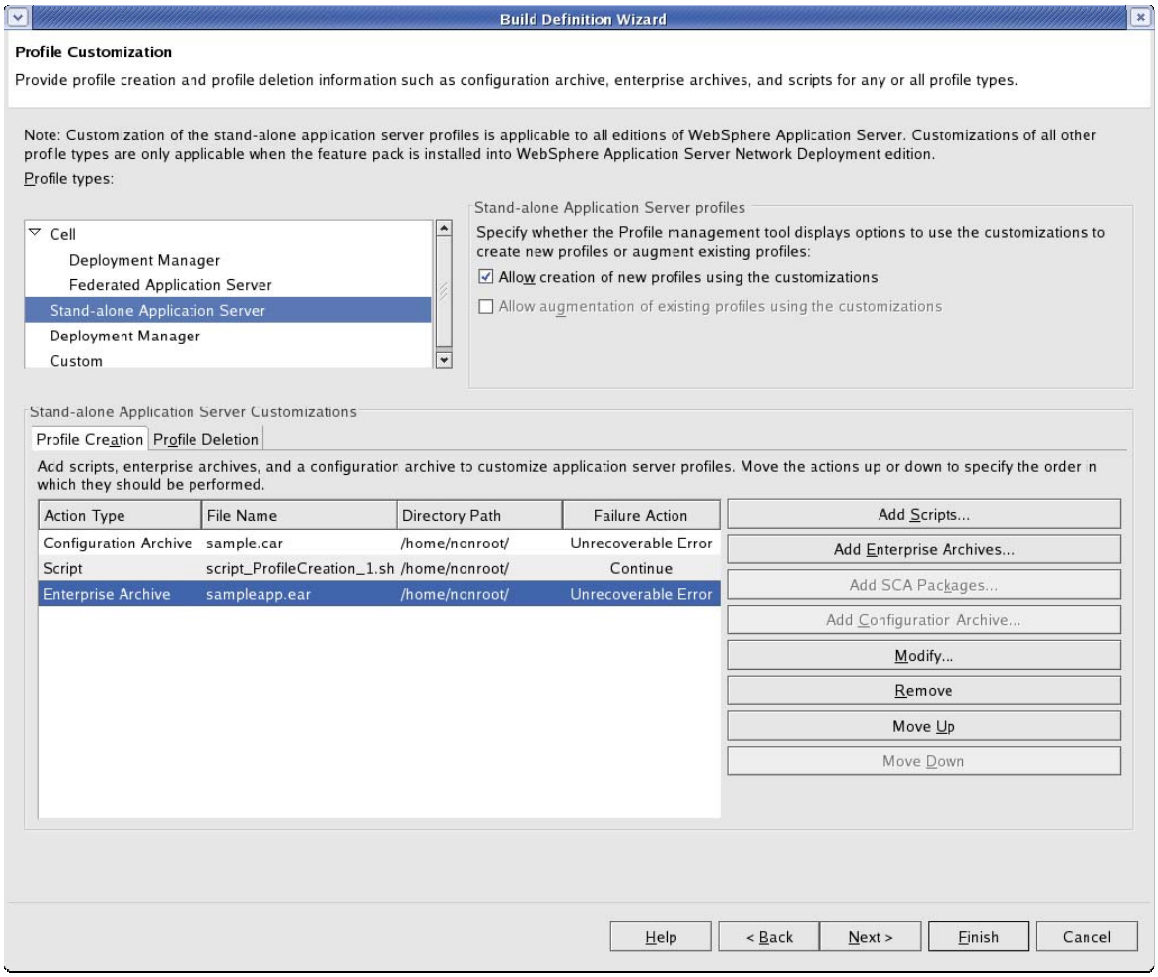
During the CIP creation, one of the panels called “Profile Customization” will allow users to customize for certain profile types the creation time and/or deletion time actions.
Installation Factory supports profile customization for both WebSphere Application Server CIP and Feature Pack for Web Services CIP.

There are two pictures below, one for WebSphere Application Server CIP profile customization, and other for Feature Pack for Web Services CIP. Both customizations are for stand-alone profile creation.

