TBSM 6.2

Installation and Configuration of SSO and SSL and upgrade to TBSM6.2 FP1

A step by step example

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Contents

Software prerequisite

TBSM 6.2 requires the following **minimum** version of each product. They need to be installed separately as they are not part of the TBSM package.

1. Installation Manager 1.8.6
2. IBM DB2 Workgroup Server Edition 11.1.2.2
3. IBM Tivoli Netcool/Omnibus v8.1.0.5
4. IBM WebSphere Application Server Version 8.5.5 Fix Pack 12
5. Jazz for Service Management 1.1.3.0 and Cumulative Patch 5 (1.1.3.0-TIV-JazzSM-DASH-Cumulative-Patch-0005)
6. IBM JAVA 7.0.9.30
7. IBM Tivoli Netcool/Omnibus 8.1.0.4-webgui Fix Pack 12
8. IBM Tivoli Netcool/Impact 7.1 Fix Pack 13

Within this guide the following version were used:

1. Installation Manager 1.8.9
2. IBM DB2 Workgroup Server Edition 11.1.2.2
3. IBM Tivoli Netcool/Omnibus v8.1.0.18
4. IBM WebSphere Application Server Version 8.5.5 Fix Pack 15
5. Jazz for Service Management 1.1.3 – Fix Pack 3
6. IBM JAVA 8.0.5.27.
7. IBM Tivoli Netcool/Omnibus 8.1.0.4-webgui Fix Pack 16
8. IBM Tivoli Netcool/Impact 7.1 Fix Pack 16
9. TBSM 6.2 Fix Pack 1

Software prerequisite configurations that need attention

1. TBSM installation requires each component to be configured with FQDN, therefore this should be used during each product installation and also /etc/hosts file should be configured accordingly.

Entry example:
IP-address FQDN Hostname-short name
172.20.20.12 Dooku.gpsg.ro Dooku

2. The user installing TBSM should be the user who installed all the prerequisite software. In this material the installation is done with user root.

3. The Netcool/Impact server that is required by TBSM must have server name TBSM for primary and TBSM_B for secondary and cluster name should be TBSMCLUSTER.

4. Impact, JazzSM and TBSM should be configured to use the same user repository.

5. Before proceeding with TBSM installation, TBSM schema must be added within the Object Server.

6. Waapi should be setup for WebGUI prior to TBSM installation and also a datasource should be defined within it.

7. If an existing Omnibus installation is being used, then a new object server needs to be created if the existing one is used by another TBSM installation. If an old TBSM server is reading events from an object server, the new server cannot read them also, hence, a new object server is needed to be used for TBSM 6.2.

8. TBSM 6.2 should not be installed on a server where there is already another TBSM installation.

9. The following 2 users impactadmin and tbsmadmin should not contain special characters within their password as this usually generated installation problems.

This guide has the purpose to illustrate a complete step by step example for a split TBSM 6.2 installation.

All the TBSM prerequisites and components were installed as follows:

- On server 1: Installation Manager, Omnibus, Netcool/Impact, DB2, TBSM Database Configuration Utility and TBSM Data Server

- On server 2: Installation Manager, WAS, JazzSM/DASH, WebGUI, TBSM Dashboard Server

Other references:

Complete official documentation guide:
https://www.ibm.com/support/knowledgecenter/SSSPFK_6.2.0/com.ibm.tivoli.itbsm.doc/installation_guide.pdf

Installation example with everything installed and configured on one server:
https://www.ibm.com/developerworks/community/blogs/7d5ebce8-2dd8-449c-a58e-4676134e3eb8/entry/TBSM_6_2_Installation_Step_by_step_example_with_all_the_prerequisites_installation_and_configuration_steps?lang=en_us

Installation example with everything installed and configured on two servers:
https://www.ibm.com/developerworks/community/blogs/cdd16df5-7bb8-4ef1-bcb9-

cefb1dd40581/entry/TBSM_6_2_Split_Installation_Guide_Step_by_step_example_with_all_the_prerequisites_installation_and_configuration_steps?lang=en_us

Installation example with everything installed and configured on two servers including SSO configuration between DASH and Impact:
https://www.ibm.com/developerworks/community/blogs/cdd16df5-7bb8-4ef1-bcb9-cefb1dd40581/entry/TBSM_6_2_Installation_Guide_Step_by_step_example_with_all_the_prerequisites_installation_and_configuration_steps_including_SSO_configuration_between_DASH_and_Impact?lang=en

Failover installation and configuration example for TBSM 6.2:
https://www.ibm.com/developerworks/community/blogs/cdd16df5-7bb8-4ef1-bcb9-cefb1dd40581/entry/TBSM_6_2_Failover_Configuration_Guide_step_by_step_example?lang=en

Known limitations, Problems and Workarounds for TBSM 6.2:
https://www-01.ibm.com/support/docview.wss?uid=ibm10716855

TBSM 6.2 Upgrade to Fix Pack 1 - A step by step example:
https://www-01.ibm.com/support/docview.wss?uid=ibm10886187

Setting up the server for TBSM Data Server (server 1)

Install or upgrade to Installation Manager 1.8.9

If Installation Manager is not installed on the server, you have the option to either install it along with Omnibus core installation as this one will automatically install IM if it detects that it doesn't exists, or you can manually install it after downloading IM package.

If IM is installed on the server and you have an older version, you can try to upgrade it to the latest version which is 1.8.9.

Option A: Manually download and install IM 1.8.9

Download link:
https://www-945.ibm.com/support/fixcentral/swg/selectFixes?parent=ibm%7ERational&product=ibm/Rational/IBM+Installation+Manager&release=1.8.9.0&platform=Linux&function=all&useReleaseAsTarget=true

refresh pack: → 1.8.9.0-IBMIM-LINUX-X86-20180313_1417 2018/03/23
IBM Installation Manager Install Kit for all x86 Linux versions supported by version 1.8.9.0

- extract IM 1.8.9 package, go to the extracted directory and run ./install :

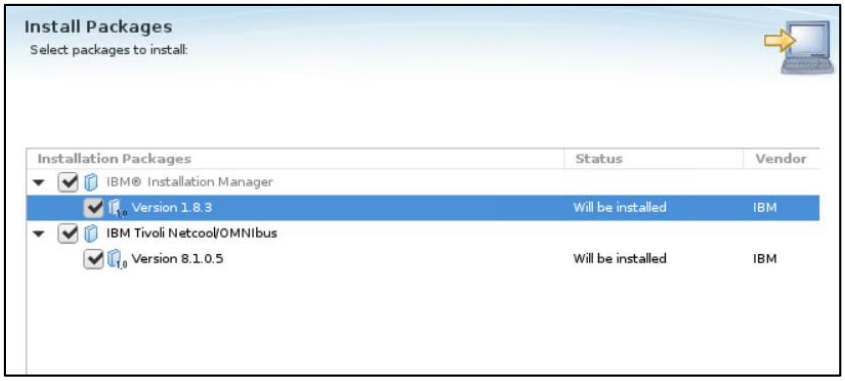
```
[root@busy1 tmpIM]# ls
con-disk-set-inst.sh  installc.ini                repository.config
configuration         install.ini                 repository.xml
documentation         install.xml                 silent-install.ini
groupinst             jre_7.0.100020.20180227_1440 tools
groupinstc            license                     userinst
groupinstc.ini        native                      userinstc
groupinst.ini         Offerings                   userinstc.ini
install               plugins                     userinst.ini
installc              readme.html                 user-silent-install.ini
```

Option B: Install IM along with OMNIbus

- go the directory where you have extracted omnibus 8.1.0.5 core and run ./install_gui.sh script:

```
[root@busy1 tmpIM]# ls /mnt/images/ibm/netcool/omnibus_core/8.1.0.5/linux_x86_64
/
im.linux.x86_64     install_gui.sh     OMNIbusRepository
install_console.sh  install_silent.sh  scripts
```

You will get the option to install IM as well:

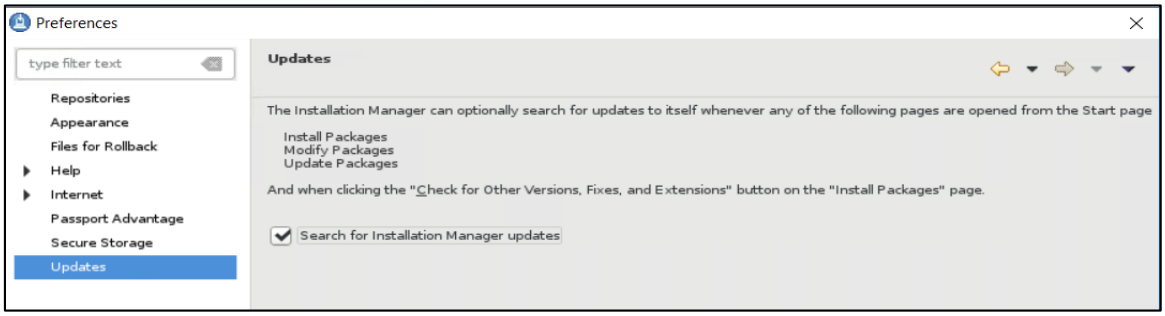


Option C: If IM is already installed or you have selected option B previously you can try to upgrade to the latest version.

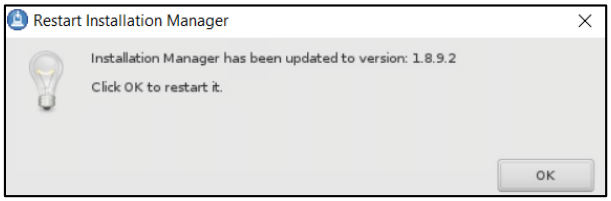
- one solution for this would be to use the service repositories feature from the already installed IM. Run ./IBMIM script -> go to File > Preferences.

- on the Repositories tab, select Search service repositories during installation and updates.

- then click Updates and select the Search for Installation Manager updates option.



- click OK to close the Preferences page and afterwards click one of these wizards: Install or Update. Installation Manager searches for updates to itself and you will be prompted to update Installation Manager; click yes to proceed with the upgrade:



Install Omnibus 8.1.0.5 core and upgrade to Fix Pack 18

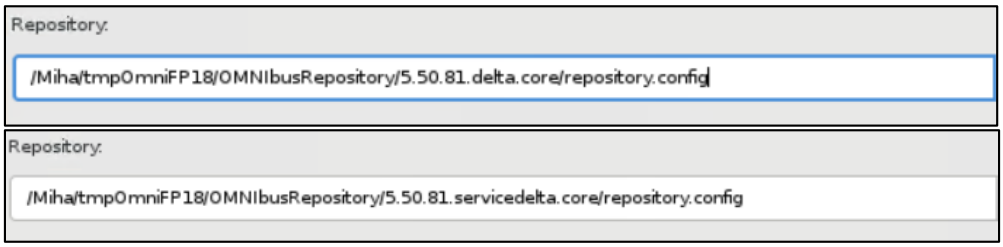
- Extract the downloaded package for 8.1.0.5 and for Fix Pack 18 as well:

Download link for Omnibus 8.1 Fix pack 18:
https://www-01.ibm.com/support/docview.wss?uid=ibm10733443

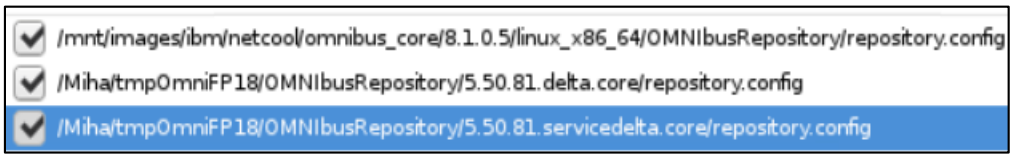
- Add both repositories (for core and fix pack) to installation manager -> preferences panel:

for omnibus core location path should be:
<extracted_core_path>/<OS>/OMNIbusRepository/repository.config

for omnibus fix pack 18 the below 2 repositories files should be added:
<extracted_fixpack_path>/OMNIbusRepository/5.50.81.delta.core/repository.config
< extracted_fixpack_path>/OMNIbusRepository/5.50.81.servicedelta.core/repository.config

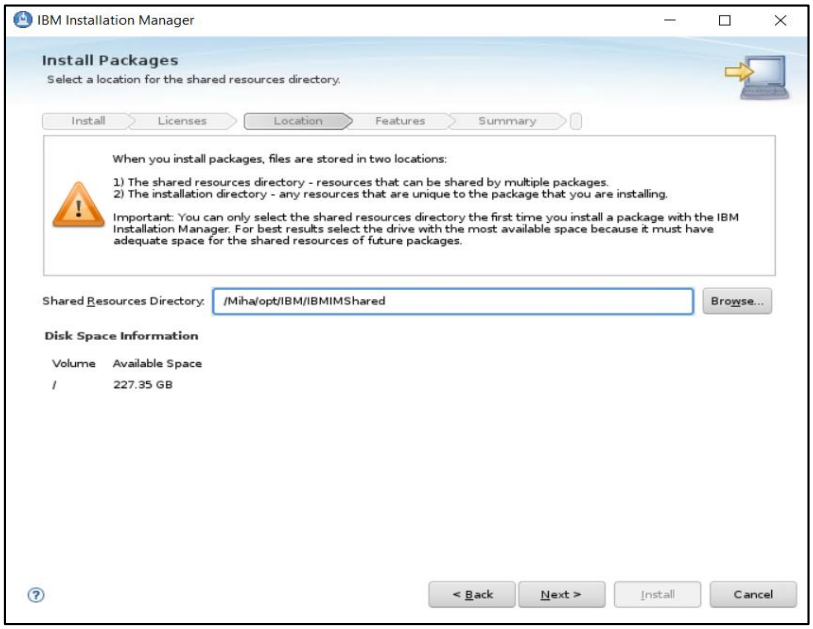


By adding all 3 repositories omnibus can be directly installed as 8.1.0.18.:

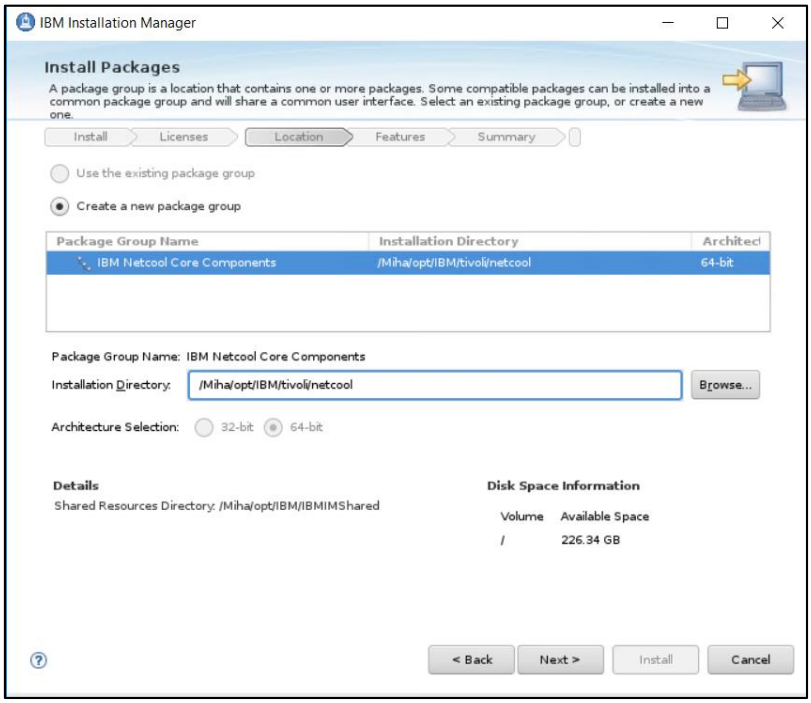


- After configuring the repository section, select “Install” option from IM main menu and check the product to be installed:

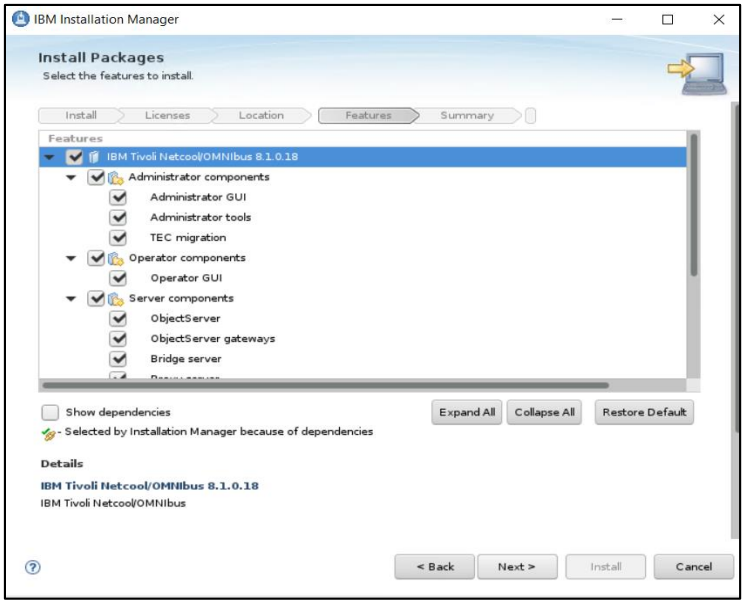
- enter the location path for the shared resources directory and continue with the installation:



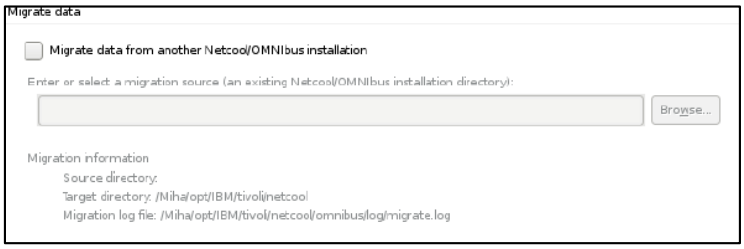
- enter the installation directory path for Omnibus 8.1.0.18 if the default one needs to be changed and click "Next" to continue with the installation process:



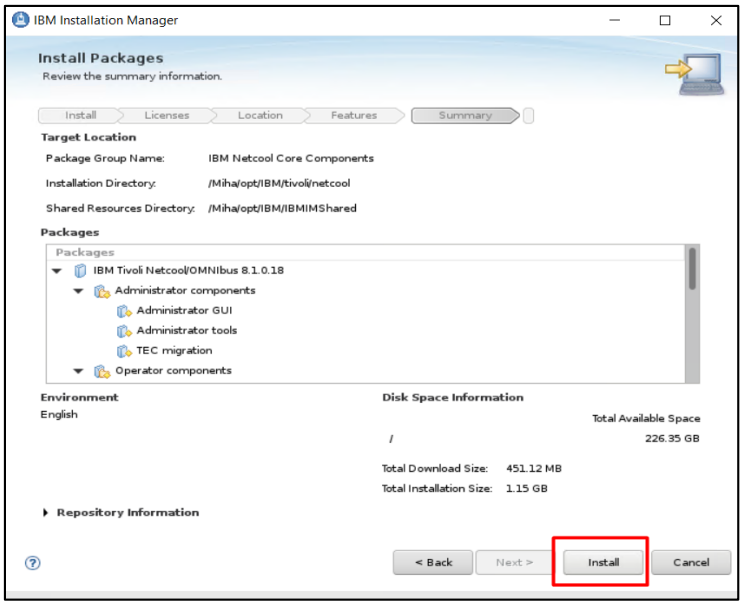
- select the features to be installed (by default all are selected):



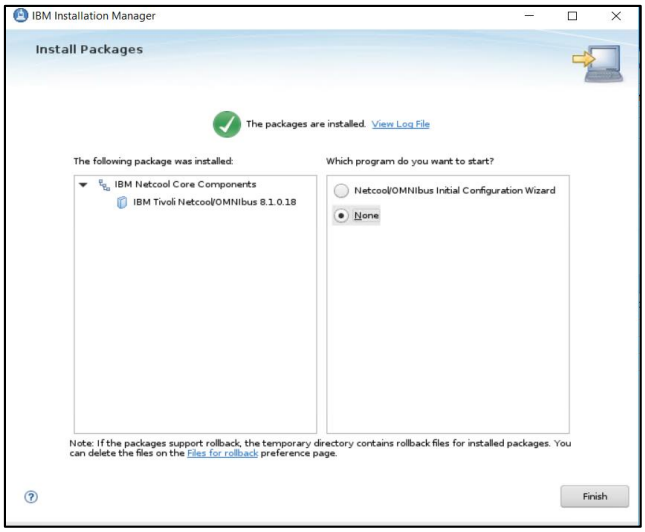
- you can select to migrate data from another omnibus install or you can do this post install if needed:



- select the Install option for the installation process to begin:



- make sure the installation went fine and afterwards you can create and configure your object server either by using the Netcool/OMNIbus Initial Configuration Wizard option that is available at the end of the installation, either by manually running the commands to create and configure a new object server after the installation:



Configure Omnibus 8.1.0.18

Option A:

If you have selected None when the Omnibus installation finished, you will need to manually create and configure an object server.

