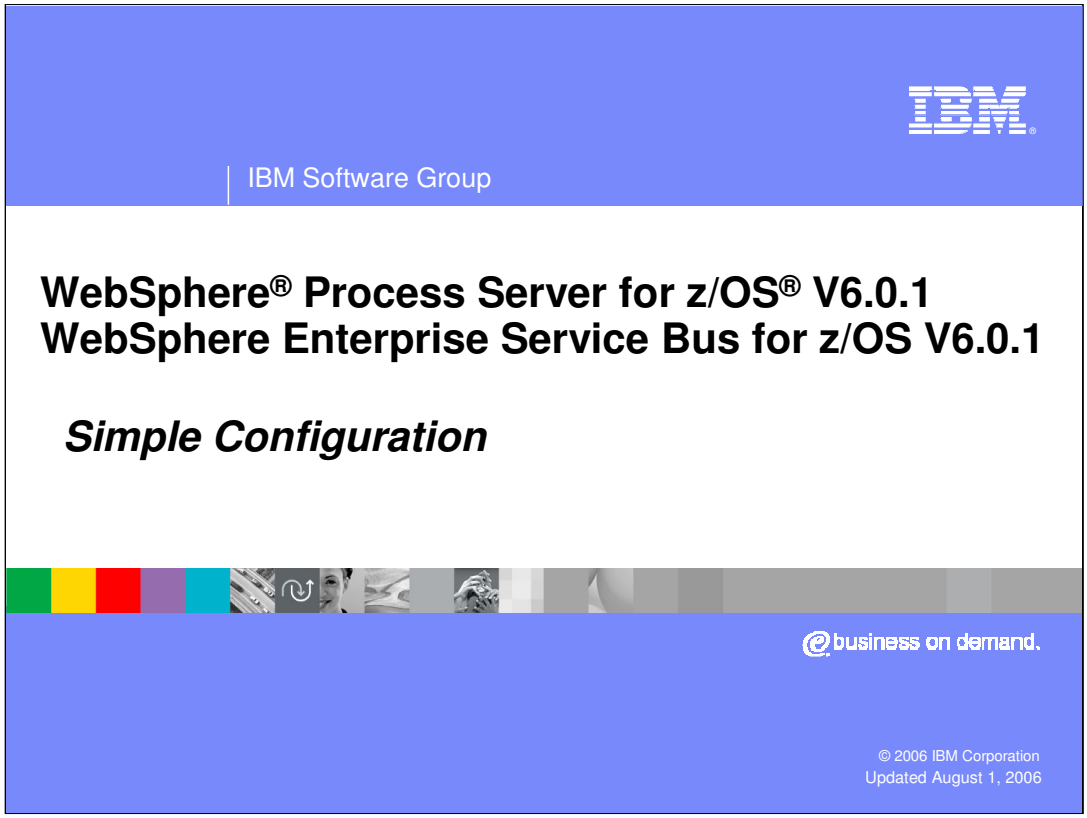


This presentation will look at a simple configuration of a stand-alone application server to enable WebSphere Process Server for z/OS V6.0.1 or WebSphere Enterprise Service Bus for z/OS V6.0.1 function.

Goals

- Describe WebSphere Process Server for z/OS V6.0.1 and WebSphere Enterprise Service Bus V6.0.1 configuration process using a Simple configuration scenario

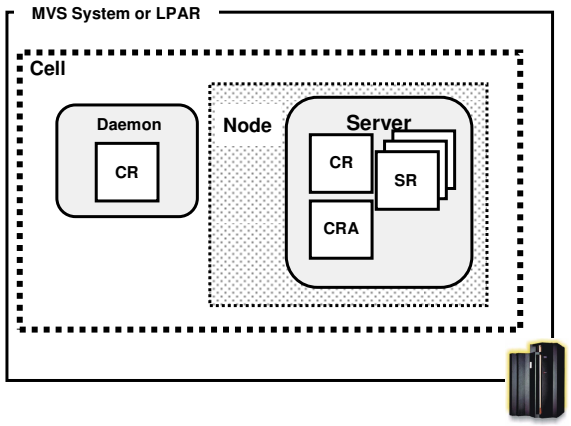
The goal of this presentation is to take you through the steps necessary to complete the configuration of WebSphere Process Server for z/OS or WebSphere Enterprise Service Bus for z/OS.

Section

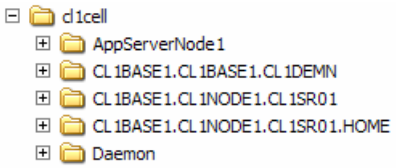
Simple configuration of WebSphere Process Server and WebSphere Enterprise Service Bus

This section will take you through the simple configuration of WebSphere Process Server for z/OS or WebSphere Enterprise Service Bus for z/OS.

