



IBM Software Group

# IBM® WebSphere® Application Server for z/OS® V7 Feature Pack for Service Component Architecture

## *Installation and configuration*



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This presentation will cover the installation and configuration of the WebSphere Application Server for z/OS V7 Service Component Architecture (SCA).

## Agenda

- Installation
- Configuration



This presentation will discuss how the feature pack is installed and then how to configure a profile to have the new feature.

## Section

# *Installation*



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

## Installation

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

```

++ PTF (uk41977)      /* 5655-n0254-jiwo700 */.
++ VER (z038)
   Fmid(jiwo700)
   Pre (uk39786)
   Sup (ak76370)
++ If fmid(h28w700) then REQ (uk41847)

```



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

- Must create FFSCA 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>

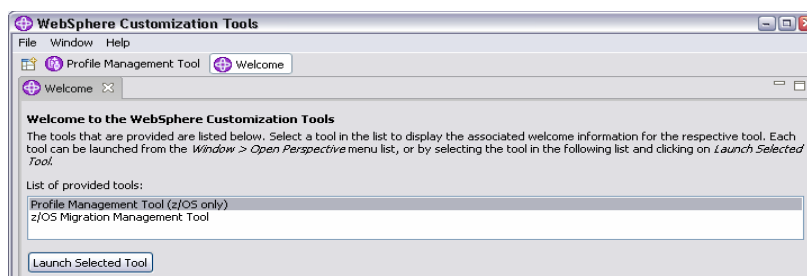


WebSphere Application Server for z/OS V7 feature pack for SCA is shipped as PTF UK61977 against the optional materials FMID, JIW0700. It is available for download at the URL shown on the slide. It must be applied to a system that has the PTF for 7.0.0.1 (UK41847) applied to the WebSphere base. As with 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.

## WebSphere Customization Tools update

- Two steps:
  - ▶ Apply new plug-in to WebSphere Customization Tools V7.0.0.1
    - `com.ibm.ws.pmt.update_7.0.0.jar`
  - ▶ Install SCA feature pack extension
    - `sca.wct`

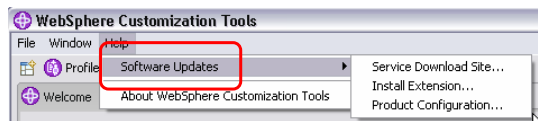
Available in  
WCT 7.0.0.3



In order to create or augment profiles with the SCA feature pack function, it is necessary to update the WebSphere Customization Tools (WCT) with an extension. In order to do this, there are two steps that must be done. First, you need to manually apply the plug-in shown on the slide. You **MUST** be at the 7.0.0.1 level of the tool in order to apply this. This plug-in will allow you to install Feature Pack and Stacked Product Extensions. This step is unnecessary after V7.0.0.3 of the WebSphere Customization Tools becomes available as it will be part of that level. The second step that is necessary is installing the actual SCA feature pack extension. That file will be available as part of the feature pack as you will see on a later slide.

## WCT update, step 1: apply new plug-in

- Stop WCT, if running
- Download `com.ibm.ws.pmt.update_7.0.0.jar`
  - ▶ Available from WCT download site:  
<http://www.ibm.com/support/docview.wss?rs=180&uid=swg24020368>
- Place downloaded jar file into the `<WCT-install-root>/WCT/plug-ins` directory
  - ▶ Do NOT place this file in the `<WCT-install-root>/plug-ins` directory
- Start the WCT
  - ▶ You should now see a *Software Updates* menu item under the *Help* menu



In the first step of the WebSphere Customization Tools update, you need to manually apply the new plug-in. It is available on the WCT download site at the URL shown on the slide. With your WCT stopped, download the `com.ibm.ws.pmt.update_7.0.0.jar` file and put it in the `WCT/plug-ins` directory found under your `WCT-install-root`. Note that you do NOT want to put it in the `plug-ins` directory directly under the `WCT-install-root`. Now that the plug-in is in place, you can restart the WCT. To verify the plug-in is being picked up, look for a 'Software Updates' menu item under 'Help'.