- some environment variables can be setup to easy navigate between directories:

```
export NCHOME=/Miha/opt/IBM/tivoli/netcool
export OMNIHOME=/Miha/opt/IBM/tivoli/netcool/omnibus
```

- create new object server (in this example, object server name will be NCOMS):

```
cd $OMNIHOME/bin
./nco_dbinit -server NCOMS
```

Command example:

```
[root@busy1 bin]# ./nco_dbinit -server NCOMS
```

- edit omni.dat file and add the required details – port, hostname, object server name

```
cd $NCHOME/etc
vi omni.dat
```

```
#
# omni.dat file as prototype for interfaces file
#
# Ident: $Id: omni.dat 1.5 1999/07/13 09:34:20 chris Development $
#
[NCOMS]
{
        Primary: busy1.castle.fyre.ibm.com 4100
}
[NCO_GATE]
{
        Primary: busy1.castle.fyre.ibm.com 4300
}
[NCO_PA]
{
        Primary: busy1.castle.fyre.ibm.com 4200
}
[NCO_PROXY]
{
        Primary: busy1.castle.fyre.ibm.com 4400
}
```

- run ./nco_igen script for the changes to be saved and start the object server afterwards:

cd $NCHOME/bin
./nco_igen

```
[root@busy1 bin]# /Miha/opt/IBM/tivoli/netcool/bin/nco_igen
```

cd $NCHOME/bin
./nco_objserv -name NCOMS &

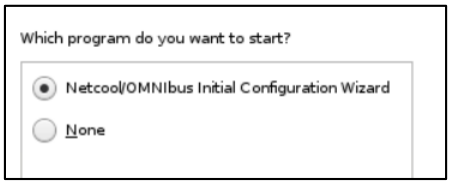
```
[root@busy1 bin]# /Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_objserv -name NCOMS &
```

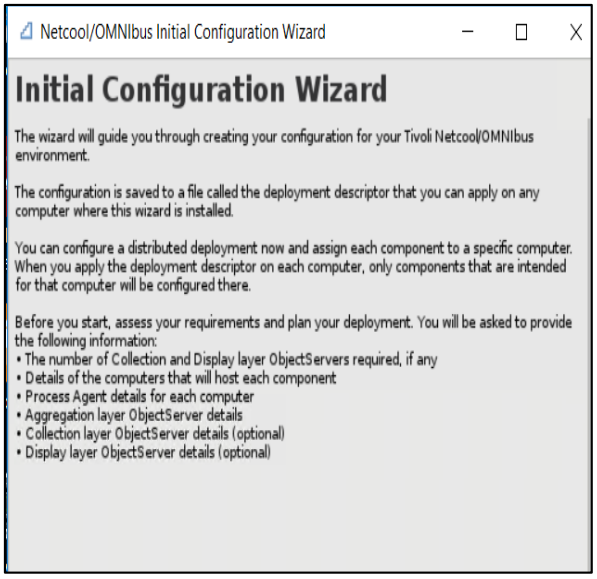
Check to see if the object server is up and running:

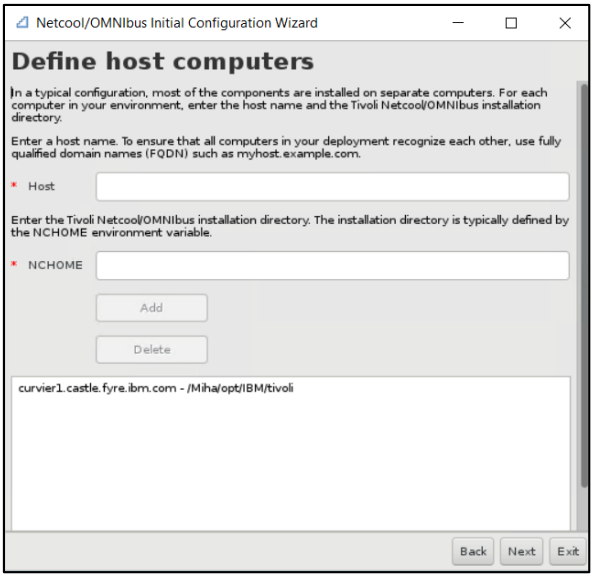
```
[root@busy1 bin]# ps -ef|grep nco
root      9226  5602  1 01:46 pts/0    00:00:00 /Miha/opt/IBM/tivoli/netcool/omnibus/platform/linux2x
86/bin64/nco_objserv -name NCOMS
root      9295  5602  0 01:46 pts/0    00:00:00 grep --color=auto nco
[root@busy1 bin]#
```

Option B

You can select "Netcool/OMNIbus Initial Configuration Wizard" to configure your object server. Enter the hostname details and installation path for Omnibus and continue with the wizard steps:





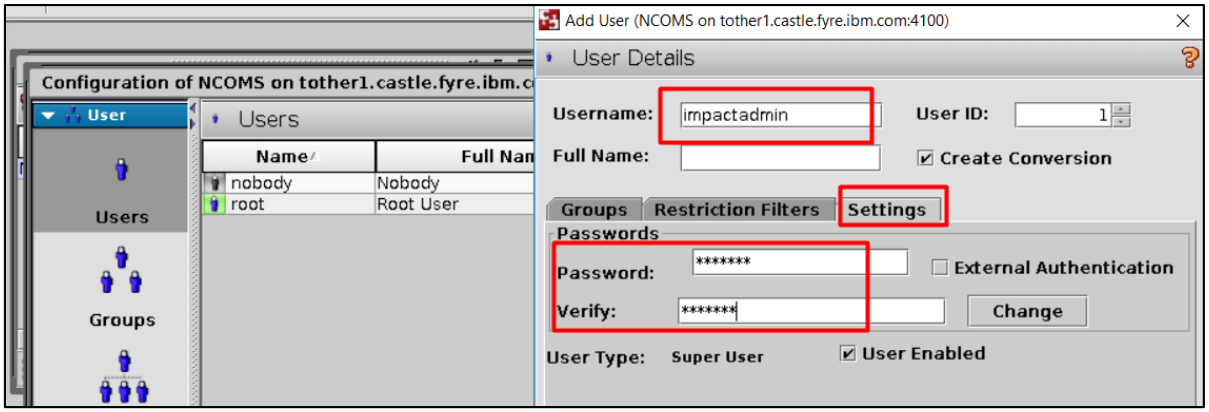


After having the object server properly configured and running, in order to prepare for Impact 7.1 installation, add **impactadmin** user within object, add its password and assign groups to this user:

cd $OMNIHOME/bin
./nco_config

```
[root@tother1 bin]# /Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_config
```

Go to User tab -> right click and select "Add User" option:



Install Netcool/Impact 7.1.0.14 and upgrade to Fix Pack 16

- download and extract Impact 7.1.0.14 and Fix Pack 16 for Impact

Download link for Fix Pack 16:
https://www-01.ibm.com/support/docview.wss?uid=ibm10881009

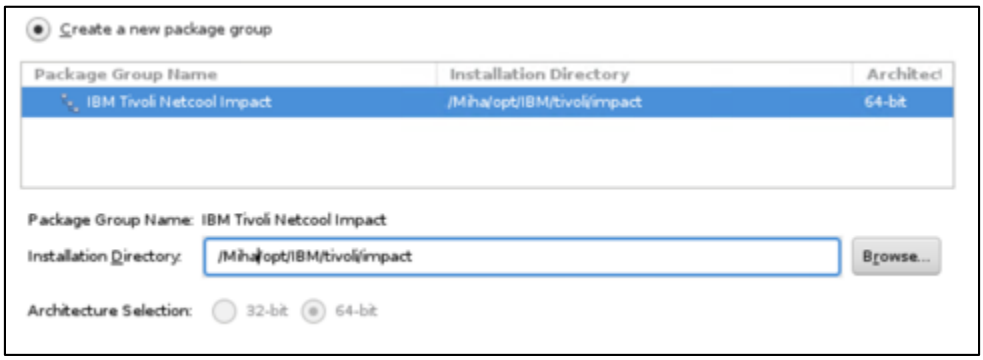
- add both the repository from Impact 7.1.0.14 base as well as the repositories from Impact Fix Pack 16 within Installation Manager -> Preferences panel if you want to install both at a time or install first the base Impact 7..10.14 and then update to Fix Pack 16.

<extracted_path_for_impact71014>/ImpactRepository/disk1/diskTag.inf
<extracted_path_for_impactFP16>/ImpactRepository/repository.config

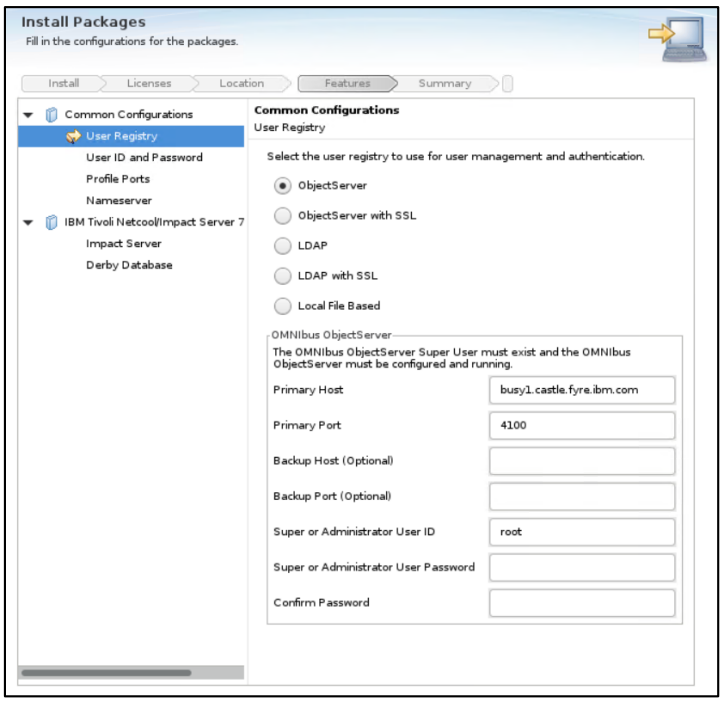
Add the ones from the NOI extension as well if needed.

- select "Install" from IM main menu and check both GUI and Server options for Impact 7.1.0.16 to be installed:

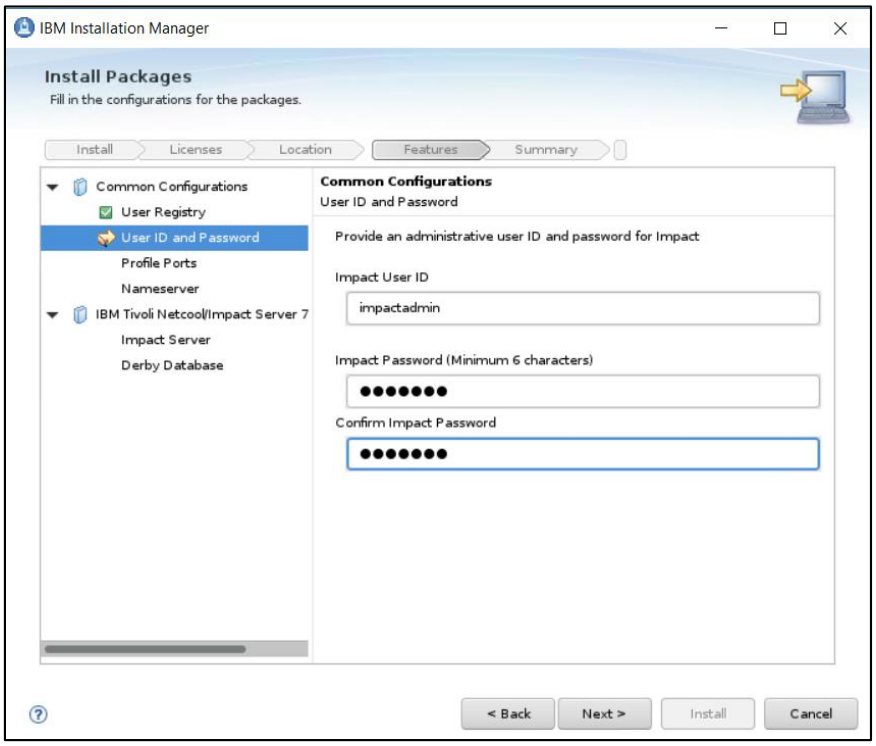
- enter installation path directory for Impact 7.1.0.16 and continue with the installation:



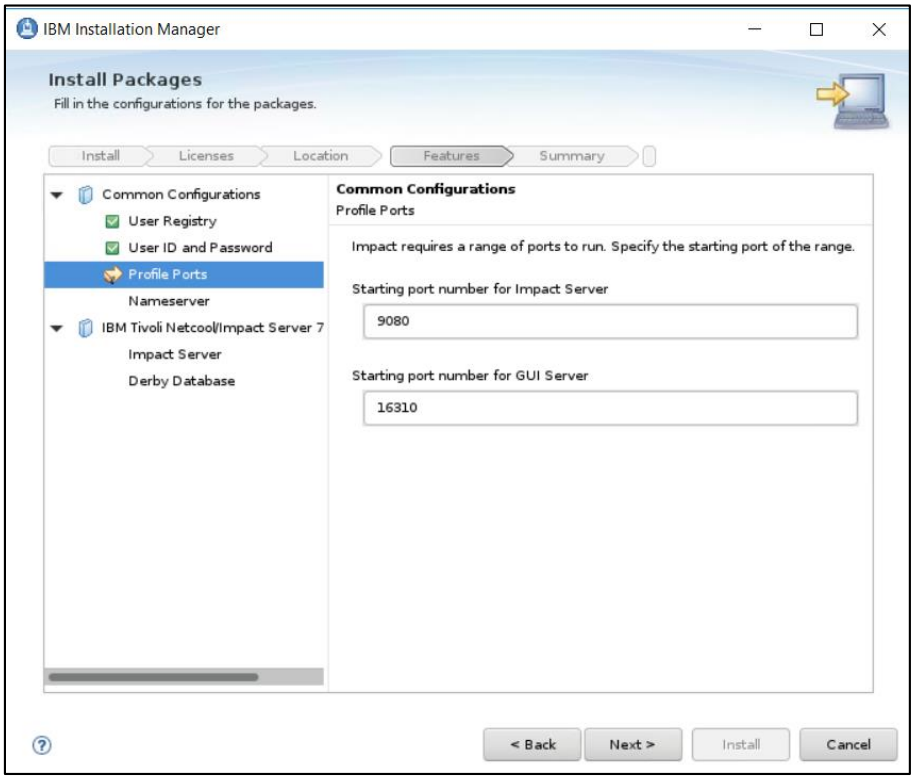
- configure user registry – this should be the same as for webgui and tbsm; in this example object server is being used for user registry, hence configure the required details for omnibus: host, port and credentials details



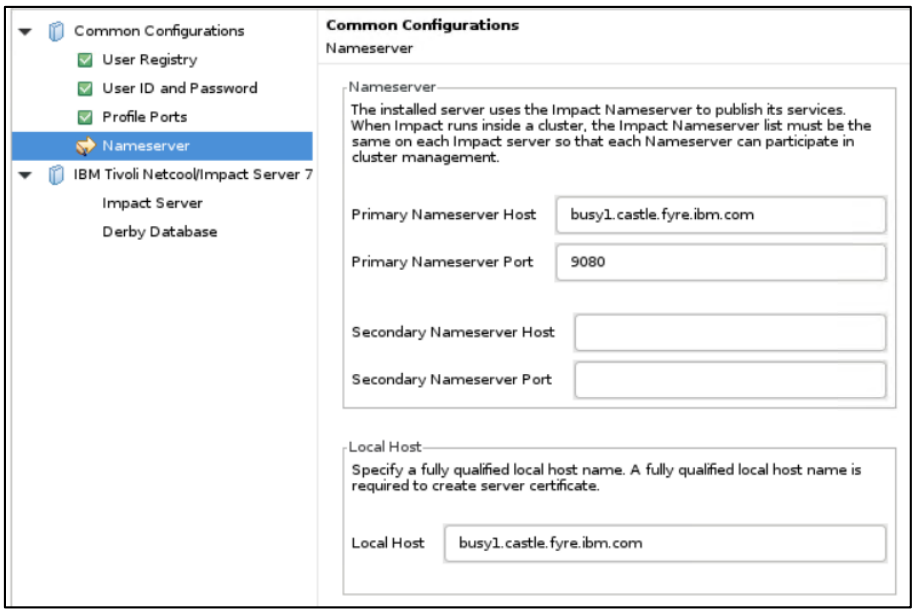
- enter impactadmin password – should be the same as the one configured in object server



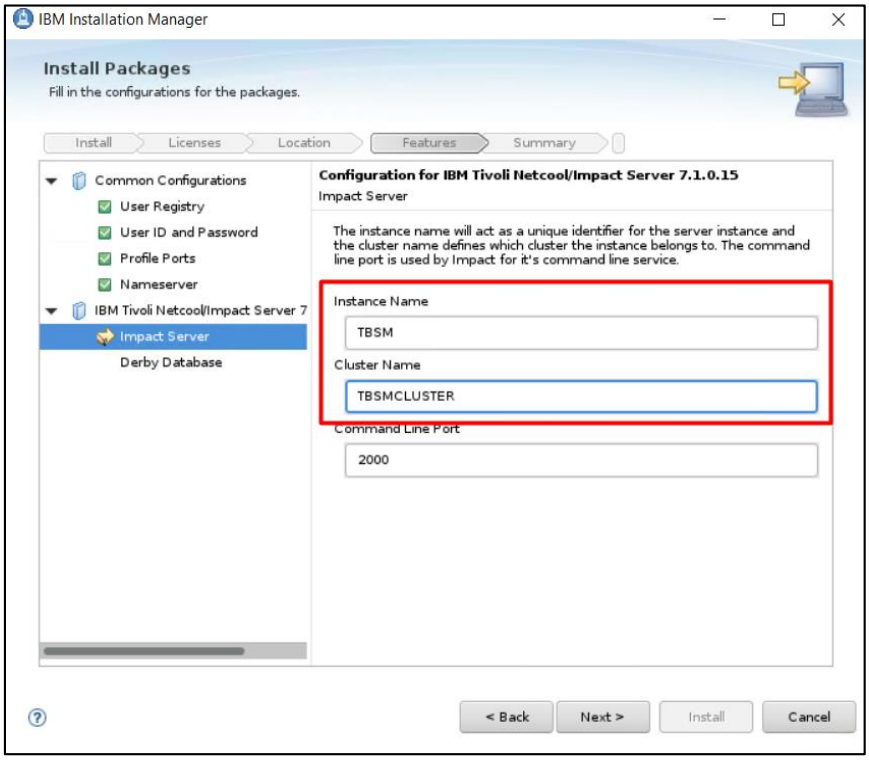
- enter port numbers for Impact Server and GUI Server



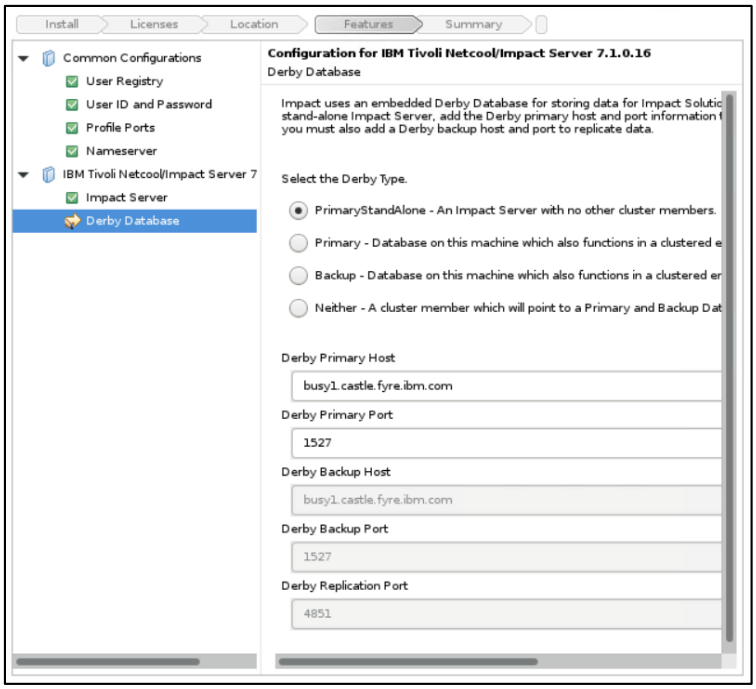
- make sure you use FQDN address:



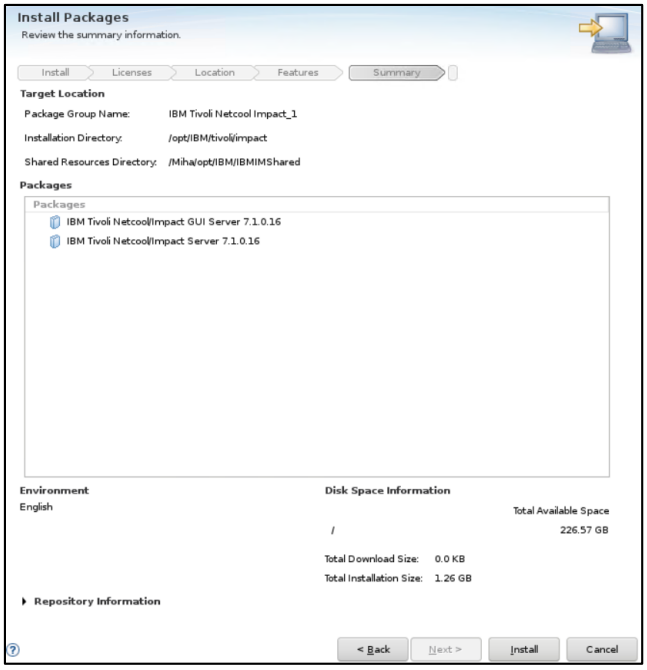
- Impact server name should be **TBSM** and cluster name should be **TBSMCLUSTER:**



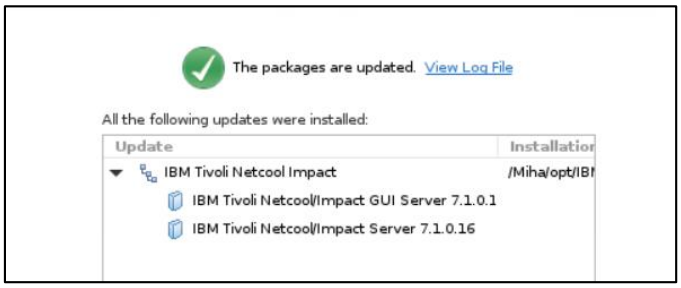
- select derby type – PrimaryStandAlone is used in this case and enter host name details



- continue with the Installation:



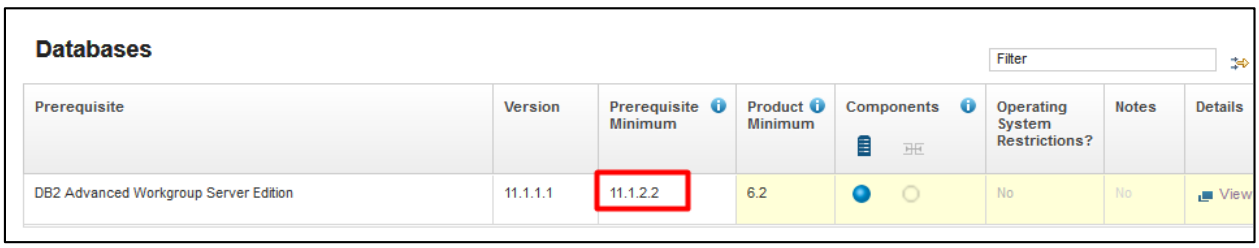
- make sure your installation finish with success:



Install DB2 Advanced Workgroup Server Edition 11.1.2.2

TBSM 6.2 requires DB2 Advanced Workgroup Server Edition and the minimum version needed for this is: 11.1 Mod 2 Fix Pack 2.

