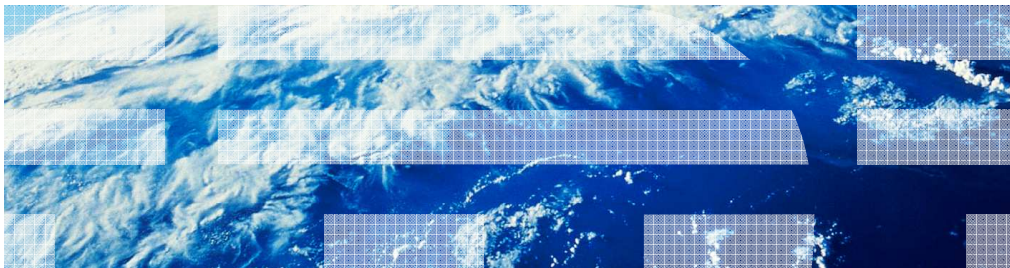

IBM WebSphere Application Server V8.5

Managing repositories with the IBM packaging utility



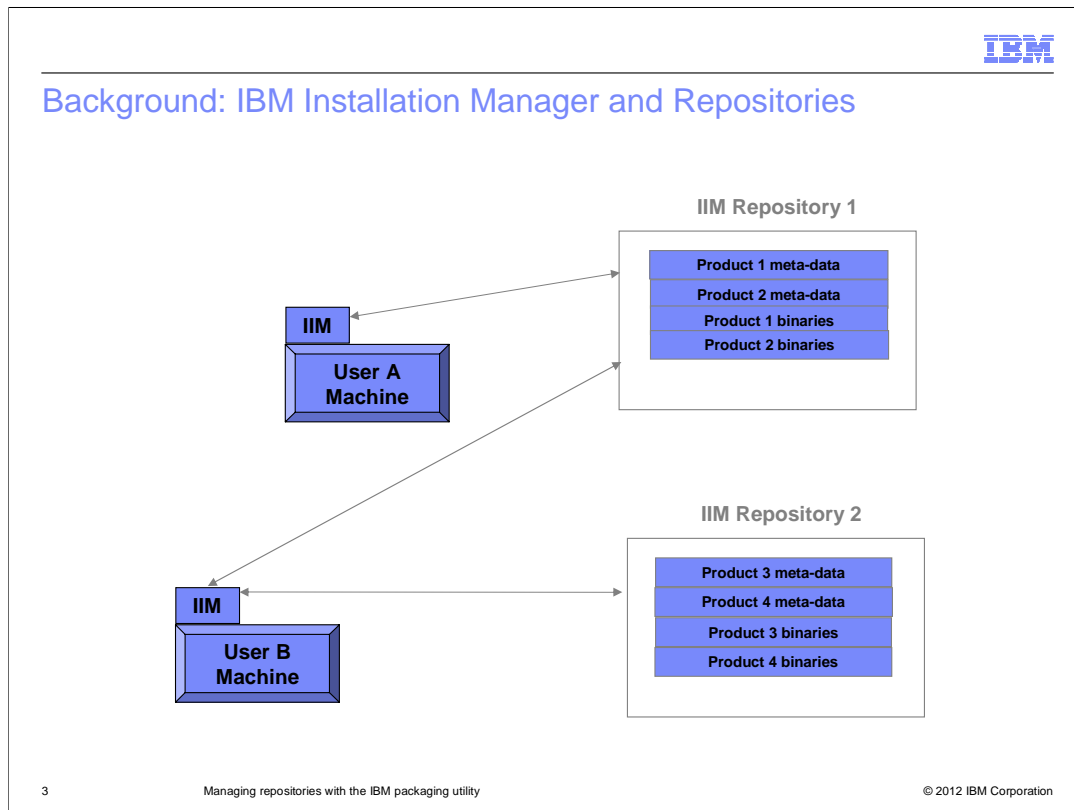
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This presentation describes managing repositories with IBM Packaging Utility for IBM WebSphere Application Server V8.5.

Overview

First, you will look at IBM Installation Manager and its repositories and then, at the IBM Packaging Utility.

Background: IBM Installation Manager and Repositories



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Managing repositories with the IBM packaging utility

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IBM Installation Manager (IIM) is the tool that you use to install and maintain IBM WebSphere Application Server V8.5.