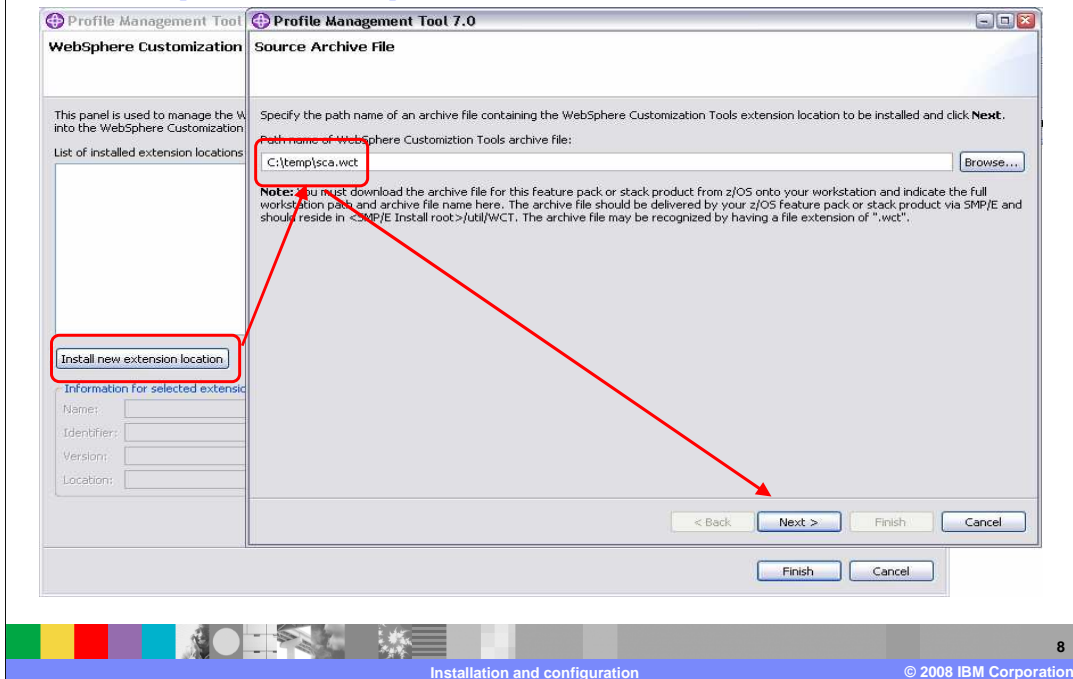
## WCT update, step 2: install extension

- 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 WCT and select the Help > Software Updates > Install Extension



Now that you have the plug-in applied, you can proceed to install the SCA extension. In the SMP/E directory for the SCA feature pack, you will find a `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.

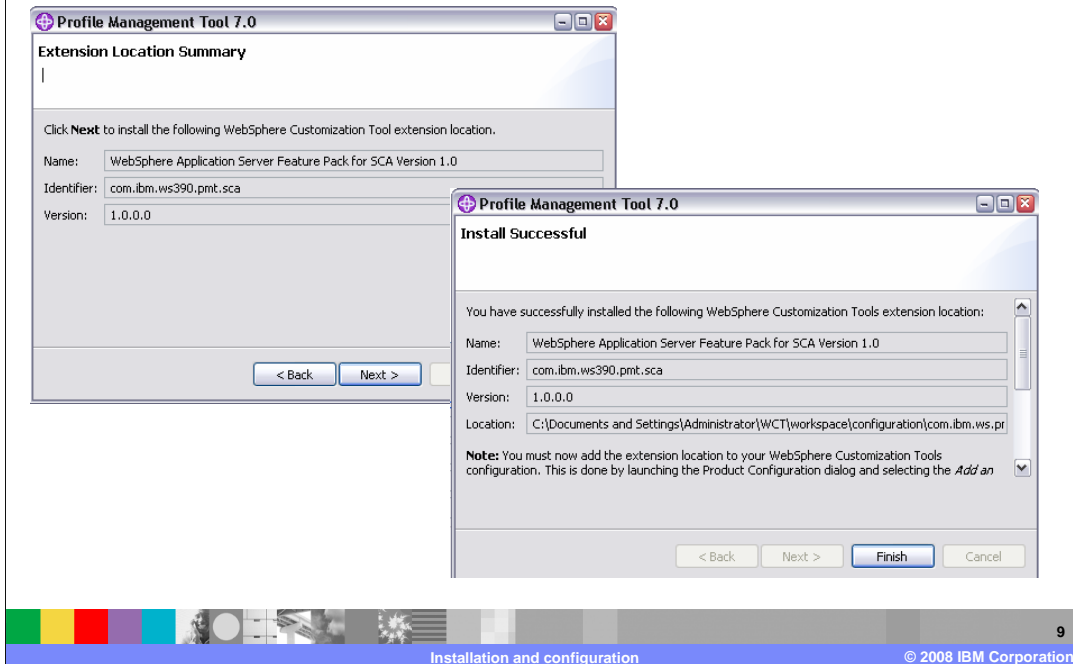
## WCT update, step 2: install extension...