From software compatibility report:



One part-number example for DB2 11.1 for Linux: CNB8FML

Download link for DB2 11.1 **Mod 2 Fix Pack 2**:
http://www-01.ibm.com/support/docview.wss?uid=swg24043789

- download and extract DB2 Advanced Workgroup Server Edition 11.1 and Activation License for this as well

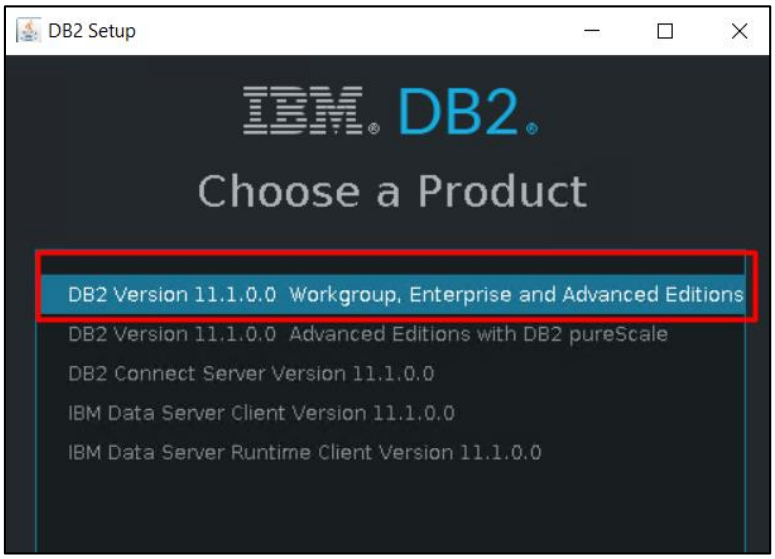
```
DB2_AWSE_Restricted_Activation_11.1.zip
DB2_AWSE_REST_Svr_11.1_Lnx_86-64.tar.gz
```

- go to the extracted directory and to */server_awse_o/* directory and run the following command from this directory:
  ./dbsetup

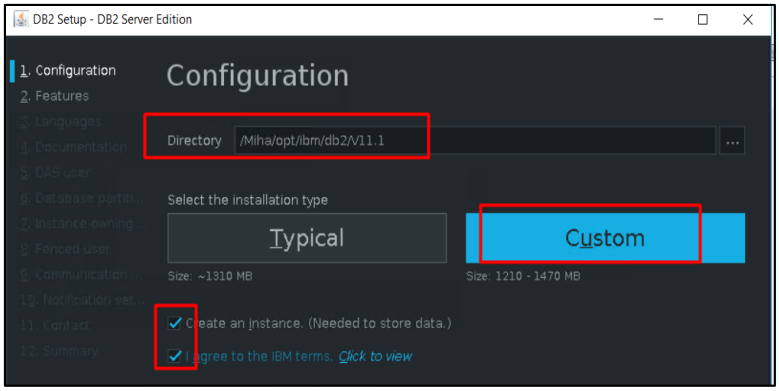
./db2setup

```
[root@busy1 server]# ls
db2                    db2checkCOL.tar.gz  db2_deinstall  db2ls          db2setup  installFixPack
db2checkCOL_readme.txt db2ckupgrade        db2_install    db2prereqcheck ibm_im    nlpack
[root@busy1 server]# ./db2setup
DBI1190I  db2setup is preparing the DB2 Setup wizard which will guide
      you through the program setup process. Please wait.
```

- select New Install and DB2 Version 11.1.0.0. Workgroup, Enterprise and Advanced Editions



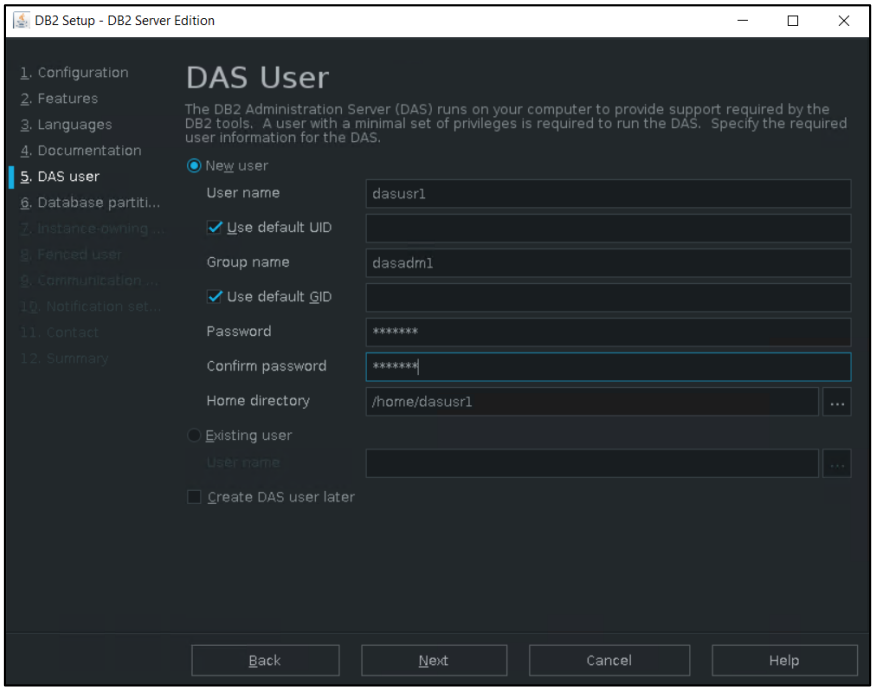
- enter installation directory for DB2. Afterwards you can select either "Custom" as installation Type in order to customize different properties for DB2 such as the DB2 instance port or select "Typical" and the default settings will be used. In this example I have selected "Custom" installation



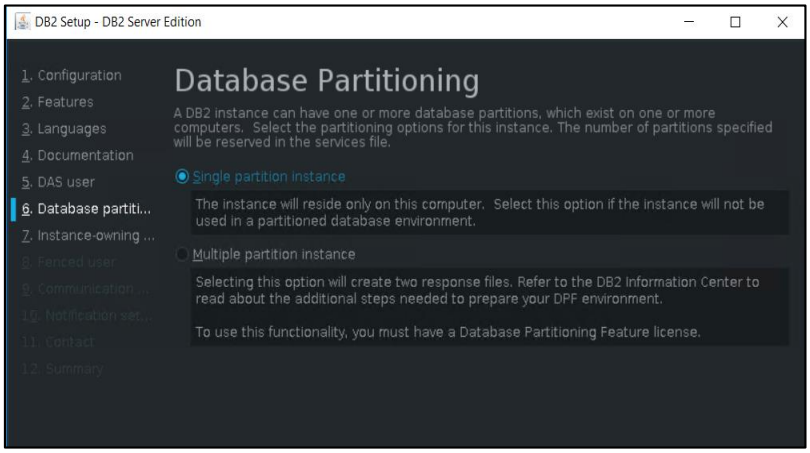
Make sure you select “Create an instance” and “I agree to the IBM terms”.

- select the DB2 features you want to install (you can let them as default):

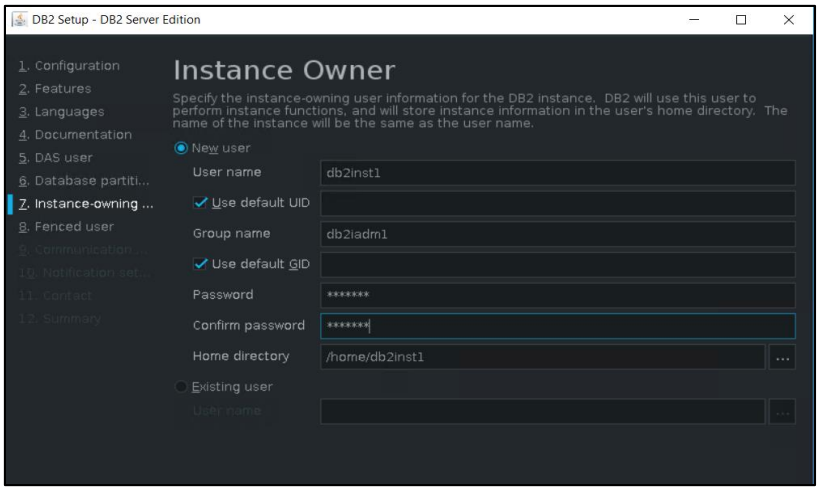
- configure DAS user name (by default dasusr1 user will be created; add a password for it):



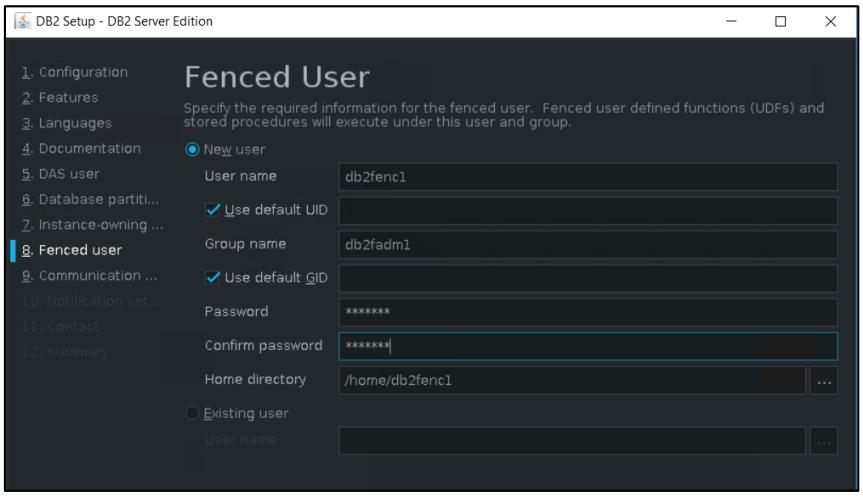
- select single partition instance for DB2



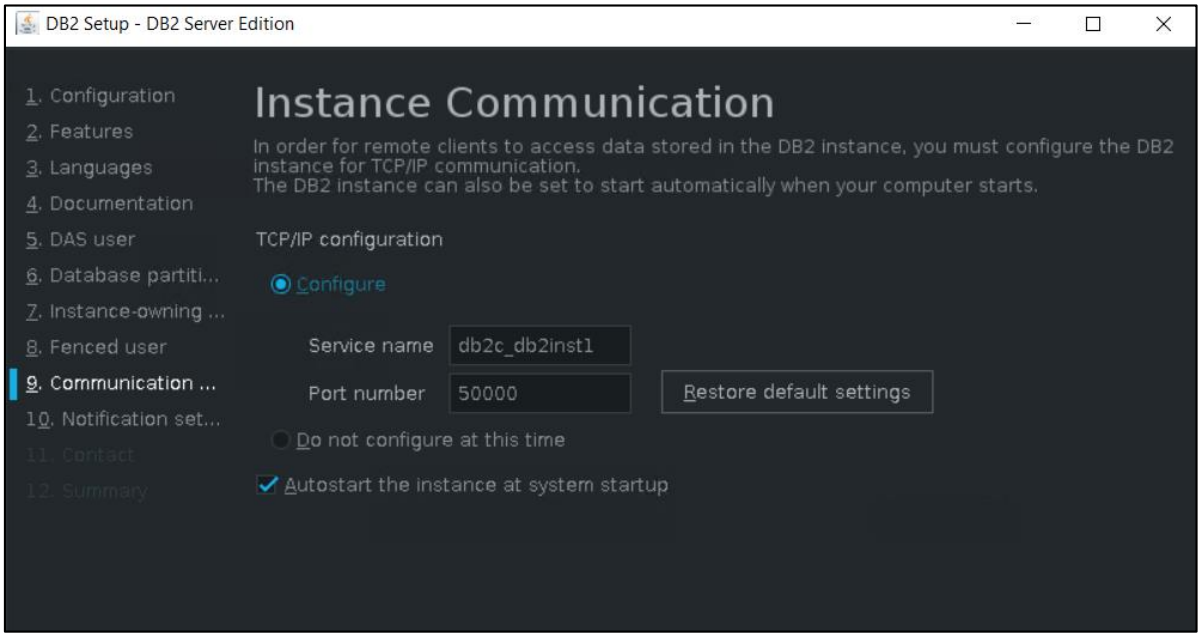
- configure Instance owner user (by default db2inst1 user will be created):



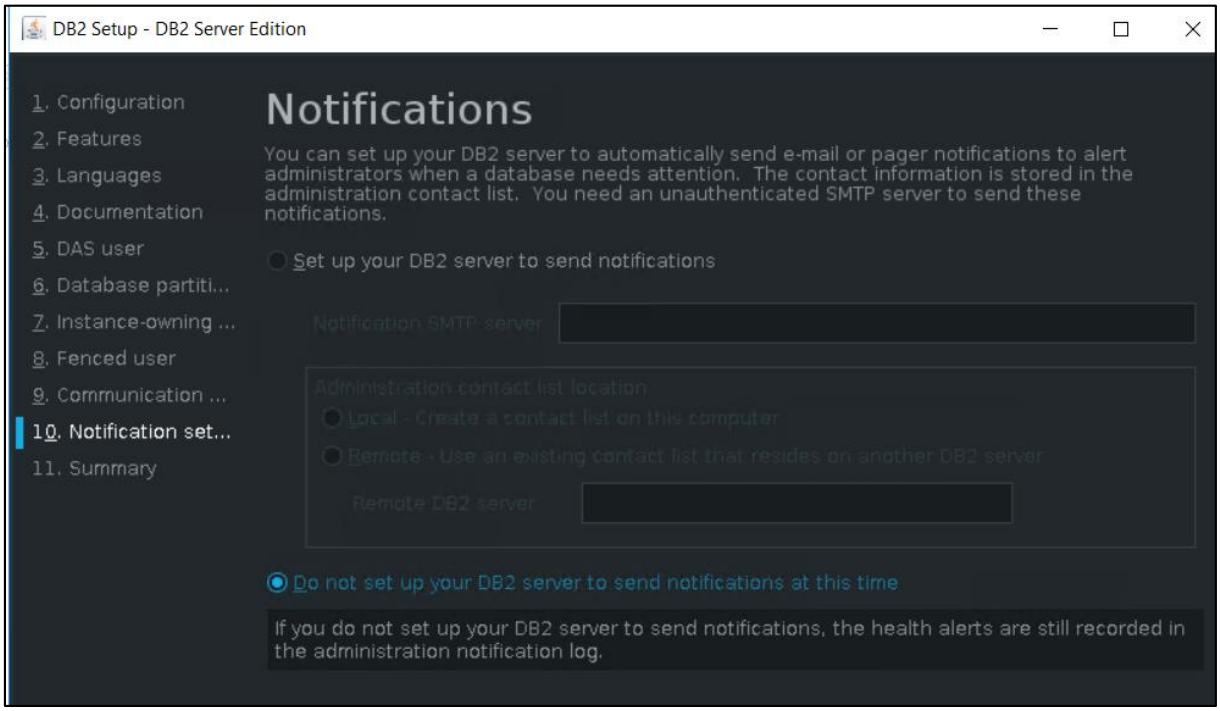
- configure fenced user for DB2 (by default db2fenc1 user will be created)



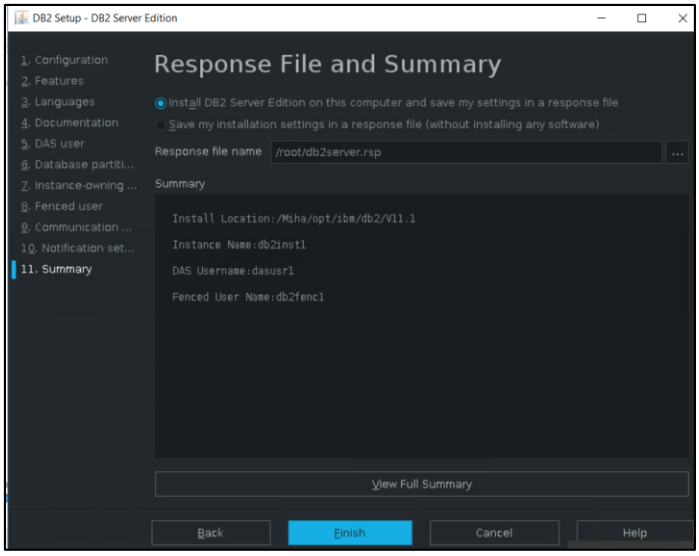
- Change the DB2 port or service name if needed, by default DB2 port will be 50000:

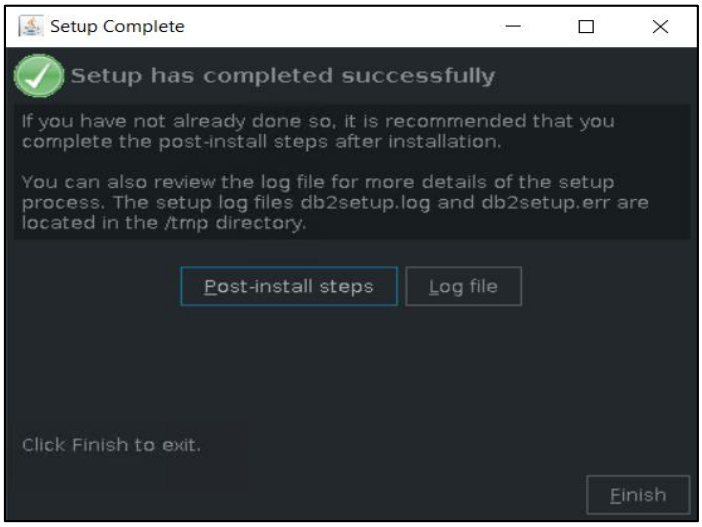


- configure if you want the DB2 server to send notification; within this example this won't be configured:



- select "Install DB2 Server Edition" option and "Finish" to start the installation and make sure everything completed successfully:





- login on the server with db2inst1 user and go to DB2 installation Directory -> bin

```
[db2inst1@tother1 bin]$ pwd
/Miha/opt/ibm/db2/V11.1/bin
```

- run db2val script and make sure the validation is successful:

```
[db2inst1@tother1 bin]$ ./db2val
DBI1379I  The db2val command is running. This can take several minutes.

DBI1335I  Installation file validation for the DB2 copy installed at
      /Miha/opt/ibm/db2/V11.1 was successful.

DBI1339I  The instance validation for the instance db2inst1 was
      successful.

DBI1343I  The db2val command completed successfully. For details, see
      the log file /tmp/db2val-190114_045758.log.
```

- add license for DB2 – unzip downloaded license package

```
[root@tother1 Miha]# cd tmpDB2Activation/
[root@tother1 tmpDB2Activation]# ls
DB2_WSE_VS_QS_Activation_11.1.zip
[root@tother1 tmpDB2Activation]# unzip DB2_WSE_VS_QS_Activation_11.1.zip
Archive:  DB2_WSE_VS_QS_Activation_11.1.zip
```

- go to <extract_path>/wse_s/db2/licence directory:

```
[db2inst1@tother1 license]$ pwd
/Miha/tmpDB2Activation/wse_s/db2/license
```

- run db2licm -a db2wse_s.lic

```
[db2inst1@tother1 license]$ db2licm -a db2wse_s.lic

LIC1402I  License added successfully.


LIC1426I  This product is now licensed for use as outlined in your License Agreem
ent.  USE OF THE PRODUCT CONSTITUTES ACCEPTANCE OF THE TERMS OF THE IBM LICENSE A
GREEMENT, LOCATED IN THE FOLLOWING DIRECTORY: "/Miha/opt/ibm/db2/V11.1/license/en
_US.iso88591"
[db2inst1@tother1 license]$
```

- run db2licm -l to make sure everything is ok

```
[db2inst1@tother1 license]$ db2licm -l
Product name:                     "DB2 Workgroup Server Edition"
License type:                     "Server Option"
Expiry date:                      "Permanent"
Product identifier:               "db2wse"
Version information:              "11.1"
Max amount of memory (GB):        "128"
Enforcement policy:               "Soft Stop"
```