We have three actions for WebSphere Application Server CIP profile customization. They are customizations for the stand-alone profile creation: sample.car to be imported during the profile creation, followed by script_profileCreation_1.sh, and deployment of sampleapp.ear. These customizations can only be invoked at profile creation time since there is a configuration archive which can be imported to a brand new profile only.

We have one action for Feature Pack for Web Services CIP profile customization. It is script_profileCreation_2.jacl to be executed for stand-alone profile creation/augmentation. The template can be used either at profile creation time (stack creation) or just profile augmentation.

WebSphere Application Server profile customization:

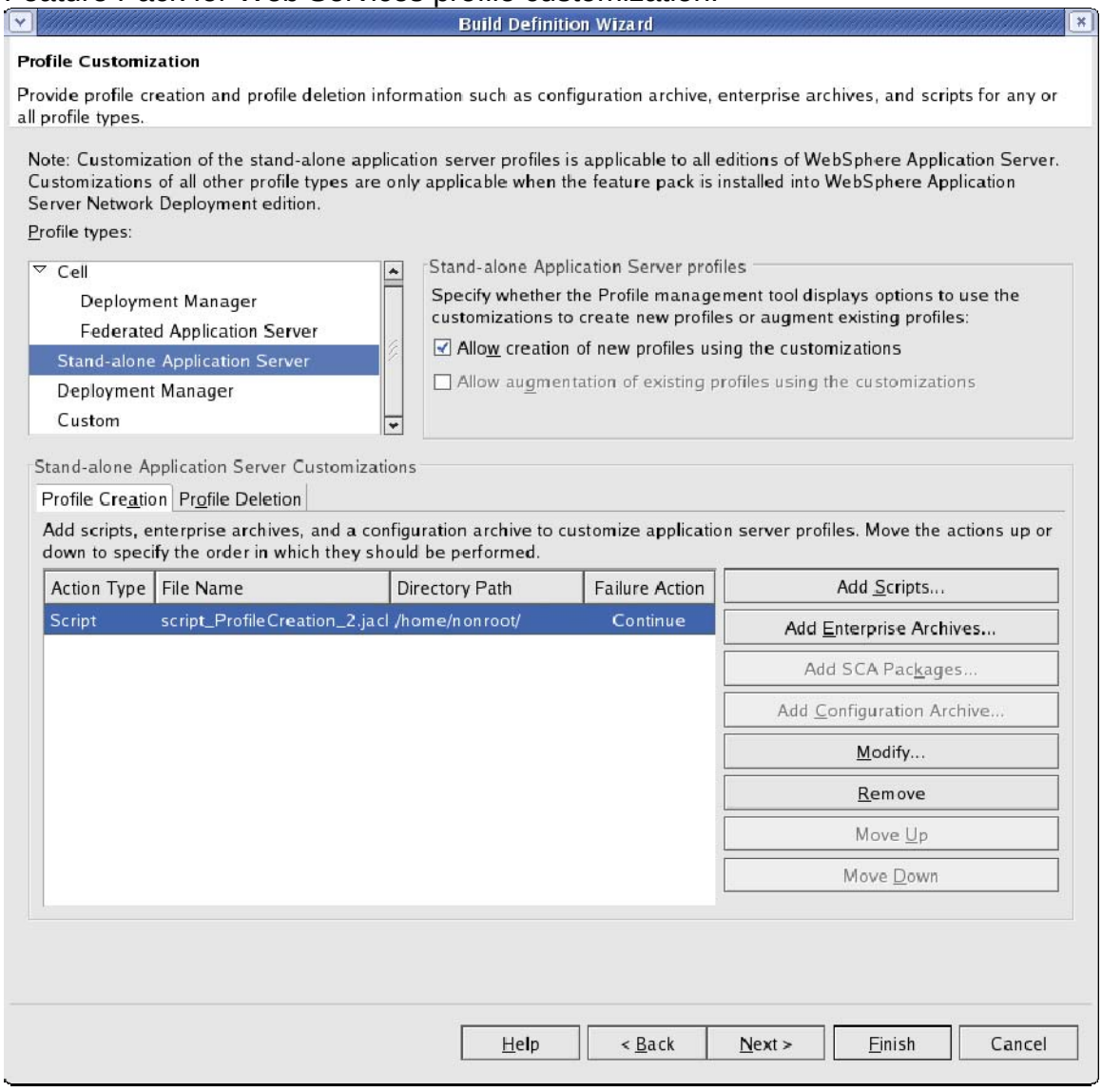



The checkbox “Allow creation of new profiles using the customizations” is checked so that when Profile Management tool (GUI) is launched, the template will be displayed there.

