



IBM Software Group

IBM WebSphere Application Server for z/OS V7 Feature Pack for Service Component Architecture V1.0.1

Installation and configuration



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This presentation covers the installation and configuration of the IBM® WebSphere® Application Server for z/OS® V7 Feature Pack for Service Component Architecture V 1.0.1.

Section

Installation



This first section discusses how to install the SCA feature pack on z/OS.

Installation: SCA feature pack

- Shipped as a PTF against the optional materials FMID (JIWO700)

```
++ PTF (UK51852)      /* 5655-n0254-jiwo700 */.  
++ VER (z038)  
   Fmid(jiwo700)  
   Pre  (uk39786)  
   Sup  (UK45149,UK48187,UK41977)
```



** New SCA feature pack sits directly on top of WebSphere application Server v7

- Must create FPSCA directory before running 'apply'

```
-PathPrefix-/usr/lpp/zWebSphere_OM/V7R0/FPSCA
```

- PTF made available here:

<http://www.ibm.com/support/docview.wss?rs=404&uid=swg27009131>



The SCA feature pack is shipped as a PTF against the optional materials FMID JIWO700. It is available for download at the URL shown on the slide. It must be applied to a system that has the PTF for 7.0.0.7 applied to the WebSphere base. As with all optional materials, the needed directory - FFSCA - must be manually created before the PTF can be applied. Once the PTF for the SCA feature pack is applied, you can either create a profile with the SCA function or augment an existing profile to include the SCA function.

Installation: SDO Feature Pack (Optional)

- Shipped as a PTF against the optional materials FMID (JIWO700)

```

++ PTF (UK51850)      /* 5655-n0254-jiwo700 */.
++ VER (z038)
   Fmid(jiwo700)
   Pre (UK51852)

-PathPrefix-
  /usr/lpp/zWebSphere_OM/V7R0/FPSCA

```

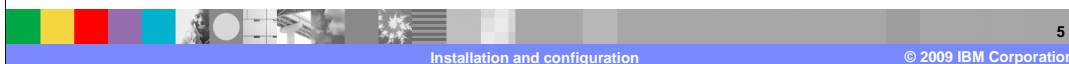
- PTF made available here:

<http://www.ibm.com/support/docview.wss?rs=404&uid=swg27009131>

SCA feature pack
SDO optional

IBM WebSphere
Application Server V7

** New SDO optional feature
installs into the SCA feature
pack HFS



Optionally, with the SCA feature pack, SDO 2.1.1 support is available as a data-binding on JSR235-compliant SCA service definitions. In order to use the SDO support, the XML feature pack is a prerequisite. The SDO support also provides a Business Object API, which allows the WebSphere Process Server to build business objects on top of the SDO infrastructure, but allows for compatibility with previous versions of WebSphere Process Server.

The SDO optional feature is shipped as a PTF against the optional materials FMID JIW0700. It is available for download at the address shown on the slide. It must be applied to a system that has the PTF for SCA 1.0.1 applied. The SDO optional feature installs into the FPSCA directory that was created earlier. Once the PTF for the SDO optional feature is applied, you can augment an existing profile to include the SDO function.

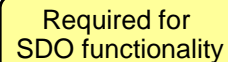
Installation: XML Feature Pack (Optional)

- Shipped as a PTF against the optional materials FMID (JIWO700)

```
++ PTF (UK51832)      /* 5655-n0254-jiwo700 */.  
++ VER (z038)  
   Fmid(jiwo700)  
-PathPrefix-  
  /usr/lpp/zWebSphere_OM/V7R0/FPXML
```

- PTF made available here:

<http://www.ibm.com/support/docview.wss?rs=404&uid=swg27009131>

XML feature packIBM WebSphere
Application Server V7Required for
SDO functionality

The XML feature pack is a prerequisite for the SDO optional feature. If the SDO optional function is not going to be used, the XML feature pack does not need to be installed for SCA support. Refer to the IBM Education Assistant for the XML feature pack for additional information.

