PERFICIENT

Install and Config For IBM BPM 8.5.5

Install and Configure of BPM v8.5.5

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Change History

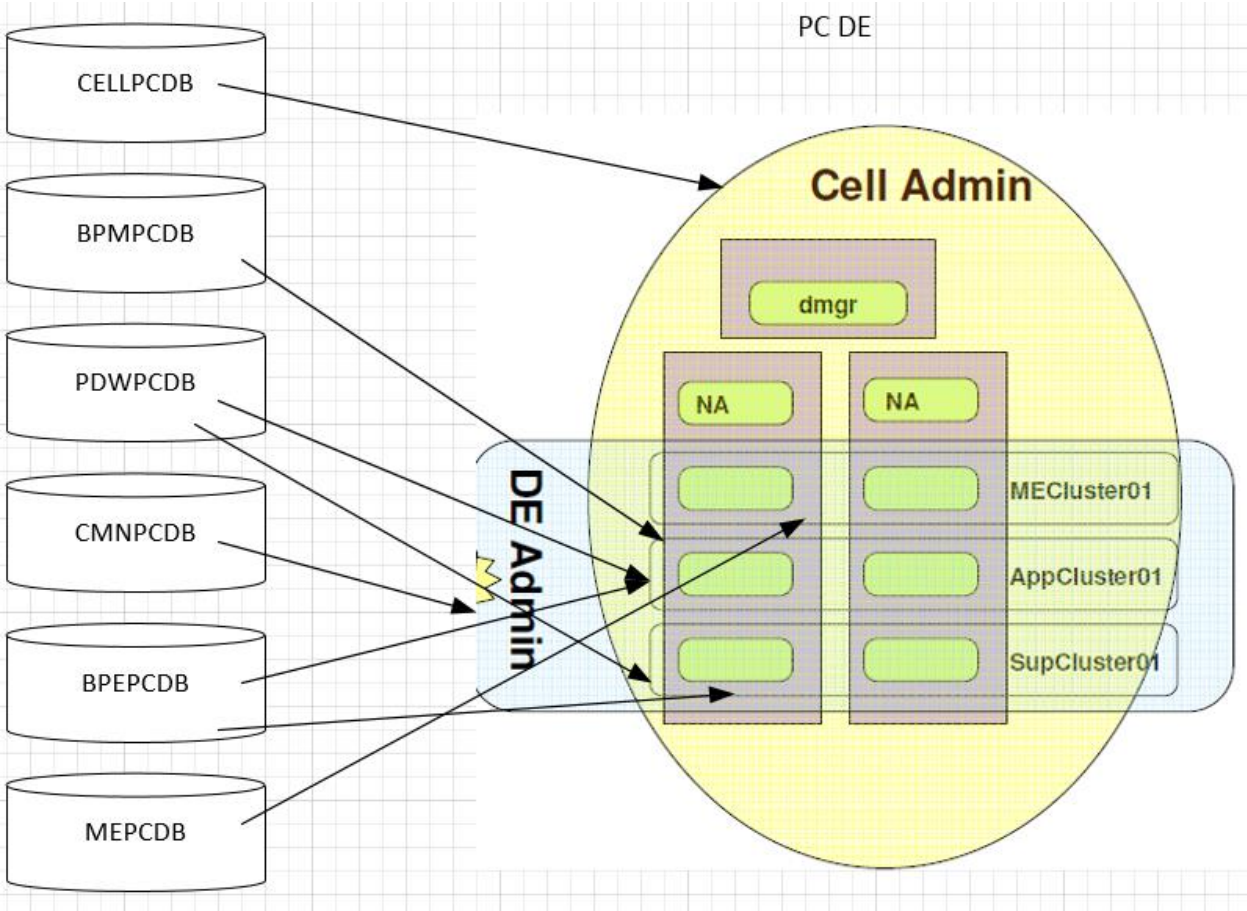
Table 1: Document Change History

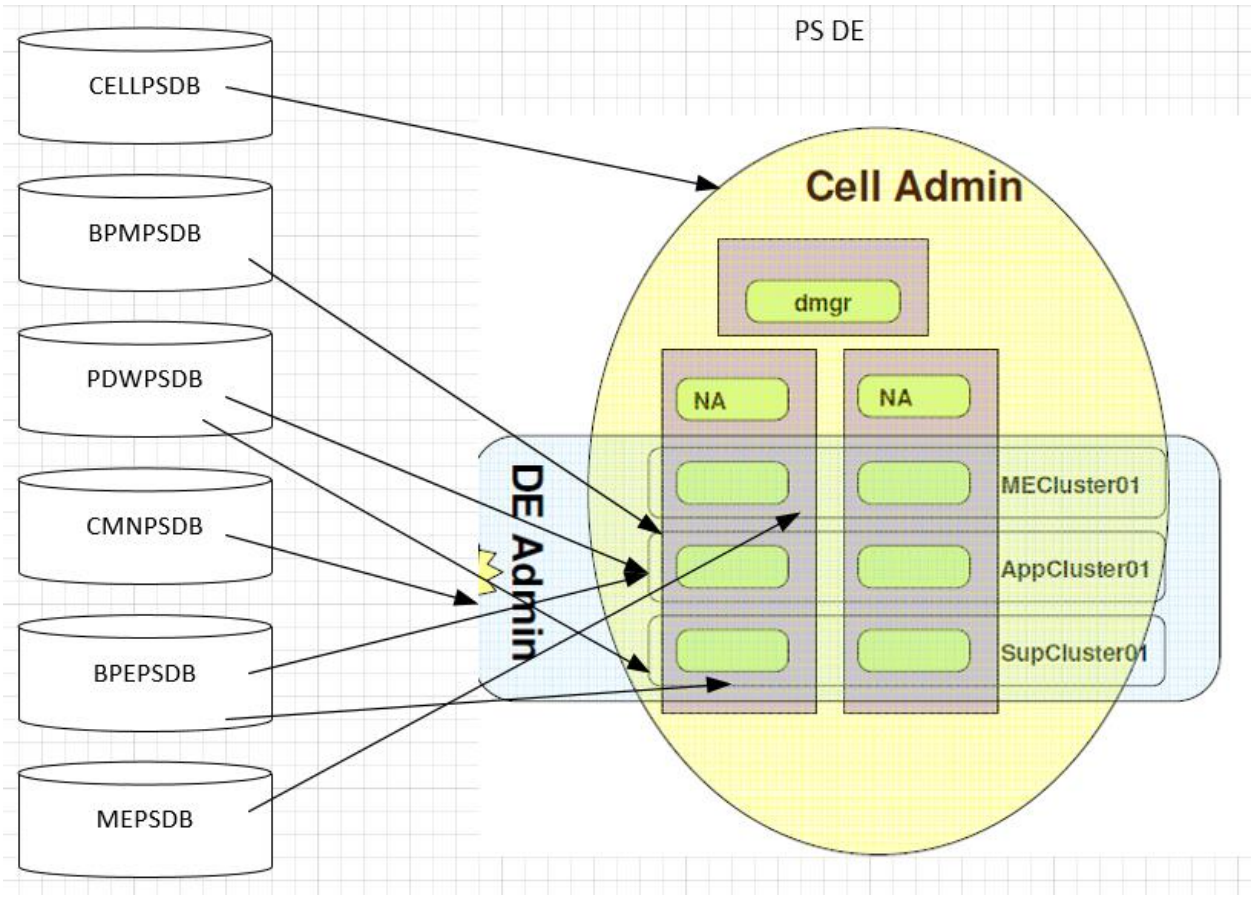
Document Revision & Date	Editor	Summary of Change
First Draft 1.0 12/01/14	Chuck Misuraca	Initial version

Table of Contents

Preface

The document is a runbook for creating IBM BPM 8.5.5 Cells that will contains either a Process Center(PC) Deployment Environment(DE) or a Process Server(PS) Deployment Environment(DE). Each DE will have 3 clusters and 6 databases. This will provide for maximum flexibility and scalability.





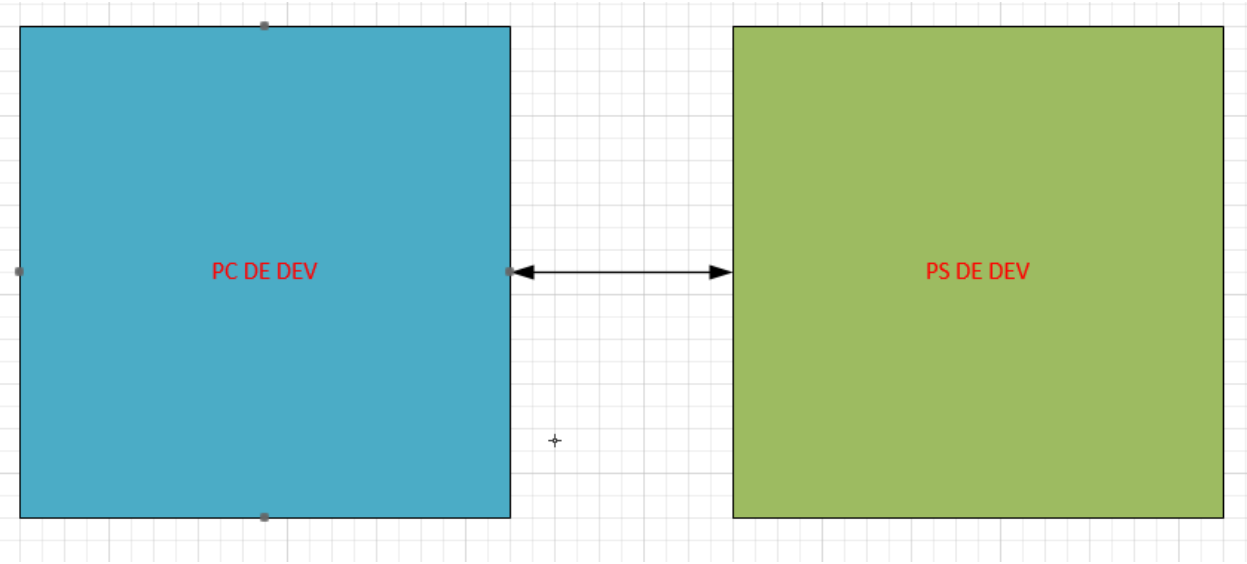
There will be 12 databases. 6 for Process Center and 6 for Process Server

- Process Center Specific
  - CELLPCDB for the Cell Common database.
  - BPMPCDB for the Process database. BPMDB will be used for ECMDB.
  - PDWPCDB for the Performance Data Warehouse database
  - CMNPCDB for Deployment Environment Common database for Process Center. CMNPCDB will be used for BSPCDB.
  - MEPCDB for Message Engine.
  - BPEPCDB for BPEL Engine
- Process Server Specific
  - CELLPSDB for the Cell Common database.
  - BPMPSDB for the Process database. BPMDB will be used for ECMDB.
  - PDWPSDB for the Performance Data Warehouse database
  - CMNPSDB for Deployment Environment Common database for Process Server. CMNPSDB will be used for BSPCDB.
  - MEPSDB for Message Engine.
  - BPEPSDB for BPEL Engine.

Two DB2 id with dbadm privileges will act as the owner of all the tables associated with each DE.

The PC acts as a repository and a point of governance. So the process server in the PC is used to vetting, validate and justify the movement from repository to runtime.

The PS has PC components so it can connect and receive deployments. PC DE DEV can connect to multiple PS DE's.



Looking forward, there is a PS only DE that does not connect to any PC. It is strictly standalone. It is a best practice to use PS only DE for Production. This configuration eliminates and changes of an accident deploy to production. The artifacts have to be exported from a PC as an ear file or deployment package and then deployed to Production.

IBM BPMv8.5.5 - Product Install:

This section is for installing IBM BPM v8.5.5 using the IBM Installation Manager Response files that are shipped with the product.

Pre-requisites:

- WebSphere Install Directory name
- Non-root ID and password

1) untar BPMv85 install media. Media file names are: BPM_Adv_V855_AIX_1_of_2.tar.gz and BPM_Adv_V855_AIX_2_of_2.tar.gz
2) put all 2 untar'ed disk images into BPM_Adv_V855_AIX_2_of_2_Folder
3) make copy of response **bpmAdv_aix_response_nonroot_64bit.xml**
   Note: bpmAdv_aix_response_nonroot_64bit.xml is located in directory: /acme/Software_depot/BPM responsefiles/BPM/
   Example name: My_bpmAdv_aix_response_nonroot_64bit.xml
4) edit response file copy.
5) Change Installation Manager install path name to the match directory naming standards for your IT Shop.

```
  <profile kind='self'
installLocation='/opt/IBM/WebSphere/AppServer/WebSphere/InstallationManager/eclipse'
id='IBM Installation Manager'>
      <data key='eclipseLocation'
value='/opt/IBM/WebSphere/AppServer/WebSphere/InstallationManager/eclipse'/>
  </profile>
```

6) Un-comment IMShared and then change the path.

```
<!--
  <preference value="/opt/IBM/IMShared"
name="com.ibm.cic.common.core.preferences.eclipseCache" />
    -->
```

7) Change BPM install path name to the match directory naming standards for your IT Shop.

```
<profile installLocation='/opt/IBM/WebSphere/AppServer/BPM/v8.5' id='IBM WebSphere
Application Server Network Deployment V8.5'>
    <data key='eclipseLocation' value='/opt/IBM/WebSphere/AppServer/BPM/v8.5' />
    <data key="cic.selector.nl" value="en" />
    <data key='user.import.profile' value='false'/>
    <data key='user.select.64bit.image,com.ibm.websphere.ND.v85' value='true'/>
</profile>
```

8) save response file.
9) set permissions 755 on response file

10) vi /acme/Software_depot/BPM/BPM_Adv_V855_AIX_2_of_2_Folder/IM/configuration/config.ini
11) INSERT this line: cic.appDataLocation=/opt/IBM/WebSphere/AppServer/WebSphere/InstallationManager
12) Save config.ini
13) su – wasadmin
14) cd /acme/Software_depot/BPM/BPM_Adv_V855_AIX_2_of_2_Folder
15) run command: ./IM64/userinstc -acceptLicense input ./responsefiles/BPM/My_bpmAdv_aix_response_nonroot_64bit.xml -log /tmp/silent_install.log
16) Do this procedure for every machine that will make up the PC or PS Cell.