The checkbox “Allow augmentation of existing profiles using the customizations” is disabled so that Profile Management tool (GUI) will not display this template when users choose to augment existing profiles.

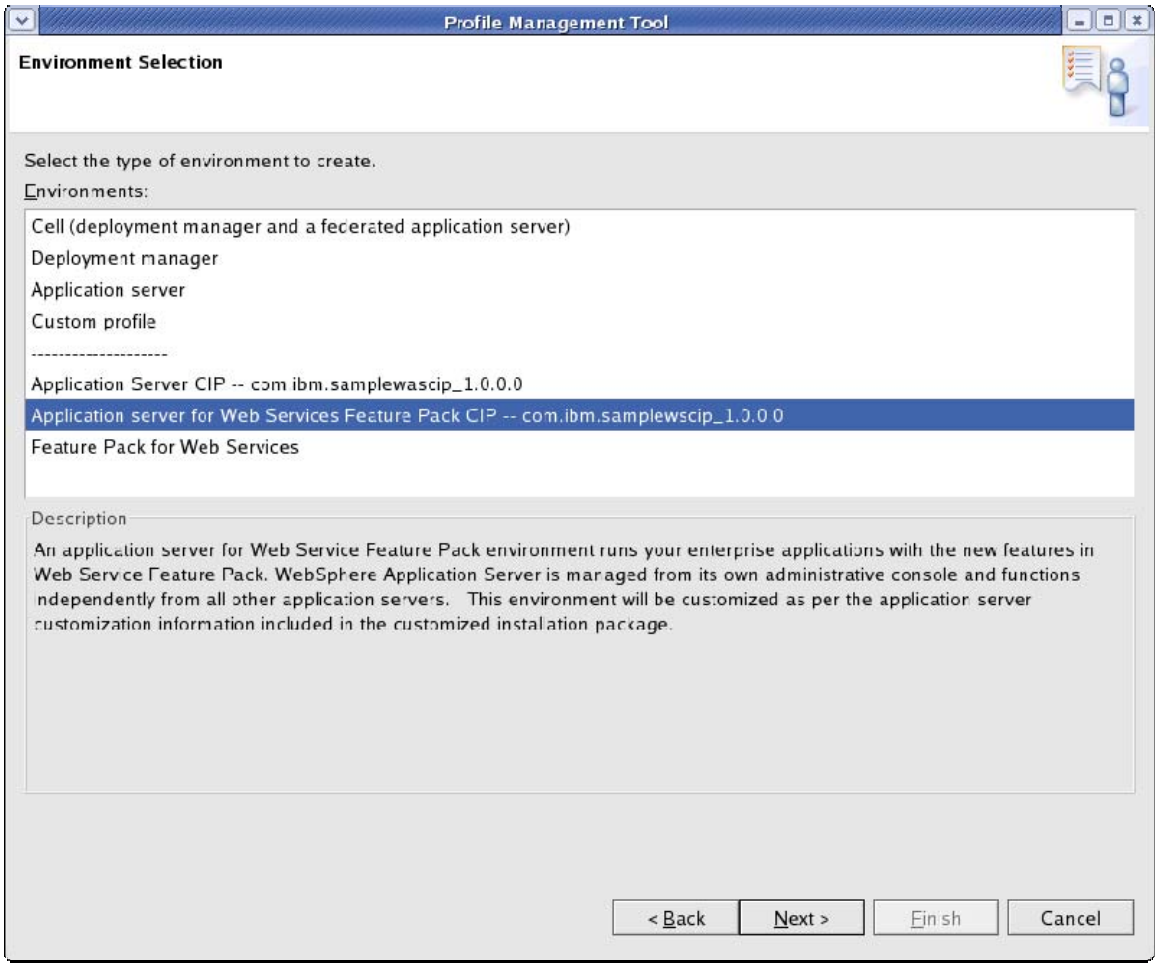
The two check boxes controls what is displayed in Profile Management tool (GUI). However, advanced users may still be able to perform applicable creation/augmentation functions through manageprofiles command.