WebSphere Application Server for z/OS V7 Feature Pack for XML is shipped as a PTF against the optional materials FMID JIWO700. It is available for download at the address shown on the slide. As with all optional materials, the needed directory - FPXML- must be manually created before the PTF can be applied. Once the PTF for the XML feature pack is applied, you can augment a profile with the XML function then augment the same profile to use the SDO optional feature.

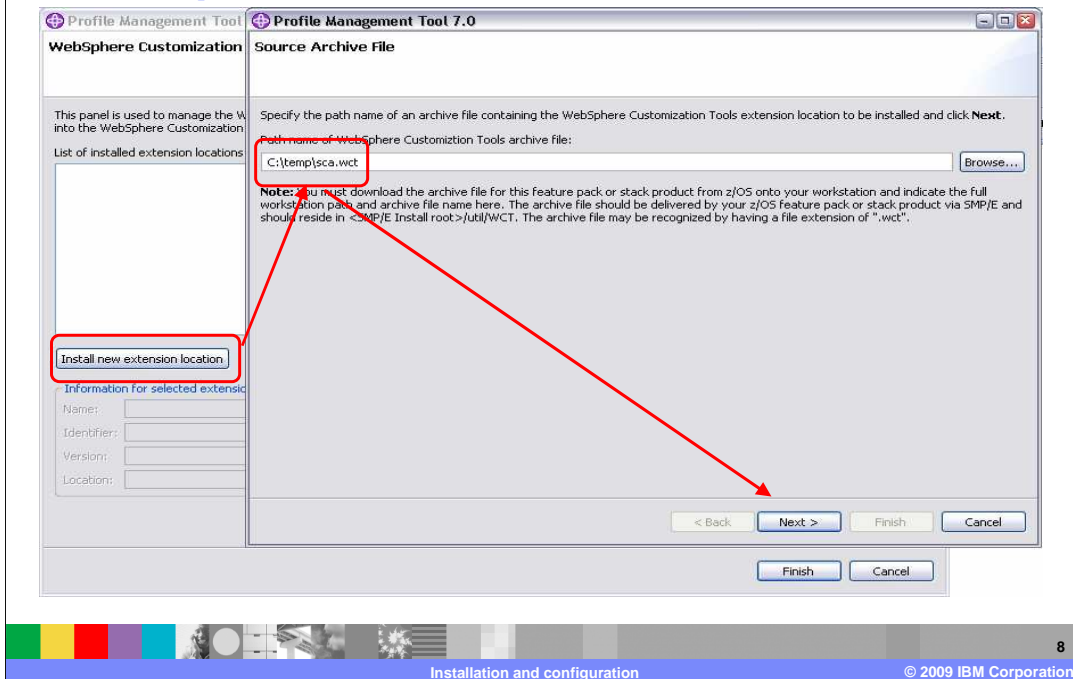
WebSphere Customization Tools update

- Download `sca.wct` in binary
 - ▶ Available as part of SCA feature pack:
 - PathPrefix-
 - `/usr/lpp/zWebSphere_OM/V7R0/FPSCA/util/WCT/sca.wct`
- Start the WebSphere Customization Tools and select the Help > Software Updates > Install Extension