IBM BPMv8.5 – Create Cell:

This section is for creating the PC or PS Cells. Always create your PC Cell first so you can use the information in the creation of the PS Cell.

Pre-requisites:

- Profile Directory name
- Profile names
- WAS Cell admin ID and password
- Node name
- Cell name
- DB2 hostname
- DB2 port
- DB2 ID and PW

Creating BPM Deployment manager

Create a response file named “createBPMDmgrProfileResponse.txt” from the following template. Replace and thing in “<>” brackets with real values.

create

templatePath=<BPMINSTDIR>/profileTemplates/dmgr.wbiserver

profileName=<DMGR_PROFILE_NAME>

profilePath=<BPMPROFILESDIR>/<DMGR_PROFILE_NAME>

isDefault=false

nodeName=<DMGR_NODE_NAME>

cellName=<DMGR_CELL_NAME>

enableAdminSecurity=true

adminUserName=<WASADMINID>

adminPassword=<WASADMINPW>

dbCreateNew=false

dbDelayConfig=true

dbDriverType=4

dbHostName=<DB2_HOSTNAME>

dbJDBCClasspath=<DB2_DRV_PATH>

dbName=<CELL Level CMN DB>

dbServerPort=<DB_SRV_PORT>

dbType=DB2_UNIVERSAL

dbUserId=<DB2ID>

dbPassword=<DB2PW>

dbDelayConfig=true

dbCreateNew=true

EXAMPLE:

NOTE: for **PS** hostname will be **aix1awas26x**

create

templatePath=/opt/IBM/WebSphere/AppServer/BPM/v8.5/profileTemplates/BPM/BpmDmgr

Or PS

profileName=prof_aix1awas**25**x_DM_BPM**PC**_01x

Or PS

profilePath=/opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas**25**x_DM_BPM**PC**_01x

isDefault=false

Or PS

nodeName=aix1awas**25**x_DM_BPM**PC**_01x

Or PS

cellName=BPM**PC**_DMCell01x

enableAdminSecurity=true

adminUserName=wasadmin

adminPassword=**<wasadmin password>**

dbCreateNew=false

dbDelayConfig=true

dbDriverType=4

dbHostName=aix1diib03x.acme.com

dbJDBCClasspath=/opt/IBM/WebSphere/AppServer/BPM/lib/db2/

Or PS

dbName=CELL**PC**DB

dbServerPort=60000

dbType=DB2_UNIVERSAL

Or ps

dbUserId=db2**pc**de

dbPassword=**<password>**

dbDelayConfig=true

dbCreateNew=true

Change to BPM_HOME/bin and execute the following command:

./manageprofiles.sh - response /home/wasadmin/script/createBPMDmgrProfileResponse.txt

Results: creation the Dmgr profile.

Starting the deployment manager

Navigate to /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas25x_DM_BPMPC_01x/bin and run the startManager.sh script.

Creating the Custom profile

On the machine(s) that will contain the managed profiles, create a response file named "createBPMCustProfileResponse.txt" from the following template. Replace and thing in <>" brackets with real values.

create

templatePath=<BPMINSTDIR>/profileTemplates/managed.wbiserver

profileName=<CUSTOM_PROFILE_NAME>

profilePath=<BPMPROFILESDIR>/<CUSTOM_PROFILE_NAME>

isDefault=false

nodeName=<CUSTOM_NODE_NAME>

cellName=<CUSTOM_CELL_NAME>

enableAdminSecurity=false

dbDriverType=4

dbJDBCClasspath=<DB2_DRV_PATH>

dbType=DB2_UNIVERSAL

dbDelayConfig=true

dbCreateNew=true

EXAMPLE:

NOTE: for **PS** hostname will be **aix1awas26x**

create

templatePath=/opt/IBM/WebSphere/AppServer/BPM/v8.5/profileTemplates/BPM/BpmNode

Or PS

profileName=prof_aix1awas**25**x_Node_BPM**PC**_01x

Or PS

profilePath=/opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas**25**x_Node_BPM**PC**_01x

isDefault=false

Or PS

nodeName=aix1awas**25**x_Node_BPM**PC**_01x

Or PS

cellName=BPM**PC**_DMCell01xtmp

enableAdminSecurity=false

dbDriverType=4

dbJDBCClasspath=/opt/ibm/BPM/v8.5/jdbcdrivers/DB2

dbType=DB2_UNIVERSAL

dbDelayConfig=true

dbCreateNew=true

Change to WPS_HOME/bin and execute the following command:

./manageprofile.sh –response /home/wasadmin/script/createBPMCustProfileResponse.txt

Results: creation the Custom profile.

Repeat this process for additional nodes.

Federating the custom profile

NOTE: for **PS** hostname will be **aix1awas26x**

To federate the node, navigate to /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas**25**x_Node_BPM**PC**_01x/bin, and issue this command:

./addNode.sh aix1awas**25**x 8879 –username wasadmin –password <password>

Repeat this process for additional nodes.

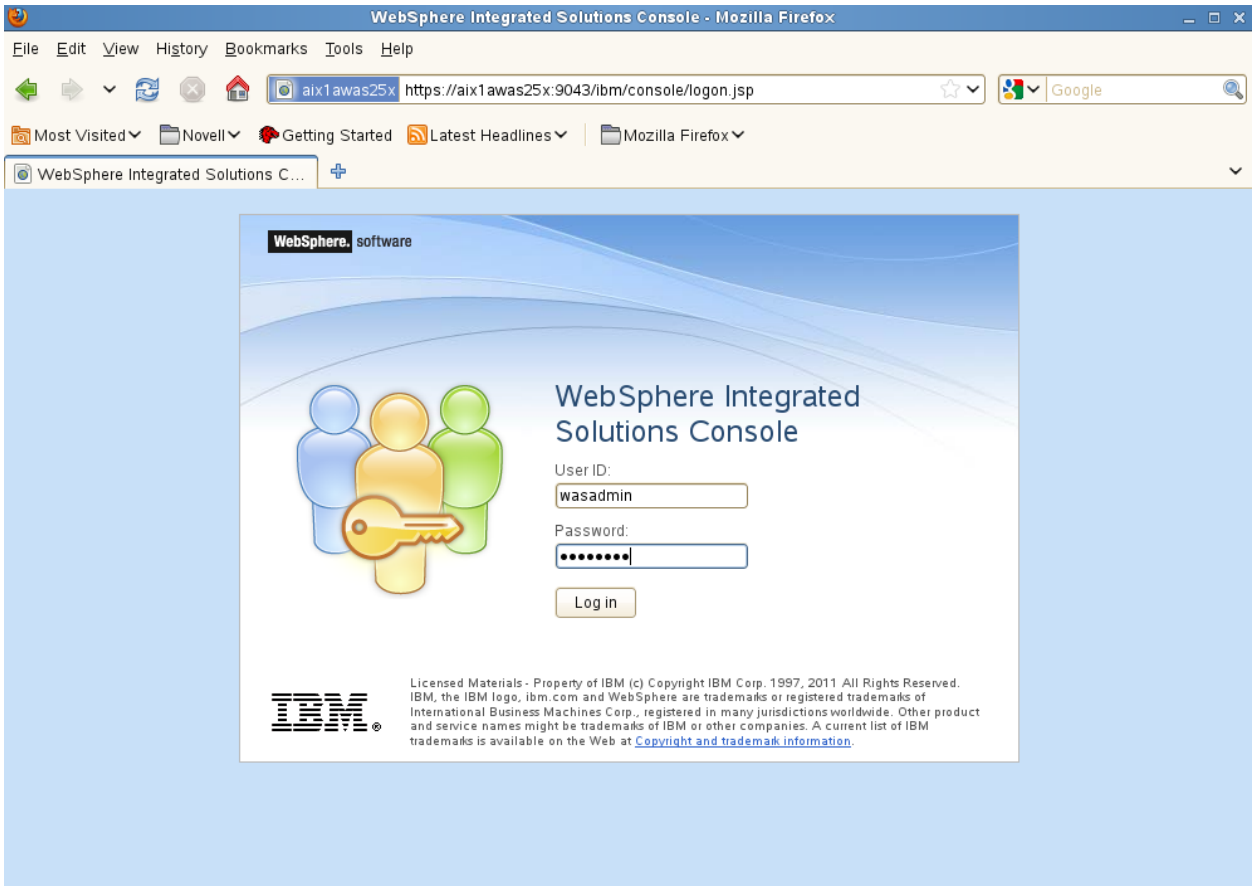
IBM BPMv8.5.5 - Product Config for a PC:

This section is for configuring IBM BPM v8.5.5 using the Admin Console. The names in this section maybe different, depending on which Environment is being built.

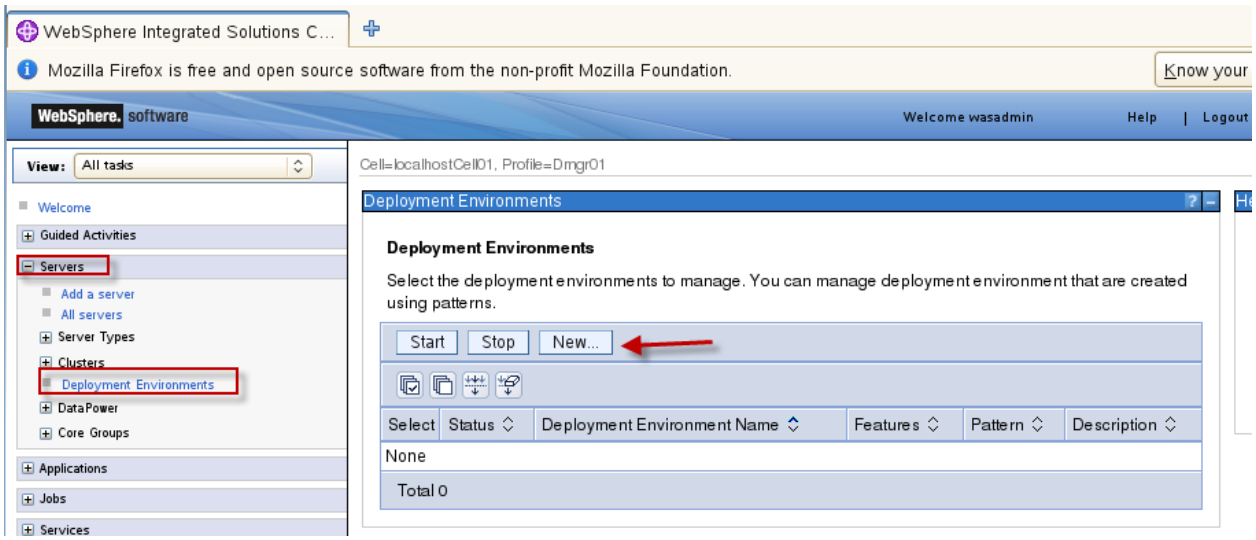
pre-requisites:

- Deployment Environment name. Example: PCDEV
- Process Center Deployment Environment Admin ID and Password. **Example**: ID = PCDEadmin PW = PCDEadmin. To move off of the file based security these should be in LDAP
- WAS Cell Admin ID and Password. **Example**: ID = wasadmin PW = wasadmin - these should be in LDAP
- Node names - for Dmgr and all nodes
- Cluster name(s)
- Cluster Member name(s)
- DB2 ID: db2pcde and <password>
- Database names for CELLPCDB, CMNPCDB, BPEPCDB, MEPCDB, BPMPCDB, and PDWPCDB

1. Logon to the admin console for the new BPM Cell:



2. Navigate to: Servers -> Deployment Environments



3. Click New – We are creating our PC DE.
4. Fill in the panel with your values. See example Below:

Enter the deployment environment name and the deployment environment administrator user name and password.

* Deployment environment name
PCDEV

* Deployment environment administrator user name
PCDEadmin

* Password
••••••••••

* Confirm password
••••••••••

Context root prefix

Virtual host
default_host

Select the type of deployment environment.

