WBSR85

WebSphere Application Server z/OS V8.5

Unit 5 – Installation Manager

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Installation Manager Overview

Why Installation Manager?

Using Installation Manager to Install WebSphere on z/OS.

Using Installation Manager to Apply Maintenance to WebSphere on z/OS.

Using Installation Manager to Install the WebSphere Customization Tool (WCT) on Windows.

Why Installation Manager?

Why Installation Manager?

Previous versions of WebSphere products have used a variety of different install and update tools. With WebSphere Application Server Version 8, Websphere-branded products are moving to a single cross-platform installer: IBM Installation Manager.

Moving to a single installer will:

 Simplify the overall installation and maintenance process for WebSphere products;

 Allow better coordination between base products, stack products, and feature packs;

 Provide direct electronic delivery of products and service in a consistent fashion across platforms.

Installation Manager documentation:

> http://publib.boulder.ibm.com/infocenter/install/v1r5/index.jsp

But what about SMP/E?

Using Installation Manager to Install WebSphere on z/OS.

Multi-part Process.

Use SMPE to install the Installation Manager Install Kit.

Use SMPE to install the WebSphere on z/OS repository.

Use the Installation Manager Install Kit to create the Installation Manager.

Create the filesystem components for WebSphere on z/OS V8 and mount them at /Service.

Use Installation Manager to populate the filesystem components.

Talk about maintenance.

Creating an Installation Manager

A word about "mode".

- Admin mode.
  - Uid=0
  - One per system.

- User mode.
  - Only the creating user.
  - One per userid.

- Group mode.
  - Any userid connected to the group.
  - As many as you want per system.

Security setup.

- One User and one Group.

- Access to the following:
  - FACILITY:
    - BPX.FILEATTR.APF   READ
    - BPX.FILEATTR.PROGCTL   READ
    - BPX.FILEATTR.SHARELIB   READ
  - UNIXPRIV:
    - SUPERUSER.FILESYS.CHOWN   READ
    - SUPERUSER.FILESYS.CHANGEPERMS
                                                          READ

Creating an Installation Manager

Creating the filesystem.

Mountpoint: `/Service/InstallationManager`

Filesystem: `WAS800.GRPMODE.GINHFS.ZFS`

JOB: `GIN.SGINJCL(GIN2CFS)`

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /usr/lpp/InstallationManager/V1R5/tools/zCreateFileSystem.sh    +
    -name WAS800.GRPMODE.GINHFS.ZFS                               +
    -type ZFS                                                     +
    -volume NGIV8A                                                +
    -cylinders 2500 250                                           +
    -mountpoint /Service/InstallationManager                      +
    -owner IMADMIN                                                +
    -group IMGROUP
```

Creating an Installation Manager

Creating the Installation Manager.

Command: `groupinstc`

installationDirectory: `/Service/InstallationManager/bin`

dataLocation: `/Service/InstallationManager/appdata`

JOB: `GIN.SGINJCL(GIN2INST)`

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /usr/lpp/InstallationManager/V1R5/groupinstc                       +
    -installationDirectory   /Service/InstallationManager/bin     +
    -dataLocation            /Service/InstallationManager/appdata +
    -acceptLicense
/*
```

Installing WebSphere on z/OS V8 using the Installation Manager

Creating the filesystem.

Mountpoint: `/Service/usr/lpp/zWebSphere/V8R0FP02`

Filesystem: `WAS800.V8R0FP02.SBBOHFS`

JOB: `BBO.SBBOJCL(BBO1CFS)`

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /Service/InstallationManager/bin/eclipse/tools/+
  zCreateFileSystem.sh                                         +
    -name WAS800.V8R0FP02.SBBOHFS                              +
    -type ZFS                                                  +
    -volume WASV8A                                             +
    -cylinders 3360 336                                        +
    -mountpoint /Service/usr/lpp/zWebSphere/V8R0FP02           +
    -owner IMADMIN                                             +
    -group IMGROUP
 /*
```

Installing WebSphere on z/OS V8 using the Installation Manager

A side discussion on repositories.

Local Repository: `/usr/lpp/InstallationManagerRepository/HBBO800`

IBM Hosted Repository:

`http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80`

Need for a userid/password to access.

Use the saveCredential Installation Manager command to create a "keyring".

Note that you may need to add `repository.config` to the end of the url and change `http` to `https` for the `saveCredential` command.