Feature Pack for Web Services profile customization:




## *Task 2. Use Profile Management tool with customized profile templates*

When Profile Management tool is used, the two new profile templates will show up together with the regular profile template for stand-alone profile, which was shipped with the WebSphere Application Server Version 6.1 installation image. In the following screen snapshot, there are two templates with CIP identifier. One is introduced through WebSphere Application Server CIP - com.ibm.samplewascip, and the other is introduced through Feature Pack for Web Services CIP – com.ibm.samplewscip.




## *Task 3. Use manageprofiles command with customized profile templates*

If users are familiar with the manageprofiles command, the commands to work with the customized profile templates are:

<WAS_HOME>/bin/manageprofiles –create –profileName <PROFILE_NAME> -templatePath <WAS_HOME>/cip/<cipID>/if_augmentTemplates/default

This command will create a stand-alone profile and invoke the three actions-import configuration archive, execute script, then deploy sample application.

<WAS_HOME>/bin/manageprofiles –create –profileName <PROFILE_NAME> -templatePath <WAS_HOME>/cip/wsfep/<cipID>/if_augmentTemplates/default

This command will create a stand-alone profile, augment with Feature Pack for Web Services template, then invoke the script.

Similarly, users can find the commands for other profile types.

The above creation command performs the creation and augmentation in one step. This can be done in two steps by using the following two commands:

<WAS_HOME>/bin/manageprofiles –create –profileName <PROFILE_NAME> -templatePath <WAS_HOME>/profileTemplates/default (assuming not using configuration archive)

<WAS_HOME>/bin/manageprofiles –augment –profileName <PROFILE_NAME> -templatePath <WAS_HOME>/cip/<cipID>/if_augmentTemplates/default