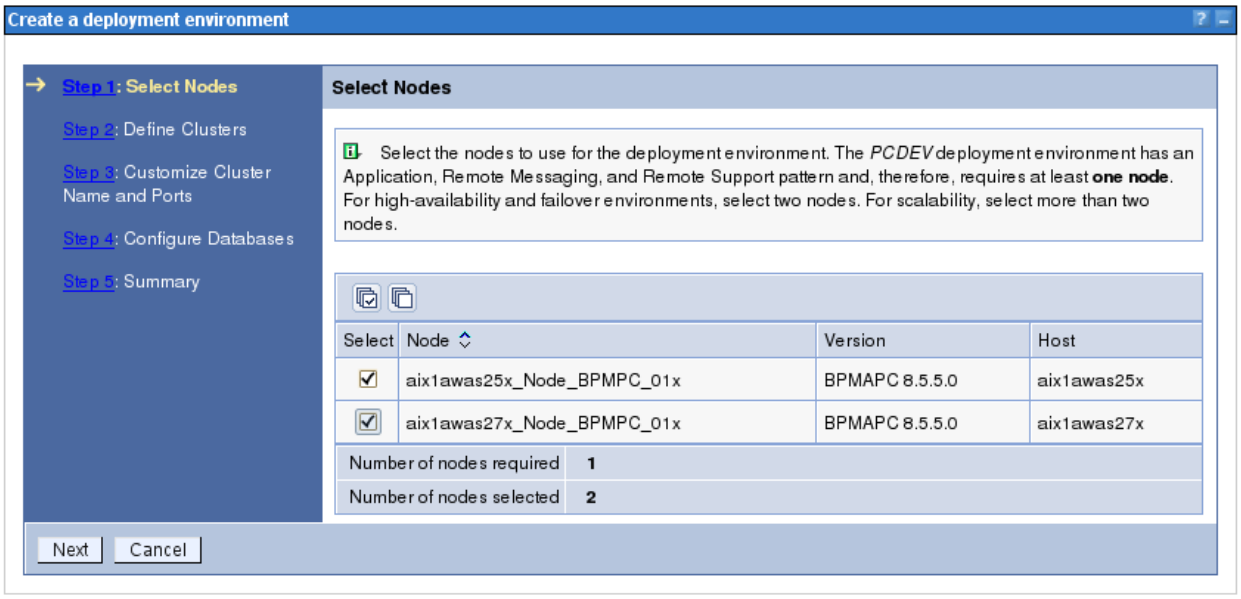
Select	IBM BPM Deployment Environment Type	Description
○	Standard Process Center	Store, test, and administer process applications and toolkits that are authored in Process Designer.
○	Standard Process Server	Run processes and services in process applications that are deployed from the Standard Process Center.
◉	Advanced Process Center	Store, test, and administer process applications and toolkits that are authored in IBM Process Designer and IBM Integration Designer.
○	Advanced Process Server	Run processes, services, and SCA modules in process applications that are deployed from the Advanced Process Center, or run modules that are deployed directly.
○	Advanced-only Process Server	Run SCA modules only. You deploy these modules from the command line or the WebSphere administrative console. This server is the IBM BPM equivalent of IBM WebSphere Process Server.

Select a cluster pattern for the deployment environment.

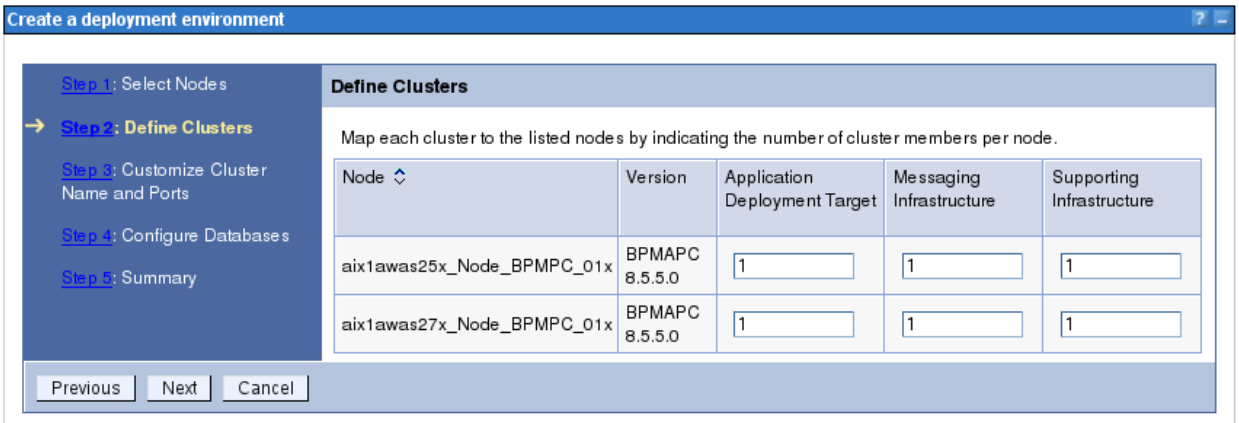
Select	Deployment Environment Pattern	Description
◉	Application, Remote Messaging, and Remote Support	Defines one cluster for application deployment, one remote cluster for the messaging infrastructure, and one remote cluster for the supporting applications
○	Single Cluster	Defines one application deployment target cluster, which includes the messaging infrastructure and supporting applications

Next Cancel

5. Click Next
6. Select the Nodes use want to use with this DE.

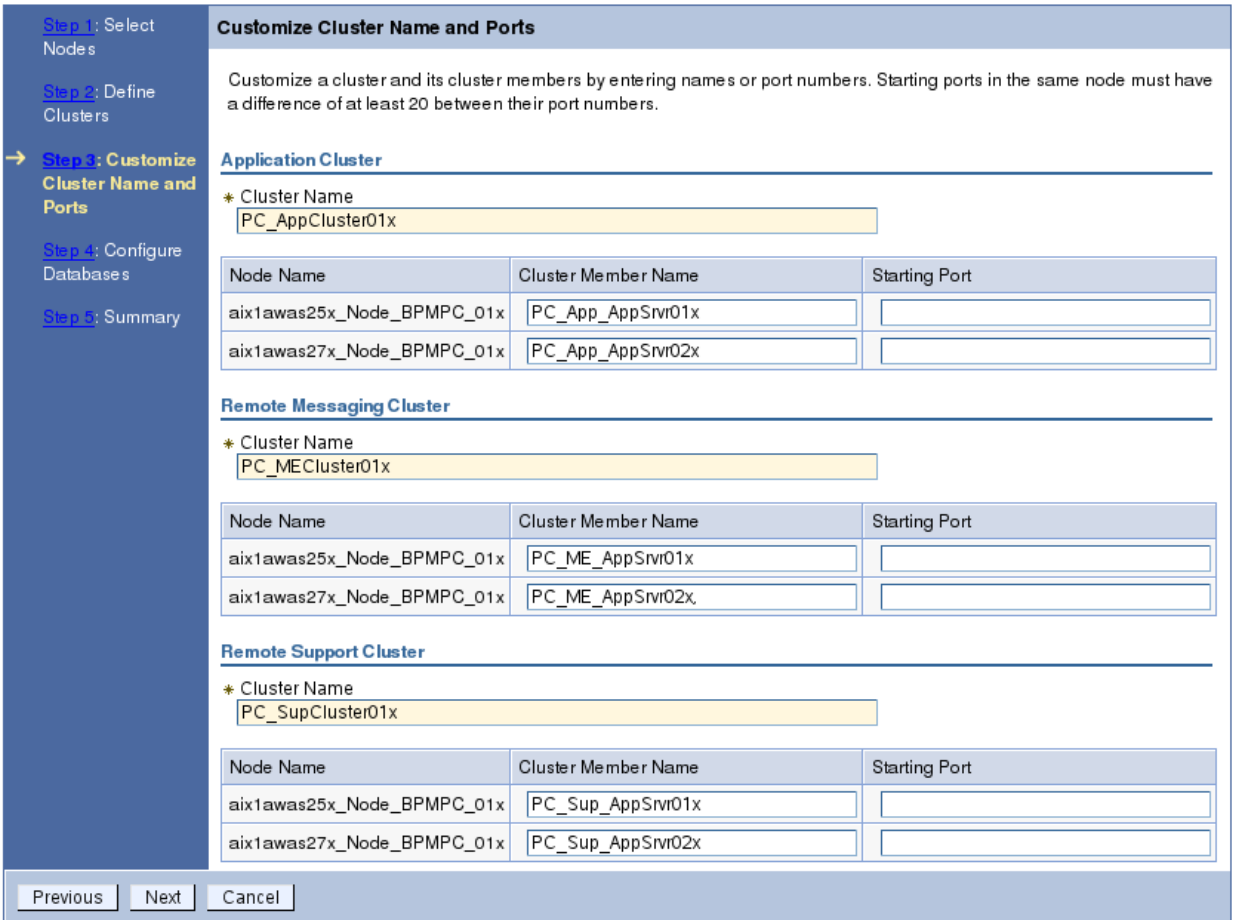


7. Click Next
8. This panel lets you define the number of clusters members.

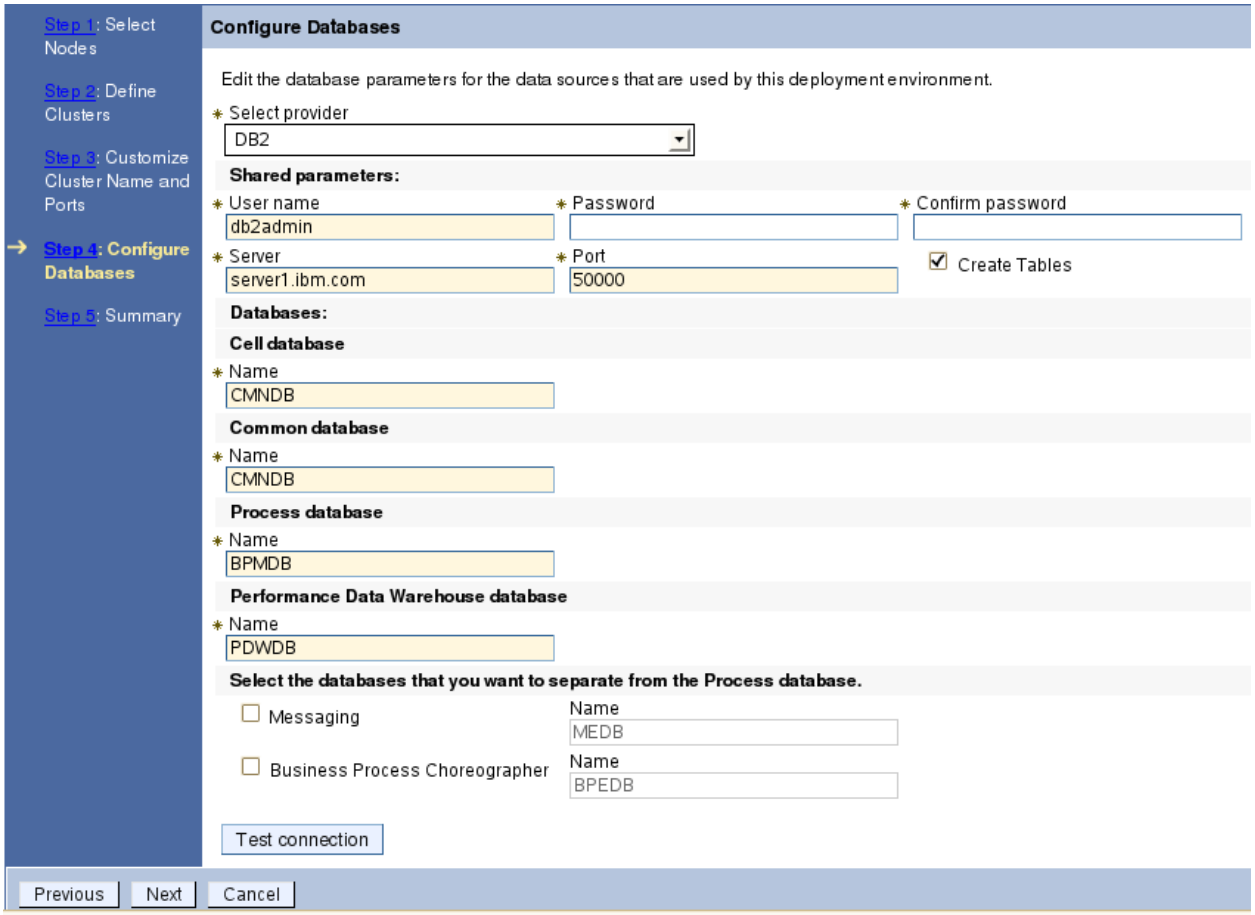


9. Click Next

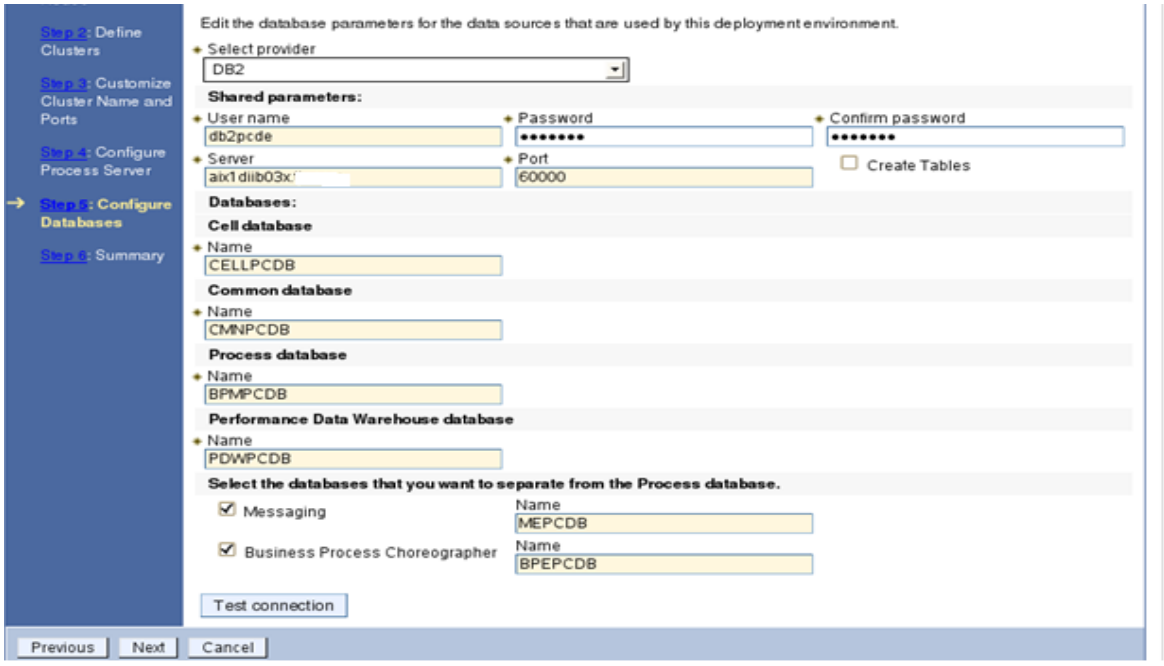
10. This panel is were clients can implement there naming standards.