```
:/Service/InstallationManager/bin/eclipse/tools.
/imutilsc saveCredential -keyring /u/mjloos/imkeyring -url
https://www.ibm.com/software/repositorymanager/com.ibm.websphere.z
OS.v80/repository.config  -userName mikeloos@us.ibm.com
-userPassword ******** -proxyHost your.proxy.hostname -proxyPort
yourproxyportnumber -proxyUsername yourproxyuserid -proxyUserPassword
********
Successfully saved the credential to the keyring.
:/Service/InstallationManager/bin/eclipse/tools
```

Use of Proxy Servers

If your installation requires that you go through a proxy server, you'll have to add the following entries after the -preferences keywork on the imcl command.

```
com.ibm.cic.common.core.preferences.http.proxyEnabled=True,

com.ibm.cic.common.core.preferences.http.proxyHost=<proxyName>,

com.ibm.cic.common.core.preferences.http.proxyPort=<proxyPort>
```

As well as having the following on the imutilsc saveCredential command to get the proper entries stored on your keyring.

```
-userName youruserid
-userPassword ********
-proxyHost your.proxy.hostname
-proxyPort yourproxyportnumber
-proxyUsername yourproxyuserid
-proxyUserPassword *********
```

Installing WebSphere on z/OS V8 using the Installation Manager

Let's see what's available.

IBM Hosted Repository:

http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80

Keyring: `/u/mjloos/imkeyring`

Use the listAvailablePackages Installation Manager command to see which fix packs are available.

```
:/Service/InstallationManager/bin/eclipse/tools

-> ./imcl listAvailablePackages -long -repositories
/usr/lpp/InstallationManagerRepostitory/HBBO800,+
http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80 -keyring
/u/mjloos/imkeyring
```

Partial output: **Fix Pack 1**

```
http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80 :
com.ibm.websphere.zOS.v80_8.0.1.20110829_1901 : IBM WebSphere Application Server for
z/OS : 8.0.0.1
```
Fix Pack 2
```
http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80 :
com.ibm.websphere.zOS.v80_8.0.2.20111202_1716 : IBM WebSphere Application Server for
z/OS : 8.0.0.2
```

Installing WebSphere on z/OS V8 using the Installation Manager

version 8.5 Update.

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /Service/InstallationManager/bin/eclipse/tools/imcl                 +
    listAvailablePackages -long -features                             +
    -repositories                                                     +
    /shared/InstallationManagerRepository/HBBO850,+
    http://www.ibm.com/software/repositorymanager+
    /com.ibm.websphere.zOS.v85                                        +
    -keyring /u/mjloos/imkeyring

/*
```

Output:

/shared/InstallationManagerRepository/HBBO850 : com.ibm.websphere.IHS.zOS.v85_8.5.0.20120501_1121 :
IBM HTTP Server for WebSphere Application Server for z/OS : 8.5.0.0 : core.feature

/shared/InstallationManagerRepository/HBBO850 : com.ibm.websphere.NDDMZ.zOS.v85_8.5.0.20120501_1118
: DMZ Secure Proxy Server for IBM WebSphere Application Server for z/OS : 8.5.0.0 :
core.feature,thinclient

/shared/InstallationManagerRepository/HBBO850 : com.ibm.websphere.PLG.zOS.v85_8.5.0.20120501_1122 :
Web Server Plug-ins for IBM WebSphere Application Server for z/OS : 8.5.0.0 : core.feature

/shared/InstallationManagerRepository/HBBO850 : com.ibm.websphere.zOS.v85_8.5.0.20120501_1118 : IBM
WebSphere Application Server for z/OS : 8.5.0.0 :
core.feature,ejbdeploy,thinclient,embeddablecontainer,samples,liberty

Installing WebSphere on z/OS V8 using the Installation Manager

Finally, let's install.