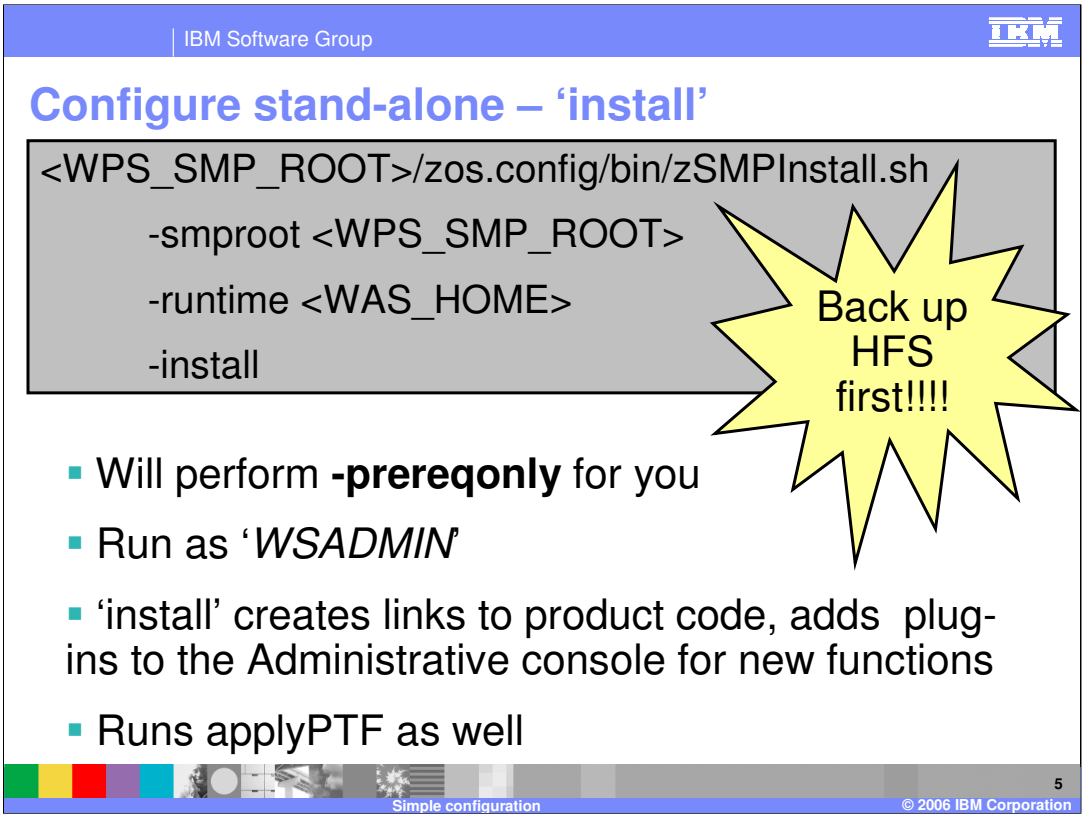
Configure a stand-alone application server



- Start with a configured Stand-Alone Application Server
- Configure it with WebSphere Process Server or WebSphere Enterprise Service Bus



This slide shows an already-configured stand-alone application server. This presentation begins with that server as the base and explains how to configure it to include the WebSphere Process Server or WebSphere Enterprise Service Bus function. Note that if you have the WebSphere Process Server for z/OS V6.0.1 product, you can configure the server with EITHER WebSphere Process Server, which includes the WebSphere Enterprise Service Bus function, OR WebSphere Enterprise Service Bus only. If you have the WebSphere Enterprise Service Bus for z/OS V6.0.1 product, your only option is to configure the server with WebSphere Enterprise Service Bus function.



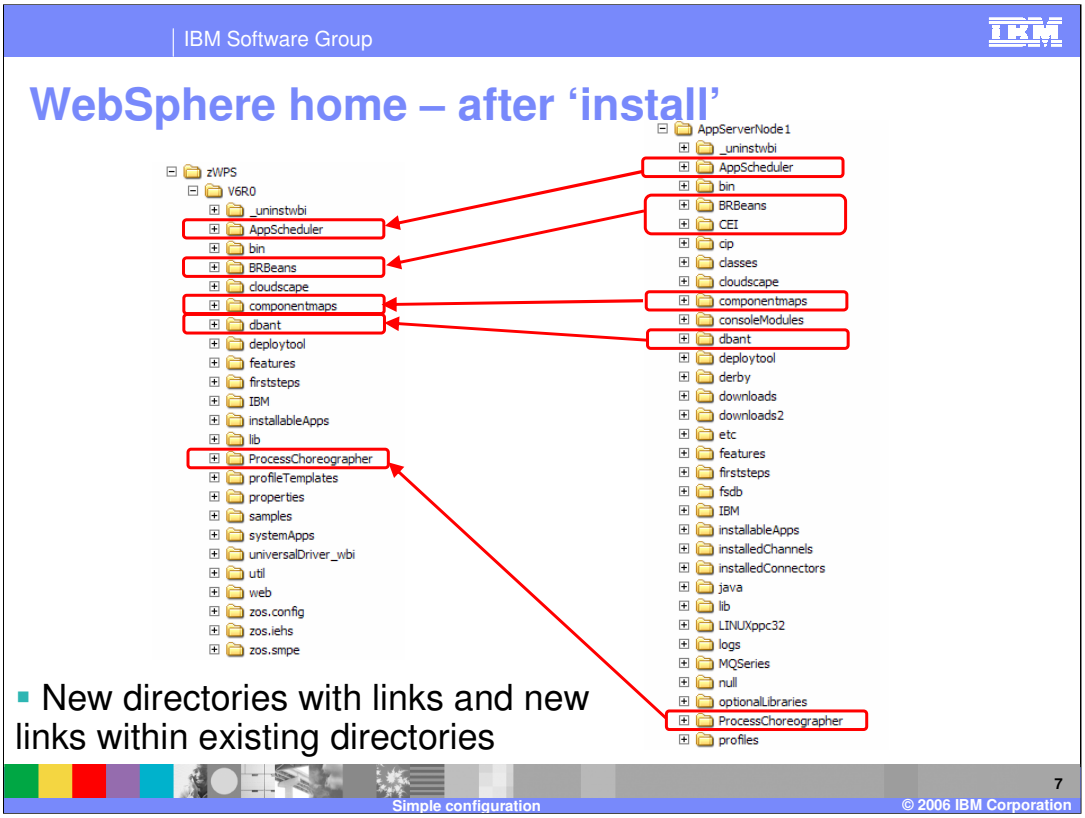
The first thing you need to do for the configuration is run the zSMPInstall.sh script in order to create symlinks in your WebSphere Application Server configuration to the WebSphere Process Server or WebSphere Enterprise Service Bus product code. This is really a task for the system administrator, since it is somewhat of an extension of the SMP/E install. You should use a WebSphere Administrator user ID to run the script. The zSMPInstall.sh script will also add plug-ins to the Administrative Console for new functions needed for the WebSphere Process Server or WebSphere Enterprise Service Bus. You need to specify the SMP/E root where you installed the WebSphere Process Server or WebSphere Enterprise Service Bus product code and the WAS_HOME for the WebSphere Application Server profile you are updating. The script will perform the prereqonly function for you automatically to ensure that any prerequisites are met. Note that before running the script, you should BACKUP your WebSphere Application Server configuration HFS first! This can be run from a telnet session or OMVS. You may find you need to increase some OMVS parameters such as MAXFILEPROC, MAXPROCUSER or MAXCPUTIME when running the shell script this way. For example, you may need to specify: SETOMVS MAXCPUTIME=86400