The installation manager is typically first installed on the machine that you want to install the application server. Then, after the installation manager has been installed, you will use it accessing the appropriate repositories to install the products that you want like the application server.

Repositories for IBM Installation Manager may be remote – live repositories hosted by IBM that you access through URLs or Passport Advantage – or something that you have downloaded and extracted onto your system or from media.

What is IBM Packaging Utility?

- A tool that manages packages and repositories for IBM Installation Manager
- Available in wizard mode (graphical user interface) and command-line mode

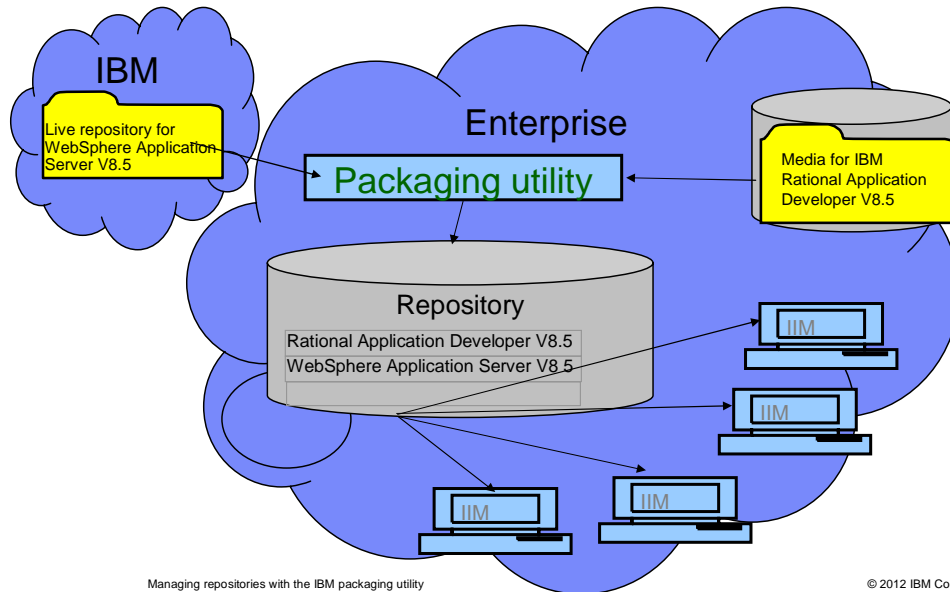
What does it do?

- Copy packages from one or more source repositories to a target repository
 - Copy packages scoped to platforms
 - (Technical Preview) Copy update packages
- Remove packages from a repository

The IBM packaging utility is the tool that you use to manage packages and repositories for IBM Installation Manager. You can use it to copy packages to and from repositories and to remove packages from them. It has both a graphical user interface and a command-line.

Why do you need the IBM packaging utility?

As an administrator, you want to setup common repository of software packages for use within the enterprise



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Managing repositories with the IBM packaging utility

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A common scenario that leads you to use IBM Packaging Utility is for setting up in-house repositories for use within the enterprise. With an enterprise repository, users in the enterprise behind firewall can directly point their IBM Installation Manager to the enterprise repository to install the software packages that they want without going outside the firewall or through a proxy. The administrators will first use IBM Packaging Utility to copy from IBM's live repositories what they want to make available and then expose them over HTTP or FTP for use within the enterprise.

Why do you need the IBM packaging utility?

- As an administrator, you want to copy packages by the platforms that you need to conserve disk space or network bandwidth or for internal distribution
- (Technical Preview) As an administrator, you want to copy the updates to the packages that you maintain directly from IBM
- As an administrator, you want to manage your enterprise repositories

In addition, you might want to conserve disk space or save download time and only work with the product binaries for the platforms relevant to your environment. Here, you will use the IBM packaging utility to copy only the product binaries for the platforms that you need. Similarly, you can use it to only copy the update packages that you need.

In summary, you will need to use the IBM packaging utility if you need to manage IBM Installation Manager's repositories for your enterprise.

Usage Scenarios

This section will cover some usage scenarios.