Upgrade to 11.1.2.2

Download link for DB2 11.1 Mod 2 Fix Pack 2
http://www-01.ibm.com/support/docview.wss?uid=swg24043789

fix pack: → DB2-linuxx64-universal_fixpack-11.1.2.2-FP002
DB2 11.1.2 Fix Pack 2 for Linux/x86-64 (64 bit), DB2 Universal Fix Pack

- stop DB2; connect to the server as db2inst1 user run: db2stop

```
[db2inst1@tother1 ~]$ db2stop
01/14/2019 05:03:17     0   0   SQL1064N  DB2STOP processing was successful.
SQL1064N  DB2STOP processing was successful.
```

- go to /universal directory from the one where you have extracted the fix and run ./installFixPack script

```
[root@tother1 tmpDB2FP2]# ls
v11.1.2fp2_linuxx64_universal_fixpack.tar.gz
[root@tother1 tmpDB2FP2]# tar xvzf v11.1.2fp2_linuxx64_universal_fixpack.tar.gz
```

```
[root@tother1 universal]# pwd
/Miha/tmpDB2FP2/universal
```

- enter DB2 installation directory and continue with the installation

```
[root@tother1 universal]# ./installFixPack
Enter the full path of the base installation directory:

------------------------------------------------------------
/Miha/opt/ibm/db2/V11.1
```

```
[root@tother1 universal]# ./installFixPack
Enter the full path of the base installation directory:

------------------------------------------------------------
/Miha/opt/ibm/db2/V11.1

Do you want to choose a different installation directory for the fix pack? [yes/
no]

------------------------------------------------------------------------------
----
no

DBI1017I  installFixPack is updating the database products installed in
      location /Miha/opt/ibm/db2/V11.1.


DB2 installation is being initialized.
```

- make sure the update completed successfully:

```
The execution completed successfully.

For more information see the DB2 installation log at
"/tmp/installFixPack.log.5555".
```

Setting up the server for TBSM Dash Server (server 2)

Install Installation Manager 1.8.9

Download link:
https://www-945.ibm.com/support/fixcentral/swg/selectFixes?parent=ibm%7ERational&product=ibm/Rational/IBM+Installation+Manager&release=1.8.9.0&platform=Linux&function=all&useReleaseAsTarget=true

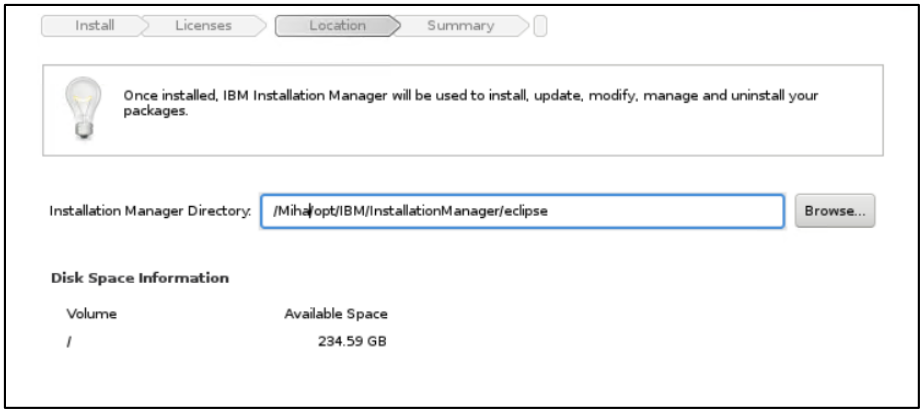
refresh pack: → 1.8.9.0-IBMIM-LINUX-X86-20180313_1417	2018/03/23
IBM Installation Manager Install Kit for all x86 Linux versions supported by version 1.8.9.0	

- extract IM 1.8.9 package, go to the extracted directory and run: ./install

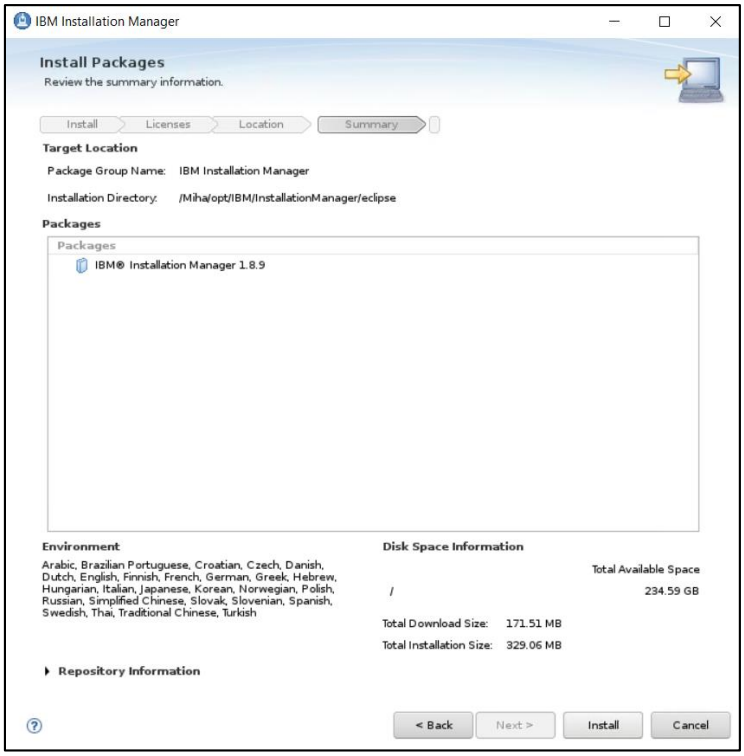
```
[root@motleys1 tmpIM]# ls
con-disk-set-inst.sh  installc.ini                repository.config
configuration         install.ini                 repository.xml
documentation         install.xml                 silent-install.ini
groupinst             jre_7.0.100020.20180227_1440  tools
groupinstc            license                     userinst
groupinstc.ini        native                      userinstc
groupinst.ini         Offerings                   userinstc.ini
install               plugins                     userinst.ini
installc              readme.html                 user-silent-install.ini
[root@motleys1 tmpIM]#
[root@motleys1 tmpIM]#
[root@motleys1 tmpIM]# ./install
```

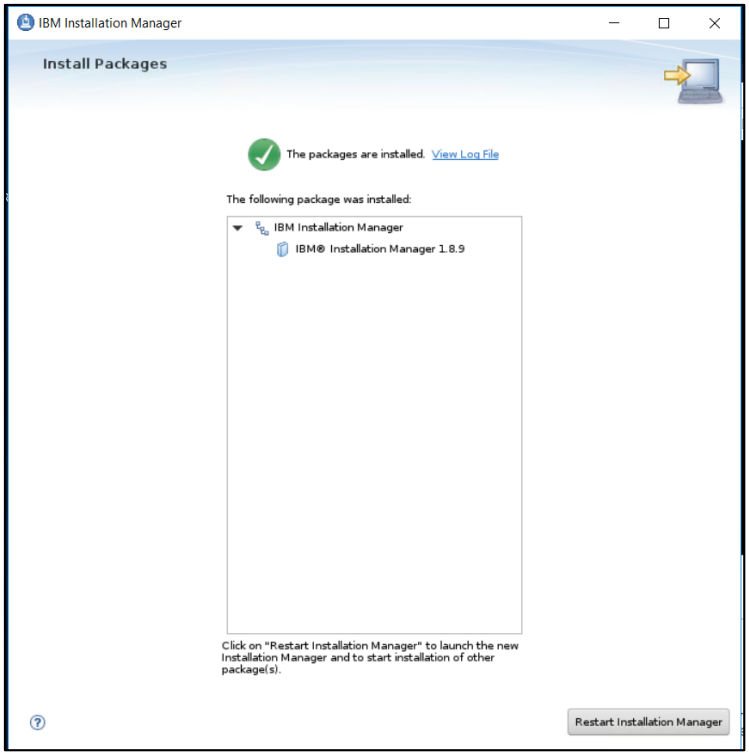
- select IBM Installation Manager Version 1.8.9 for this to be installed

- select the directory where you want to install Installation Manager



- continue with the installation by selecting "next" and "install". Make sure everything worked fine, you should get "the packages are installed" message at the end:





Install WAS 8.5.5.15, JazzSM 1.1.3.1/DASH 3.1.3.1 and Java SDK 8.0.5.27

You can install all these directly, at the same step.

- download and extract WAS 8.5.5.9 core and 8.5.5 Fix Pack 15

Download link for 8.5.5 Fix Pack 15:
https://www-01.ibm.com/support/docview.wss?uid=ibm10871944

- add both repositories within Installation Manager -> Preferences section:

<extracted_path_8.5.5.9>/linux_x86_64/disk1/diskTag.inf
<extracted_path_8.5.5.15>/repository.config

- download and extract JazzSM 1.1.3.1 package and add the repository within Installation Manager -> Preferences panel:

<extracted_path_JazzSM>/JazzSMRepository/disk1/diskTag.inf

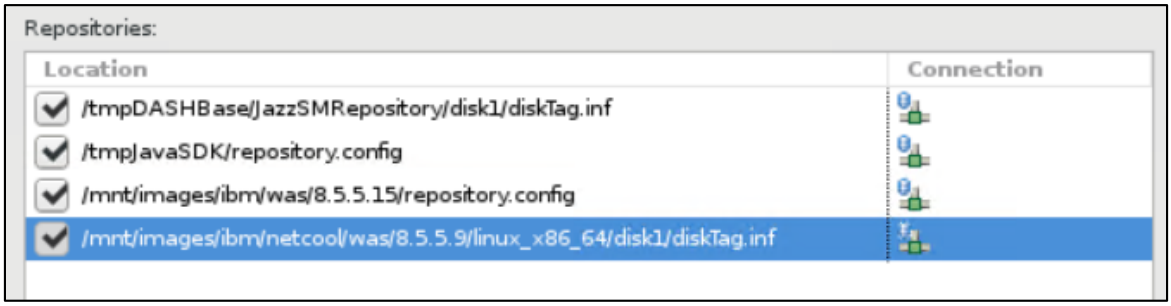
- download and extract Java 8.0.5.27 package and add the repository within IM

<extracted_path_java>/repository.config

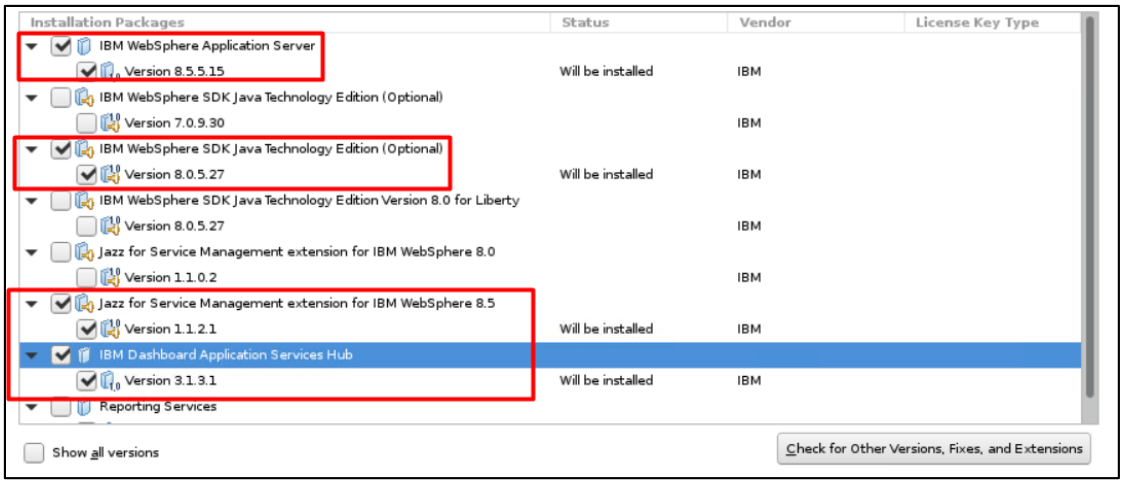
Download link for Java SDK 8.0.5.27 for WAS 8.5.5.15:

https://www-01.ibm.com/support/docview.wss?uid=ibm10873198

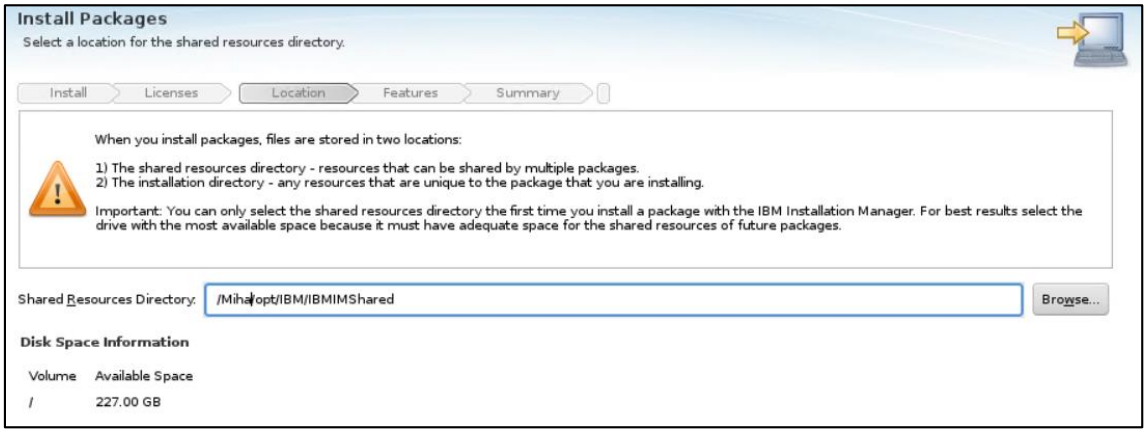
The following list of repositories should be added for this installation:



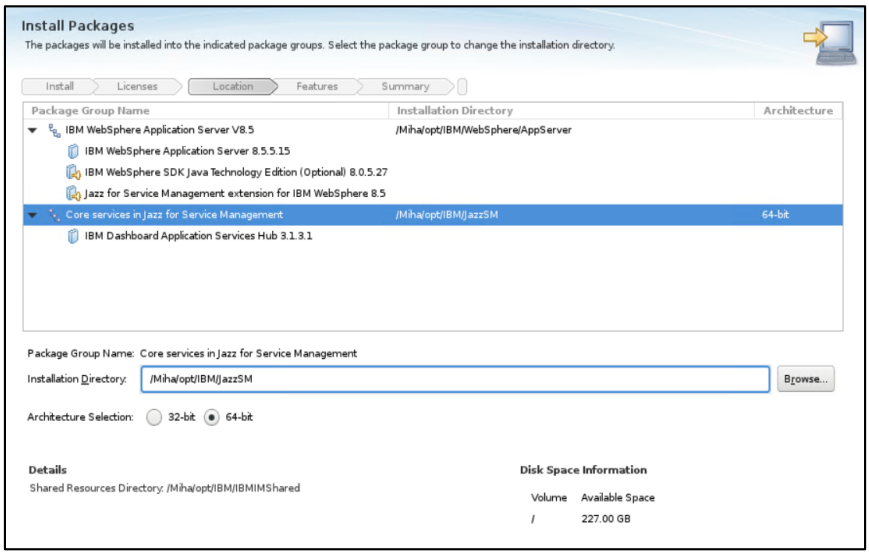
- return to Installation Manager main menu and select the Install option
- select the products you want to install; you should select at least: WAS 8.5.5.15, Java SDK 8.0.5.27, Jazz for IBM WebSphere 8.5 version 1.1.2.1 and IBM Dash 3.1.3.1.



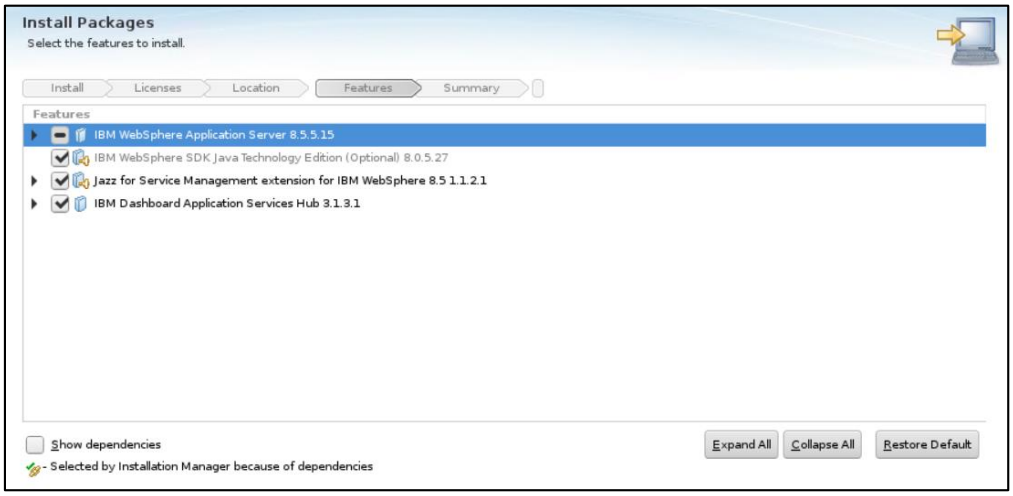
- continue with the installation and enter the location path for the shared resources directory:



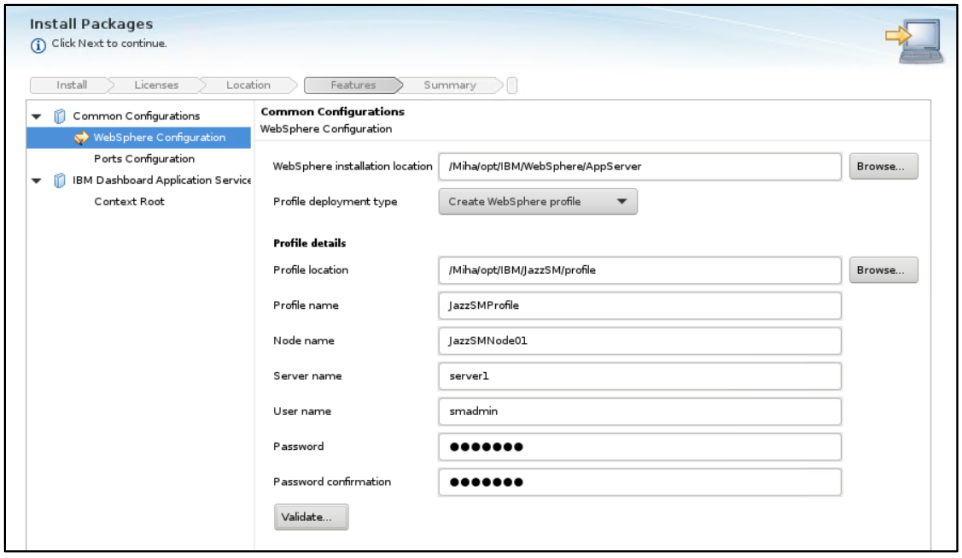
- enter installation directory for WAS 8.5.5.15 and for DASH (you have to select each of them to change their directories):



- continue with the installation:

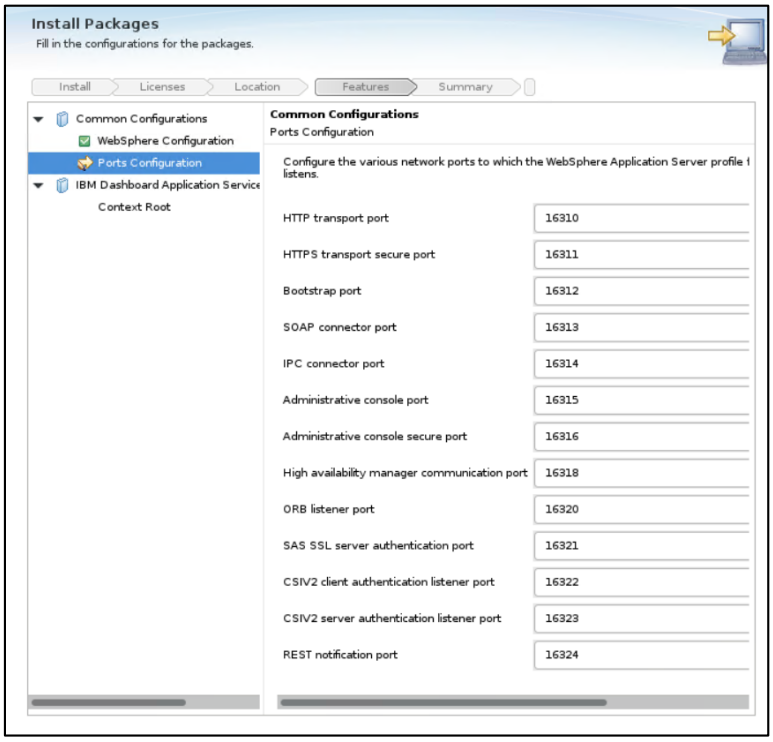


- enter WebSphere installation location as you initially added within the previous screens and the details needed to create a WAS profile (smadmin user password); afterwards click on the "Validate" option:

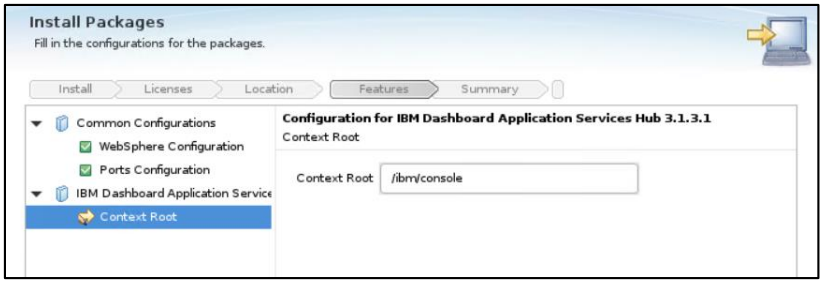


- change installation ports if needed and continue with the installation

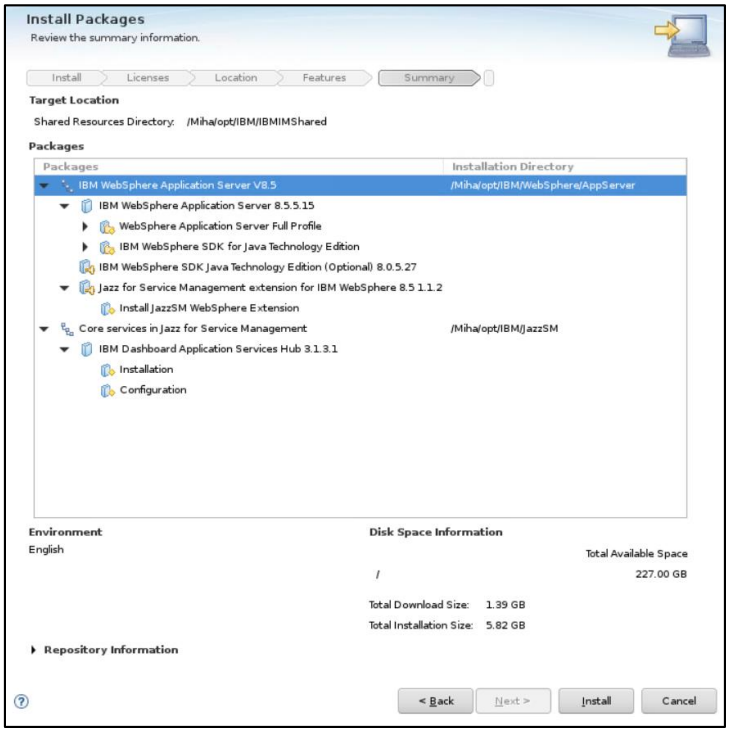
In case you are installing everything on the same box, these ports are easier to be changed than the ones from Impact as they cannot run on the same port at the same time.