Configure stand-alone – 'install' JCL

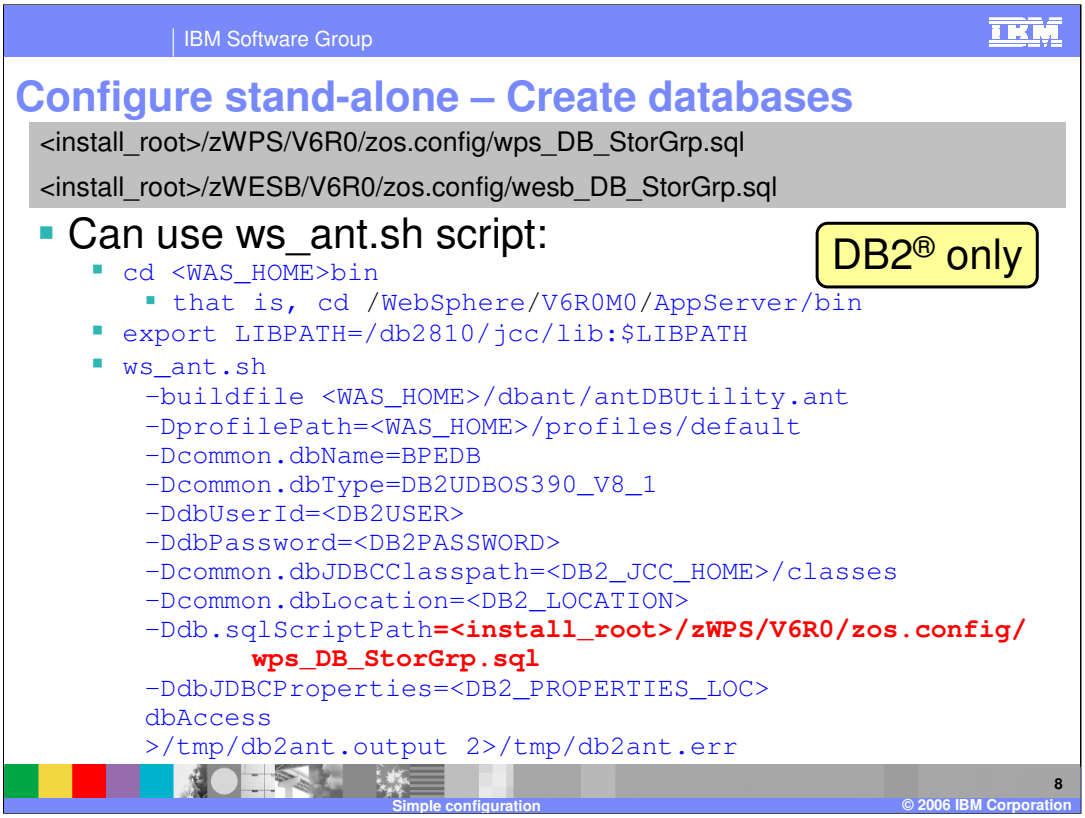
```
//INSTONLY JOB (ACCTNO,ROOM),'HONKEN',CLASS=A,REGION=0M,
//  NOTIFY=&SYSUID,TIME=NOLIMIT
//*
//*********************************************************************/
//*  zSMPInstall.sh          R_                                       */
//*********************************************************************/
//INSTO EXEC PGM=IKJEFT01,REGION=0M
//SYSTSPRT DD  SYSOUT=*
//SYSTSIN  DD  *
 BPXBATCH SH +
 /etc/WAS60B/usr/lpp/zWPS/V6R0/zos.config/+
 /bin/zSMPInstall.sh +
    -smproot /etc/WAS60B/usr/lpp/zWPS/V6R0  +
    -runtime /etc/cl1cell/AppServerNode1  +
    -install  +
  1> /tmp/installonly_84821.out +
  2> /tmp/installonly_84821.err
/*
//*********************************************************************
//*  STEP Copy - Copy script output back to joblog                    *
//*********************************************************************
//MCFGC EXEC PGM=IKJEFT01,REGION=0M
//SYSEXEC  DD  DISP=SHR,DSN=WAS60A.SBBOEXEC
//SYSTSIN  DD *
   BBOHFSWR '/tmp/installonly_84821.out'
   BBOHFSWR '/tmp/installonly_84821.err'
//SYSTSPRT DD SYSOUT=*
//
```