11. Click Next
12. This panel is the Database panel. We need to pay close attention to the info we put into this panel.
13. Before We change anything:



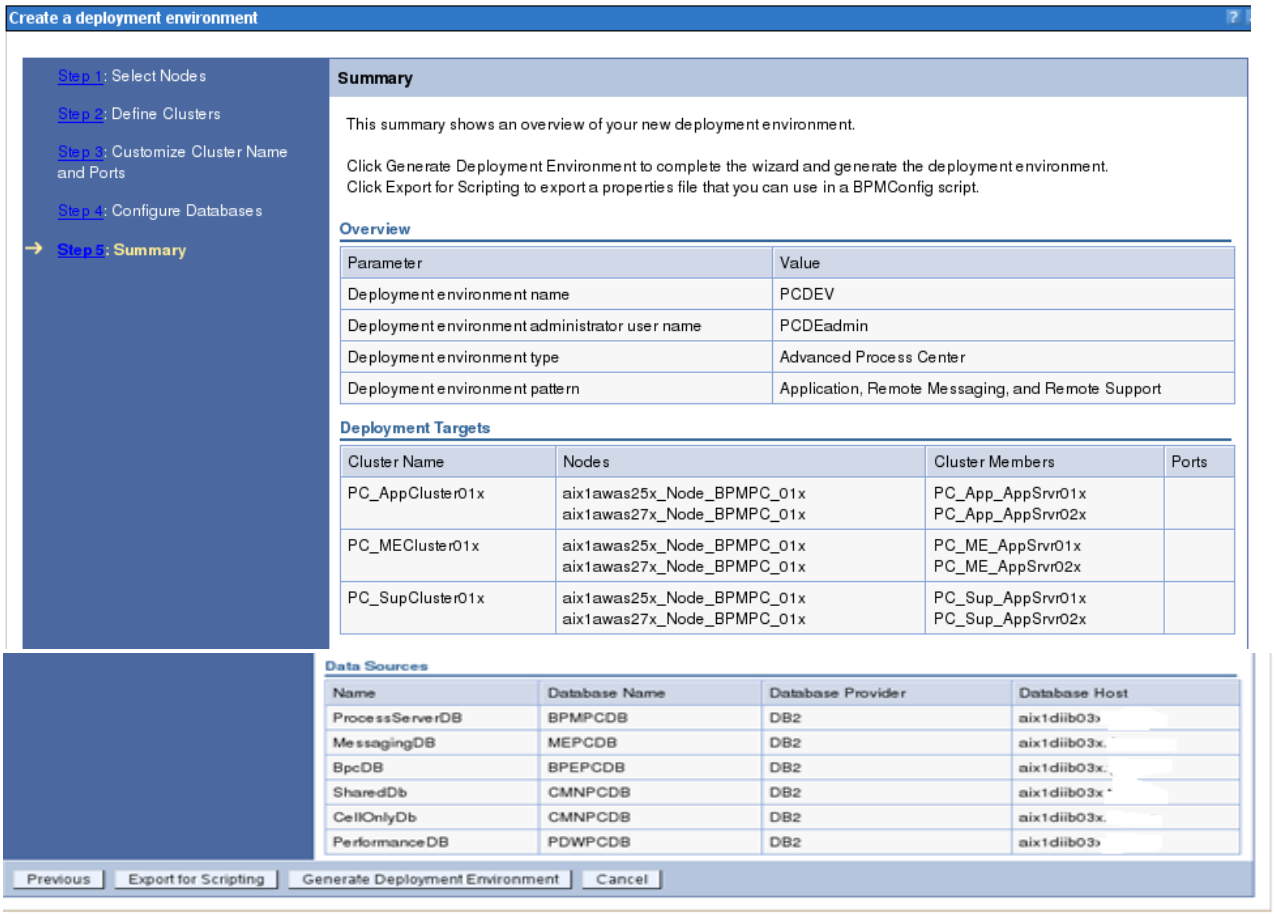
14. After we put in our values:



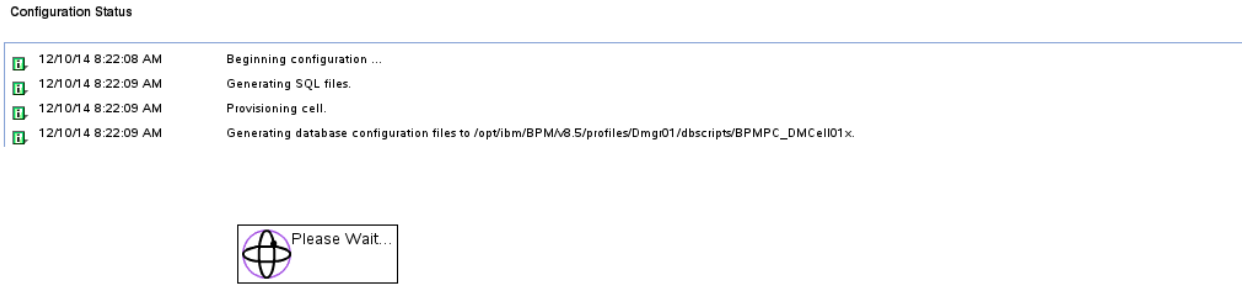
15. We filled in the panel with the info the DBA gave us for the PC. Take note we **un-check** Create Tables. We are using a remote DB2 server. Once the PC DE is created all the database scripts will be

located in a directory under the Dmgr profile. We will need to tar them up and sent then to the DBA to run. Once the DBA is done the Databases will be populated. The DBA will have a section coming.

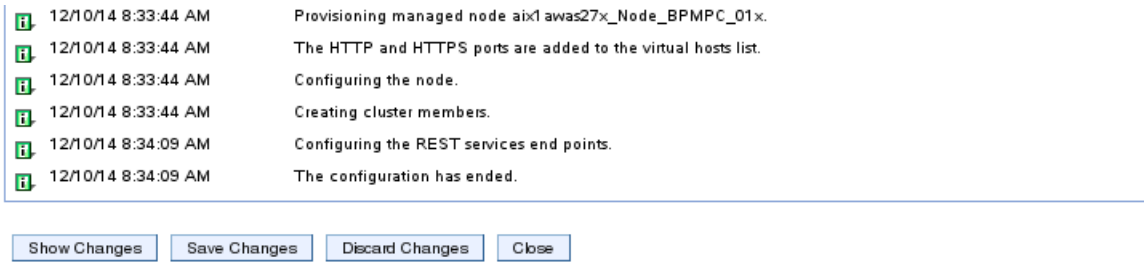
16. Review these entries. Once validated, Click Next
17. At this point I usually Click Export for Script and Save.



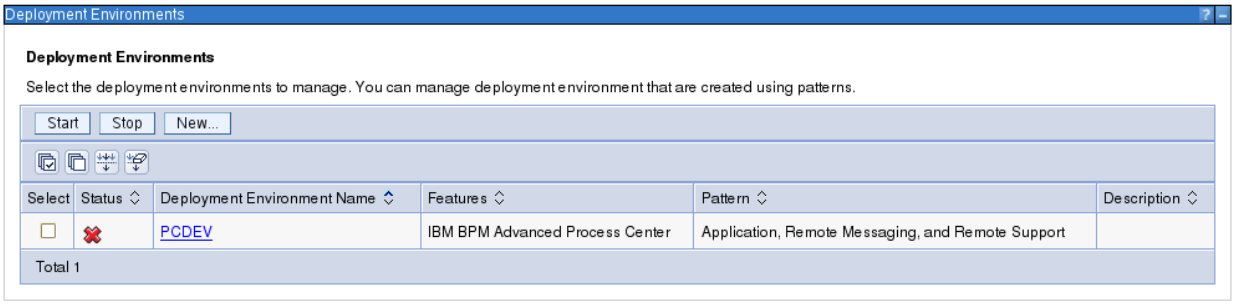
18. Then Click Generate Deployment Environment.



19. This could take 20+ minutes. Depending on RAM and CPU.



20. Now Click Save Changes



21. Tar up
    /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas25x_DM_BPMPC_01x/dbscripts
    and give them to the DBA. With the instructions from the next section.

IBM BPMv8.5 - DBA instructions for PC:

This section is for creating tables in the DB2 database created earlier in this doc.

The instructions in this section will demonstrate how to make a script from the contents of the dbscripts.tar file.

Pre-requisites:

- DB2 DBA
- DB2 instance owner ID and password. Example: db2pcde
- The dbscripts.tar from the BPM admins.

Create Database

1. un-tar the dbscripts tar file.
2. su - db2 instance owner id. Example: db2pcde
3. cd /<your location>/dbscripts
4. run command:
   find . -name createD*.sh -print > createdbs.sh
5. Edit createdbs.sh

6. Your should see:
   ./BPMPC_DMCell01x/DB2/CELLPCDB/createDatabase.sh
   ./PCDEV/DB2/MEPCDB/createDatabase.sh
   ./PCDEV/DB2/CMNPCDB/createDatabase.sh
   ./PCDEV/DB2/BPEPCDB/createDatabase.sh
   ./PCDEV/DB2/PDWPCDB/createDatabase.sh
   ./PCDEV/DB2/BPMPCDB/createDatabase.sh
7. Change createdbs.sh into what is listed below. Then save it.

   cd ./BPMPC_DMCell01x/DB2/CELLPCDB
   ./createDatabase.sh
   cd -
   cd ./PCDEV/DB2/MEPCDB
   ./createDatabase.sh
   cd -
   cd ./PCDEV/DB2/CMNPCDB
   ./createDatabase.sh
   cd -
   cd ./PCDEV/DB2/BPEPCDB
   ./createDatabase.sh
   cd -
   cd ./PCDEV/DB2/PDWPCDB
   ./createDatabase.sh
   cd -
   cd ./PCDEV/DB2/BPMPCDB
   ./createDatabase.sh
   cd –

8. chmod 755 createdbs.sh
9. Run:
   ./createdbs.sh

Create Tables

1. run command:
   find . -name create* Advanced.sql -print > createTables.sh
   find . -name create*Messaging.sql -print >> createTables.sh

2. Edit createTables.sh
3. Your should see:
   ./BPMPC_DMCell01x/DB2/CELLPCDB/createSchema_Advanced.sql

./PCDEV/DB2/CMNPCDB/createSchema_Advanced.sql
./PCDEV/DB2/BPEPCDB/createSchema_Advanced.sql
./PCDEV/DB2/PDWPCDB/createSchema_Advanced.sql
./PCDEV/DB2/BPMPCDB/createProcedure_Advanced.sql
./PCDEV/DB2/BPMPCDB/createSchema_Advanced.sql
./PCDEV/DB2/MEPCDB/createSchema_Messaging.sql
NOTE: **The directory names can change as different environments are built.**
***NOTE: **Review these sql files before running them. Make sure they meet Corporate IT Standards.**

4. Change createTables.sh into what is similar as below. Then save it. **Notice the database you need to connect to is listed right after DB2 in the directory path.**

```
db2 connect to CELLPCDB
db2 -vtf ./BPMPC_DMCell01x/DB2/CELLPCDB/createSchema_Advanced.sql
db2 connect reset

db2 connect to CMNPCDB
db2 -vtf ./PCDEV/DB2/CMNPCDB/createSchema_Advanced.sql
db2 connect reset

db2 connect to BPEPCDB
db2 -vtf ./PCDEV/DB2/BPEPCDB/createSchema_Advanced.sql
db2 connect reset

db2 connect to PDWPCDB
db2 -vtf ./PCDEV/DB2/PDWPCDB/createSchema_Advanced.sql
db2 connect reset

db2 connect to BPMPCDB
db2 -vtf ./PCDEV/DB2/BPMPCDB/createProcedure_Advanced.sql
db2 -vtf ./PCDEV/DB2/BPMPCDB/createSchema_Advanced.sql
db2 connect reset

db2 connect to MEPCDB
db2 -vtf ./PCDEV/DB2/MEPCDB/createSchema_Messaging.sql
db2 connect reset
```

5. Run:
   chmod 755 createTables.sh
6. Run:
   ./createTables.sh

Testing the new PC DE environment:

Now that the DBA work is complete.