Local Repository: `/usr/lpp/InstallationManagerRepository/HBBO800`

IBM Hosted Repository:

`http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80`

Keyring: `/u/mjloos/imkeyring`

Installation Directory: `/Service/usr/lpp/zWebSphere/V8R0FP02`

JOB: `BBO.SBBOJCL(BBO1INST)`

Use the install command to cause Installation Manager to populate the target filesystem.

```
/SYSTSIN  DD  *
 BPXBATCH SH +
  /Service/InstallationManager/bin/eclipse/tools/imcl          +
    install com.ibm.websphere.zOS.v80_8.0.2.20111202_1716      +
    -installationDirectory /Service/usr/lpp/zWebSphere/V8R0FP02    +
    -sharedResourcesDirectory                                  +
    /Service/InstallationManager/sharedResources              +
    -repositories /usr/lpp/InstallationManagerRepository/HBBO800,+
    http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80 +
    -preferences com.ibm.cic.common.core.preferences.preserveDownlo+
     adedArtifacts=false -keyring /u/mjloos/imkeyring            +
    -acceptLicense
/*
```

Installing WebSphere on z/OS V8.5 using the Installation Manager (including Liberty feature)

Finally, let's install.

Local Repository: `/usr/lpp/InstallationManagerRepository/HBBO850`

IBM Hosted Repository:

`http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v85`

Keyring: `/u/mjloos/imkeyring`

Installation Directory: `/Service/usr/lpp/zWebSphere/V8R5BASE`

JOB:

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /Service/InstallationManager/bin/eclipse/tools/imcl            +
    install com.ibm.websphere.zOS.v85,core.feature,liberty,+
    ejbdeploy,thinclient,+
    embeddablecontainer,samples                                  +
    -installationDirectory /Service/usr/lpp/zWebSphere/V8R5BASE   +
    -sharedResourcesDirectory                                    +
    /Service/InstallationManager/sharedResources                 +
    -repositories                                                +
    /shared/InstallationManagerRepository/HBBO850,+
    http://www.ibm.com/software/repositorymanager+
    /com.ibm.websphere.zOS.v85                                   +
    -preferences com.ibm.cic.common.core.preferences.preserveDownlo+
     adedArtifacts=false                                         +
    -acceptLicense -keyring /u/mjloos/imkeyring
 /*
```

Installing WebSphere on z/OS V8.5 Adding Java 7.

Finally, let's install.

Local Repository: `/usr/lpp/InstallationManagerRepository/HBJA700`

IBM Hosted Repository:

`http://www.ibm.com/software/repositorymanager/com.ibm.websphere.IBMJAVA.v70`

Keyring: `/u/mjloos/imkeyring`

Installation Directory: `/Service/usr/lpp/zWebSphere/V8R5BASE`

JOB:

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /Service/InstallationManager/bin/eclipse/tools/imcl               +
    install com.ibm.websphere.IBMJAVA.v70_7.0.1000.20120424_1539    +
    -installationDirectory /Service/usr/lpp/zWebSphere/V8R5BASE     +
    -sharedResourcesDirectory                                       +
    /Service/InstallationManager/sharedResources                    +
    -repositories                                                   +
    /shared/InstallationManagerRepository/HBJA700,+
    http://www.ibm.com/software/repositorymanager+
    /com.ibm.websphere.IBMJAVA.v70                                  +
    -preferences com.ibm.cic.common.core.preferences.preserveDownlo+
     adedArtifacts=false                                            +
    -acceptLicense -keyring /u/mjloos/imkeyring
/*
```

Installing WebSphere on z/OS V8 using the Installation Manager

Next step...put it into use.