- Can run the job from JCL as well

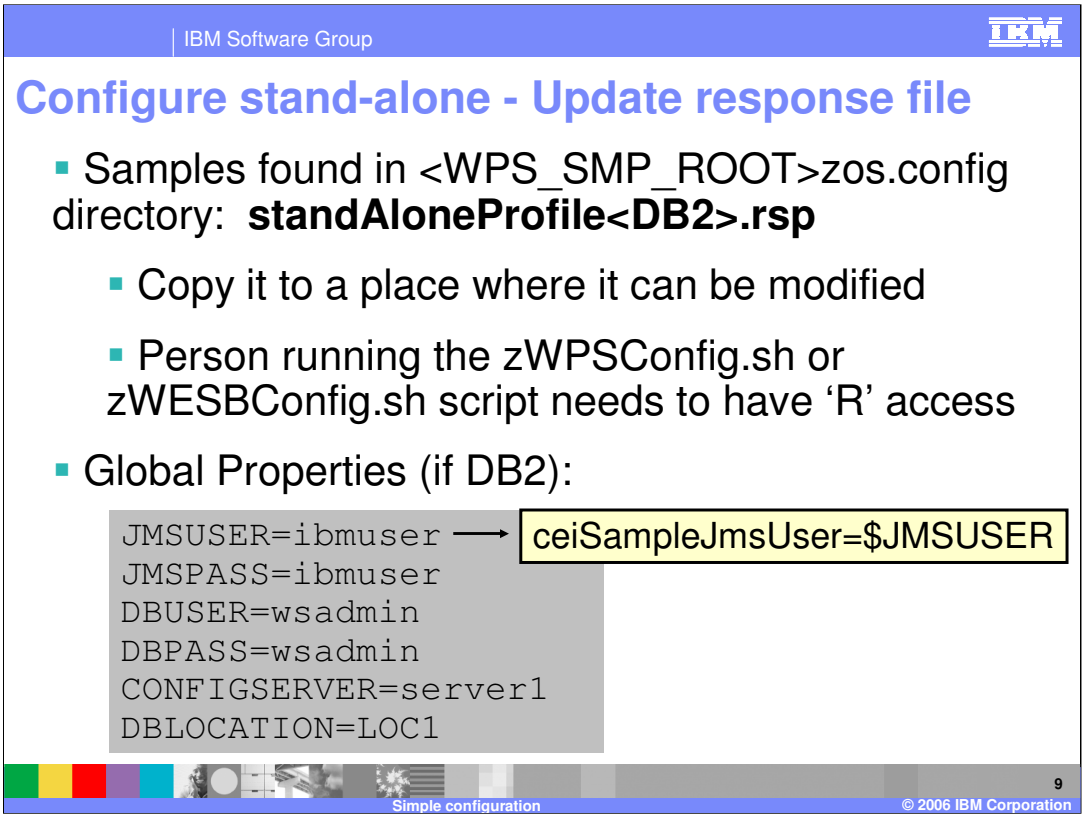
This slide shows an example of running the shell script from JCL.



After running the zSMPInstall.sh script, the WebSphere Application Server configuration is updated with new directories with links to the WebSphere Process Server or WebSphere Enterprise Service Bus product files, and with new links within existing directories.

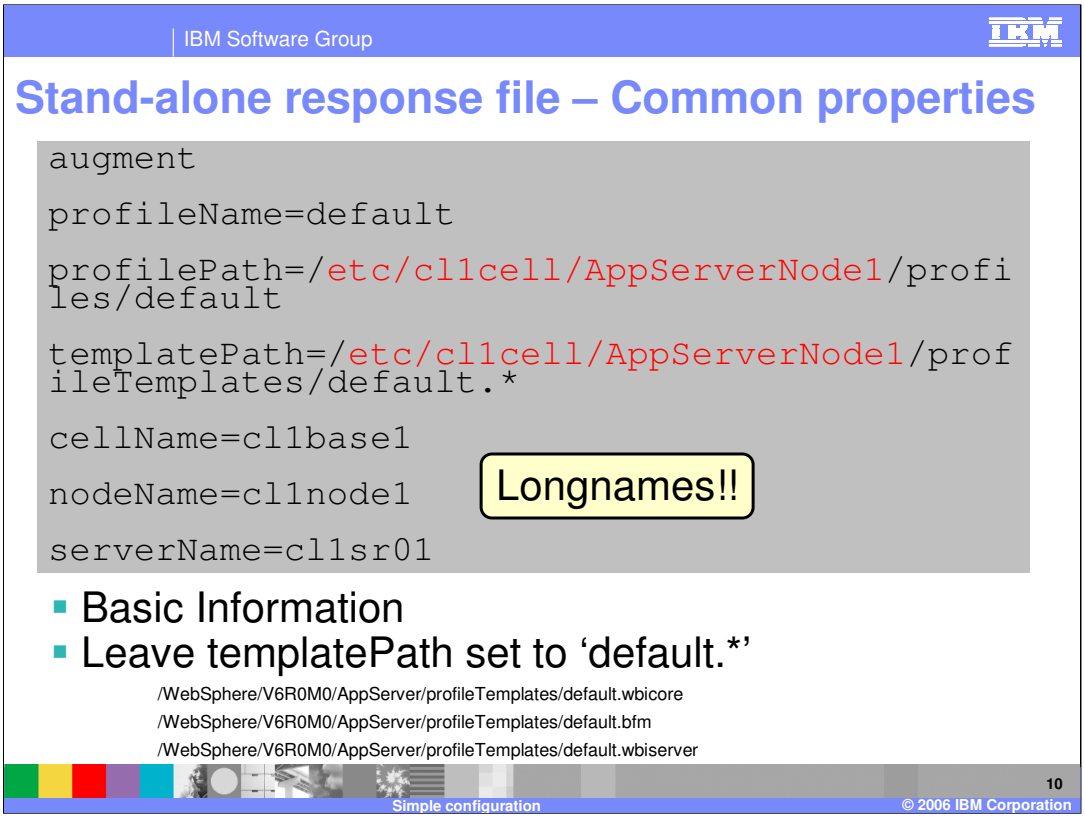


If you plan on using DB2 in your configuration, you should create the necessary databases and storage groups at this point. .sql to do this is provided in the zos.config directory as wps_DB_StorGrp.sql or wesb_DB_StorGrp.sql which. Note that these files are both in ASCII. This shows an example of using the ws_ant.sh script in order to create the DB2 databases. Note that the common.dbName parameter can be anything here. If you plan on using Cloudscape databases, the configuration script will create those for you and you need to do nothing at this step.