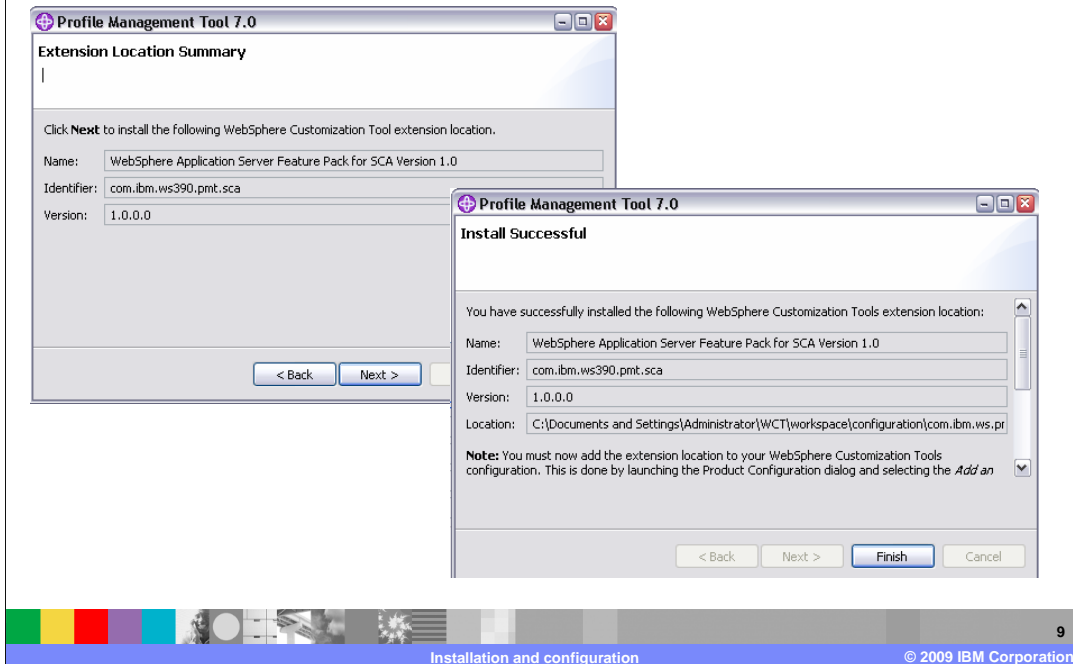
In order to create or augment profiles with the SCA feature pack function, it is necessary to update the WebSphere Customization Tools with an extension. In the SMP/E directory for the SCA feature pack, there is an `sca.wct` file located under the `util/WCT` directory. Download that in binary to the machine where you run the WebSphere Customization Tools. In order to install it, go to the Help -> Software Updates -> Install extension menu item in WebSphere Customization Tools.

Tools update: Install SCA extension...



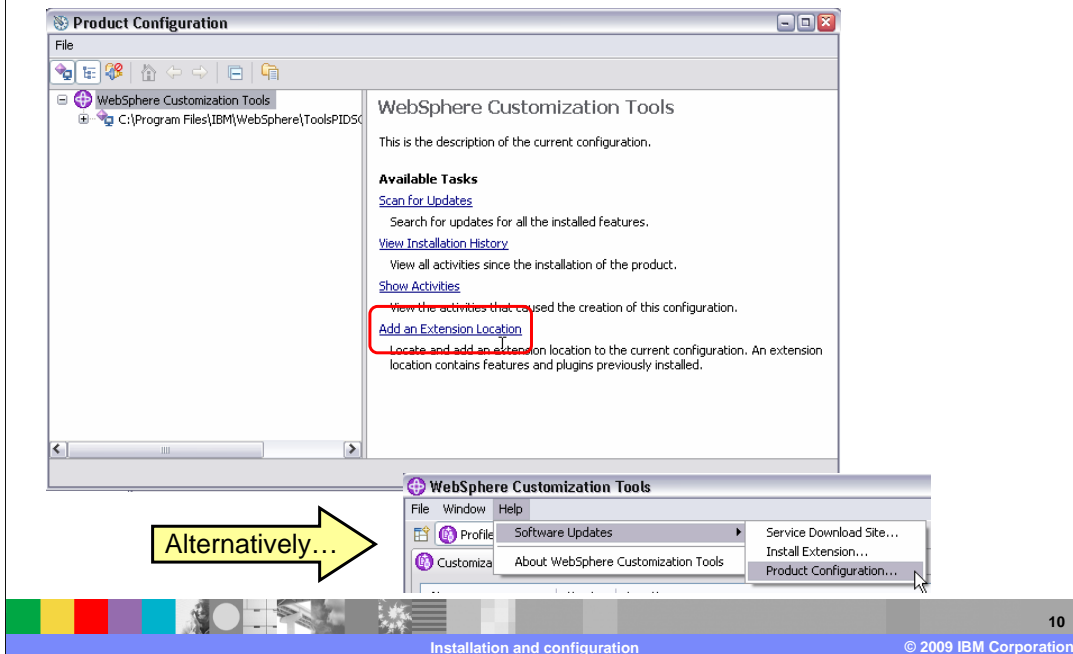
On the next screen, you have the option to 'Install new extension location'. Once you click that button, you are prompted for the location of the extension file. Browse to the place where you placed the downloaded file and click 'Next'.