On the next screen, you will have the option to 'Install new extension location'. You need to click that button and it will prompt you for the location of the extension file. Browse to the place where you placed the downloaded file and press 'Next'.

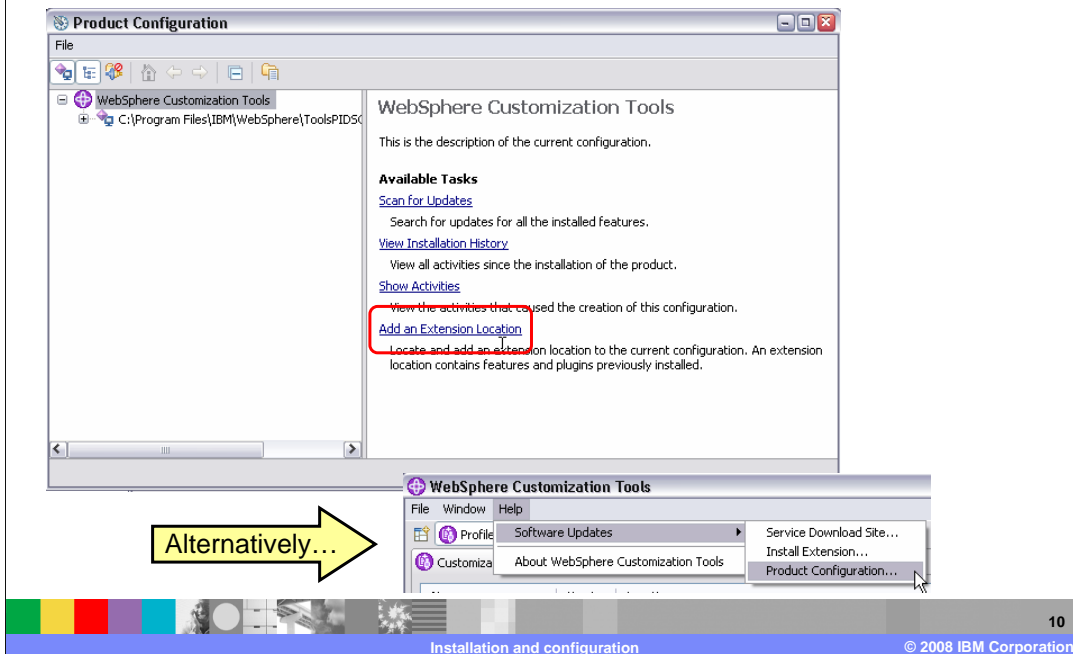


## WCT update, step 2: install extension...



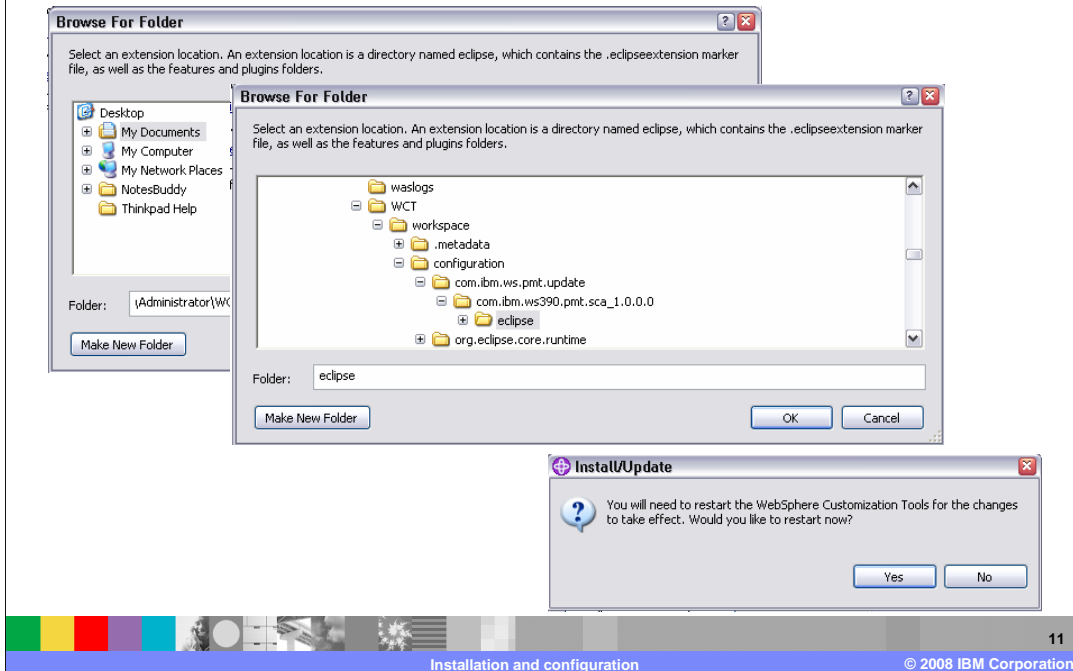
You are then presented with a verification screen, showing that you are about to install the extension location for the feature pack for SCA. Click 'Next' and you should see a message telling you the installation was successful. Note that the location has just been installed now. Next, you will need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