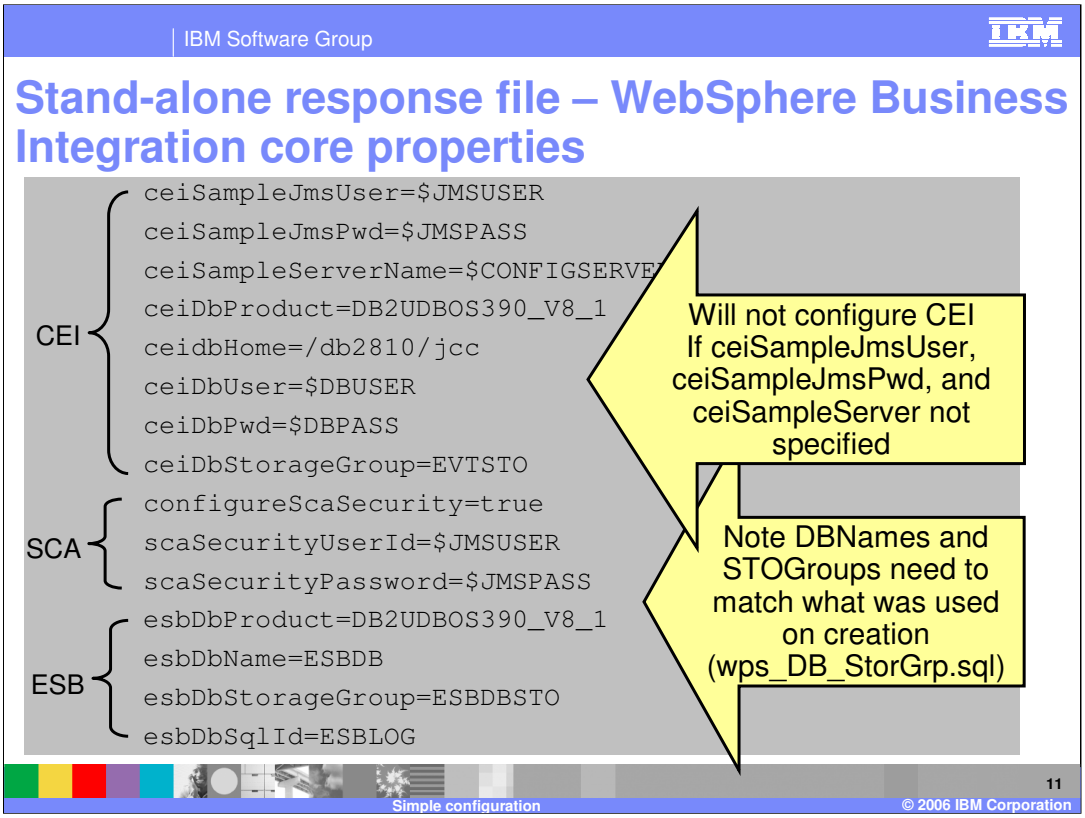


To prepare for running the configuration script, you will need to update one of the response file samples that are shipped with the product. The samples can be found in the zos.config directory in the SMP/E-installed HFS directory path. Since it is a read-only file system, you will need to copy it to a place where it can be modified. Make sure that the user ID that you will use to run the zWPSConfig.sh script or zWESBConfig.sh script has at least read-access to the file. There are two samples shipped for the Stand-alone configuration: standAloneProfile.rsp and standAloneProfileDB2.rsp. Select the correct one based on whether you plan to use DB2 or Cloudscape for your databases.

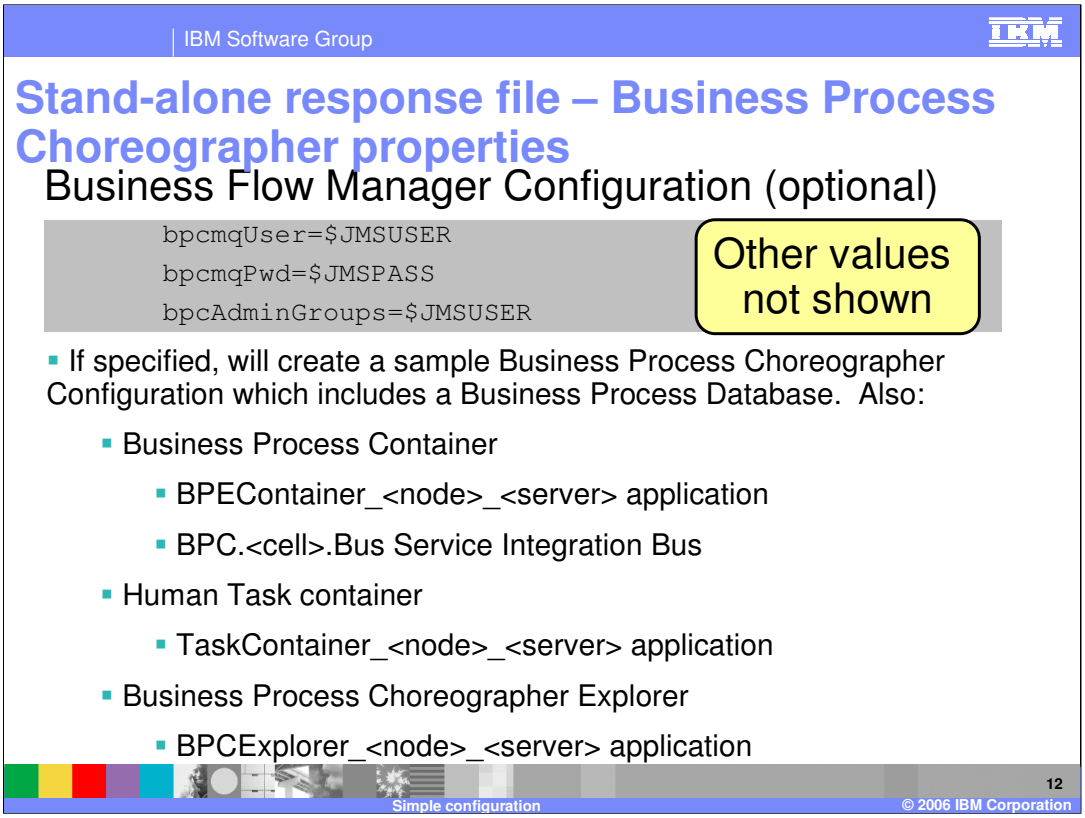
The first set of parameters you need to set in the response file are ones that can be used later in variable substitutions as shown in the yellow box. This allows you to specify parameters once, making it easier to override on the command line and cutting down on typographical errors. The user IDs and passwords that you are asked to supply will be used to create authentication aliases to protect various resources that are created for you. You are able to change their values in the Administrative Console at a later time if needed. Note that the DBLOCATION needs to be the location name, not the subsystem name.