1. Run: - this will popular product tables.

   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas25x_DM_BPMPC_01x/bin/bootstrapProcessServerData.sh -clusterName PC_AppCluster01x
2. Start the Deployment Environments.
3. For Process Center - Test by using these URLs:
   NOTE:
   1) You must use a supported Browser - IE 10, Chrome 20 or greater, Safari 5 or greater and FireFox 10.
   2) Always use a new Browser session, never just open anadditional tab.
   Process Center EXAMPLES:
   Test in this order: - check servers for correct port numbers

   http://aix1awas25x:9080/ProcessCenter/login.jsp
   http://aix1awas25x:9080/ProcessPortal/login.jsp
   http://aix1awas25x:9080/ProcessAdmin/login.jsp
   http://aix1awas25x:9082/PerformanceAdmin/login.jsp

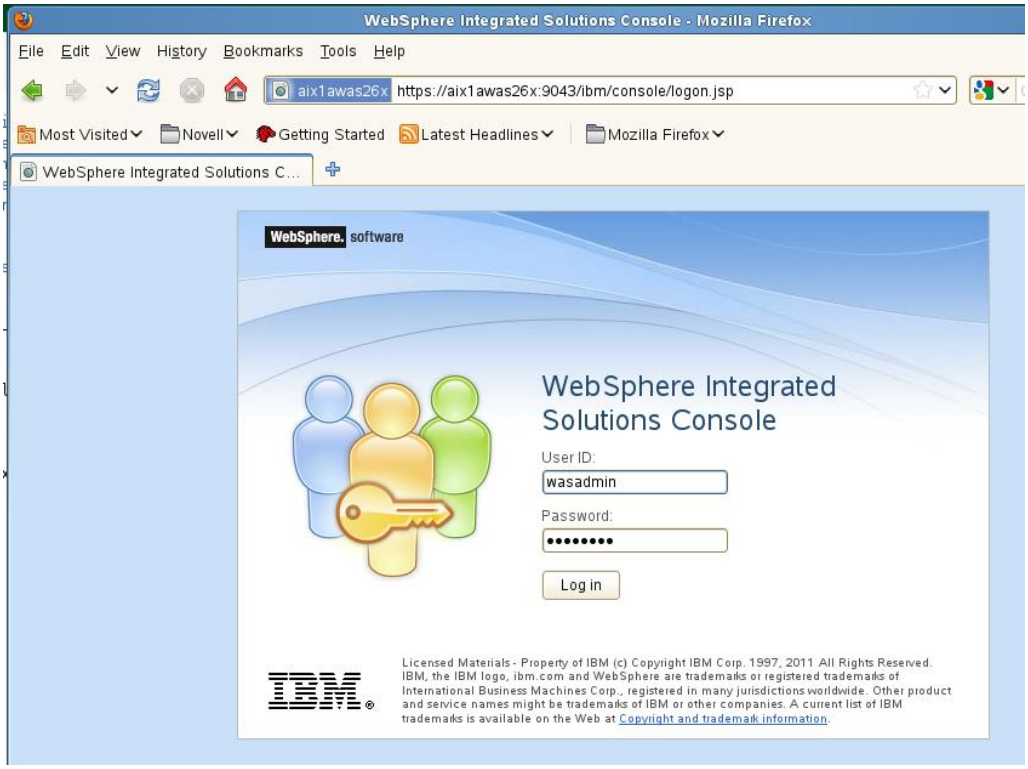
IBM BPMv8.5.5 - Product Config for PS:

This section is for configuring IBM BPM v8.5.5 using the Admin Console. The names in this section maybe different, depending on which Environment is being built.

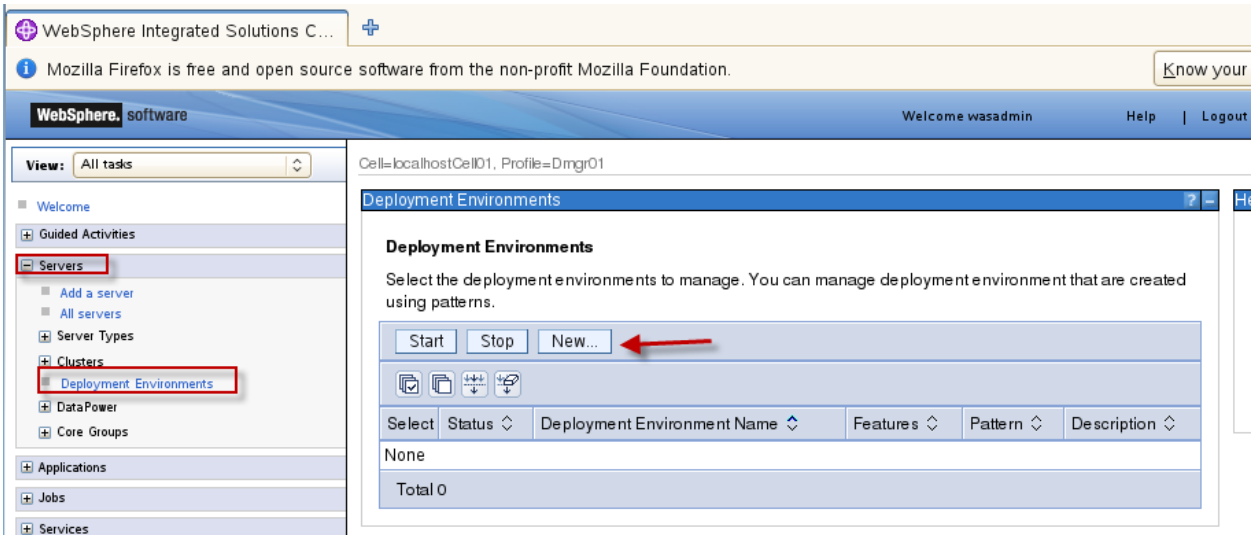
pre-requisites:

- Deployment Environment name. Example: PSDEV
- Process Server Admin ID and Password. Example: ID = PSDEadmin PW = PSDEadmin. To move off of the file based security these should be in LDAP
- WAS Cell Admin ID and Password. Example: ID = wasadmin PW = wasadmin - these should be in LDAP
- Node names - for Dmgr and all nodes
- Hostnames. If more than one machines in the cell.
- Profile names. Dmgr and node(s).
- Cluster name(s)
- Cluster Member name(s)
- DB2 DE IDs and <passwords>
- Database names for CELLPSDB, CMNPSDB, BPEPSDB, BPMPSDB, PDWPSDB and MEPSDB.

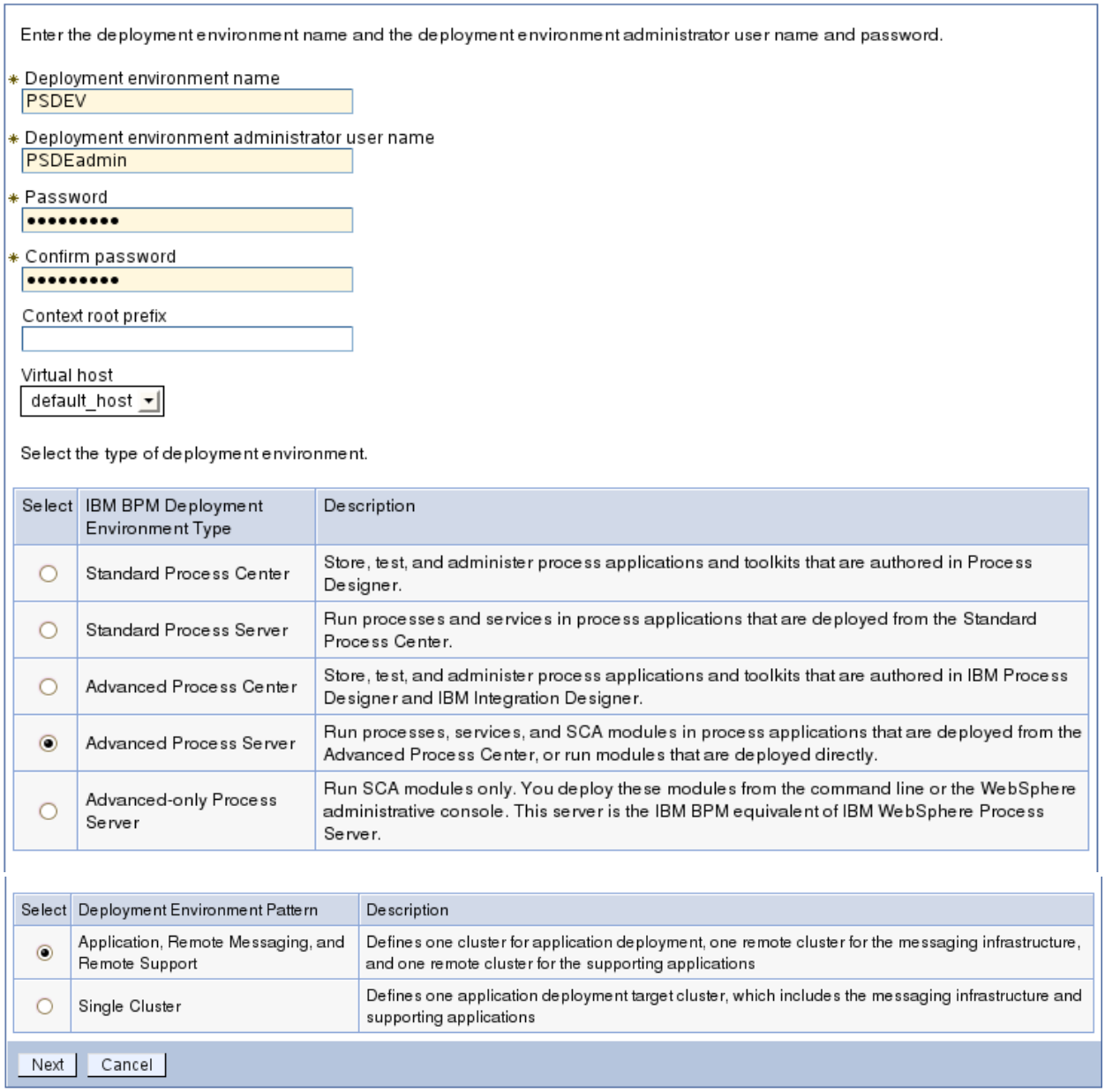
1. Logon to the admin console for the new BPM Cell:



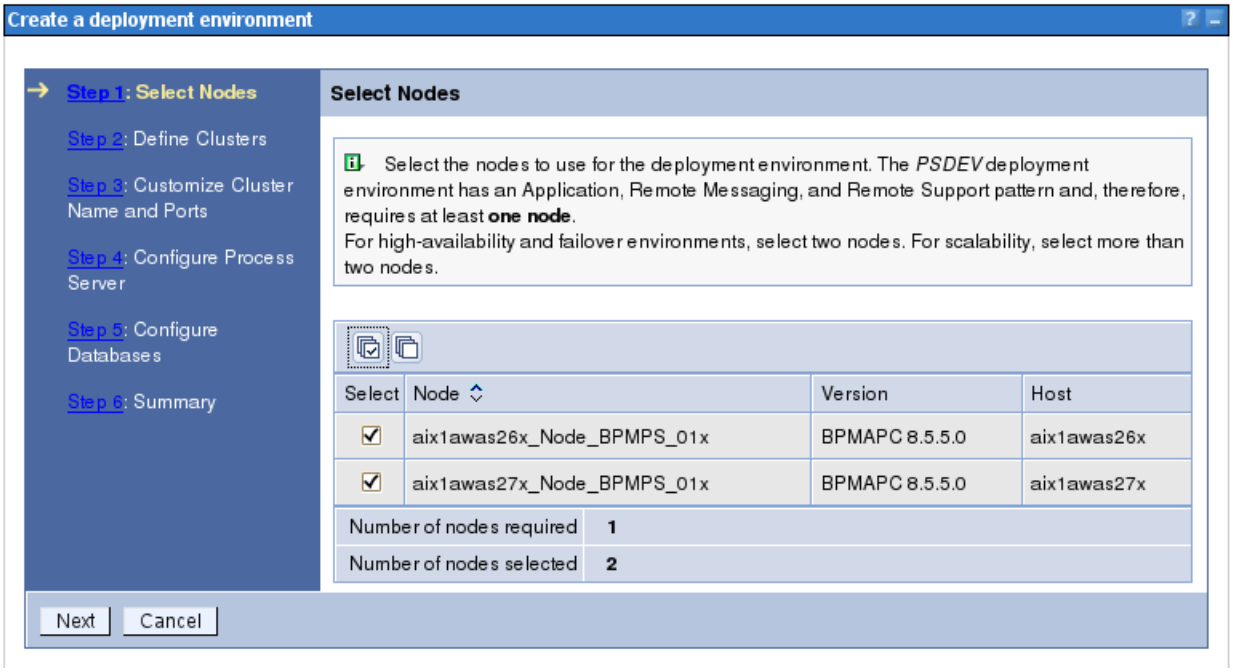
2. Navigate to: Servers -> Deployment Environments