# Sample 7 – Additional files bundled in CIP and IIP

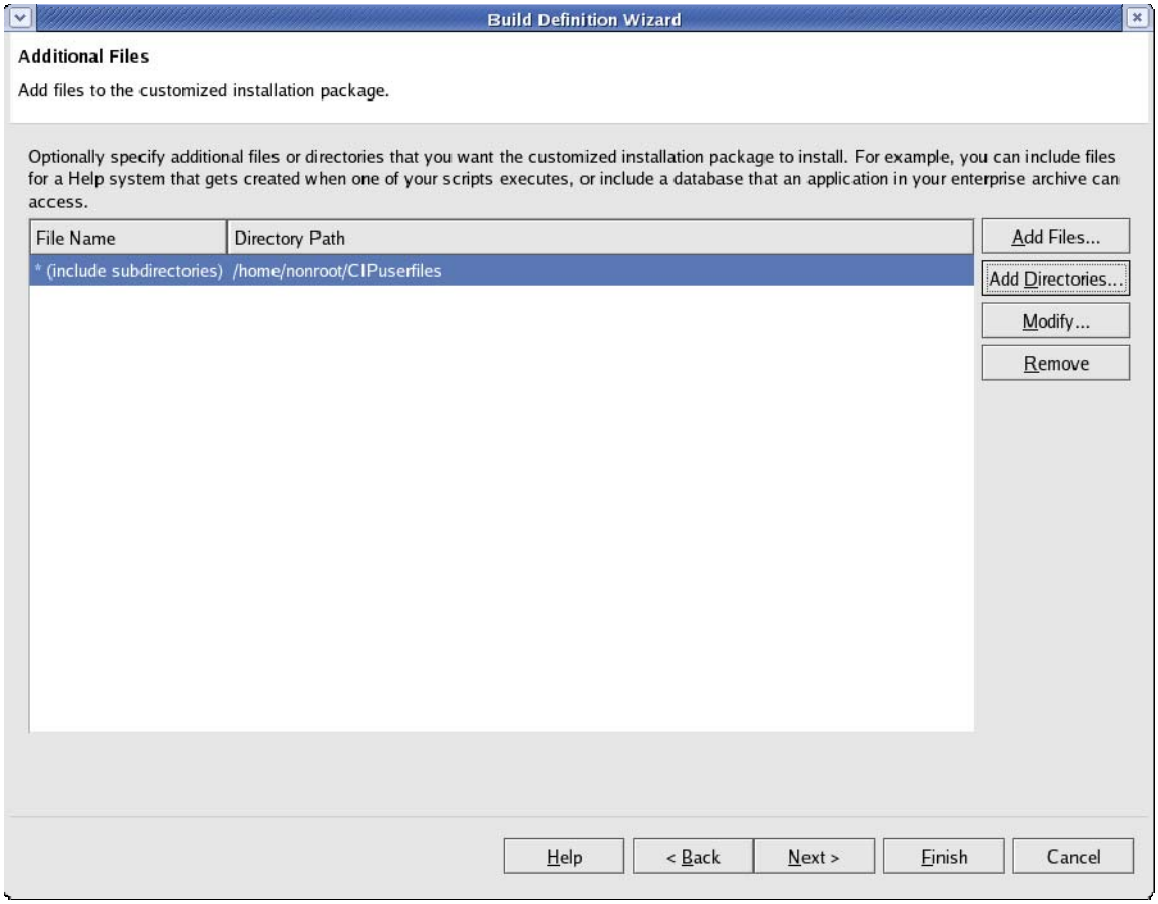
## *Goal*

There might be some additional files users want to include as part of CIP or IIP. These files can be a Readme file, or additional license agreement, etc.

## *Task 1. Bundle additional files in CIP*

With CIP, these files can be provided in the following panel. Users can either input files one by one by “Add Files”, or use “Add Directories” where there is an option to also include subdirectories.

In the screen capture below, the whole directory /home/nonroot/CIPuserfiles is bundled in the CIP, including subdirectories.