Tools update: Install SCA extension...



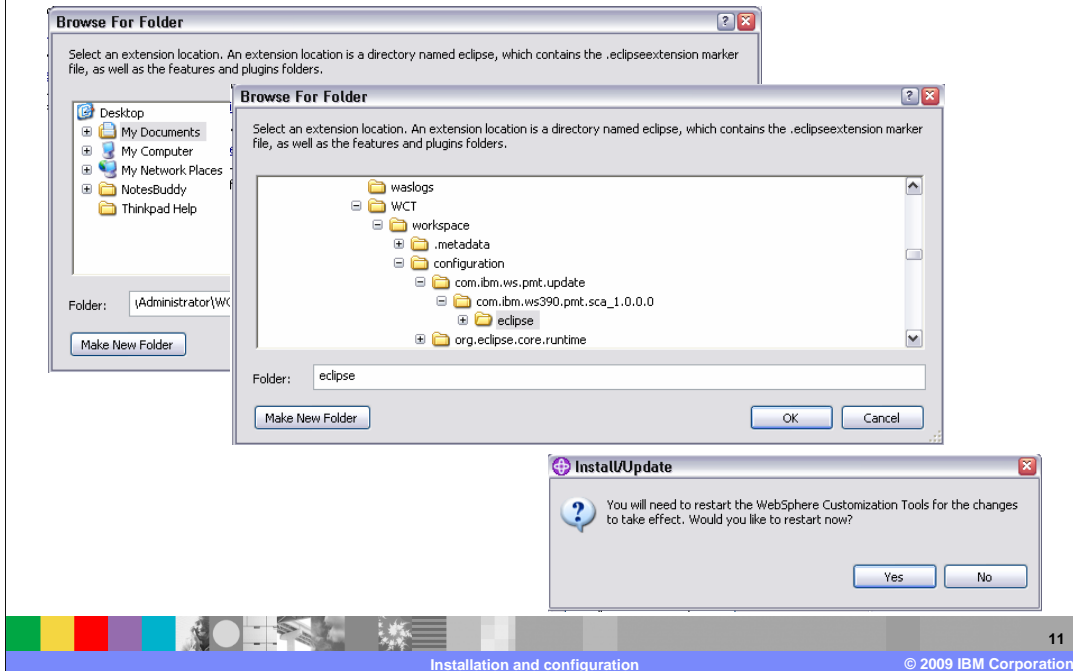
You are then presented with a verification screen, showing that you are about to install the extension location for the feature pack for SCA. Click 'Next' and you should see a message telling you the installation was successful. Note that the location has just been installed now. Next, you need to configure the product to use the new extension location. You need to make a note of where it was installed. Save the 'Location' and click 'Finish'.

Tools update: Install SCA extension...



You should be put in the 'Product Configuration' screen automatically. Select the 'Add an Extension Location' link. If you are not automatically put in the 'Product Configuration' screen, you can get there from the 'Software Update' option as shown on the slide.

Tools update: Install SCA extension...



Browse to the 'Location' you saved when you installed the extension location and click 'OK'. You then are given the option to restart the WebSphere Customization Tools which is necessary to be able to configure profiles with the SCA feature.

Tools update: Install optional extensions

- If utilizing SDO functionality:

- ▶ Install SDO WebSphere Customization Tools extension

- PathPrefix-

- `/usr/lpp/zWebSphere_OM/V7R0/FPSCA/util/WCT/sdo.wct`

- ▶ Install XML WebSphere Customization Tools extension

- PathPrefix-

- `/usr/lpp/zWebSphere_OM/V7R0/FPXML/util/WCT/xml.wct`



Additionally, if the SCO optional feature is going to be used, the SDO and XML extensions need to be installed from the locations shown here. Follow the same steps for each extension.