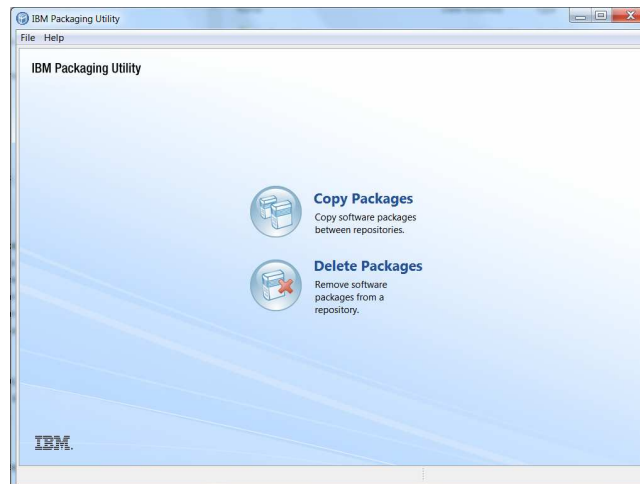
Getting started with the IBM packaging utility

- Downloadable .zip files and instructions for the IBM packaging utility:
 - http://www-947.ibm.com/support/entry/portal/Recommended_fix/Software/Rational/IBM_Installation_Manager
 - Latest available version is 1.5.2 (as of March 2012)
- Install directly with IBM Installation Manager:
 - Connect through Passport Advantage integration;
 - Or, use this repository URL:
 - <http://www.ibm.com/software/repositorymanager/com.ibm.cic.packagingUtility>
- Supported on AIX, Linux x86, Solaris Sparc, Windows, and z/OS
 - <https://www-304.ibm.com/support/docview.wss?rs=0&uid=swg21498662>

To setup the IBM packaging utility on your system, you can either download archives of the tool from IBM or you can install directly using IBM Installation Manager. The IBM packaging utility is only available for AIX, Linux Intel, Solaris Sparc, Windows and z/OS.

Working in wizard mode

- Launch the **IBMPU** executable file
- Unavailable on z/OS

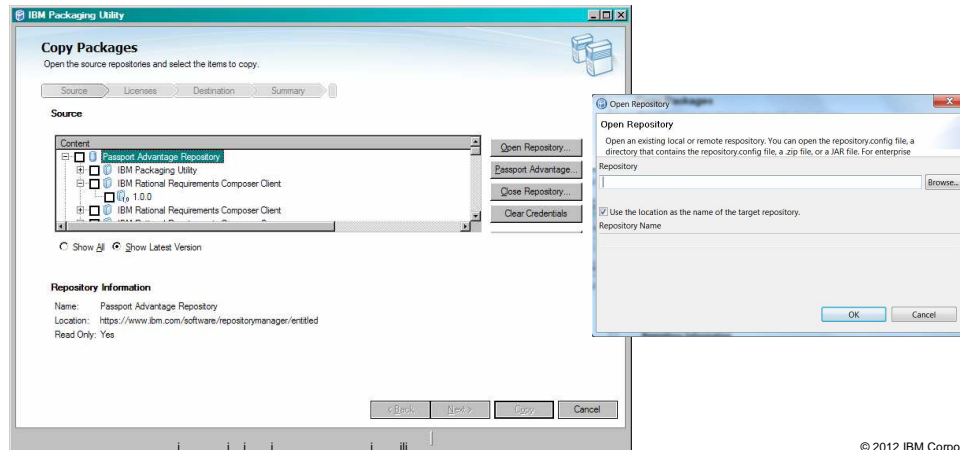


You can use the IBM packaging utility in wizard mode, which is a graphical user interface. You get to it by launching the IBMPU executable file from where you have IBM packaging utility installed or extracted.

Once the tool is up and running, you get two options on the main panel, one to copy packages and another to delete packages.

Copying packages in wizard mode (1 of 5)

- Select **Copy Packages** from the main panel
- Select **Open Repository** to open the source repository
 - Or, select **Passport Advantage** to access entitled packages

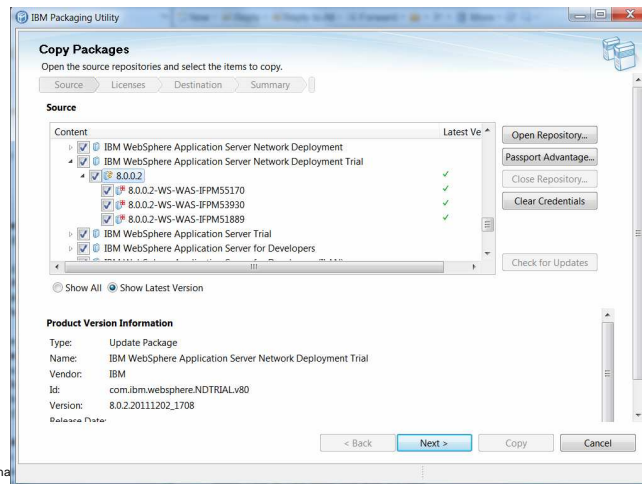


Clicking on Copy Packages on the main panel will take you to the Copy Packages wizard.