## WCT update, step 2: install 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.

## WCT update, step 2: install extension...



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

## Section

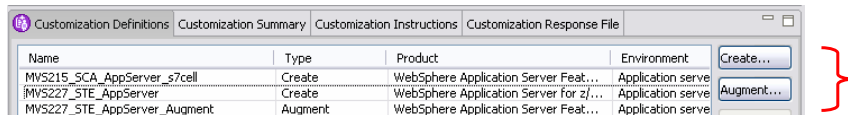
# *Configuration*



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

## Configure profile with SCA

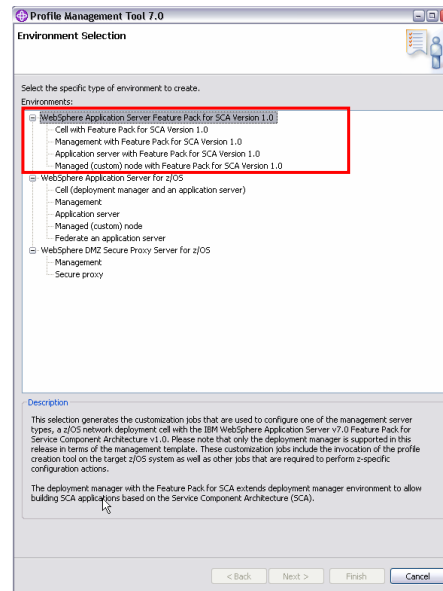
- Two options:
  - Create a new V7 profile with SCA function
  - Augment an existing V7 profile with SCA function



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 will have 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 will look just like a regular profile creation. One of the only additions you'll 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

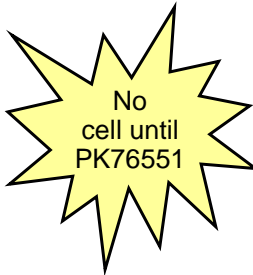
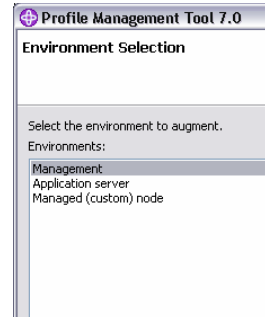
Feature pack for  
SCA product HFS