The next set of values you are asked to specify in both cases are some common properties such as cellName, nodeName and serverName. It is important to note that if you set up your cell such that you have different names for the longnames and shortnames, you MUST SPECIFY THE LONGNAME! On z/OS, the profileName will always be 'default' so that should not be changed. You need to change the Path parameters to include your configuration HFS path, being careful to leave the non-highlighted part alone. On the templatePath parameter, this value determines which actions are performed during the profile augmentation portion of the install. It should be left 'as-is' with the wildcard unless you have a good reason to change it. One reason might be that the job is timing out so it does not finish. For that reason, you might specify one value shown here at a time and run the job multiple times. The values shown here are valid for the WebSphere Process Server product. The values for the WebSphere Enterprise Service Bus product are different and can be found in the response file. If you leave the wildcard, all three actions will be performed for you.



The next set of parameters deal with the configuration of the WebSphere Business Integration Core functions. Common Event Infrastructure will not be configured if you do not specify the ceiSample JMS User, JMS password and server parameters. Recall that CEI is an optional function. For the Service Component Architecture, or SCA, function, it will create an authentication alias to protect the System Integration Buses that are created if you set the configureSCASecurity parameter to 'true'. Finally, you are asked some information for the Enterprise Service Bus setup having to do with the databases that are required. The names specified here must match what you created earlier when you ran the wps_ or wesb_DB_StorGrp sql.



This slide shows a subset of the Business Flow Manager Configuration parameters. The Business Flow Manager includes both the Business Process Choreographer and the Human Task Manager. In order for these functions to be configured at this time, you must specify the values shown here on the slide. If they are NOT specified, a sample configuration is NOT created at this time. It is possible to create a sample configuration later using .jacl scripts or an install wizard in the Administrative Console. You can find a sample of running the .jacl script in the NetworkDeploymentConfiguration presentation.

The sample configuration that is created includes the Business Process Container, the Human Task Container and the Business Process Choreographer Explorer. This includes a few applications and a Service Integration Bus.

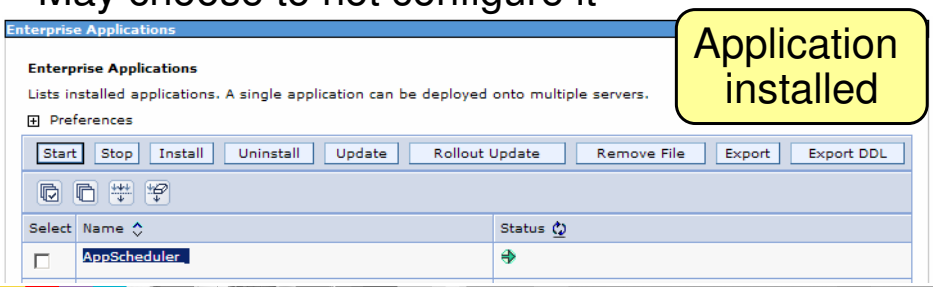
Here, 'optional' just means whether you configure it or not. Those components will still be installed. The difference is whether or not you configure it now. You may want to 'configure' the sample and then once you get an idea of how you will be using it, use the .jacl scripts to configure it more to your liking. It is possible to go back and configure the optional components.

Stand-alone response file – WebSphere Business Integration server properties

Application Scheduler Configuration (optional)

```
configureAppScheduler=true
appSchedulerServer=$CONFIGSERVER
```

- Allows you to schedule the starting and stopping of applications that are installed on WebSphere Process Server
- May choose to not configure it



The Application Scheduler Configuration is optional. By configuring the Application Scheduler, the administrator will have the ability to schedule the starting and stopping of applications that are installed on the WebSphere Process Server using the Administrative Console. When configured, a new application will be installed into your server.

Stand-alone response file – Database

WPSDB Database Configuration

```
dbName=WPSDB
dbType=DB2UDBOS390_V8_1
dbUserId=$DBUSER
dbPassword=$DBPASS
dbStorageGroup=WPSDBSTO
dbHostName=localhost
dbServerPort=446
dbConnectionLocation=$DBLOCATION
dbJDBCClasspath=/db2810/jcc/classes
dbJDBCProperties=/db2810/jcc/properties
dbCreateNew=false
dbDefineSQL=true
```

For Type 4

dbCreateNew – create Databases
dbDefineSQL – configure Databases

- dbJDBCProperties file MUST point to DB2JccConfiguration.properties if specified

This slide shows some values you must specify for the WPSDB common database configuration in order to create JDBC resources, authentication aliases and the .sql needed to configure the database. Shown here are values from the DB2 response file; the Cloudscape version has just a subset of these parameters. Again, it's important that the database name and storage group parameters match what you specified when you created the database. The dbCreateNew parameter determines whether the database itself is created during augmentation. For the DB2 version, this must be false but for Cloudscape, this can be true. The dbDefineSQL parameter determines whether the SQL to configure the databases is run during the augmentation phase. Setting this to 'true' allows the configuration to be fully automated. If this parameter is set to 'false', you will need to manually run the SQL that is generated in order to configure the databases. The ServerPort parameter is used for a Type 4 definition only and finally, if you need to specify a JDBC properties file, it MUST be called DB2JccConfiguration.properties.