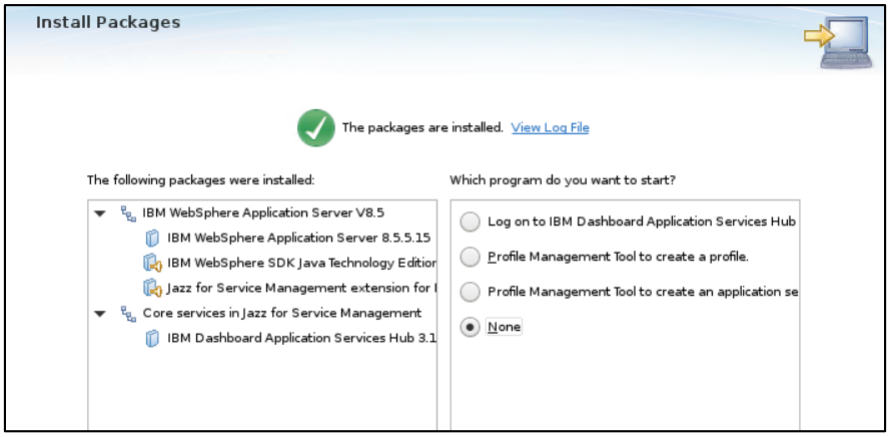


- by default, context root is /ibm/console; continue with the installation



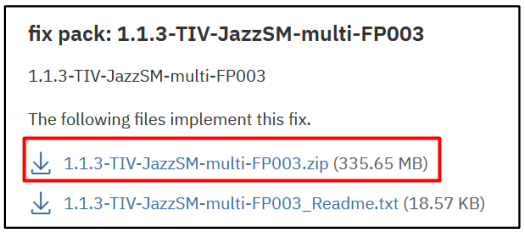
- proceed with the installation and make sure everything completed successfully:





Upgrade to JazzSM/DASH Fix Pack 3

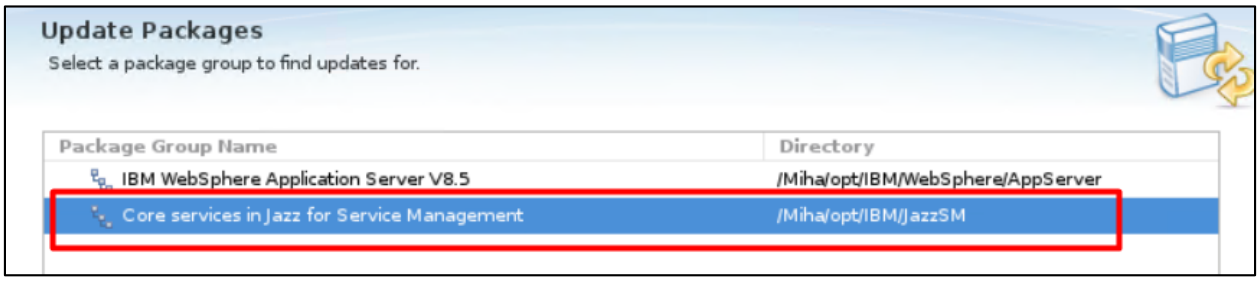
Download link:
https://www-945.ibm.com/support/fixcentral/swg/downloadFixes?parent=ibm%2FTivoli&product=ibm/Tivoli/Jazz+for+Service+Management&release=1.1&platform=All&function=fixId&fixids=1.1.3-TIV-JazzSM-multi-FP003&includeRequisites=1&includeSupersedes=0&downloadMethod=http



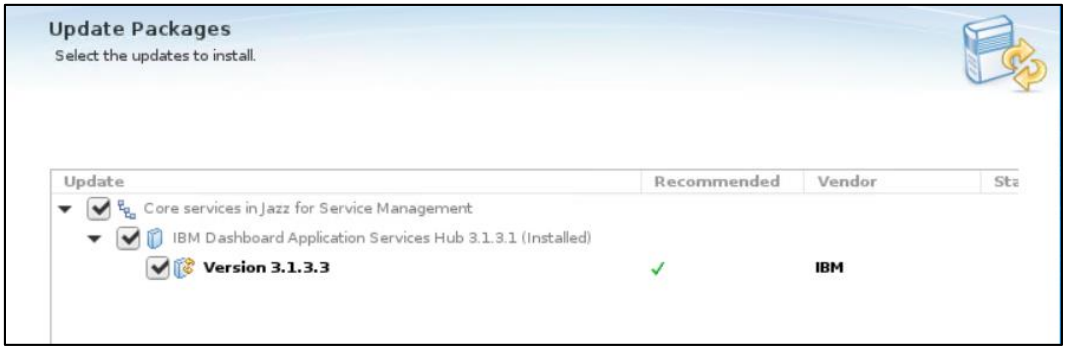
- download and extract FP3 package
- add the repository within Installation Manager -> preferences section

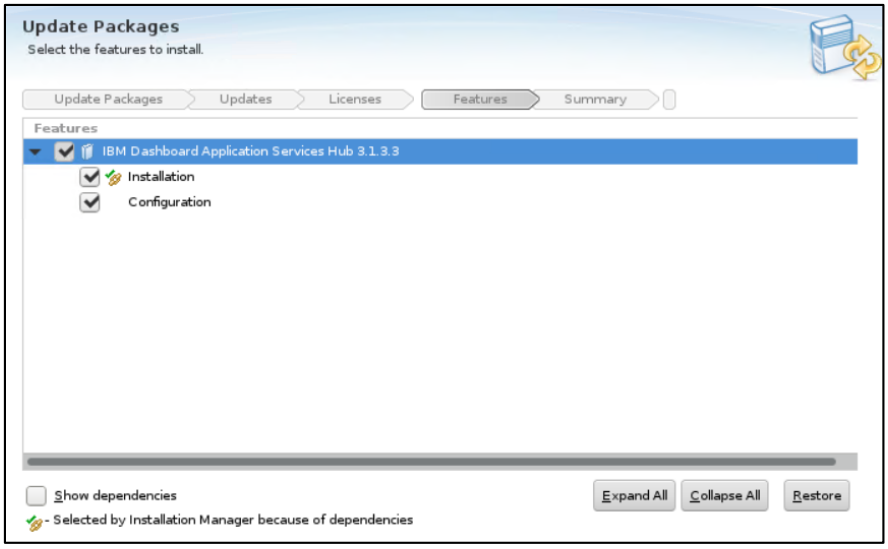
<extracted_path_JazzFP3>/JazzSMFPRepository/disk1/diskTag.inf

- return to IM main menu, select the Update option and choose Jazz from the list:

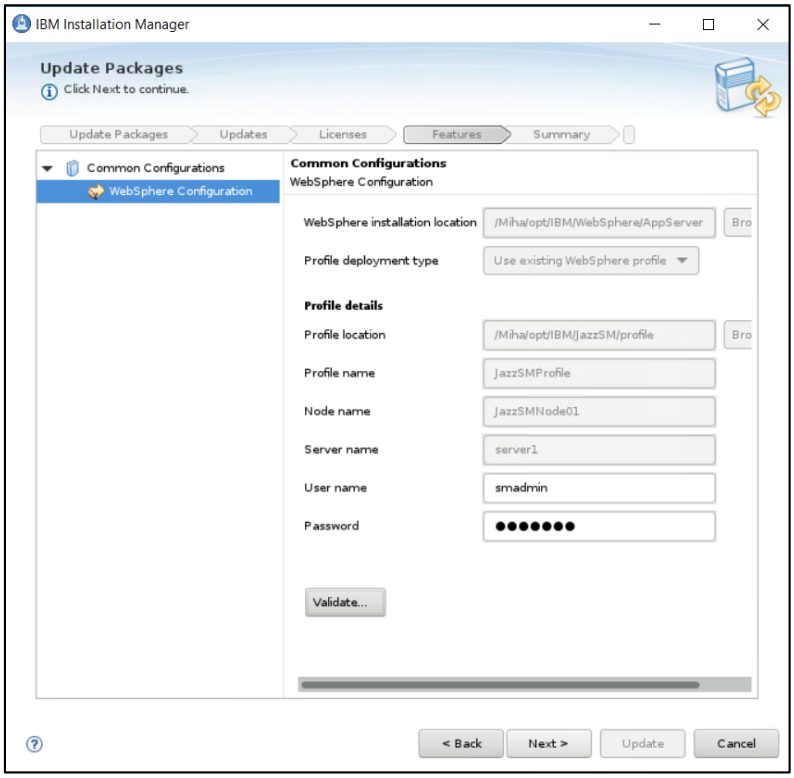


- continue with the installation:

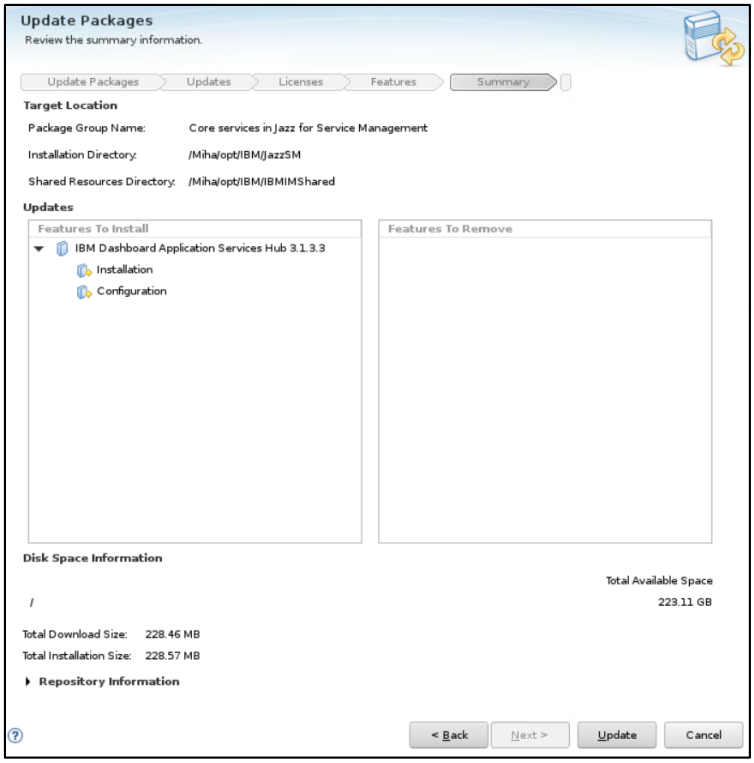


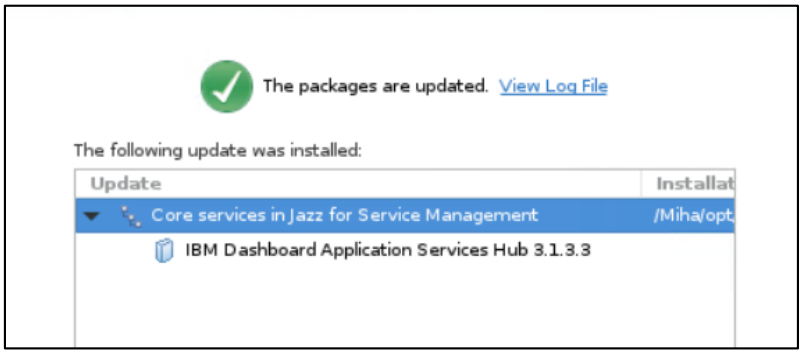


- enter smadmin user details and click on the "*Validate*" option:



- click on "Update" and make sure everything completed successfully:





Install WebGUI 8.1.0.14 and upgrade to Fix Pack 16

- download and extract the package for WebGUI 8.1.0.14 as well as the package for WebGUI 8.1 fix pack 16

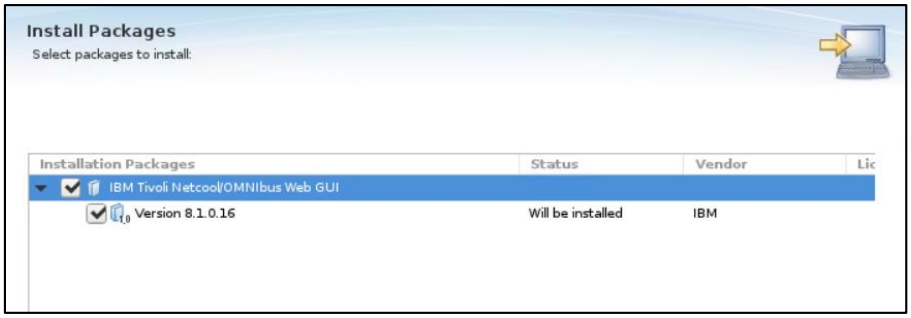
Download link for Fix Pack 16:
https://www-01.ibm.com/support/docview.wss?uid=ibm10791445

- add both WebGUI and fix pack repositories within Installation Manager -> Preferences section:

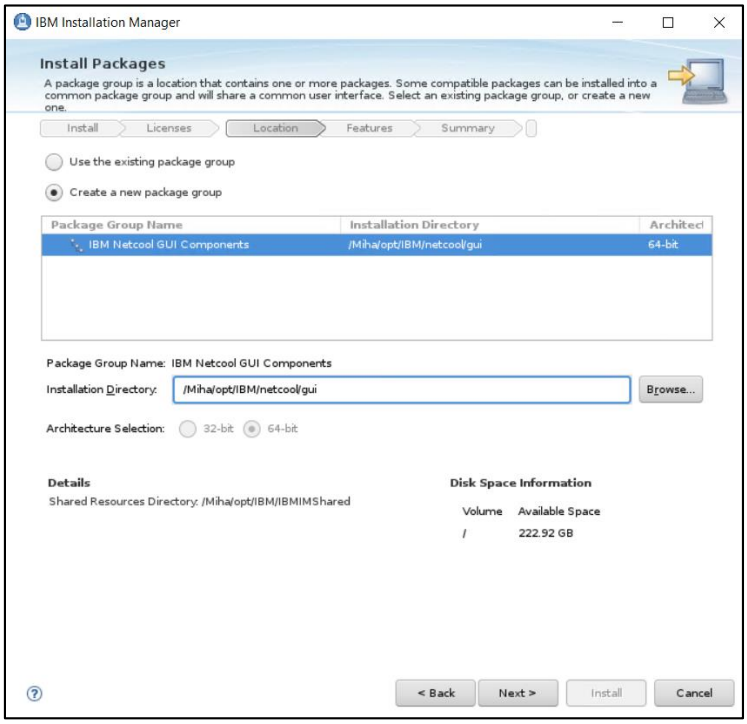
<extracted_path_webgui_base>/OMNIbusWebGUIRepository/repository.config
<extracted_path_webgui_FP16>/OMNIbusWebGUIRepository/composite/repository.config

Add the repositories for NOI extension as well if needed.

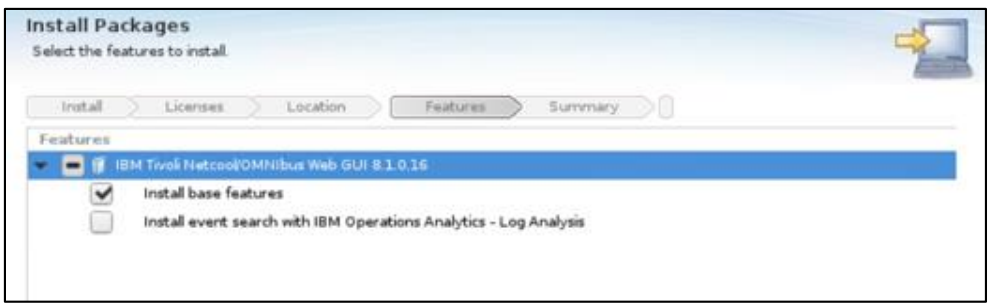
- select Install wizard from IM and choose the product to be installed:



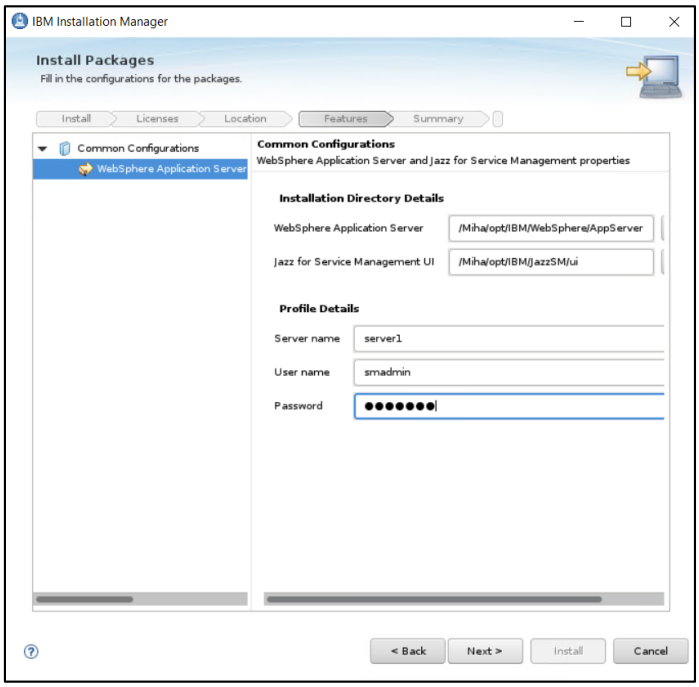
- enter installation path directory:

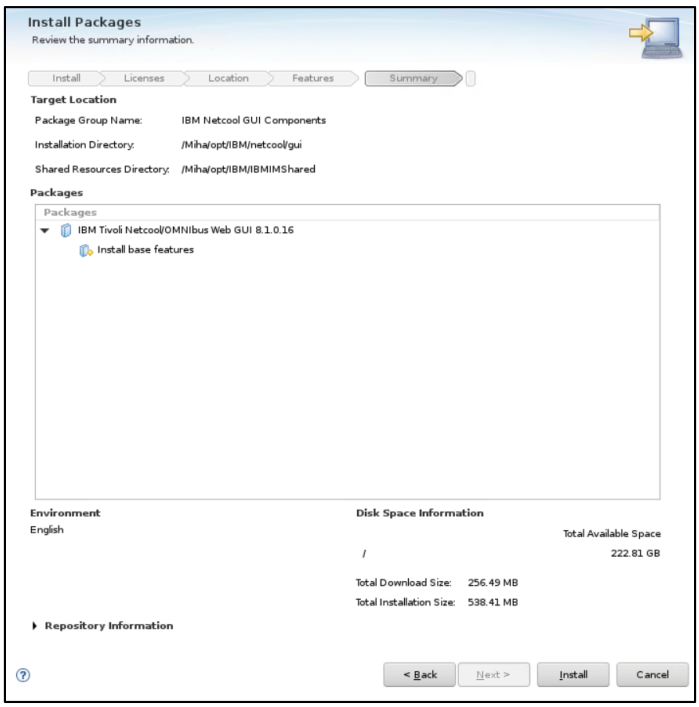


- select as least “Install base feature” option:

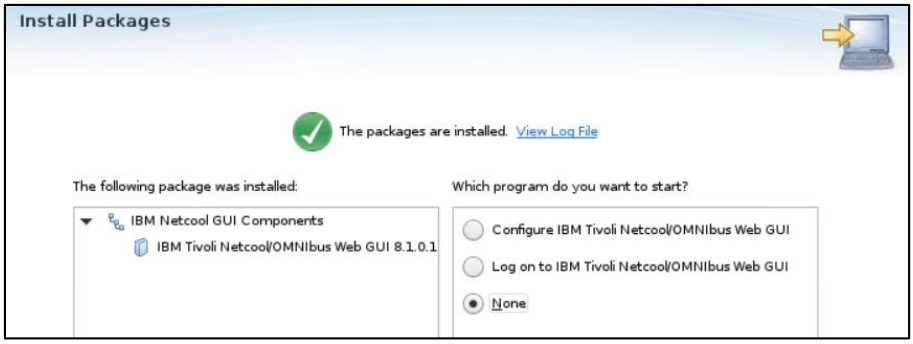


- enter WebSphere and JazzSM installation directories as well as the profile details for WebGUI (username and password). Afterwards continue with the installation:



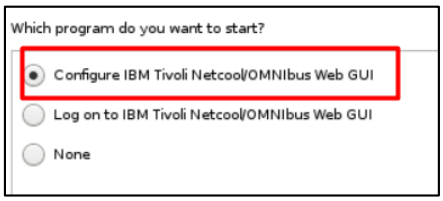


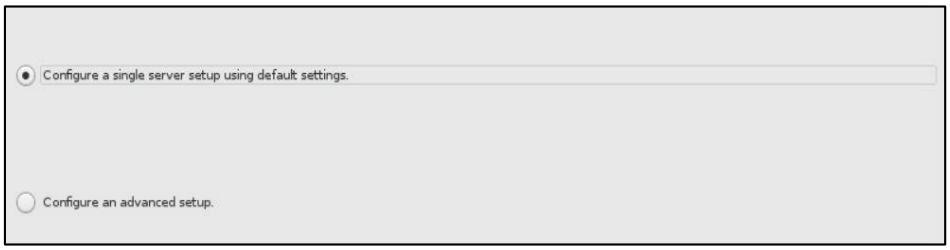
- make sure everything completed successfully. Afterwards WebGUI configuration can be made within the wizard that is available to be selected or manually after completing the installation.