Section

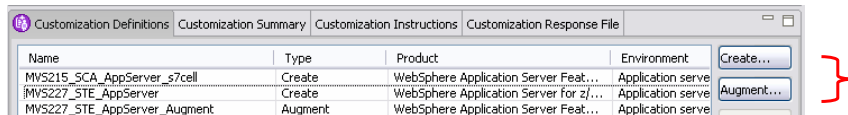
Configuration



Next you will see how to configure profiles with the SCA function.

Configure profile with SCA

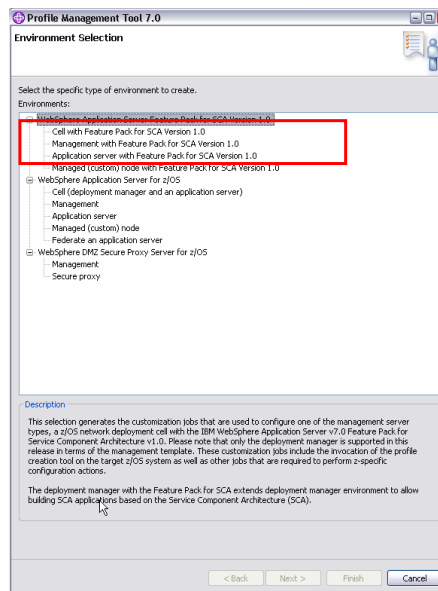
- Two options:
 - Create a new V7 profile with SCA function
 - Augment an existing V7 profile with SCA function



Now that you have the WebSphere Customization Tools updated with the SCA feature pack extension, you have two choices for configuration. You can create a new V7 profile that has the SCA feature pack functions available OR you can augment an existing V7 profile to have the new function.

Configure profile with SCA...create

- Create a profile with SCA features
 - ▶ Basic environments available
 - Cell
 - Deployment manager cell
 - Application server cell
 - Managed node



When you specify 'Create', you have the option of creating different basic environments including cell, deployment manager, application server, and managed node. When you select any one of these environments, it looks just like a regular profile creation. One of the only additions you will see is a screen asking you for the location of the SCA feature pack file system. This is shown on the next slide.

Configure profile with SCA...create

Profile Management Tool 7.0

Feature Pack for SCA Product File System
Application server with Feature Pack for SCA Version 1.0

Product file system directory:
/etc/WAS60H/PIDSCA/usr/pp/zWebSphere_OM/V7R0/FPSCA

Intermediate symbolic link
 Create intermediate symbolic link
Path name of intermediate symbolic link:
/etc/pidsca/s7cell/s7nodea/fpscasmp

Note: If an intermediate symbolic link is specified, symbolic links will be created from the configuration file system to the intermediate symbolic link. Otherwise, they will be created directly to the Feature Pack for SCA file system. Refer to the information center for more information on intermediate symbolic links and the product file system directory.

[View the online information center](#)