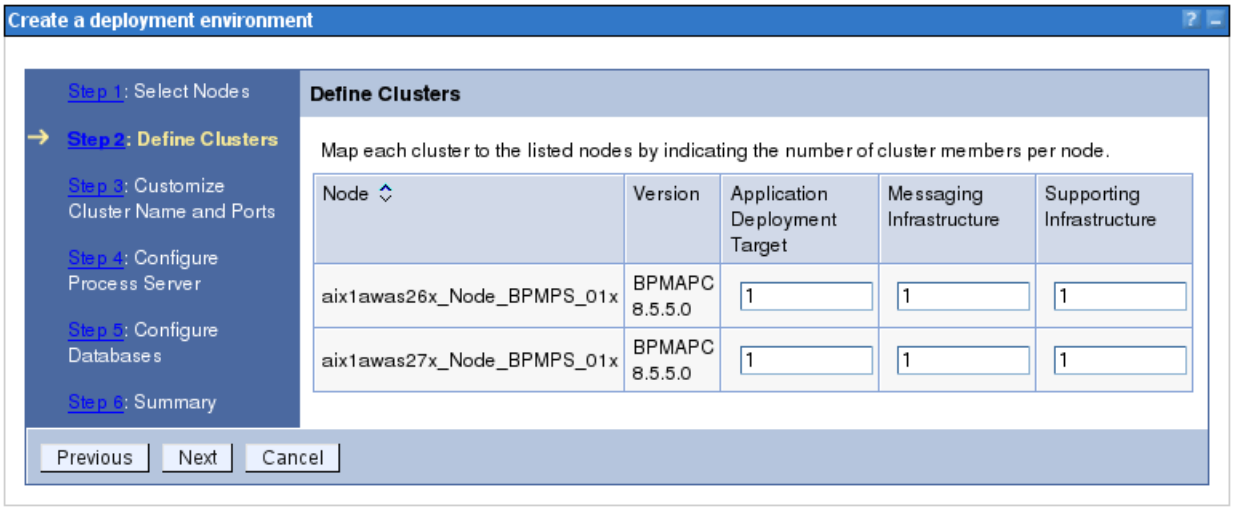
3. Click New – We are creating our PS DE.
4. Fill in the panel with your values. See example Below:



5. Click Next
6. Select the Nodes use want to use with this DE.

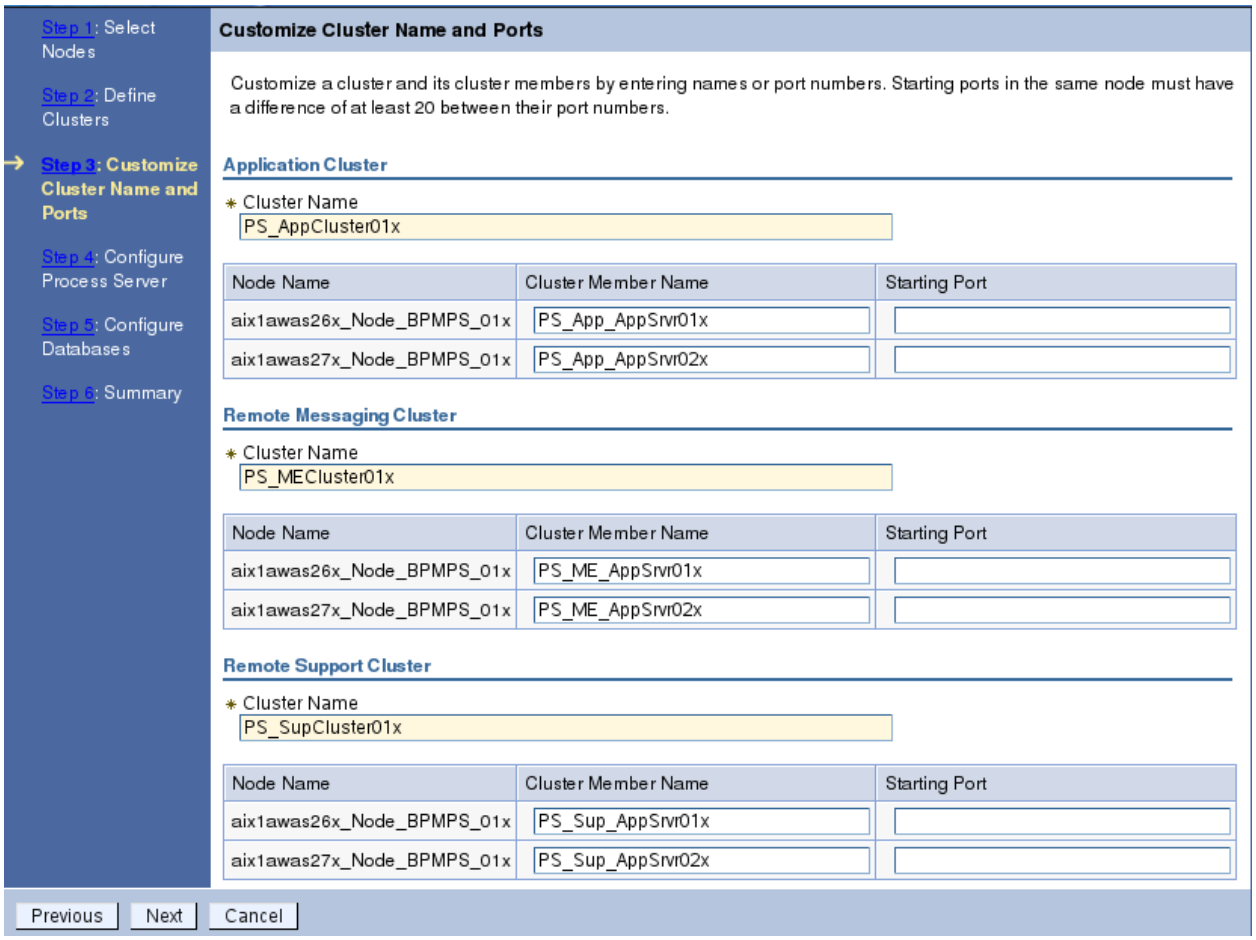


7. Click Next
8. This panel lets you define the number of clusters members.

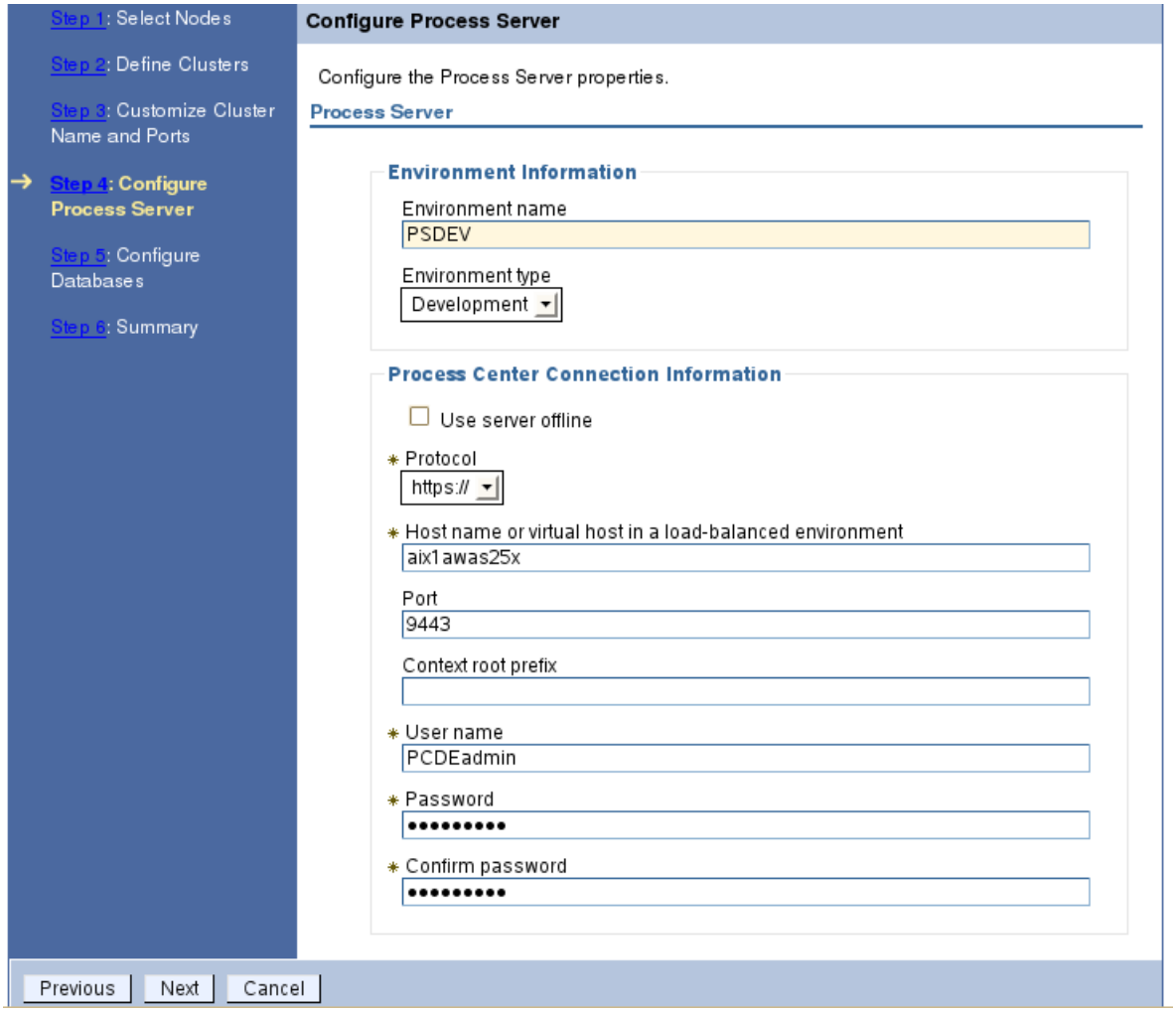


9. Click Next

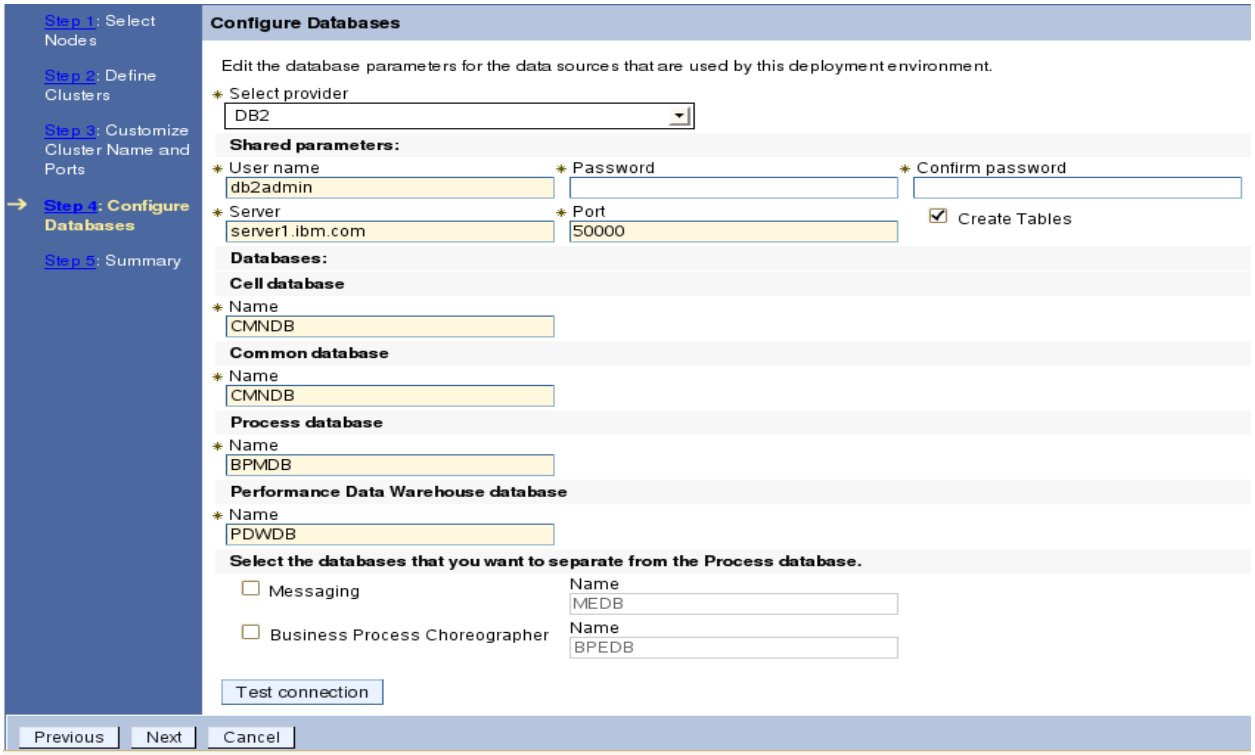
10. This panel is were clients can implement there naming standards.