Configure stand-alone – 'augment'

```
export LIBPATH=/db2810/jcc/lib:$LIBPATH
<WAS_HOME>/bin/zWPSConfig.sh
        -response standAloneProfile<DB2>.rsp
        -augment
```

- 'augment' will create resources and install applications needed to run the WebSphere Process Server
- Needs to be run from the <WAS_HOME>/bin directory as '*WSADMIN*'
- Need to export LIBPATH first if using DB2 and dbDefineSQL=true

Now that you have completed the update of the response file, you are ready to run the augment job. If using DB2 and you set dbDefineSQL to 'true' in order to configure the databases automatically, you will need to export your LIBPATH statement first. The zWPSConfig.sh script, found in the bin directory of your WAS_HOME is used for the augment. You should again run the script from a WebSphere administrator user ID. The only parameter you need to specify other than 'augment', which takes no value, is the 'response' parameter to indicate where the updated copy of the sample response file can be found.

Configure stand-alone – 'augment'

- Keep in mind that configuring WebSphere Process Server will also configure ESB
- To configure an ESB-only server use:
  - zWESBConfig.sh

```
<WAS_HOME>/bin/zWESBConfig.sh
        -response standAloneProfile<DB2>.rsp
        -augment
```

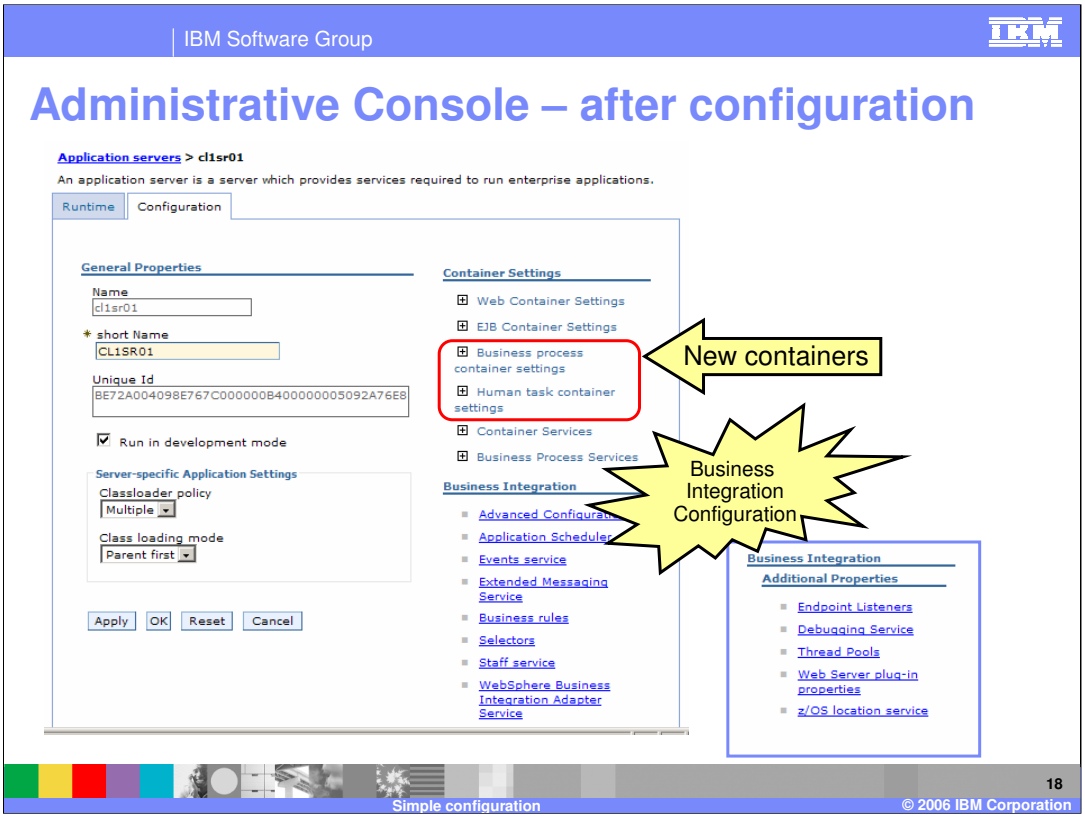

Recall that when you configure WebSphere Process Server, you automatically configure the WebSphere Enterprise Service Bus since that is included as part of the WebSphere Process Server Product. It is also possible to configure ONLY the WebSphere Enterprise Service Bus. The command to do that, zWESBConfig.sh, is shown here. This would be the only available option if you have the WebSphere Enterprise Service Bus for z/OS V6.0.1 product.