Currently mounted at `/Service`.

Unmount and remount at the "standard" location.

`/usr/lpp/zWebSphere/V8R0FP02`

Or, simply copy the filesystem to a newname, and mount it in the "standard" location.

If this is just the beginning of your use with V8, it would be appropriate to begin configuration processes.

If this is an "upgrade" to a new maintenance level, then it is time to start changing the intermediate symlinks as discussed earlier.

Using Installation Manager to Apply Maintenance to WebSphere on z/OS.

A little bit about maintenance.

- Maintenance.
  - Fix packs is installed as we have already shown
  - iFixes (similar to APARFIX)
  - Only in the /Service area.
- listAvailableFixes Installation Manager Command.

```
:/Service/InstallationManager/bin/eclipse/tools

-> ./imcl listAvailableFixes com.ibm.websphere.zOS.v80_8.0.2.20111202_1716
-long -repositories /usr/lpp/InstallationManagerRepository/HBBO800,+
http://www.ibm.com/software/repositorymanager/con.ibm.websphere.zOS.v80
-keyring /u/mjloos/imkeyring -preferences +
com.ibm.cic.common.core.preferences.http.proxyEnabled=True,+
com.ibm.cic.common.core.preferences.http.proxyHost=<proxyName>,+
com.ibm.cic.common.core.preferences.http.proxyPort=<proxyPort>

http://www.ibm.com/software/repositorymanager/com.ibm.websphere.zOS.v80 :
8.0.0.2-WS-WAS-IFPM53930_8.0.2.20120112_0922 : recommended=true
```

Installing the iFix.

- A Sample Job.

```
//SYSTSIN  DD  *
 BPXBATCH SH +
  /Service/InstallationManager/bin/eclipse/tools/imcl                      +
    install 8.0.0.2-WS-WAS-IFPM53930_8.0.2.20120112_0922                   +
    -installDirectory /Service/usr/lpp/zWebSphere/V8R0FP02                 +
    -repositories /usr/lpp/InstalllationManagerRepository/HBBO800,+
    http://www.ibm.com/software/repositorymanager/+
     com.ibm.websphere.zOS.v80                                            +
    -preferences ce.zOS.v80c.common.core.preferences.preserveDownlo+
     adedArtifacts=false,+
     com.ibm.cic.common.core.preferences.http.proxyEnabled=True,+
     com.ibm.cic.common.core.preferences.http.proxyHost=<proxyName>,+
     com.ibm.cic.common.core.preferences.http.proxyPort=<proxyPort> +
    -keyring /u/mjloos/imkeyring                                           +
    -acceptLicense
 /*
```

Using Installation Manager to Install the WebSphere Customization Tool (WCT) on Windows.

Installing Installation Manager for Windows

First you have to find it...

Start with the WebSphere V8 Infocenter.

http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.zseries.doc/info/zseries/ae/welcome_zseries.html

Installing Installation Manager for Windows

Browsing down you'll find instructions.

- **Access the live repositories, and use web-based installation**

  If you have a Passport Advantage ID and password, you can install the product from the web-based repositories.

  i. Install Installation Manager on your system.

     You can install Installation Manager using the product media, using a file obtained from the Passport Advantage site, or using a file containing the most current version of Installation Manager from the IBM Installation Manager download website.

  ii. Use Installation Manager to install the product from the web-based repository located at

     ```
     http://www.ibm.com/software
     /repositorymanager
     /com.ibm.websphere.WCT.v80
     ```

Installing Installation Manager for Windows

After starting and opening the Installation Manager on your Desktop...

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Installing Installation Manager for Windows

Respond to the password prompt with your IBM ID and password.

Installing Installation Manager for Windows

Now you're ready to install..