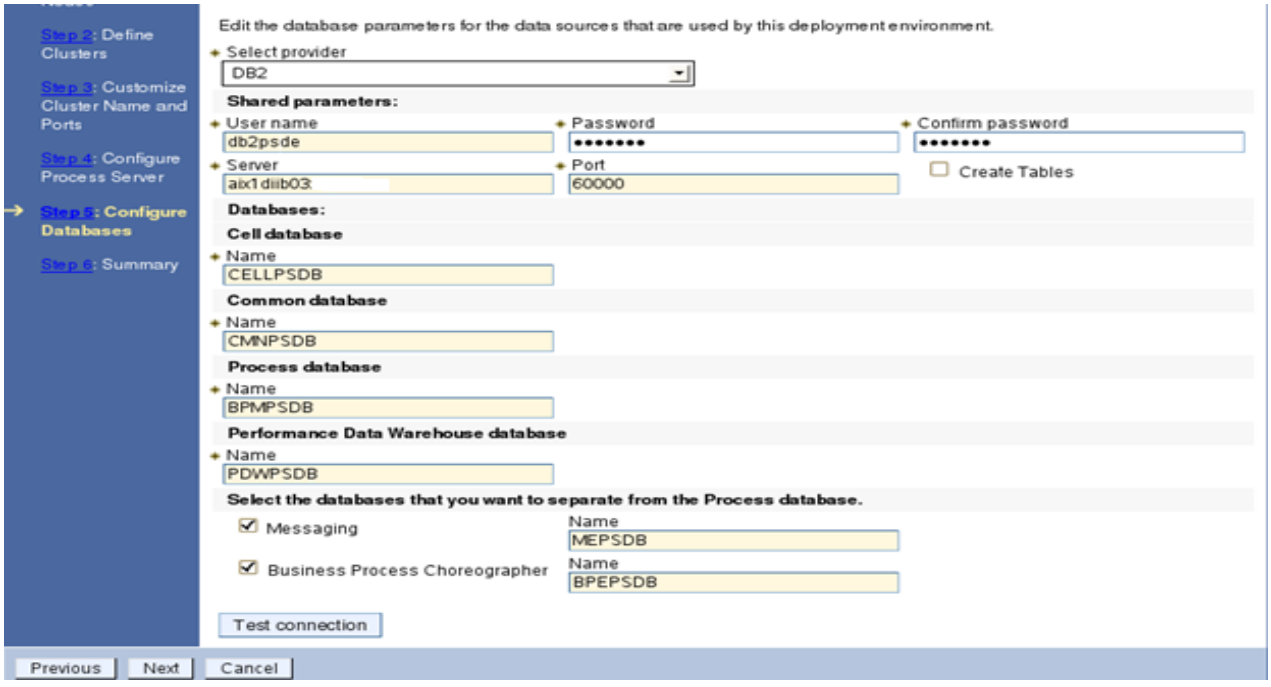
11. Click Next
12. This panel is where the connection info for the PC is entered. The id and password is for the PC admin. It will be used to make the connection.



13. This panel is the Database panel. We need to pay close attention to the info we put into this panel.
14. Before We change anything:

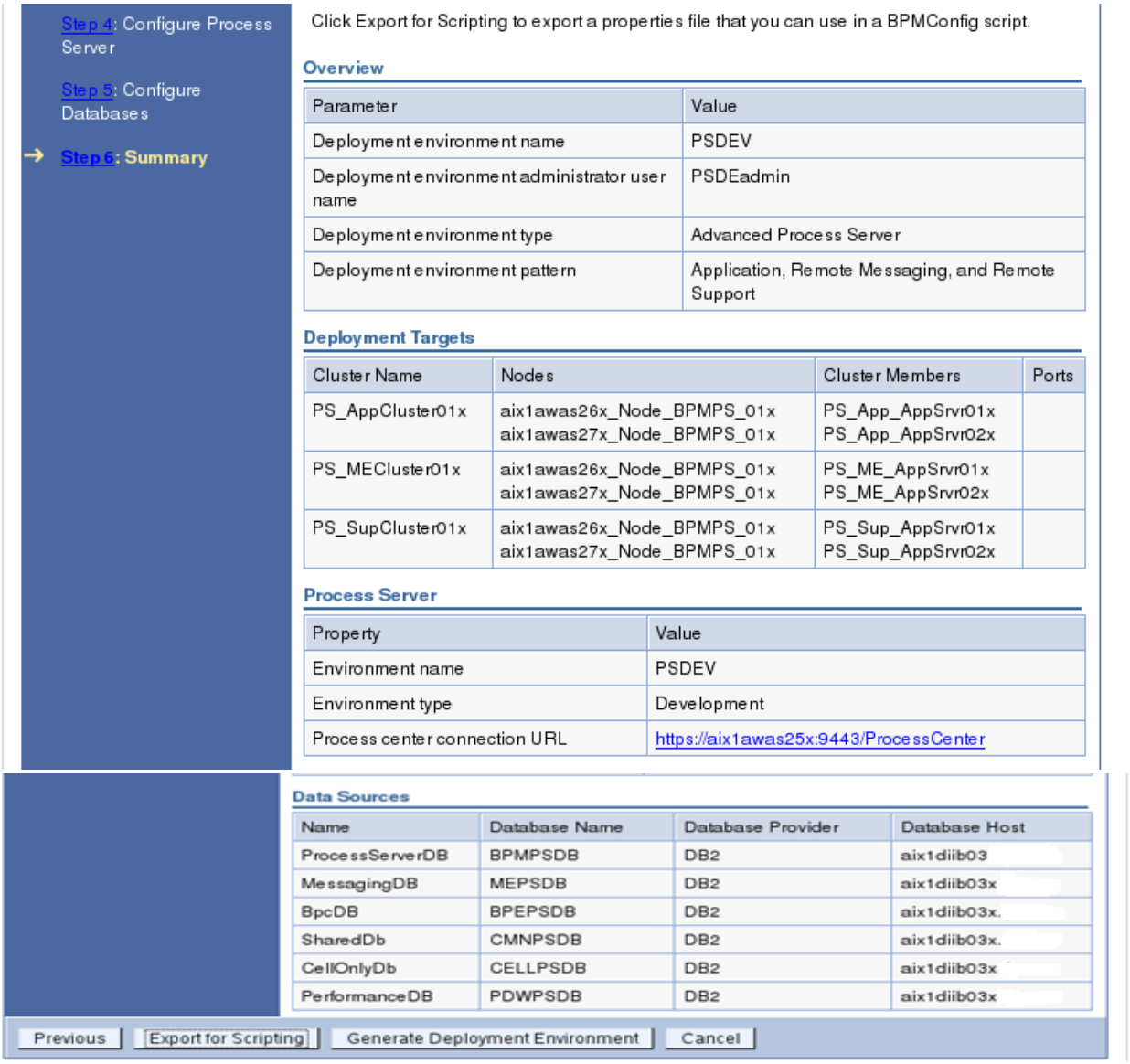


15. After we put in our values:



16. We filled in the panel with the info the DBA gave us for the PS. Take note we un-check Create Tables. We are using a remote DB2 server. Once the PS DE is created all the database scripts will be located in a directory under the Dmgr profile. We will need to tar them up and sent then to the DBA to run. Once the DBA is done the Databases will be populated. The DBA will a section coming.

17. Review these entries. Once validated, Click Next
18. At this point I usually Click Export for Script and Save.



Step 4: Configure Process Server

Step 5: Configure Databases

→ Step 6: Summary

Click Export for Scripting to export a properties file that you can use in a BPMConfig script.

Overview

Parameter	Value
Deployment environment name	PSDEV
Deployment environment administrator user name	PSDEadmin
Deployment environment type	Advanced Process Server
Deployment environment pattern	Application, Remote Messaging, and Remote Support

Deployment Targets

Cluster Name	Nodes	Cluster Members	Ports
PS_AppCluster01x	aix1awas26x_Node_BPMPS_01x aix1awas27x_Node_BPMPS_01x	PS_App_AppSrvr01x PS_App_AppSrvr02x	
PS_MECluster01x	aix1awas26x_Node_BPMPS_01x aix1awas27x_Node_BPMPS_01x	PS_ME_AppSrvr01x PS_ME_AppSrvr02x	
PS_SupCluster01x	aix1awas26x_Node_BPMPS_01x aix1awas27x_Node_BPMPS_01x	PS_Sup_AppSrvr01x PS_Sup_AppSrvr02x	

Process Server

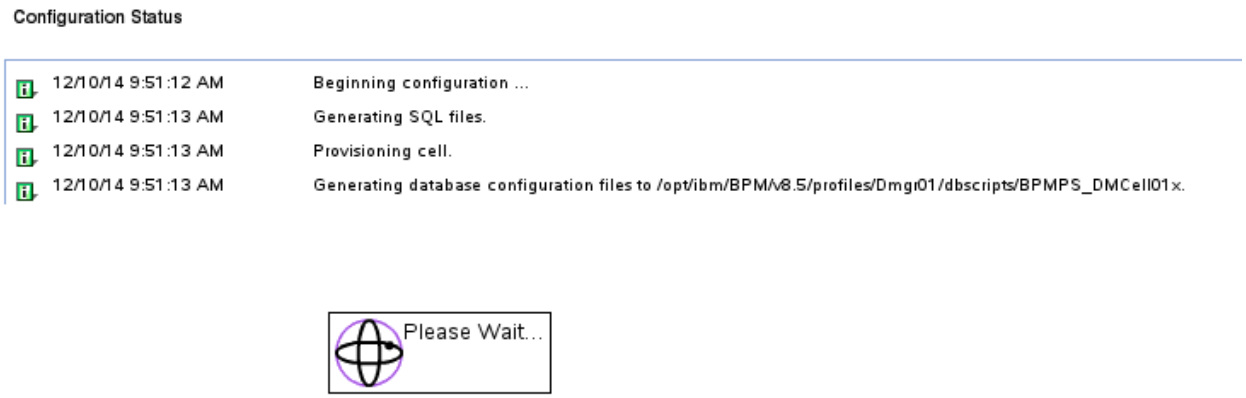
Property	Value
Environment name	PSDEV
Environment type	Development
Process center connection URL	https://aix1awas25x:9443/ProcessCenter

Data Sources

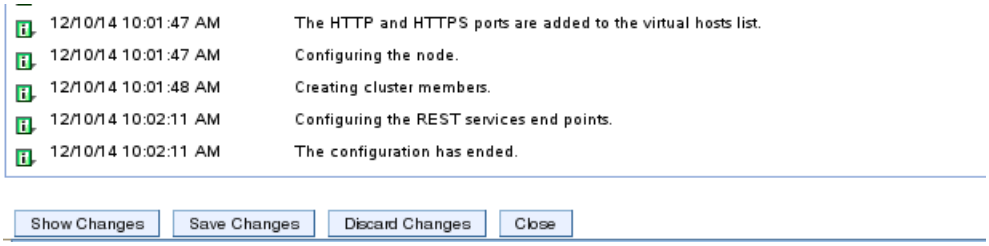
Name	Database Name	Database Provider	Database Host
ProcessServerDB	BPMPSDB	DB2	aix1diib03
MessagingDB	MEPSDB	DB2	aix1diib03x
BpcDB	BPEPSDB	DB2	aix1diib03x.
SharedDb	CMNPSDB	DB2	aix1diib03x.
CellOnlyDb	CELLPSDB	DB2	aix1diib03x
PerformanceDB	PDWPSDB	DB2	aix1diib03x

Previous | Export for Scripting | Generate Deployment Environment | Cancel

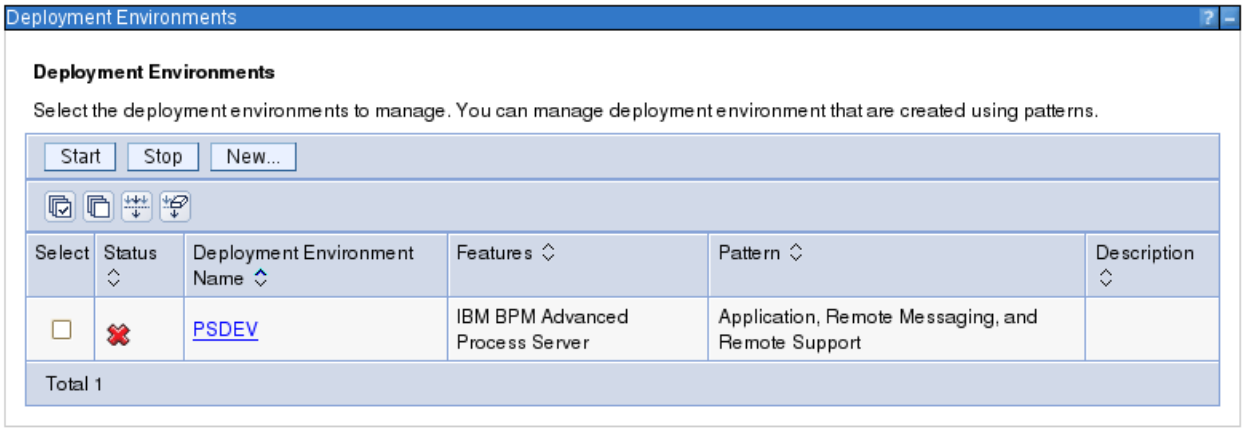
19. Then Click Generate Deployment Environment.



20. This could take 20+ minutes. Depending on RAM and CPU.



21. Now Click Save Changes



22. Tar up /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas26x_DM_BPMPC_01x/dbscripts and give them to the DBA. With the instructions from the next section.

IBM BPMv8.5 - DBA instructions for PS:

This section is for creating tables in the DB2 database created earlier in this doc.