Configure stand-alone – 'augment' JCL

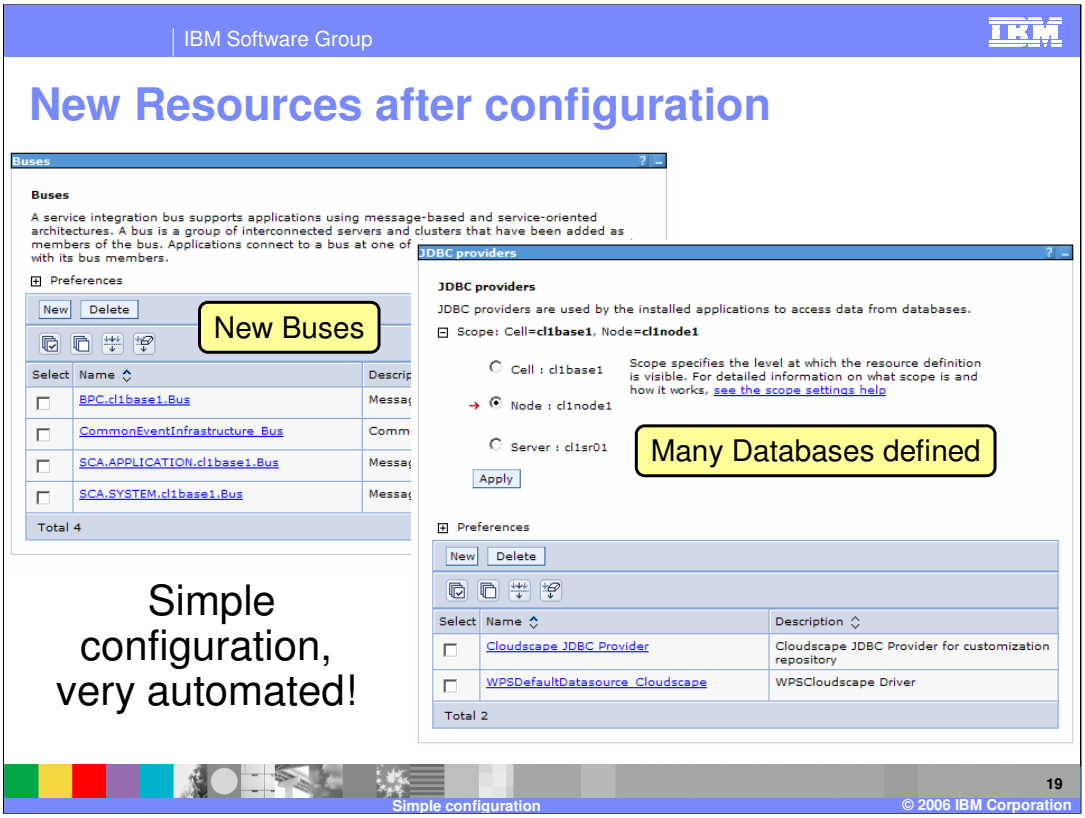
```
//AUGMENT  JOB (ACCTNO,ROOM),'HONKEN',CLASS=A,REGION=0M,
//  NOTIFY=&SYSUID,TIME=NOLIMIT
//*******************************************************************/
//*  zWPSConfig.sh                                                  */
//*******************************************************************/
//AUGMT EXEC PGM=IKJEFT01,REGION=0M
//SYSTSPRT DD  SYSOUT=*
//SYSTSIN  DD  *
 BPXBATCH SH +
 cd /etc/cl1cell1
 /AppServerNode1
 /bin; +
   export LIBPATH=/usr/lpp/db2810/jcc/lib:$LIBPATH; +
    ./zWPSConfig.sh +
    -response /u/wsuser/standAloneProfileDB2.rsp +
    -augment +
     1> /tmp/zWPSConfig_40135.out +
     2> /tmp/zWPSConfig_40135.err
/*
//*******************************************************************/
//*  STEP Copy - Copy script output back to joblog                  */
//*******************************************************************/
//MCFGC EXEC PGM=IKJEFT01,REGION=0M
//SYSEXEC  DD  DISP=SHR,DSN=WAS60A.SBBOEXEC
//SYSTSIN  DD *
   BBOHFSWR '/tmp/zWPSConfig_40135.out'
   BBOHFSWR '/tmp/zWPSConfig_40135.err'
```

- Note the 'export' in the JCL

Again, here is an example of running the augment function using JCL. Do not forget to export the Native JCC LIBPATH if dbDefineSQL is set to 'true'.

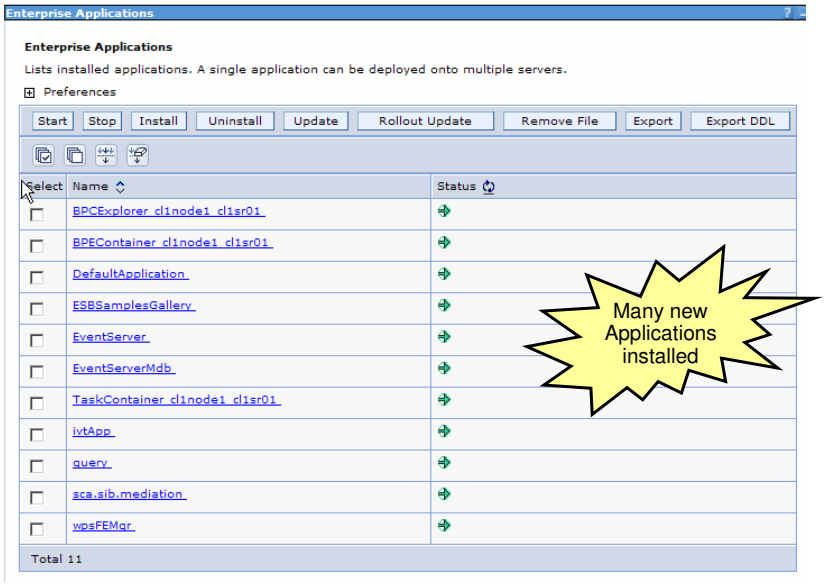


Looking at the Administrative Console after the configuration is complete, you should see some new containers for business processes and human tasks. There is an entire new 'Business Integration' section as well, including sections to configure the application scheduler and business rules. This is only a subset of changes that you will see but it should give you an idea of the changes that were made.



You will also note that many new resources were defined for you. On the left, you see the service integration buses that were created for you and on the right you see a new JDBC provider. If you were to drill down, you will find JDBC resources defined for the various functions included in the product.

New applications…



Finally, you will see many applications that were installed into your server. At the top, you see the Business Process Choreographer Explorer which allows you to start and stop business processes and claim human tasks. Below that, you see the Business Process Container, a couple of applications for the Common Event Infrastructure, the Human Task container, an application for mediations and finally the failed event manager. Note that this was all done for you automatically during the augmentation. The Stand-Alone Server configuration can be highly automated. Another presentation is available that talks about the configuration in a Network Deployment cell.

Summary

- WebSphere Process Server for z/OS V6.0.1 and WebSphere Enterprise Service Bus for z/OS V6.0.1 are easily configured in a simple configuration
  - Uses Cloudscape or DB2
  - Highly automated

In summary, the configuration of a Stand-Alone Application server with WebSphere Process Server for z/OS or WebSphere Enterprise Service Bus for z/OS is highly automated. This presentation went through the steps involved and how you can easily configure a Stand-Alone Application server for use with these products using a DB2 or Cloudscape database. For a more complicated configuration, see the Network Deployment Configuration presentation.

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