Before you can select what you want to copy, you will need to first open the repositories you want to copy from. Click “Open Repository” to open the repository you want to work with. You can open one or more repositories and you can connect to Passport Advantage to work with packages that are available to you.

Copying packages in wizard mode (2 of 5)

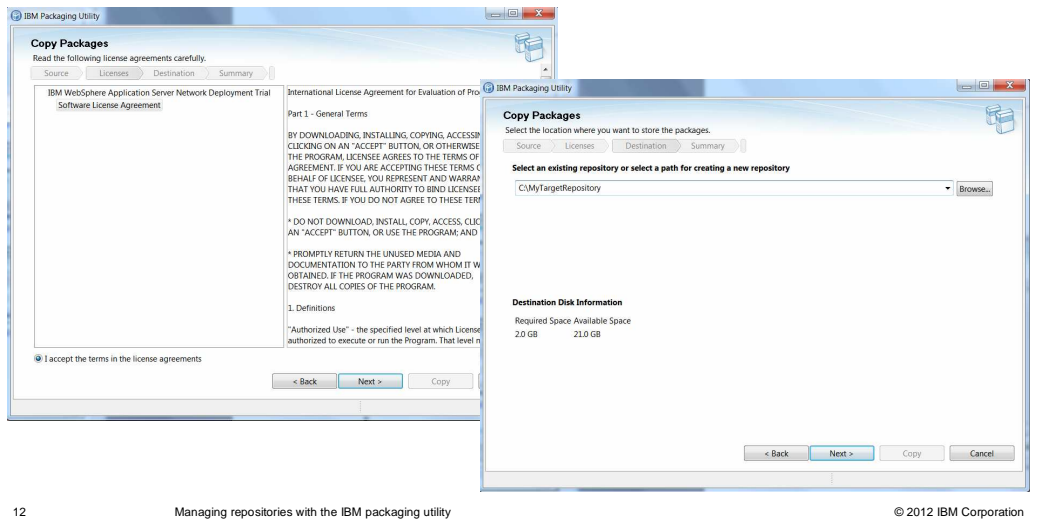
- Browse the opened repository and select the packages and fixes to copy
 - Select **Show All** to show all available versions of the packages
 - Click **Next** to continue



Browse the repositories that you have opened for what you want to copy and then select them for copying. By default, IBM Packaging Utility will only show the latest versions of the packages that it can find. Select Show All if you want to see all available versions.

Copying packages in wizard mode (3 of 5)

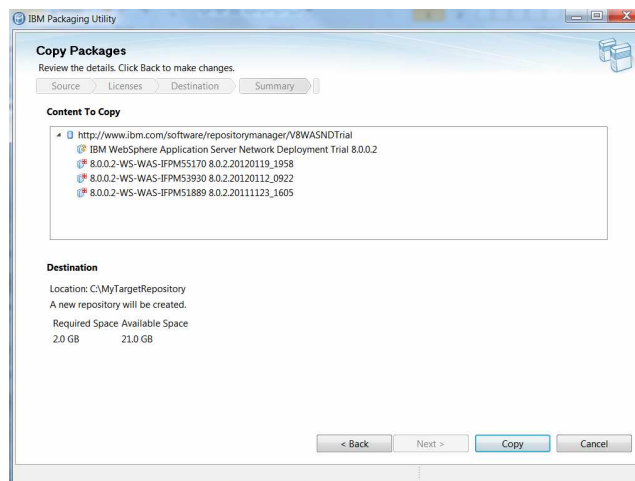
- Accept the license agreement and then, specify the location of the target repository



After you have selected the packages and fixes that you want to copy, you will be prompted to accept the license agreements and where you want the files to be copied to. The target repository can be an existing repository or a new one. You can then expose the target repository as your enterprise repository over HTTP or FTP.