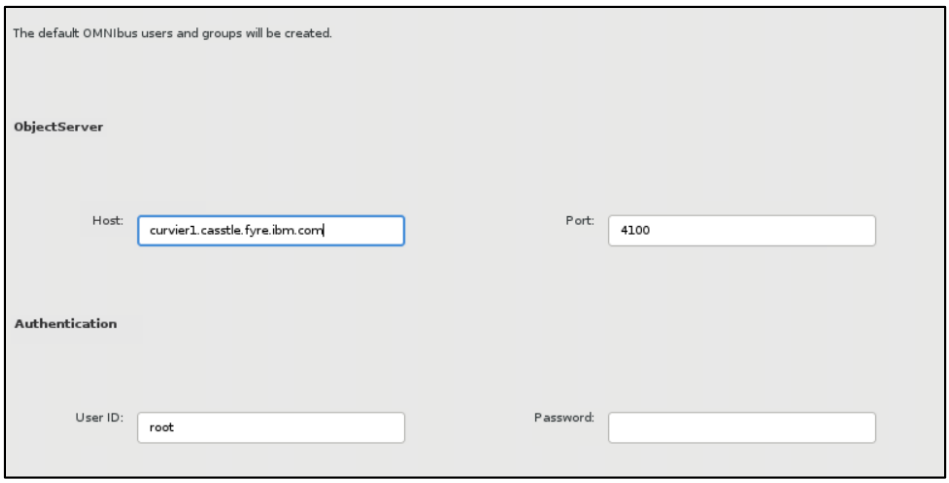
Add object server as repository for WebGUI and create datasource in WebGUI console

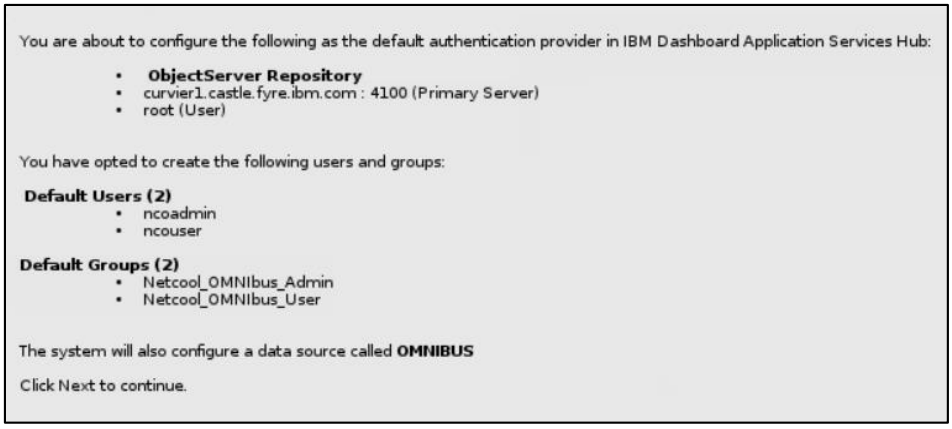
Option A: Use the wizard that is available at the end of webgui installation.



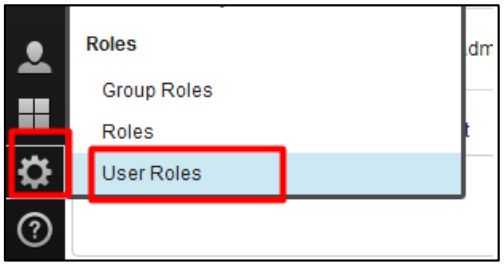


- enter object server details (host, port, user id and password):





At the end login to webgui console and add roles to smadmin user.



Option B: Select "none" at the end of the installation and manually add object server as repository for webgui and create a datasource in webgui console.

- go to $WAS_HOME/bin directory

```
[root@motleys1 eclipse]# cd /Miha/opt/IBM/WebSphere/AppServer/bin/
```

- use confvmm4ncos.sh script to add the created object server as repository for webgui.

Run the following command after you replace with your own values:

./confvmm4ncos.sh $JazzSM_HOME/profile objserver_root_user objserver_root_user_pass FQDN_omnibus objserver_port

Command example:

```
[root@motleys1 bin]# ./confvmm4ncos.sh /Miha/opt/IBM/JazzSM/profile root '' busy1.castle.fyre.ibm.com 4100
```

```
[root@motleys1 bin]# ./confvmm4ncos.sh /Miha/opt/IBM/JazzSM/profile root '' busy1.castle.fyre.ibm.com 4100
configfile=/Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/wim/config/wimconfig.xml
Warning : 0
Result - Success : 0
Please restart the server for these changes to take effect.
```

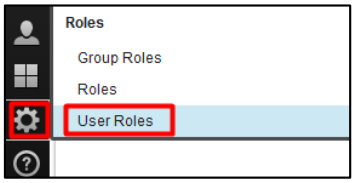
- restart webgui by running below commands:

./stopServer.sh server1
./startServer.sh server1

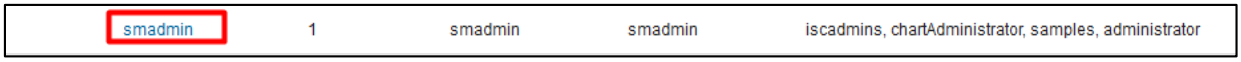
```
[root@motleys1 bin]# /Miha/opt/IBM/JazzSM/profile/bin/stopServer.sh server1 -username smadmin -password netco
ol
```

```
[root@motleys1 bin]# /Miha/opt/IBM/JazzSM/profile/bin/startServer.sh server1
```

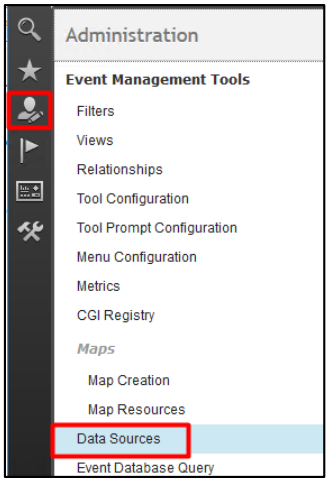
- login to webgui console and add roles to smadmin user

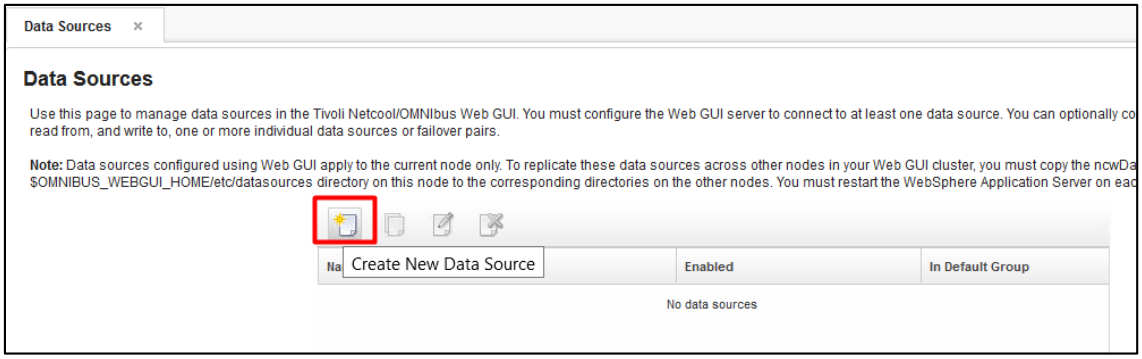


- click on Search -> select smadmin user -> select all roles -> save configuration

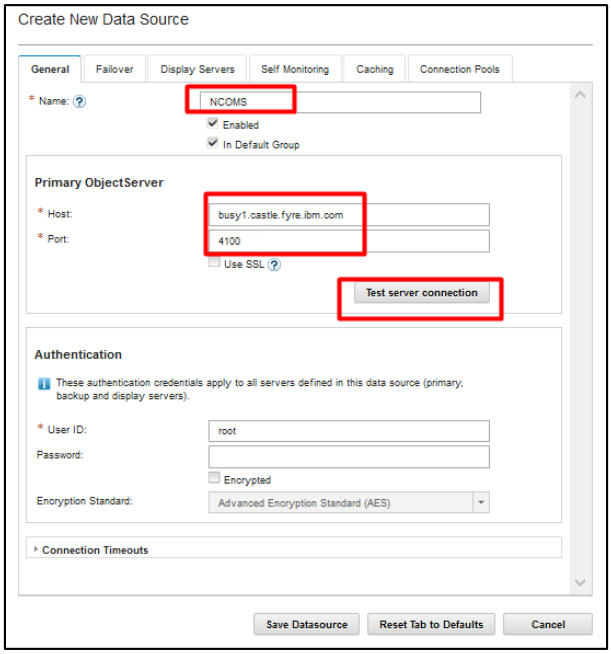


- logout/login with this user.
- create datasource within webgui to the object server created on server 1:





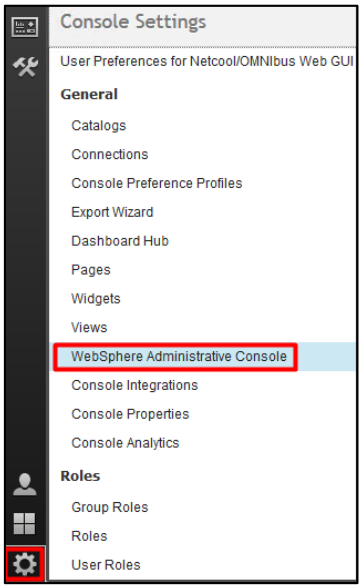
- enter a name for this data source, add the hostname where the object server was installed, and the port used for this one; test the connection and make sure it can successfully connect and save the new data source

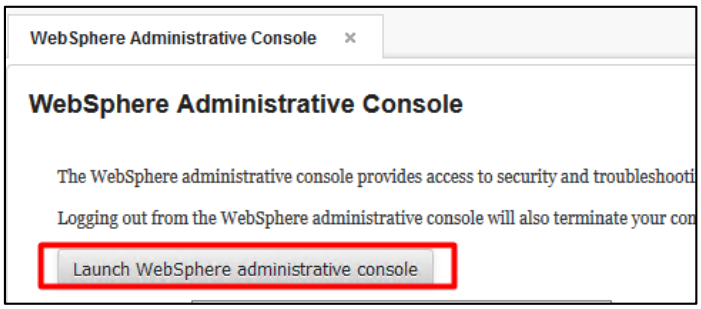


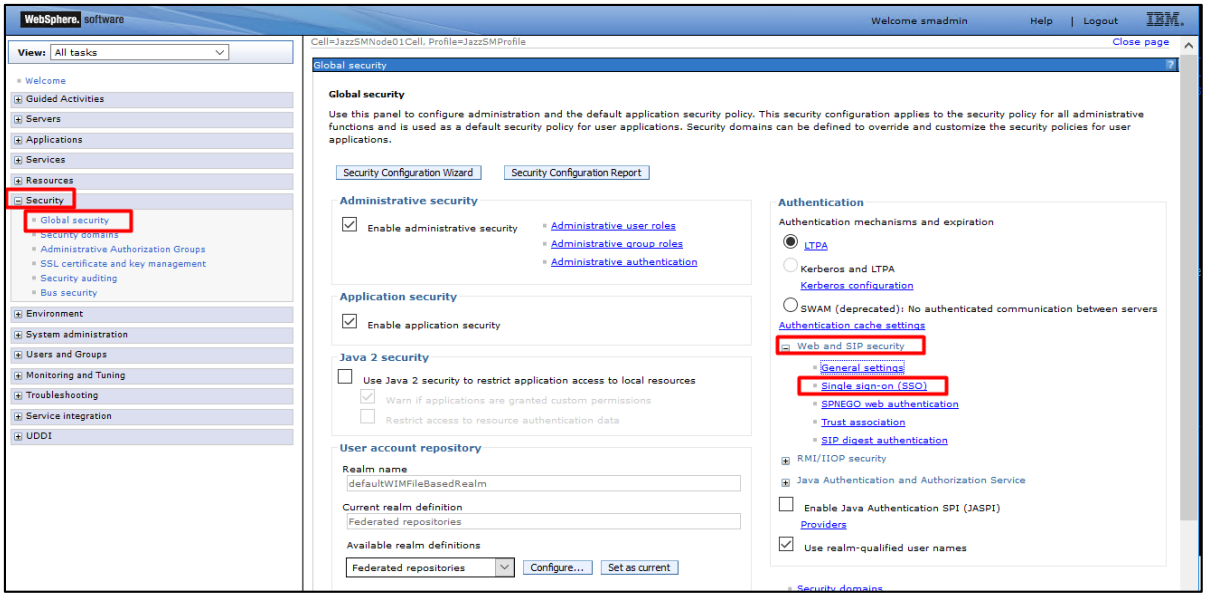
Configure SSO between DASH and Impact

On the DASH side:

- Login to dash -> go to WebSphere administrative console -> security -> global security -> web and sip security -> single sign on

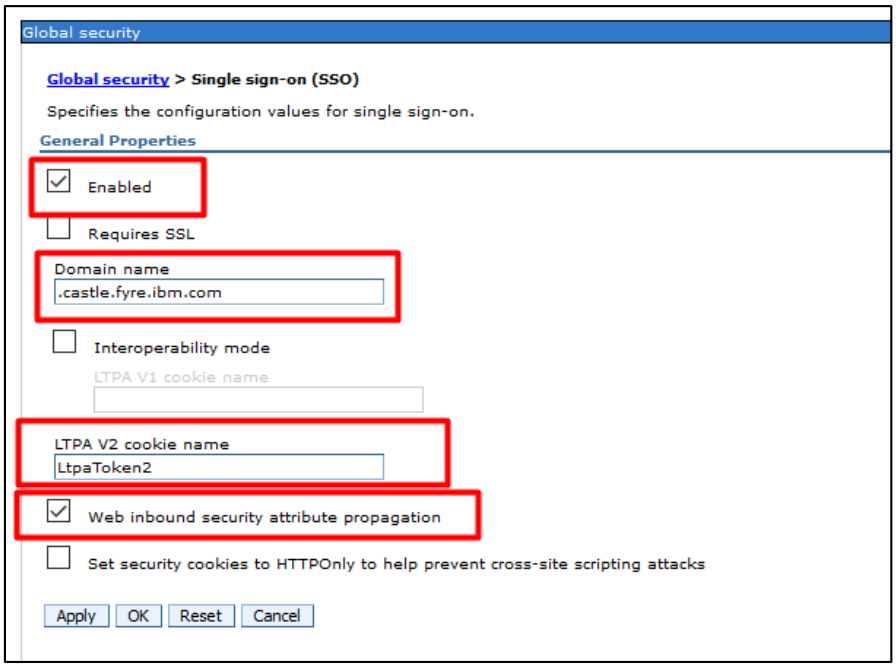




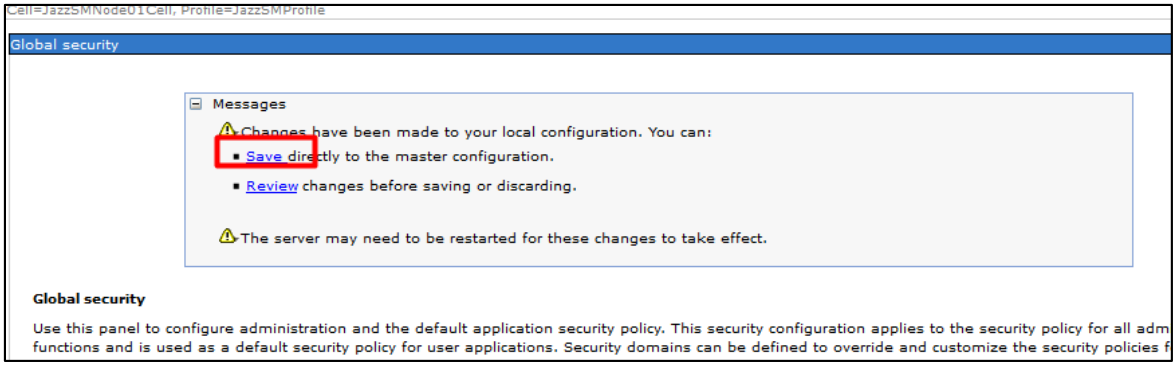


- make sure SSO enabled is checked
- add the domain name of the servers
- add LTPA V2 cookie name and make sure that web inbound security is checked

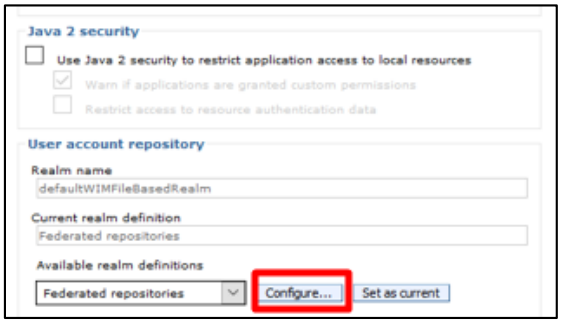
Configure the LTPA V2 cookie name to a unique value. The default is LtpaToken2. Make a note of the LTPA V2 cookie name for the Impact configuration.



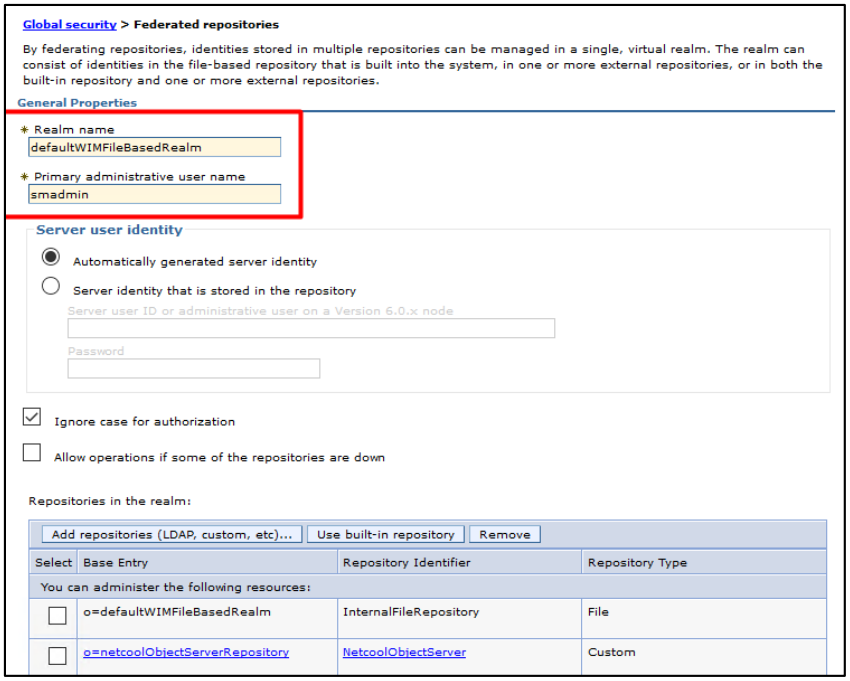
- click OK and select Save from the output you get:



- Under the *Security* menu, select the *Global Security* link -> under the *User account repository* section, select *Configure*



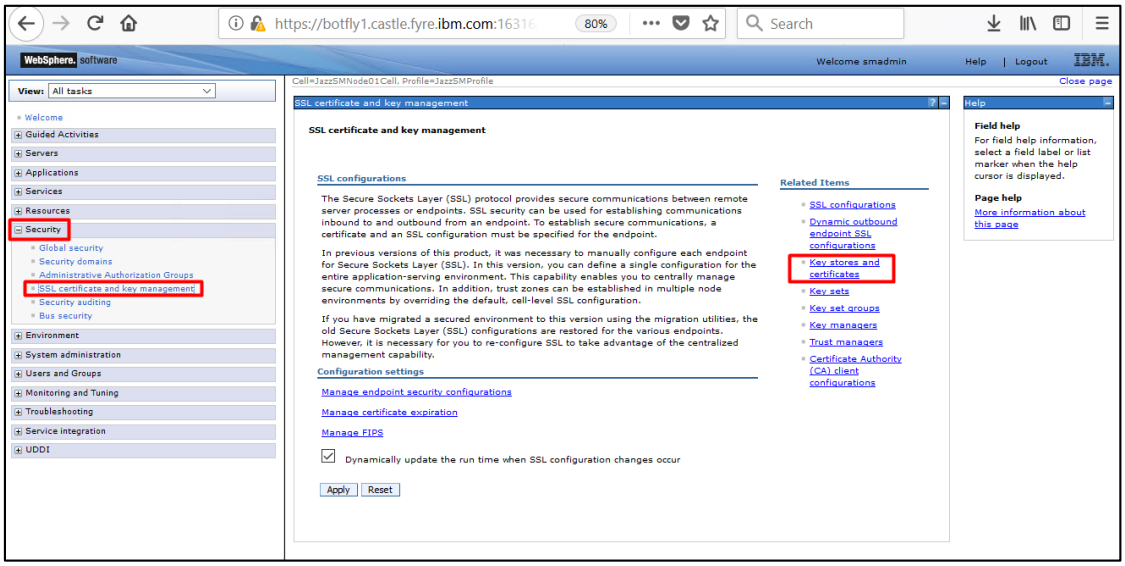
- from here you can configure the Realm name and make note of the name as you will need it for the Impact Realm configuration. defaultWIMFileBasedRealm is default.