< Back Next > Finish Cancel

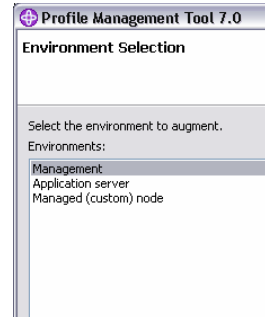
Feature pack for
SCA product HFS



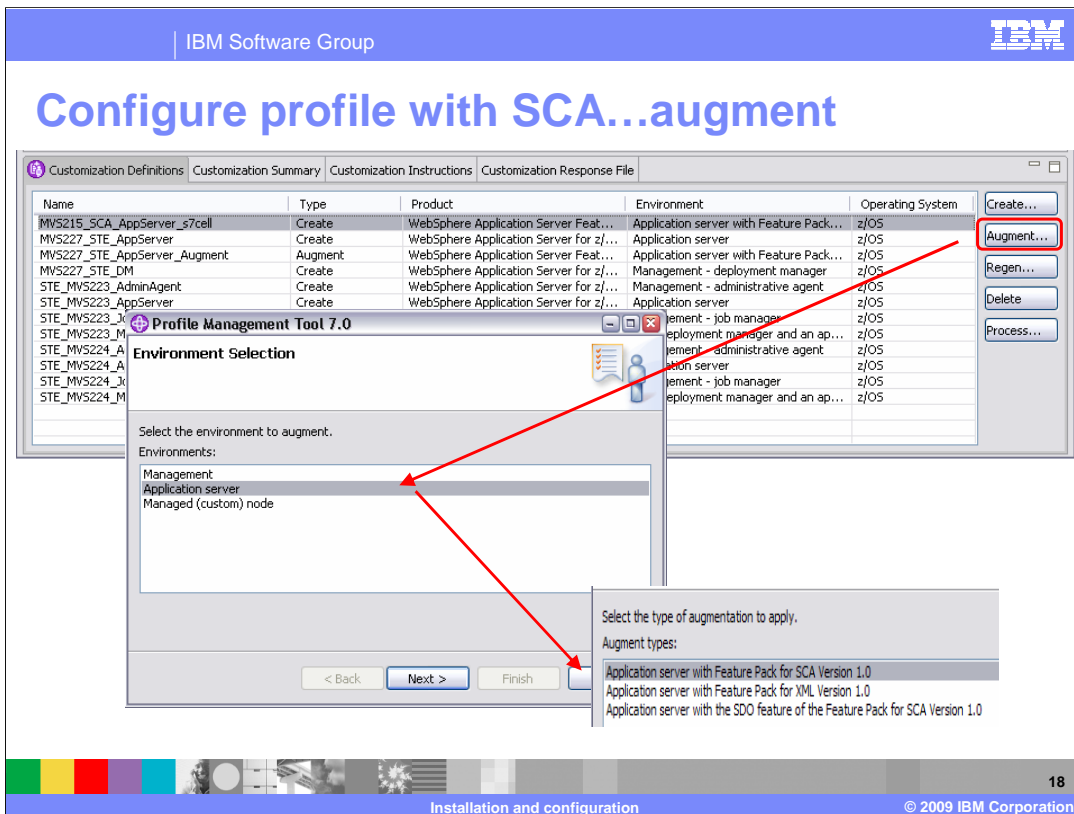
Shown here is the screen where you are asked to specify where the feature pack for SCA file system is found. The profile creation creates an intermediate symbolic link for you if you specify that as well. Again, the rest of the profile creation screens are the same.

Configure profile with SCA...augment

- Augment a profile with SCA features
 - ▶ Basic environments available
 - Deployment manager node
 - Application server
 - Managed node



When you specify 'Augment', you have an existing environment that you want to add the SCA function to. Here you have the option of augmenting a deployment manager node, application server or a managed node. WebSphere Customization Tools also allow you to augment a 'cell' environment by selecting the Management option.



This slide shows the various screens that appear if you select augment. As shown on the previous slide, you are given three options for augmentation. Your first option is a management environment, which is a deployment manager profile. The second option is an application server environment, which is a stand-alone application server node. The third option is a managed or custom node environment, which is an application server node that has been federated into a deployment manager cell.

The augment types panels shows a selection for each of the WebSphere Customization Tools extensions that have been installed.

Configure profile with SCA...augment

Profile Management Tool 7.0

Customization Definition Name
Application server with Feature Pack for SCA Version 1.0

Specify the name that will identify this customization definition.

Customization definition name:
MVS227_STE_AppServer_Augmentation

Response file path name (optional)
C:\Documents and Settings\Administrator\My Documents\zPMTDefnsGAVersion\profiles\MVS227_STE_AppServer\MVS227_STE_AppServer.responseFile Browse...