Copying packages in wizard mode (4 of 5)

- Review the selection and details and click **Copy** to start the copy operation



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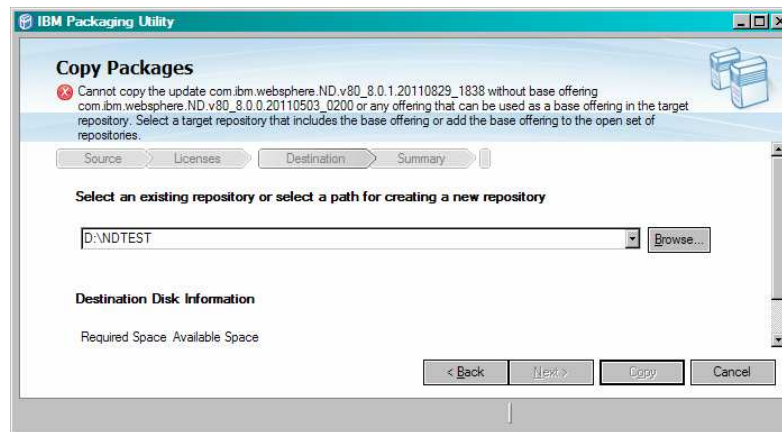
Managing repositories with the IBM packaging utility

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You can review your selection and begin the copy operation at the last panel of the Copy Packages wizard.

Copying packages in wizard mode (5 of 5)

- If you attempt to copy an update without access to the base offering (either as a source or already in the target repository), you will be blocked with this error. This can happen if you do not have entitlement to the base (GA) offering



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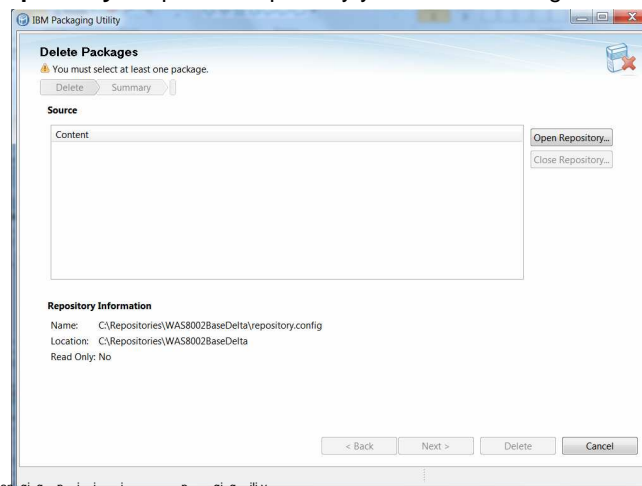
Managing repositories with the IBM packaging utility

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An item to note is that you may encounter an error that blocks you from proceeding when you are copying an update like 8.5.0.1, which is a fix pack, if you do not have the base offering (8.5) available either in your opened source repositories or your target repository. You can either open a source repository that contains 8.5 or copy to a target repository that already has it to resolve the issue.

Deleting packages in wizard mode (1 of 2)

- Select **Delete Packages** from the main panel
- Select **Open Repository** to open the repository you want to manage



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Managing p i i i p g i l i y

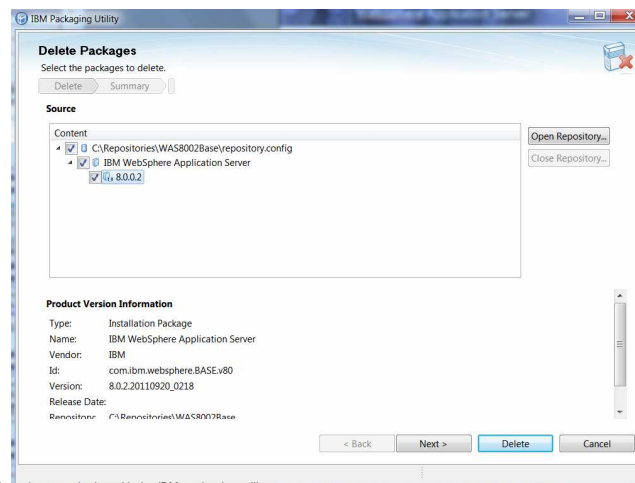
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The Delete Packages wizard is similar to the Copy Packages wizard.