The instructions in this section will demonstrate how to make a script from the contents of the dbscripts.tar file.

Pre-requisites:

- DB2 DBA
- DB2 instance owner ID and password. Example: db2psde
- The dbscripts.tar from the BPM admins.

Create Database

10. un-tar the dbscripts tar file.
11. su - db2 instance owner id. Example: db2psde
12. cd /<your location>/dbscripts
13. run command:
    find . -name createD*.sh -print > createdbs.sh
14. Edit createdbs.sh
15. Your should see:
    ./BPMPS_DMCell01x/DB2/CELLPSDB/createDatabase.sh
    ./PSDEV/DB2/MEPSDB/createDatabase.sh
    ./PSDEV/DB2/CMNPSDB/createDatabase.sh
    ./PSDEV/DB2/BPEPSDB/createDatabase.sh
    ./PsDEV/DB2/PDWPSDB/createDatabase.sh
    ./PSDEV/DB2/BPMPSDB/createDatabase.sh
16. Change createdbs.sh into what is listed below. Then save it.

    cd ./BPMPS_DMCell01x/DB2/CELLPSDB
    ./createDatabase.sh
    cd -
    cd ./PSDEV/DB2/MEPSDB
    ./createDatabase.sh
    cd -
    cd ./PSDEV/DB2/CMNPSDB
    ./createDatabase.sh
    cd -
    cd ./PSDEV/DB2/BPEPSDB
    ./createDatabase.sh
    cd -
    cd ./PSDEV/DB2/PDWPSDB
    ./createDatabase.sh
    cd -
    cd ./PSDEV/DB2/BPMPSDB
    ./createDatabase.sh
    cd –

17. chmod 755 createdbs.sh
18. Run:

./createdbs.sh

Create Tables

7. run command:
   find . -name create* Advanced.sql -print > createTables.sh
   find . -name create*Messaging.sql -print >> createTables.sh

8. Edit createTables.sh
9. Your should see:
   ./BPMPS_DMCell01x/DB2/CELLPSDB/createSchema_Advanced.sql
   ./PSDEV/DB2/CMNPSDB/createSchema_Advanced.sql
   ./PSDEV/DB2/BPEPSDB/createSchema_Advanced.sql
   ./PSDEV/DB2/PDWPSDB/createSchema_Advanced.sql
   ./PSDEV/DB2/BPMPSDB/createProcedure_Advanced.sql
   ./PSDEV/DB2/BPMPSDB/createSchema_Advanced.sql
   ./PSDEV/DB2/MEPSDB/createSchema_Messaging.sql
   NOTE: **The directory names can change as different environments are built.**
   ***NOTE: **Review these sql files before running them. Make sure they meet Corporate IT Standards.**

10. Change createTables.sh into what is similar as below. Then save it. **Notice the database you need to connect to is listed right after DB2 in the directory path.**

    db2 connect to CELLPSDB
    db2 -vtf ./BPMPS_DMCell01x/DB2/CELLPSDB/createSchema_Advanced.sql
    db2 connect reset

    db2 connect to CMNPSDB
    db2 -vtf ./PSDEV/DB2/CMNPSDB/createSchema_Advanced.sql
    db2 connect reset

    db2 connect to BPEPSDB
    db2 -vtf ./PSDEV/DB2/BPEPSDB/createSchema_Advanced.sql
    db2 connect reset

    db2 connect to PDWPSDB
    db2 -vtf ./PSDEV/DB2/PDWPSDB/createSchema_Advanced.sql
    db2 connect reset

    db2 connect to BPMPSDB

db2 -vtf ./PSDEV/DB2/BPMPSDB/createProcedure_Advanced.sql
db2 -vtf ./PSDEV/DB2/BPMPSDB/createSchema_Advanced.sql
db2 connect reset

db2 connect to MEPSDB
db2 -vtf ./PSDEV/DB2/MEPSDB/createSchema_Messaging.sql
db2 connect reset

11. Run:
    chmod 755 createTables.sh
12. Run:
    ./createTables.sh

Testing the new PS DE environment:

Now that the DBA work is complete.

4. Run: - this will popular product tables.

   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas26x_DM_BPMPS_01x/bin/bootstrapProcessServerData.sh -clusterName PS_AppCluster01x
5. Start the Deployment Environments.
6. For Process Center - Test by using these URLs:
   NOTE:
   1) You must use a supported Browser - IE 10, Chrome 20 or greater, Safari 5 or greater and FireFox 10.
   2) Always use a new Browser session, never just open a additional tab.
   Process Center EXAMPLES:
   Test in this order: - check servers for correct port numbers

   http://aix1awas26x:9082/bpc
   http://aix1awas26x:9080/BusinessSpace
   http://aix1awas26x:9082/PerformanceAdmin/login.jsp
   http://aix1awas26x:9080/ProcessAdmin/login.jsp
   http://aix1awas26x:9080/ProcessPortal/login.jsp

Post Config Setup

This section is a summary following URL. This procedure puts all the steps of getting the communication of PC and PS in one place.

IBM BPM 8.5.5 Info center source:

http://www-01.ibm.com/support/knowledgecenter/api/content/SSFTDH_8.5.0/com.ibm.wbpm.admin.doc/topics/tins_cnfg_ssl_nd.html?locale=en

1. Import the **Process Server** WebSphere® Application Server root SSL certificate into Process Center.
    a. In the Process Center WebSphere Application Server administrative console, click **Security > SSL certificate and key management > Key stores and certificates > CellDefaultTrustStore > Signer certificates > Retrieve from port.**
    b. Enter the Host name, secure Port of the Process Server profile (WC_defaulthost_secure), and Alias, and click Retrieve signer information. You can retrieve the signer information for any of the servers listed.
    Note: The WC_defaulthost_secure profile is located in the WebSphere Application Server administrative console. Navigate to **Servers > Server Types > WebSphere Application Servers > *SERVER_NAME* > Ports.**

    c. Click Apply and save your changes.
2. Import the **Process Center** root SSL certificate into Process Server.
    a. In the Process Server WebSphere Application Server administrative console, click Security > SSL certificate and key management > Key stores and certificates > CellDefaultTrustStore > Signer certificates > Retrieve from port.
    b. Enter the Host name, secure Port of the Process Center profile (WC_defaulthost_secure), and Alias, and click Retrieve signer information. You can retrieve the signer information for any of the servers listed.
    Note: The WC_defaulthost_secure profile is located in the WebSphere Application Server administrative console. Navigate to Servers > Server Types > WebSphere Application Servers > *SERVER_NAME* > Ports.

    c. Click Apply and save your changes.
3. Specify HTTPS URLs and ports for all Representational State Transfer (REST) services for your environment by using the REST service administrative console page.
    a. Click Services > REST services > REST service providers.
    b. Select all from the Scope selection pull-down menu.
    c. Click on the REST service provider in Provider Application field and specify the Host name or virtual host in a load-balanced environment and the Port.
    Important: For a REST Services Gateway deployment manager, use the deployment manager host name and port; do not use the IHS host name and port.

    d. Click Apply and save your changes.
4. Set the `deploySnapshotUsingHttps` property to `true` to make sure that the Process Center connects to the Process Server using SSL for online deployment. Run the following commands on both the Process Center and the Process Server.

```
ON aix1awas25x
wsadmin -conntype NONE -lang jython
```

```
wsadmin> ps = AdminConfig.getid("/Cell:/ServerCluster:
PC_AppCluster01x/BPMClusterConfigExtension:/BPMProcessCenter:/BPMServerSecu
rity:/") # You must use BPMProcessCenter or BPMProcessServer depending on
your environment
wsadmin> print AdminConfig.show(ps) #look at deploySnapshotUsingHttps to
see the current value
wsadmin> AdminConfig.modify(ps, [['deploySnapshotUsingHttps', 'true']]) #
default value is false
wsadmin> print AdminConfig.show(ps) #verify your change
wsadmin> AdminConfig.save()
wsadmin> exit
```

ON aix1awas26x

```
wsadmin -conntype NONE -lang jython
wsadmin> ps = AdminConfig.getid("/Cell:/ServerCluster:
PS_AppCluster01x/BPMClusterConfigExtension:/
BPMProcessServer:/BPMServerSecurity:/") # You must use BPMProcessCenter or
BPMProcessServer depending on your environment
wsadmin> print AdminConfig.show(ps) #look at deploySnapshotUsingHttps to
see the current value
wsadmin> AdminConfig.modify(ps, [['deploySnapshotUsingHttps', 'true']]) #
default value is false
wsadmin> print AdminConfig.show(ps) #verify your change
wsadmin> AdminConfig.save()
wsadmin> exit
```

Note: See below for details on the version support differences:

5. Restart the Process Server and Process Center servers.
    . Use the WebSphere Application Server administrative console to stop the clusters.
    a. Stop the node agent and deployment manager.
    b. Re-start the node agent.
    c. Re-start the deployment manager.
    d. Use the WebSphere Application Server administrative console to start the clusters.
6. Verify your configuration.
    . Log in to the Process Center console using an https connection.
    a. From the Server tab, click runtime server > configure server and confirm that it is opened in a secure browser with https.

Add nodes to a DE

This section is for adding new nodes to an existing PC or PS.

1) Create a BPM 8.5.5 custom profile on the new machine.
2) addNode.sh to the Cell that is getting the new node.
3) Go to: Servers -> Deployment Environments -> <DEname> -> Deployment Topology
4) Select the new node from the drop down
5) Click Add
6) Set the number of servers per cluster you want.
7) Click OK
8) Click Save
9) Restart environment.

Manual Adjustments for large LDAP search results set

Edit wimconfig.xml

The ACME LDAP is return more than 4500 entries and it causing an exception.

1. edit `wimconfig.xml`
2. **change** `maxSearchResults="4500"` **TO** `maxSearchResults="60000"`.
   We need to change this file on aix1awas25x, aix1awas26x and aix1awas27x:
   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas25x_DM_BPMPC_01x/config/cells/BPMPC_DMCell01x/wim/config/wimconfig.xml
   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas25x_Node_BPMPC_01x/config/cells/BPMPC_DMCell01x/wim/config/wimconfig.xml

   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas26x_DM_BPMPS_01x/config/cells/BPMPS_DMCell01x/wim/config/wimconfig.xml
   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas26x_Node_BPMPS_01x/config/cells/BPMPS_DMCell01x/wim/config/wimconfig.xml

   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas27x_Node_BPMPC_01x/config/cells/BPMPC_DMCell01x/wim/config/wimconfig.xml
   /opt/IBM/WebSphere/AppServer/BPM/v8.5/profiles/prof_aix1awas27x_Node_BPMPS_01x/config/cells/BPMPS_DMCell01x/wim/config/wimconfig.xml

3. restart PC and PS environment
4. Check the logs.

Add custom property to BPMPSDB Data source

The BPM Process Server data source is throwing an exception because the cursor is not closed after a transaction commit.

1. Logon to the BPM 8.5.5 PS admin console
   http://aix1awas26x:9060/ibm/console
2. Go to: Resources -> JDBC -> Data Sources
3. Click on BPM Process Server data source – at the PS_AppCluster01x cluster level.
4. On the Right Hand Side click on: Custom properties
5. Click New and added these values to these fields:
   Name: allowNextOnExhaustedResultSet
   Value: 2
   Description:

Determine whether ResultSet are closed or kept open when committing a transaction. 1 (HOLD_CURSORS_OVER_COMMIT), 2 (CLOSE_CURSORS_AT_COMMIT).

6. Click OK
7. Click Save
8. Restart PS_AppCluster01x members.

Appendix A: Change Passwords on the file repository IDs

The Deployment Environment(DE) Admin ID file based password change on either PC or PS is a multi-step process.

For PC or PS DE Admin ID

1) Run the JACL:
   cd <BPM_INSTALL_root>/profiles/*Dmgr*/bin
   ./wsadmin.sh -conntype NONE
   Cut and Paste these commands with your info:
   $AdminTask changeFileRegistryAccountPassword {-userId <DEadmin_ID> -password <DEadmin_new_password>}
   $AdminConfig save

2) Go in to Auth Aliases and update with new password the DE admin you're working on.
3) Re-start BPM environment

Update PS with new PC DE admin password:

1) Go To: Servers -> Deployment Environments -> <DE*name*> -> Additional Properties -> Process Server Settings
2) Change password
3) Click OK
4) Click Save
5) Go in to Auth Aliases and update the PC DE admin ID with the new password.
6) Click OK
7) Click Save
8) Re-start PS

Add User on the file repository

Run the JACL:
cd <BPM_INSTALL_root>/profiles/*Dmgr*/bin
./wsadmin.sh -conntype NONE
Cut and Paste these commands with your info:
$AdminTask addFileRegistryAccount {-userId <ID> -password <new_password>}

$AdminConfig save

Appendix B: BPM 8.5.5 beyond the POC

1. To move beyond a POC an application has to be designed, built and an inventory of features has to be done.
2. Estimated work load has to be established.
3. The inventory from step 1 and the estimated work load from step 2 need to be run through IBM Techline. IBM Techline will provide an initial sizing of the environment that will be needed to meet the estimated work load.
4. Monitoring will need to be setup on the Databases and file systems to assure that there is enough space available at all times.
5. Memory can be monitored by OS system tools like top, topas … etc.
6. If the estimated work load changes then resource like file system space, CPU and RAM will need to be re-evaluated.