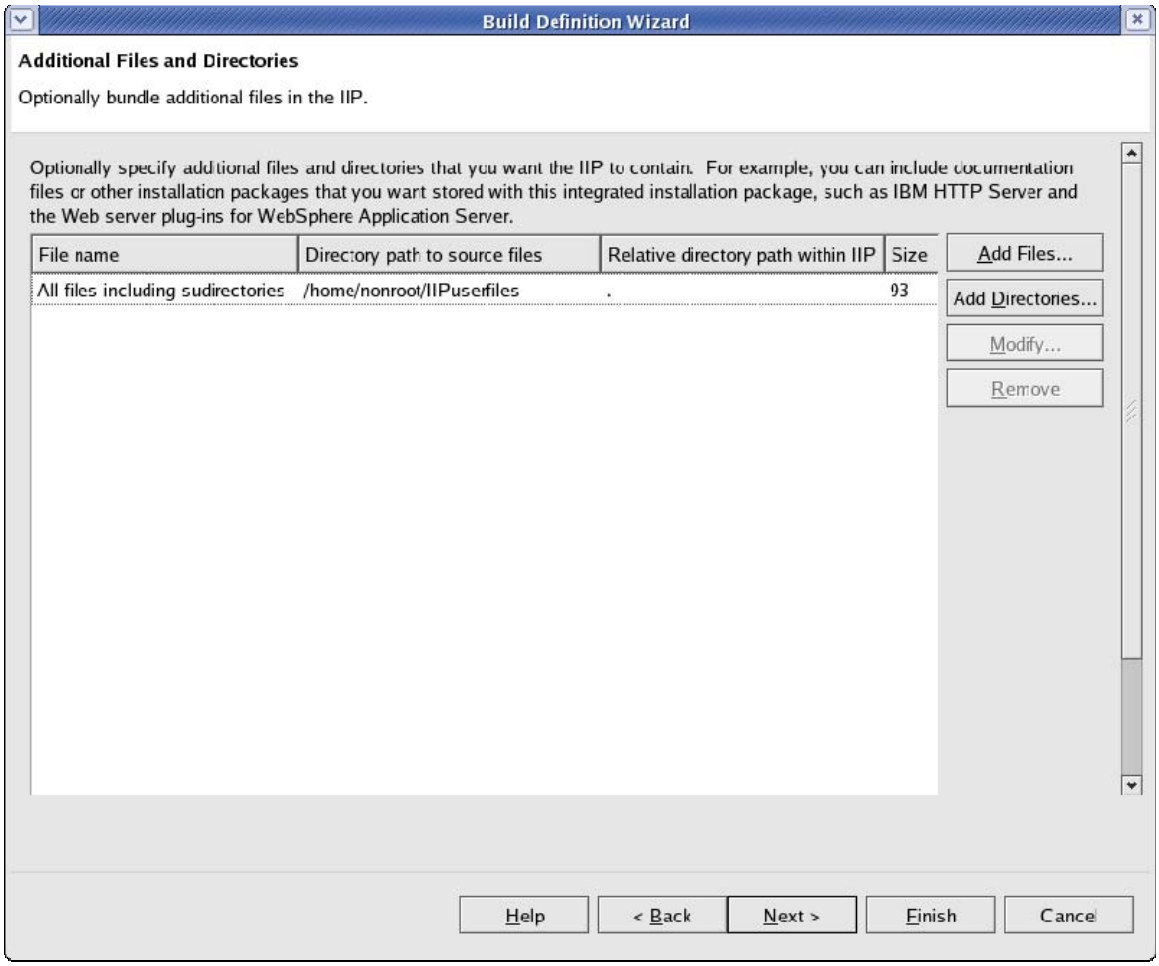

The places where these CIP additional files go differs with the type of CIP. If the additional files are bundled in the WebSphere Application Server CIP, after installation, they are placed under <WAS_HOME>/cip/<cipID>/userfiles/. If the

additional files are bundled in the Feature Pack for Web Services CIP, after installation, they are placed under <WAS_HOME>/cip/wsfep/<cipID>/userfiles/

## *Task 2. Bundle additional files in IIP*

The Installation Factory GUI panel looks like the following when bundling additional files into IIP. The difference between CIP and IIP here is that users can specify where the relative path is within IIP to place the files. In the example below, a "." is specified, so that the files are placed directly under the IIP build location which is /newdisk/IF/iip/.

However, these files will NOT be installed at IIP installation time. If users would like to install these files, they need to write a script to handle it.



# Trouble Shooting

## *Examining IIP and Other Logs*

### 1. Finding the logs for CIP/IIP creation

It can be found at the following location:
<IF_install_root>/logs/log.txt, for example, /newdisk/IF/logs/log.txt
The indicator of success is: INSTCONFSUCCESS

### 2. Finding the logs for an IIP installation

If the IIP installation GUI is used, the status of each invocation and overall status will be shown on the GUI.

The logs for IIP installation can be found at the following location:
<IIP_build_location>/iip/log.txt, for example /newdisk/IF/iip/logs/log.txt

### 3. Indicators for success

The indicators for success for each invocation and overall status are as follows:

- **The first invocation (WebSphere Application Server CIP)**

```
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Summary of execution for invocation with invocation id "6.1.0-WS-
WASND_1-1":
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Exit code: succeeded.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Explaination of exit code: The contribution was installed
successfully..
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Final installation location: /opt/IBM/WebSphere/AppServer3.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Location of log file:
/opt/IBM/WebSphere/AppServer3/logs/install/log.txt.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Location of trace file: .
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO:
```

Note that in the above logging information, it tells users where the installation log for the WebSphere Application Server CIP is (in this case it is /opt/IBM/WebSphere/AppServer3/logs /install/log.txt). Therefore, if anything went wrong, users need to look at this log for the contribution installation. Another possible place to check logs is the <USER_HOME>/waslogs/.

- **The second invocation (Feature Pack for Web Services CIP)**

```
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Summary of execution for invocation with invocation id "6.1.0-WS-
WASWS_1-1":
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Exit code: succeeded.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Explaination of exit code: The feature pack was installed
successfully..
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Final installation location: /opt/IBM/WebSphere/AppServer3.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Location of log file:
/opt/IBM/WebSphere/AppServer3/logs/install/webservices/log.txt.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO: Location of trace file: .
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logResults,
INFO:
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUti
lity, logEnds, INFO:
```

Note that in the above logging information, it tells users where the installation log for the Feature Pack for Web Services CIP is (in this case it is /opt/IBM/WebSphere/AppServer3/logs /install/webservices/log.txt). Therefore, if anything went wrong, users need to look at this log for the contribution installation. Another possible place to check logs is the <USER_HOME>/webservices/.