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

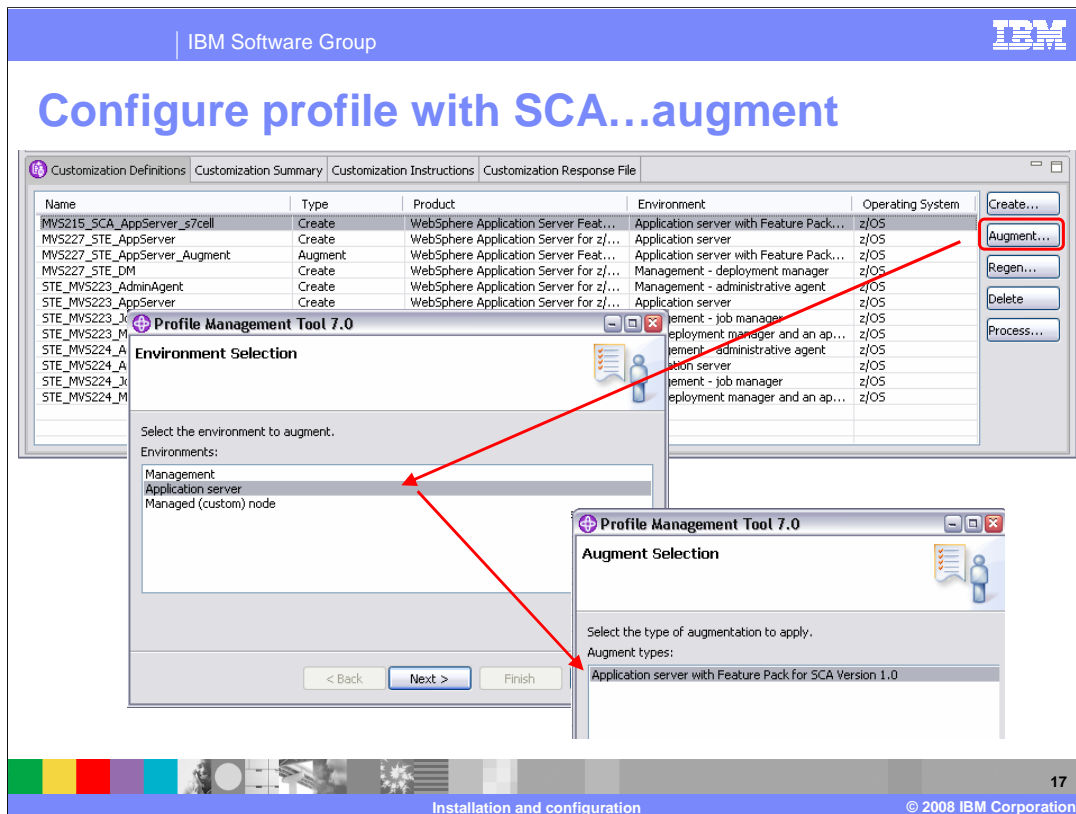
## Configure profile with SCA...augment

- 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. Note that the 'augment' function does not allow you to augment a 'cell' environment. If you created a cell profile originally, you will have to augment the deployment manager node and the application server node separately; always starting with the deployment manager node. APAR PK76551 will address this.





This slide shows the various screens that you will see if you select augment. As shown on the previous slide, it will give you 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 (custom) node environment which is an application server node that has been federated into a deployment manager cell. You will notice that the SCA feature pack is currently the only choice for augmentation.

## 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:  
MV5227\_STE\_AppServer\_Augmentation

Response file path name (optional)  
C:\Documents and Settings\Administrator\My Documents\zPMTDefnsGAVersion\profiles\MV5227\_STE\_AppServer\MV5227\_STE\_AppServer.responseFile [Browse...]

Specify values  
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:  
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 will be changed. You'll 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/zWebSphere/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/zWebSphere\_OM/V7R0/FPSCA

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 will also ask 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 will 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:

```
DEFINE 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:

```
HONKMN.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 the both the 'create' and the 'augment'. In the 'create' case, instructions for a vanilla system are uploaded but the additional EJBROLE 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)
```

Note that in the GA product, the command in the IWOJEBR "DATA" member will need to be changed. It defines <SAF\_profile\_prefix>.zScaAllAuthorizedUsers instead. Fixed in 7.0.0.1



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.

At the time of GA, the directions are correct but the actual EJBROLE being defined in the sample job is incorrect. It needs to be updated to match the directions. This will be fixed in V7.0.0.1.

## 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  CDB
*****
/* Create feature pack (or stacked product) intermediate symlink */
/******
//INTSYML2 EXEC PGM=IKJEFT01,REGION=0M,COND=(0,LT)
//SYSPRT DD SYSOUT=*
//BPXOUT DD SYSOUT=*
//STDERR DD SYSOUT=*
//STDOUT DD SYSOUT=*
//SYSISIN DD *
BPXBATCH SR *
/ipp/createIntermediateSymlinks_20144794.sh +
/etc/WAS60H/PIDSCA/user/ipp/2WebSphere_0M/V7R0/EPSCA +
/etc/pidcca/cell/nnodea/ippcasape
/******
/* Create 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 will 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 may 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.

## Summary

- Installation
  - ▶ PTF
- Configuration
  - ▶ WCT

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

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