You will need to open the repository that you want to manage after you launch the wizard.

Deleting packages in wizard mode (2 of 2)

- Browse the opened repository and select the packages and fixes to delete



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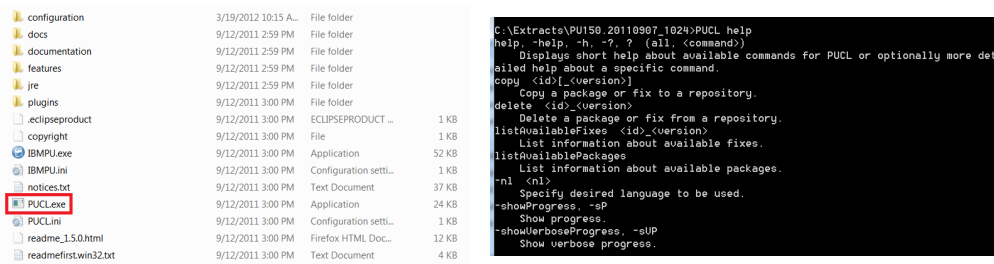
Managing repositories with the IBM packaging utility

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After you have the repositories that you want to manage opened, browse them to select the packages and fixes that you want to delete. Click Delete to begin the operation or you can click Next to review your selection before you delete.

Working in command-line mode

- Run commands with the **PUCL** executable file
- Run `PUCL help` to show available commands



You can work with IBM Packaging Utility in command-line mode too. In command-line mode, you can issue IBM Packaging Utility's commands directly from your command console and the tool will perform the operations as you specified. This mode is especially useful for scripting and where automation is required.

You will use the PUCL executable file for command-line mode. You can run the PUCL help command to access the command-line help.

Working in command-line mode

To **list packages** in repositories:

```
PUCL listAvailablePackages -repositories <URL>[,URL] -prompt
```

Note: You can use the `-prompt` argument with PUCL as an alternative to creating a key ring

To **list fixes** in repositories:

```
PUCL listAvailableFixes <package> -repositories <URL>[,URL] -prompt
```

To **copy packages or fixes**:

```
PUCL copy <package> -repositories <source repository URLs> -target  
<target repository URL>
```

If you do not specify the package version, you will get the latest

The `listAvailablePackages` and `listAvailableFixes` commands will allow you to list what you have in your repositories.

You will use the PUCL `copy` command to copy packages and fixes from a repository to another. Similarly, you will use the PUCL `delete` command to delete packages from a repository.

Copying packages by platforms

- Currently only supported in command-line mode
 - Available in 1.5.2; Technical Preview in 1.5.0 and 1.5.1

```
PUCL copy packageID_version -repositories source_repository -platform  
os=os,arch=arch -target destination_repository -acceptLicense
```

- Article on Creation of Custom Installation Repositories for WebSphere Application Server:
 - http://www.ibm.com/developerworks/websphere/library/techarticles/1201_seelemann/1201_seelemann.html

You can copy packages by platforms using the `–platform` option of the PUCL `copy` command. The command will copy only the needed binaries for the OS and architecture that you have specified.

Copying packages by platforms: examples

Create a new repository suitable for direct install to WebSphere Application Server Network Deployment V8.0.0.1 on Linux PPC. It will not support install to 8.0.0.0

```
PUCL copy com.ibm.websphere.ND.v80 -repositories
http://www.ibm.com/software/repositorymanager/com.ibm.websphere.ND.v
80 -platform os=linux,arch=ppc -target /usr/MyNDRepository -prompt
```

Create a repository for 8.0.0.0 specifying the full package ID including the version:

```
PUCL copy com.ibm.websphere.ND.v80_8.0.0.20110503_1838 -repositories
http://www.ibm.com/software/repositorymanager/com.ibm.websphere.ND.v
80 -platform os=linux,arch=ppc -target /usr/MyNDRepository -prompt
```

Note: Do not attempt to use the PPA unpacked repository as a target to add more service.
This is not supported with the special disk1, disk2 ... repository

Here is a few examples of what you can do with the `-platform` option of the PUCL copy command.

You can either use a previously created key ring file to access protected repositories or you can use the `-prompt` option, which will prompt you to input your credentials when needed.