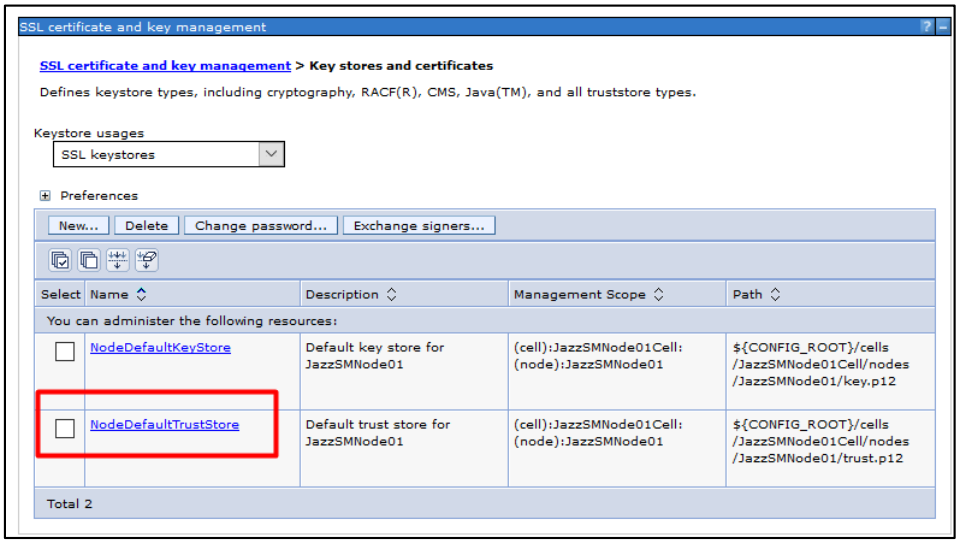


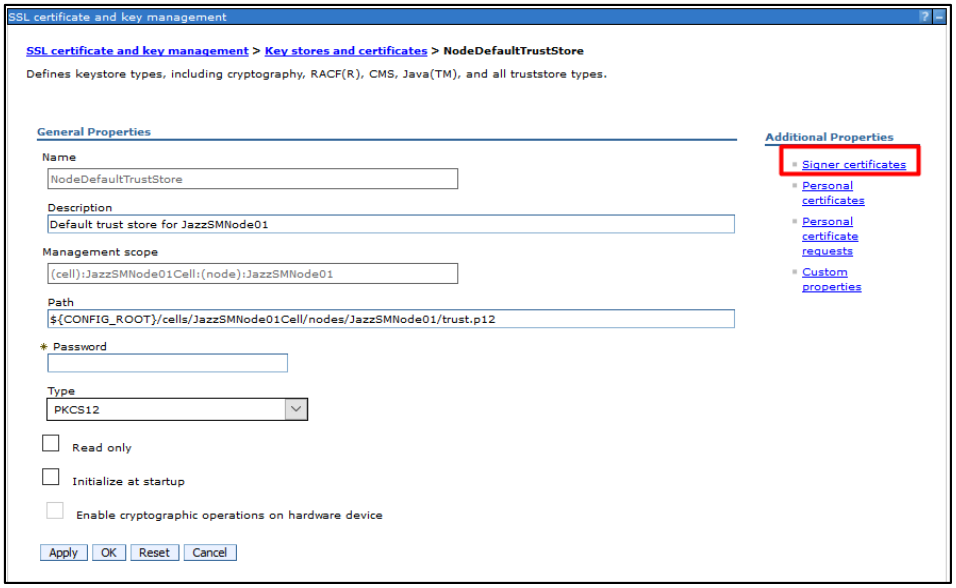
- click OK and Save the configuration

- In the WebSphere console, add the Netcool/Impact SSL certificate into the Dashboard Applications Services Hub truststore

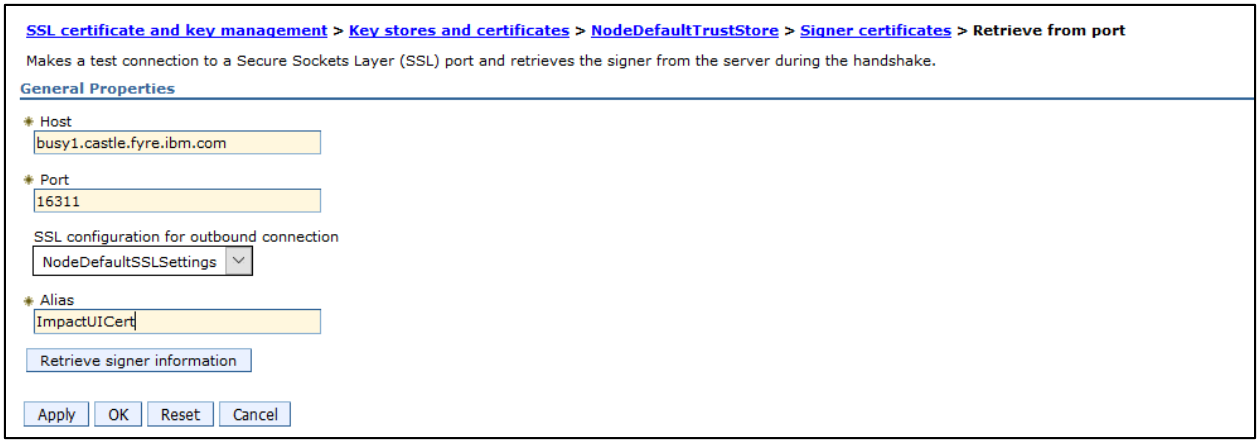
- go to Security -> SSL certificate and key management -> under Related Items section-> key stores and certificates -> NodeDefaultTrustStore -> Signer Certificates -> Retrieve from port:



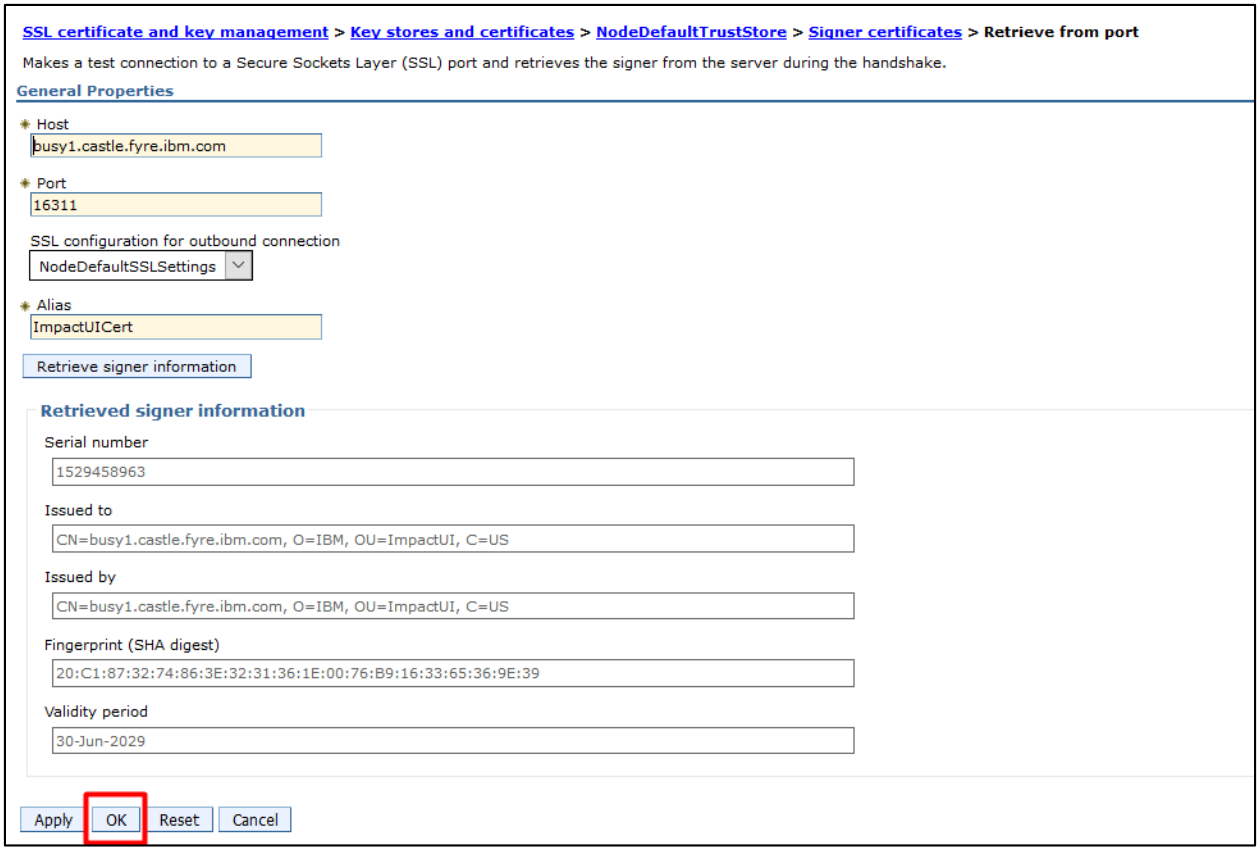




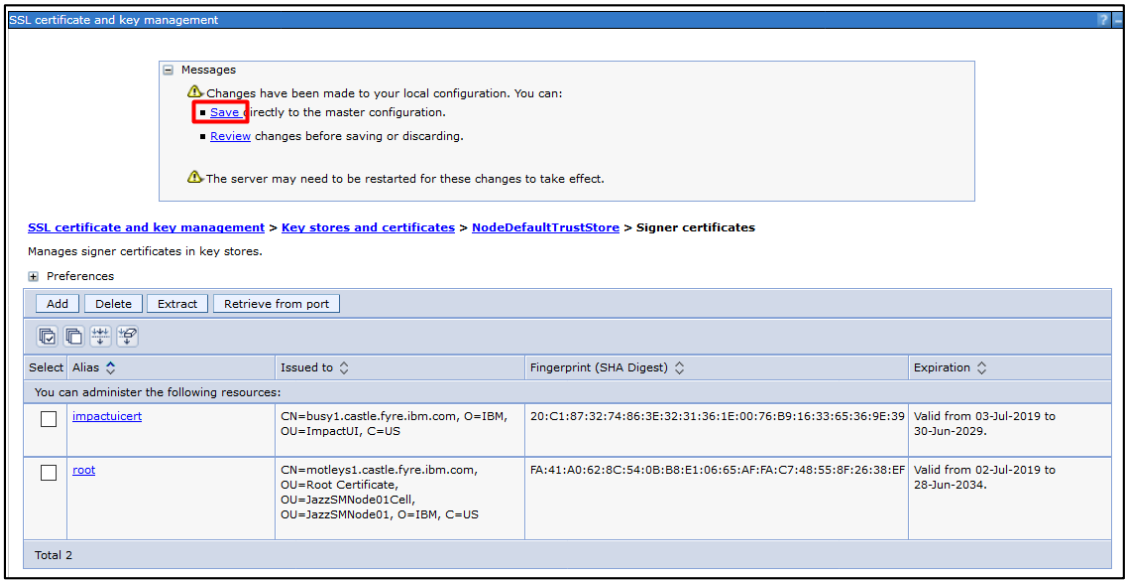
- add the details for the server where Impact is installed (hostname and port)
- add an Alias for the Impact certificate



- select Retrieve signer information option:

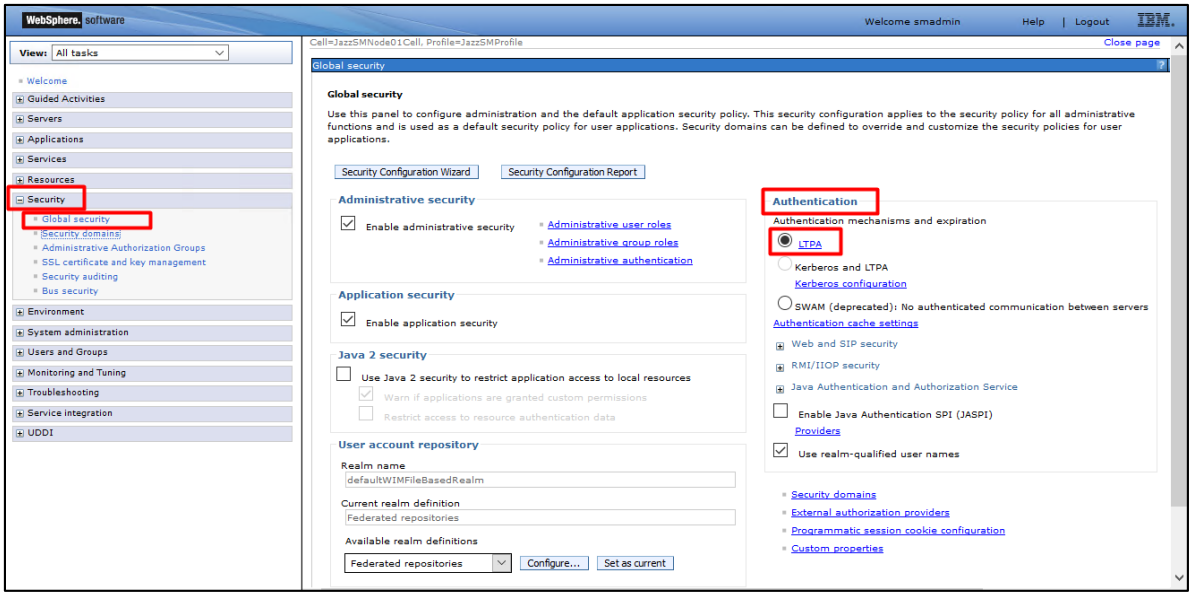


- select OK and Save the configuration



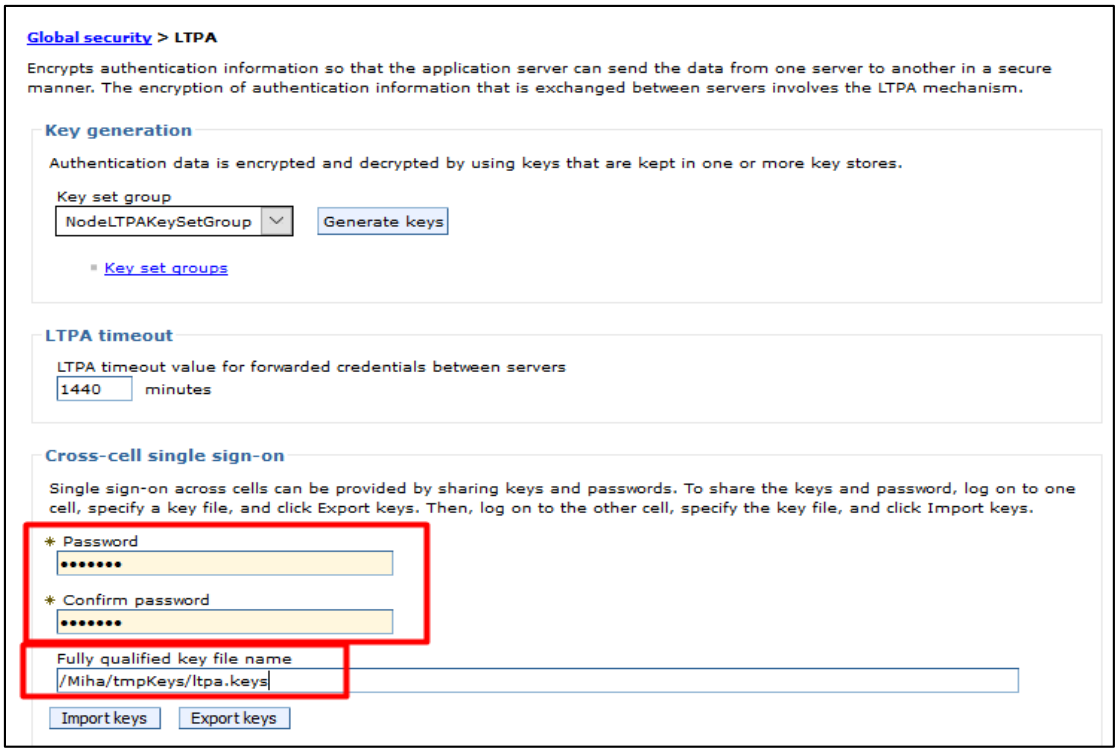
- Export the ltpa.keys file from the DASH and apply a password to the ltpa.keys file

- go to Security -> Global Security -> Authentication -> LTPA

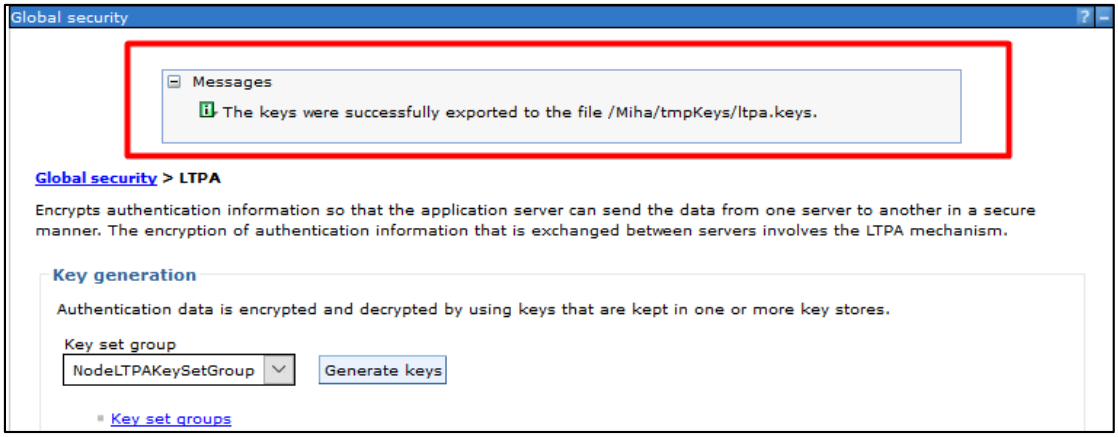


- set password for the ltpa.keys

- enter the complete path to the place where you will store the exported ltpa.keys



- select “Export Keys” option and make sure everything completed successfully:



To cross check this, go to the directory where you have exported ltpa.keys file and check the content of this file:

```
[root@motleys1 Miha]# cat ltpa.keys
#IBM WebSphere Application Server key file
#Wed Jul 03 05:09:05 PDT 2019
com.ibm.websphere.CreationDate=Wed Jul 03 05\:09\:05 PDT 2019
com.ibm.websphere.ltpa.version=1.0
com.ibm.websphere.ltpa.3DESKey=Ee/9QQ5UxZinJQVTNi3RQZUJbYJ/NiSbXajFT1b1A4Y\=
com.ibm.websphere.CreationHost=motleys1.castle.fyre.ibm.com
com.ibm.websphere.ltpa.PrivateKey=9YFKIln/hkf6Qij1826fdxlZ/FLIK9xVdRKc9V5LABSZLVBIUD+cyLbiK2XD5YPIG5LDuMlxx6m
nMwKvpKRiFfjd3vgway4IppprDH0bTBoHsaeTwZnNnIyzf07NjF+alvW7tINOxWlJsYrzPouyTlLm9koHIblNXdGeJ9JlwfZzwou2GgCmF4qH
hv8EqFn2+n2zn9M+Tg6YhCHsqlksvjeEvpbf12XiyUkcdTnAYf8kfGGP9ztovfKKngEW621pHfIQaZUaRAY8iOqGUgNpsYh0eVSLTHdhlU7bL
349TF+rkiYYcb+aFiaehsk2crHtD9aPyW3hWpS/qkahmOoHH+/M2ISnSSes+X1+uJi3Dk0\=
com.ibm.websphere.ltpa.Realm=defaultWIMFileBasedRealm
com.ibm.websphere.ltpa.PublicKey=AK1+0UmkdgAU+fNGb3K5oE8A8etuWTEwU/7FRb6pNmVh/dwfZpABnp3IxmOrAPsq2OdgaA3p0+Gs
hzO1wucDo/za2jRz7b3OddfMHkyoytdU1gWqo0U59D2/hJShQ+ECyIxXP6DEDez87abWrY65cC9pPHfav3e3QnR4sLi84/tNAQAB
```