- **Overall IIP installation status**

```
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logEnds,
INFO: The IIP command ended at: 28-May-2007 12:50:56 PM with return
code: INSTCONFSUCCESS.
(28-May-2007 12:50:56 PM),
com.ibm.ws.install.factory.iip.engine.util.IIPILogUtility, logEnds,
INFO:
```

## *Common Errors and Resolution*

### 1. IIP installation returns right away, no error messages on screen

Possible causes:
1. The command has some typos, such as
./install.sh –iipResponseFile <IIP_HOME>/install.txt
It should have a "=" sign between –iipResponseFile and the real file name.

1. Invalid parameters. Open the IIP installation log at <IIP_build_location>/logs/log.txt for more details.

2. In IIP response file, if a path contains space, it should be surrounded by single quotes.

3. Response file for individual invocation has errors, such as installation location is not correct, or did not mark -OPT silentInstallLicenseAcceptance="true"

### 2. Could not launch IIP installer in silent mode

Possible causes:
1. During the IIP creation, the "Display installation wizard at startup" check box is checked, but "Users can override whether to display installation wizard" is not checked. This means, the creator of IIP does not allow installer of IIP to run the IIP installer in silent mode.
2. On platforms that do not support Installation Factory GUI, if users manually modified the IIP build definition file, check the following entries in the build definition file. Both attributes should be set to false.

```
<iipGUIEnablement iipbuilddef:userCanModify="false">
  <showIIP_GUI>false</showIIP_GUI>
</iipGUIEnablement>
```

### 3. Could not install contributions individually in silent mode

Possible causes:
1. Response file for individual invocation has errors, such as installation location is not correct, or did not mark -OPT silentInstallLicenseAcceptance="true"
2. Modified the wrong response file.

If during IIP creation, response file are provided for each contribution, IIP will make a copy of the original response file into <IIP_build>/responseFiles folder. Therefore there are 3 copies of the same response file under the following locations:

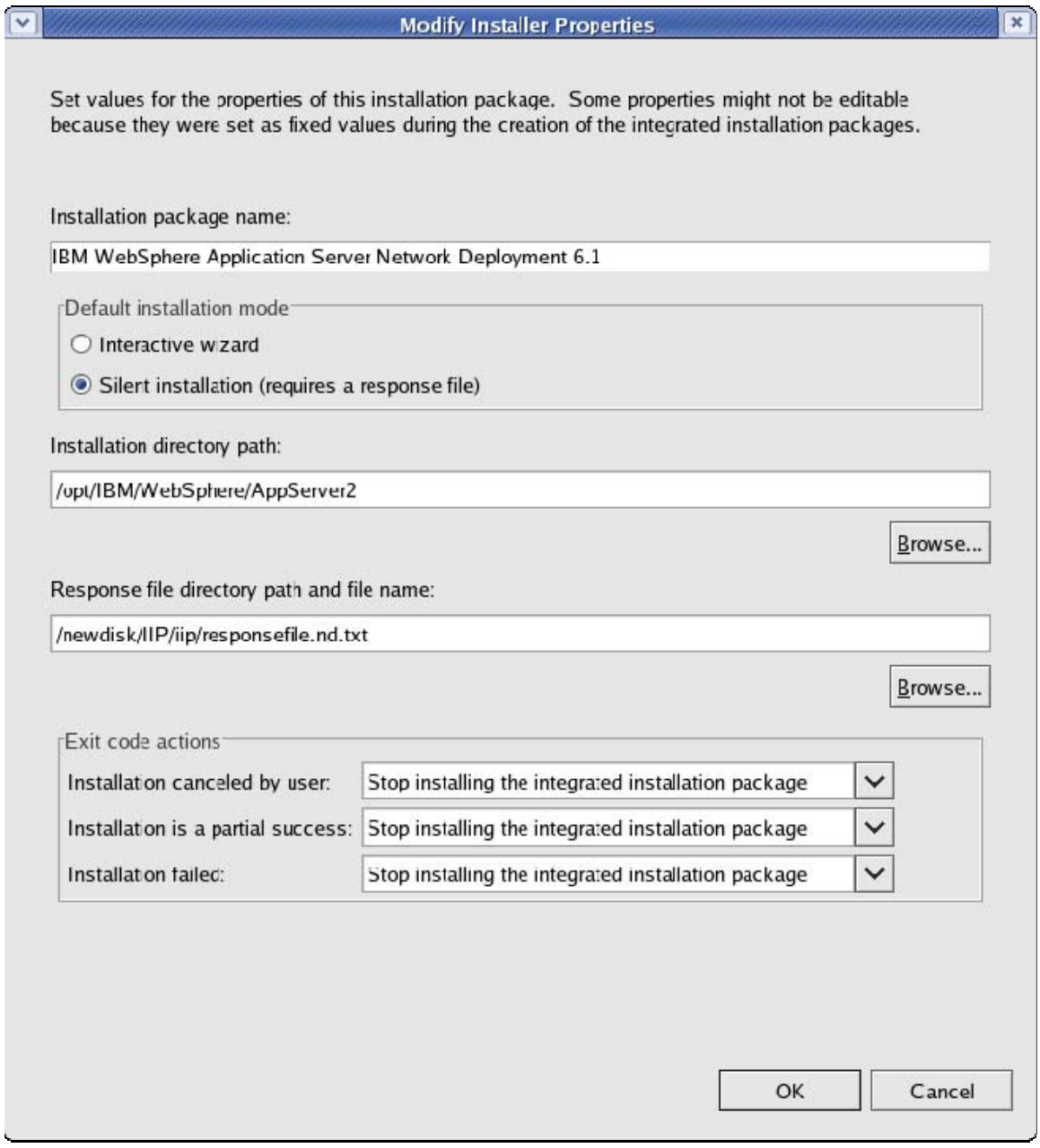
a. In the CIP: <CIP_build_location>/ifpackages/WAS/responsefile.nd.txt
b. In the IIP:

<IIP_build_location>/iip/**contrib**/6.1.0-WS-WASND/1/LinuxX32/WAS/responsefile.nd.txt

c. In the IIP:
<IIP_build_location>/iip/**ResponseFiles**/6.1.0-WS-WASND_1-1/LinuxX32/nonroot/responsefile.nd.txt

The one that IIP goes by default is c – under the <IIP_build_location>/iip/ResponseFiles directory.

If no response file was provided during IIP creation, at the IIP installation time, users can modify the property of the invocation to specify one. This one is being used then.



## 4. An unknown status is returned on the IIP installer GUI after an invocation

Possible causes:

1. Machine was shut down accidentally, or the process was killed.

## 5. Cancel does not stop the IIP installation right away

Possible causes:

1. This is working as designed. If the Cancel button on IIP installer wizard is clicked, it will finish the ongoing invocation; however it will stop at the next invocation. To cancel the ongoing invocation, users may click the Cancel button on the individual installer GUI, if it is enabled.

## 6. Bundling WebSphere Application Server fix packs in Feature Pack for Web Services CIP fails validation

Possible causes:

1. This is the design. Users are not supposed to bundle WebSphere Application Server fix packs into a Feature Pack for Web Services CIP. Only Feature Pack for Web Services fix packs and interim fixes can be bundled into a Feature Pack for Web Services CIP. If the Feature Pack for Web Services CIP installation requires upgrading WebSphere Application Server fix pack levels, users can specify the parameter in the Feature Pack for Web Services silent installation response file.
   -OPT fixpackLocation="<fix_pack_location>"

## 7. When using the command line to override parameters for an IIP contribution (using an option set), my changes are not picked up

Possible causes:

1. You must specify all parameters (installLocation, path to response file, and the silent flag), even if you are only changing one of these parameters (such as install location or response file):
   e.g -iipOptionSet=6.1.0-WS-WASWS_1-1 -OPT installLocation='C:\Program Files\IBM\WebSphere\AppServer' -options C:\IIPs\new\responsefile.WEBSV.txt -silent

## What to Use When

| Your environment or project requirements | What to use | Notes |
|---|---|---|
| Eclipse is not supported on your OS | Use cross platform CIP/IIP generation (recommended) or use ifcli with preexisting build definition | See sample 4 |
| You need to bundle files in your automated install | Use CIP or IIP | See sample 7 |
| You need to include installation and uninstallation scripts, or install profile customizations | Use Installation Factory to create individual CIPs, then include the CIPs in an IIP (for seamless end to end) | See sample 5 and 6 |
| You must automate installation of WebSphere Application Server and Feature Pack for Web Services to multiple machines without user intervention | Create IIP specifying silent mode for all contributions. Run IIP installation script with iipNoGui option | See sample 2 and 3 |