Copying packages by platforms: Supported -platform values for IBM WebSphere Application Server 8.5

Platform	-platform Value	Resulting Repository
Windows	os=win32	Windows 32-bit and 64-bit
Linux Intel	os=linux,arch=x86	Linux Intel 32-bit and 64-bit
Linux Power	os=linux,arch=ppc	Linux Power 32-bit and 64-bit
zLinux	os=linux,arch=s390	zLinux 32-bit and 64-bit
AIX	os=aix	AIX
Solaris Sparc	os=solaris,arch=sparc	Solaris Sparc
Solaris Intel	os=solaris,arch=x86	Solaris Intel
HP-UX Itanium	os=hpux	HP-UX Itanium
z/OS	os=zos	z/OS

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Managing repositories with the IBM packaging utility

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Note that not all possible values for the `-platform` option of the PUCL copy command is supported by IBM WebSphere Application Server 8.5. The table lists what is supported for the release. You can consult product documentation of the application server for details.

Copying updates

- A technical preview (in 1.5.2) and currently only supported in command-line mode.
 - <http://www-01.ibm.com/support/docview.wss?uid=swg27023960>
- Use the `-updateFromVersion` option to copy only the files that are required to update to a later version
 - The version value is the version of the package that you are updating from
 - The package that you are copying is the version that you are updating to
 - An update might require files from a base offering

```
PUCL copy packageID_version -updateFromVersion version -repositories  
source_repository -target destination_repository
```

Another noteworthy option of the PUCL copy command is the `-updateFromVersion` option, which is currently a technical preview as part of the 1.5.2 release of IBM Packaging Utility.

With the `-updateFromVersion` option, you can copy only the files needed to update a package to a later version. For instance, copying the update between 8.5.0.1 and 8.5 or 8.5.0.2 and 8.5 for IBM WebSphere Application Server. It can also be used in conjunction with the platform option.

Copying updates: Examples

Create a repository with content suitable for updating from 8.0.0.0 to 8.0.0.2 for Windows only:

```
PUCL copy com.ibm.websphere.NDTRIAL.v80_8.0.2.20111202_1708 -  
  repositories  
  http://www.ibm.com/software/repositorymanager/com.ibm.websphere.NDTR  
  IAL.v80 -updateFromVersion 8.0.0.20110503_0200 -platform os=win32 -  
  target C:\Repositories\WASNDTrial8000To8002Update -prompt -  
  acceptLicense
```

Create a repository with content suitable for updating from 8.0.0.1 to 8.0.0.2:

```
PUCL copy com.ibm.websphere.NDTRIAL.v80_8.0.2.20111202_1708 -  
  repositories  
  http://www.ibm.com/software/repositorymanager/com.ibm.websphere.NDTR  
  IAL.v80 -updateFromVersion 8.0.1.20110829_1838 -target  
  C:\Repositories\WASNDTrial8001To8002Update -prompt -acceptLicense
```

Here are a few examples of how you can use the `-updateFromVersion` option of the `PUCL copy` command to copy only the updates that you need.

Section

Summary

This section contains a summary.

Summary

- Use IBM Packaging Utility to manage your packages and repositories
 - Copy and remove packages from repository
 - Copy packages by platforms
 - Copy updates
- Available in wizard mode (graphical user interface) and command-line mode

IBM Packaging Utility is the tool that you use to manage your packages and repositories to be used with IBM Installation Manager. You can use it to copy and remove packages from repositories and to copy packages by platforms and updates. It is especially useful for managing in-house repositories for your enterprise.

References

- Download Instructions for IBM Packaging Utility
 - http://www.ibm.com/support/entry/portal/Recommended_fix/Software/Rational/IBM_Installation_Manager
- System Requirements for IBM Packaging Utility
 - <https://www-304.ibm.com/support/docview.wss?rs=0&uid=swg21498662>
- IBM Packaging Utility's Information Center
 - <http://publib.boulder.ibm.com/infocenter/install/v1r5/index.jsp>
- Create Custom Installation Repositories for WebSphere Application Server with the IBM Packaging Utility
 - http://www.ibm.com/developerworks/websphere/library/techarticles/1201_seelemann/1201_seelemann.html
- Technical Preview: -updateFromVersion option for Packaging Utility
 - <http://www-01.ibm.com/support/docview.wss?uid=swg27023960>

See these references for additional information about **Managing Repositories with IBM Packaging Utility**.



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