Profile Management Tool 7.0

Target Data Sets
Application server with Feature Pack for SCA Version 1.0

Specify a high-level qualifier for the target z/OS data set:
mvs227 - [32 x 80]

High-level qualifier (HLQ):
HONKEN.WASV70.STE.F7BASEA

The generated batch jobs and instructions will be up
HLQ.CNTL - a partitioned data set with fixed block s
HLQ.DATA - a partitioned data set with variable ler
Note: A multi-level high-level qualifier can be specifi

mvs227 - [32 x 80]

File Edit View Communication Actions Window Help

Menu Functions Confirm Utilities Help

BROWSE ==> HONKEN.WASV70.STE.F7BASEA.CNTL

Command	Name	Prompt	Size	Created
	IWODAUGA			
	IWODBRAK			
	End			

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There is not much information that is needed in order to perform the augmentation but there is some basic information that you are asked for. You can specify the response file for the profile you are augmenting to pre-fill the panels with the correct values. The target data set can be the same as the one used for the original profile and nothing is changed. You will see that there are only a couple of members created during the augment and they start with 'IWOD'.

Configure profile with SCA...augment

Profile Management Tool 7.0

Base File Systems
Application server with Feature Pack for SCA Version 1.0

Configuration file system

Mount point:
/etc/ste/f7basea/f7nodea

Directory path name relative to mount point:
AppServer

WebSphere Application Server product file system

Product file system directory (or path name of intermediate symbolic link):
/etc/WAS60H/W007097/usr/lpp/z/WebSphere/V7R0

or more information on intermediate symbolic link

Profile Management Tool 7.0

Feature Pack for SCA Product File System
Application server with Feature Pack for SCA Version 1.0

Product file system directory:
/usr/lpp/z/WebSphere_OM/V7R0/FP5CA

Intermediate symbolic link
 Create intermediate symbolic link

Path name of intermediate symbolic link:
/etc/ste/f7basea/f7nodea/fpscasmpe

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The first piece of information needed for the augment is the mount point of the configuration that you want to augment with the SCA features. It also asks you about where the WebSphere base product is located. Note that even though an intermediate symbolic link was specified in the response file you used, you need to update the field to be a symbolic link here if that is what you want to use.

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Configure profile with SCA...augment

Profile Management Tool 7.0

Target Node Administrative Security
Application server with Feature Pack for SCA Version 1.0

Specify the following information on the administrative security that is in effect for the target node.

Target node is managed by a z/OS security product

SAF profile prefix (optional):
F7BASEA

WebSphere Customization Tools

Instructions for Augmenting a WebSphere Application Server for z/OS Application Server Node

The application server will be augmented with:

- Feature Pack for SCA

The Profile Management Tool has created a response file that can be used to augment a WebSphere Application Server for z/OS application server node. This augmentation will update the runtime profile to configure Feature Pack for SCA on the target node based on the information you provided.

Feature Pack for SCA Considerations

Feature Pack for SCA requires the following EJBROLE profile to be defined (unless this profile has already been defined):

```
F7BASEA.scaAllAuthorizedUsers
```

For RACF users, the following RACF commands are required to define the EJBROLE profile:

```
RDEFINE EJBROLE F7BASEA.scaAllAuthorizedUsers UACC(READ)
SETROPTS RACLIST(EJBROLE) REFRESH
```

A sample job to create this EJBROLE profile will be written to the following location when the customization jobs are uploaded to the target z/OS system:

```
HONKEN.WASV70.STE.F7BASEA.CNTL(IW0DBRAX)
```

- New EJBROLE needed
- Instructions in profile management tool only for SCA feature pack (true for 'create' as well)

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If a z/OS security product is being used, then one last piece of information needed for the augment is the SAF profile prefix, if being used for the profile. A new EJBROLE is introduced for the SCA feature pack. This allows a sample job to be created to issue the needed RACF® command. The last screen capture here is from the Customization Instructions that are populated when you finish the customization definition. Note that there are no instructions for the SCA feature pack uploaded to the mainframe. You must use the instructions found in the profile management tool to finish the customization. This is true for both the 'create' and the 'augment'. In the 'create' case, instructions for a vanilla system are uploaded but the additional steps needed for the SCA feature are found only in the profile management tool.

scaAllAuthorizedUsers EJBROLE

- Used for SCA applications with services exposed over the Web services binding that require "authentication.transport". In *.composite file:

```
<service name="EchoService">  
  <binding.ws requires="authentication.transport" />  
</service>
```

- RACF command:

```
RDEFINE EJBROLE  
<SAF_profile_prefix>.scaAllAuthorizedUsers UACC(READ)
```



The scaAllAuthorizedUsers EJBROLE profile is intended for SCA applications that have a service that is exposed over the Web services binding and requires "authentication.transport". An example of what you specify in the composite file is shown on the slide.

Configure profile with SCA...run jobs

▪ Create

- BBOxHFSA has additional steps to create links to SCA

```
BROWSE  HONKEN.WASV70.PIDSCA.SYBASEA.CNTL(BBOWHFSA Line 00000005 Col 001 000
Command -> Scroll -> CSR
*****
/* Create feature pack (or stacked product) intermediate symlink */
/******
//INTSYML2 EXEC PGM=IKJEFT01,REGION=0M,COND=(0,LT)
//SYSISRT DD SYSOUT=*
//BPXOUT  DD SYSOUT=*
//STDERR  DD SYSOUT=*
//STDOUT  DD SYSOUT=*
//SYSISIN DD *
BPXBATCH SH *
/ipp/c/real/intermediateSymlinks_20144794.sh +
/etc/WAS60H/PIDSCA/user/ipp/2WebSphere_OR/V7R8/EPSCA +
/etc/pidcca/cell/nnodear/ippcasape
/******
/* Generate feature pack (or stacked product) symbolic links */
/******
```

- BBOWWPFx has additional processing to augment with SCA function
- IWODBRAK sample job to create new EJBROLE (runs commands in IWODEJBR "DATA" member)
- default_create.log

▪ Augment

- IWODAUGx creates links to SCA and runs the augment on the profile
- IWODBRAK sample job to create new EJBROLE (runs commands in IWODEJBR "DATA" member)

Logs found in

<WAS_HOME>/logs/manageprofiles/

default_augment.log



The final step to configuring a V7 profile with SCA is to run the jobs that are created for you. In the case of 'create', you are instructed to run the jobs you normally run to create that type of profile. A couple of the jobs have had additional processing added to them to allow the profile to support SCA. Those jobs are shown on the slide. BBOxHFSA has had some additional steps added to it to create links to the SCA product files and BBOWWPFx will do some additional processing to augment the profile with SCA. In the case of 'augment', you are instructed to run the IWODAUGx job which will create the needed SCA links in the specified profile and then run the augment processing for you. In both cases, a sample job, IWODBRAK, is provided to create the new EJBROLE profile that is needed for SCA. It runs the commands found in the IWODEJBR "DATA" member. This might need to be updated. If an error is encountered in the SCA augmentation, you can look for the source of the problem in the logs found in the manageprofiles directory. In the case of 'create', the progress is documented along with the rest of the profile creation in the default_create.log. In the case of 'augment', the progress is tracked in the default_augment.log instead.

Once the SCA configuration is complete, it is necessary to augment the profile using the XML option in the WebSphere Customization Tools. The XML feature pack CNTL dataset will contain a BBO*INS file that will contain the steps necessary to configure the XML environment.

Finally, the profile can be augmented to activate the SDO optional feature. The CNTL dataset contains one job, IWOKAUGx, which creates the needed SDO links in the specified profile and then run the augment process for you.

Summary

- Installation
 - ▶ PTF
- Configuration
 - ▶ WebSphere Customization Tools



In this presentation, you saw that the installation of the WebSphere for z/OS V7 SCA feature pack and the SDO optional feature are done by way of SMP/E with a PTF. Once the product code is in place, you can use the WebSphere Customization Tools to create or augment profiles with the SCA and SDO functions. You saw the new plug-ins that have to be installed in the WebSphere Customization Tools in order to do this.

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RACF WebSphere z/OS

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