On the Netcool/Impact side:

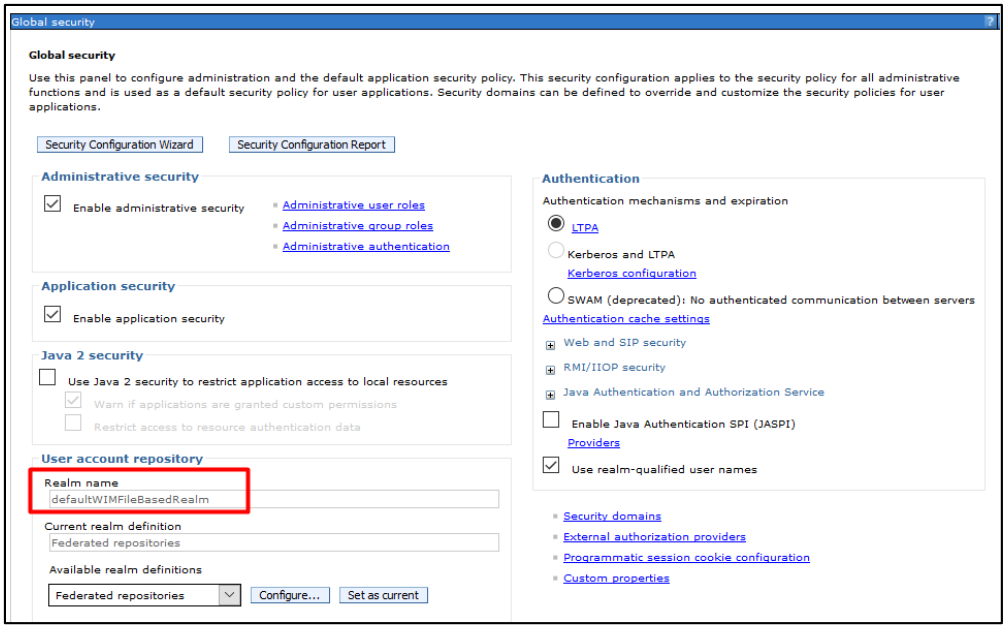
- take a backup of ltpa.keys files from the below directories:

/Miha/opt/IBM/tivoli/impact/wlp/usr/servers/ImpactUI/resources/security/ltpa.keys
/Miha/opt/IBM/tivoli/impact/wlp/usr/servers/TBSMls /resources/security/ltpa.keys

```
[root@busy1 server]# cd /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/ImpactUI/resources/security
You have mail in /var/spool/mail/root
[root@busy1 security]# ls
key.jks  ltpa.keys  trust.jks
[root@busy1 security]#
[root@busy1 security]# cp ltpa.keys ltpa.keys_bak
[root@busy1 security]# ls
key.jks  ltpa.keys  ltpa.keys_bak  trust.jks
```

```
[root@busy1 security]# cp /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/TBSM/resources/security/ltpa.ke
ys /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/TBSM/resources/security/ltpa.keys_bak
[root@busy1 security]# ls /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/TBSM/resources/security/
key.jks  ltpa.keys  ltpa.keys_bak  trust.jks
```

- make sure both DASH and Impact have the same Realm name e.g.: **defaultWIMFileBasedRealm** (or how you have configured this in DASH)



If the name is not the same as the one from Impact, you will need to update the Realm Name for Impact first.

Make sure the object server is up and running and not hanging and afterwards in Impact and that within /Miha/opt/IBM/tivoli/impact/install/security/**impactncos.properties** you have **NCOSPrimaryHost** property set to FQDN of Impact hostname.

- disable object server repository authentication by running:

cd /Miha/opt/IBM/tivoli/impact/install/security
./confAuth4OMNIbus.sh disable impadmin netcool netcool

where:
impadmin – new temporary user created in file based repository
netcool – current impadmin password
netcool – current impact administrative user that was used for the current repository

Command example:

```
[root@busy1 security]# ./confAuth4OMNIbus.sh disable impadmin netcool netcool
Buildfile: /Miha/opt/IBM/tivoli/impact/install/security/cfg_scripts/confAuth4OMNIbus.xml

init:
```

- update impactncos.properties file to reflect the new realm name

```
/Miha/opt/IBM/tivoli/impact/install/security/impactncos.properties
```

vi /Miha/opt/IBM/tivoli/impact/install/security/impactncos.properties

```
# Netcool/OMNIbus ObjectServer Unique Name Label
NCOSRepositoryName="AUTH:Impact"

# Netcool/OMNIbus ObjectServer Primary Hostname or IP address
NCOSPrimaryHost="busy1.castle.fyre.ibm.com"

# Netcool/OMNIbus ObjectServer Primary Port Number
NCOSPrimaryPort="4100"

# Netcool/OMNIbus ObjectServer Administrator User
# Note: user must be enabled and have access to users.security table
NCOSUsername="root"

# Enable SSL Communication to the ObjectServer
# Note: must exchange certificates between Impact and the ObjectServer before enabling
NCOSSSLEnabled="false"

# Single Sign On Realm Name
NCOSSSORealm="defaultWIMFileBasedRealm"

# Netcool/OMNIbus ObjectServer Secondary Hostname or IP address
# Note: (optional) used for failover when primary server becomes unavailable
```

- enable object server repository authentication again

cd /Miha/opt/IBM/tivoli/impact/install/security
./confAuth4OMNIbus.sh enable impactadmin netcool "" netcool

where:
impactadmin – object server user created for impact with admin permissions
netcool – current impactadmin password
"" – object server administrative user (root with no password)
netcool – current impact administrative user that was used for the current repository (for impadmin user created in file based repository)

Command example:

```
[root@busy1 security]# ./confAuth4OMNIbus.sh enable impactadmin netcool "" netcool
```

- make sure everything completed successfully:

```
updatePLUGINS:
     [echo] Updating plugin registration
     [echo] Run command java -jar /Miha/opt/IBM/tivoli/impact/install/../cli/cli.jar -deletePlugin Pr
eferences -pluginurl_username impactadmin -pluginurl_password xxxxxx -consoleRest https://localhost:1
6311/ibm/console/rest -username impactadmin -password xxxxxx
     [java] Deleting a plugin.
     [java] Authenticating against REST with username:impactadmin Password: ********
     [java] {"status":"success"}
     [java] Command completed successfully.
     [echo] Run command java -jar /Miha/opt/IBM/tivoli/impact/install/../cli/cli.jar -addPluginUrl /i
mpactAdmin/jsp/impactAdminPrefsRegister.jsp -pluginurl_username impactadmin -pluginurl_password xxxxx
x -consoleRest https://localhost:16311/ibm/console/rest -username impactadmin -password xxxxxx
     [java] Adding a plugin.
     [java] Authenticating against REST with username:impactadmin Password: ********
     [java] {"result":0,"resultLabel":"Success"}
     [java] Command completed successfully.

checkGUIDisabled:

disableNCOS_GUI:

BUILD SUCCESSFUL
Total time: 1 minute 42 seconds
```

- copy the exported key file name on the impact server and replace the initial files for both TBSM and ImpactUI Impact components with the exported one:

cd /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/ImpactUI/resources/security
cp /Miha/tmpDashKey/ltpa.keys ltpa.keys

cd /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/TBSM/resources/security
cp /Miha/tmpDashKey/ltpa.keys ltpa.keys

```
[root@busy1 security]# cd /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/ImpactUI/resources/security
[root@busy1 security]#
[root@busy1 security]#
[root@busy1 security]# cp  /Miha/tmpDashKey/ltpa.keys ltpa.keys
cp: overwrite 'ltpa.keys'? y
[root@busy1 security]# cd /Miha/opt/IBM/tivoli/impact/wlp/usr/servers/TBSM/resources/security
[root@busy1 security]# cp  /Miha/tmpDashKey/ltpa.keys ltpa.keys
cp: overwrite 'ltpa.keys'? y
```

- enable SSO configuration by running configImpactSSO.sh script:

cd /Miha/opt/IBM/tivoli/impact/install/security/
./configImpactSSO.sh defaultWIMFileBasedRealm LtpaToken2 .castle.fyre.ibm.com netcool netcool

where:
defaultWIMFileBasedRealm – common realm name for both impact and dash
LtpaToken2 – ltpa cookie as was set in dash
.castle.fyre.ibm.com – domain name (. is mandatory)
netcool - password for the ltpa cookie name as was set in dash
netcool – password for the impact admin user

Command example:

```
[root@busy1 security]# ./configImpactSSO.sh defaultWIMFileBasedRealm LtpaToken2 .castle.fyre.ibm.com
netcool netcool
```

- make sure everything completed successfully:

```
updateCOOKIE:
     [echo] Updating REST API with cookie name
     [echo] Run command java -jar /Miha/opt/IBM/tivoli/impact/install/../cli/cli.jar -addCustomCookieName 'LtpaToken2' -consoleRest https
://localhost:16311/ibm/console/rest -username impactadmin -password xxxxxx
     [java] Authenticating against REST with username:impactadmin Password: ********
     [java] {"result":0,"resultLabel":"Success"}
     [java] Command completed successfully.

BUILD SUCCESSFUL
Total time: 1 minute 32 seconds
```

Test SSO between Impact-DASH

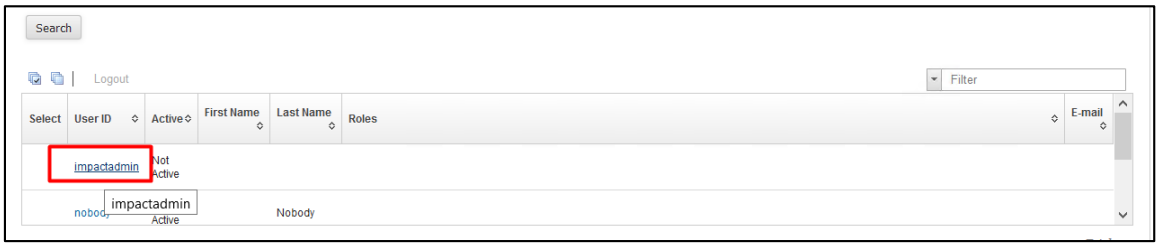
After the SSO steps you need to either add roles to impactadmin user so that is can access DASH features or use mapRoles on ncoadmin or another integration user so that is can see Impact features.

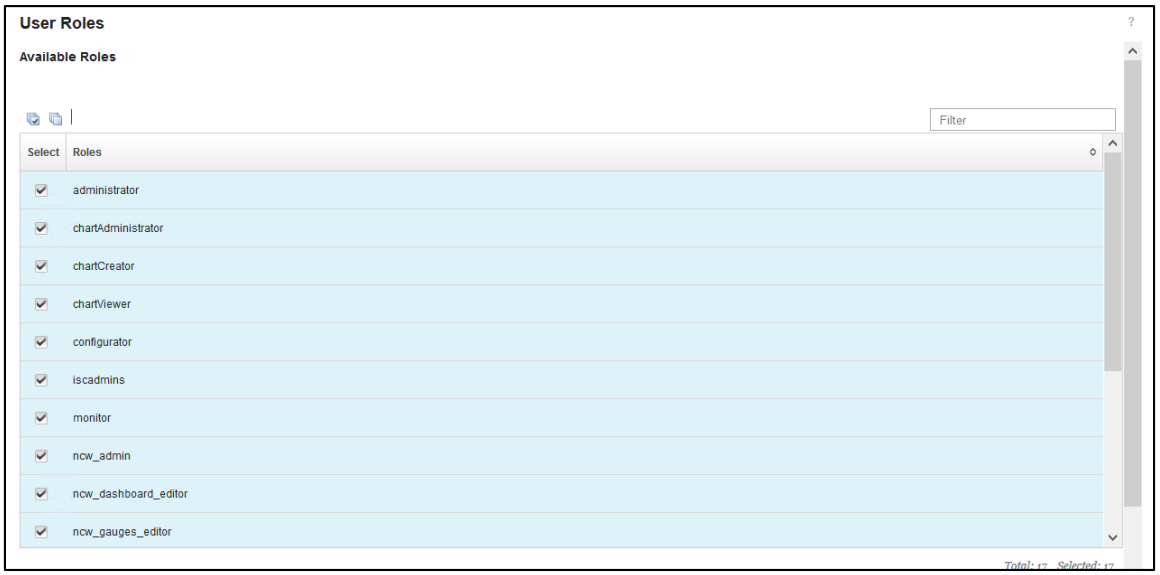
Command example:

./mapRoles.sh -add -user ncoadmin -roles " impactAdminUser|impactFullAccessUser"

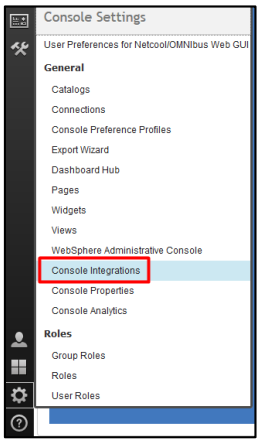
In this example I have added permissions to impactadmin user.

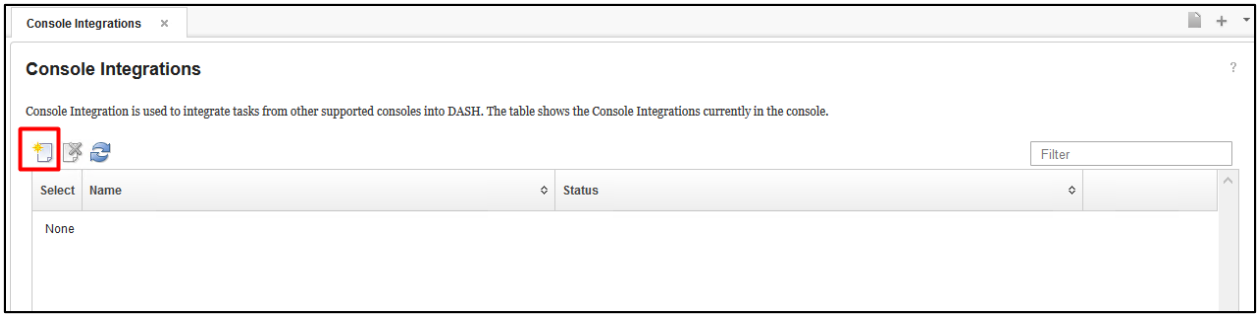
- login in DASH with smadmin user -> User roles -> select impactadmin user



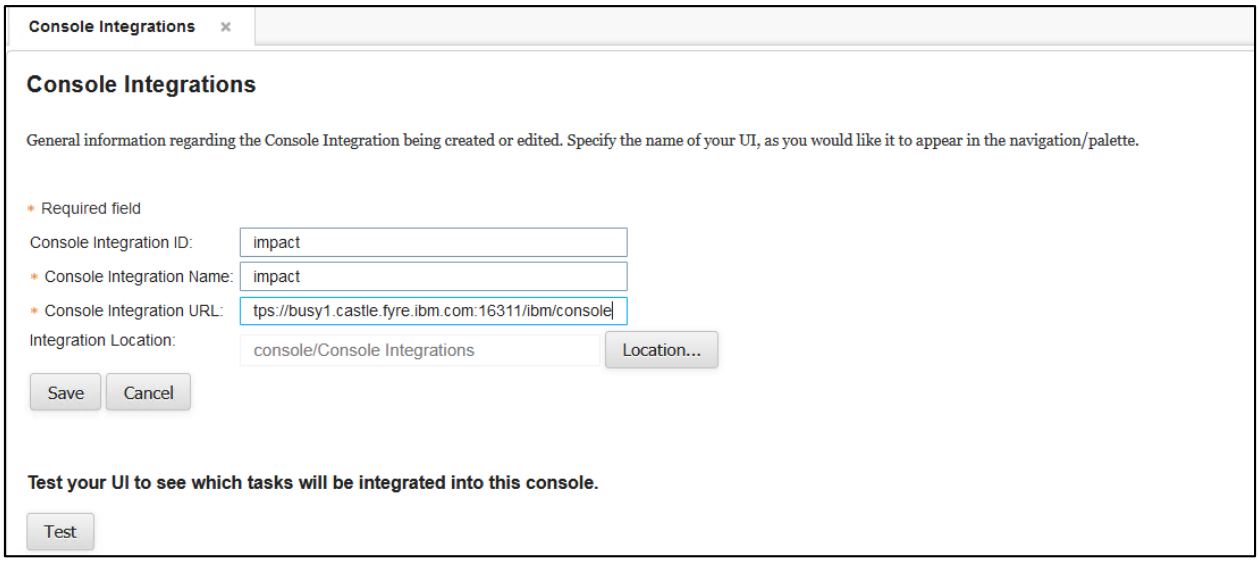


- login in DASH with impactadmin user and configure Console Integration

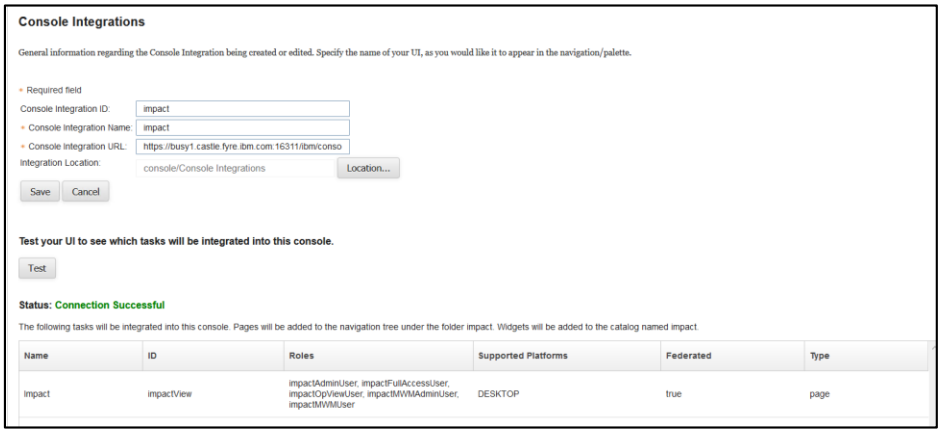




- click on New to add a new console integration
- add a name and URL (<impact_hostname:port>/ibm/console/rest)

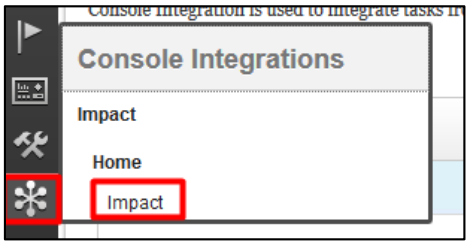


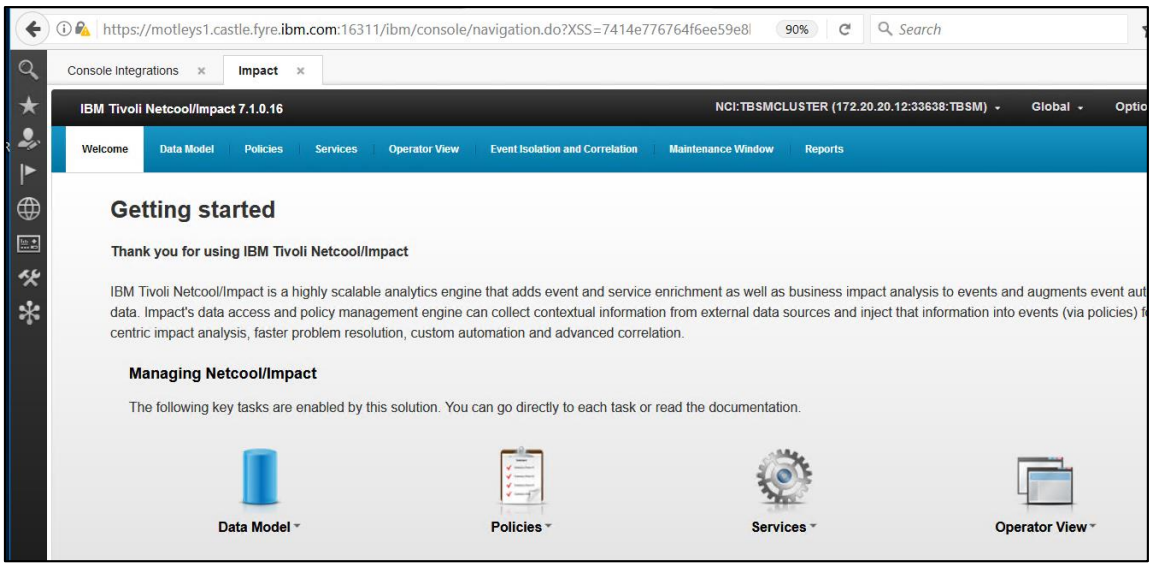
- test and check if the connection is successful



- save the console integration

- this should be afterwards available within DASH menu:





Install TBSM Components

TBSM Data Server and TBSM Dash Server could be installed in any order. In case TBSM Dash Server is first, then you need to first create tbsmadmin user within the object server.

Before starting the installation of either Data Server or Dash Server, TBSM Configuration Utility should be installed and TBSM schema should be added within the object server.

TBSM 6.2 package should be downloaded and extracted on both server 1 and server 2.
TBSM 6.2 data server will be installed on server 1, along with Omnibus, Impact.
TBSM 6.2 dash server will be installed on server 2, along with JazzSM, webgui.

Add TBSM Schema to Object Server

This will be applied on server 1 where OMNIbus was installed and configured, hence on server1.

- go to unzipped directory for TBSM and from here to the following directory: <extracted_tbsm_path>/data_linux/omnibus/schema_files:

```
[root@busy1 schema_files]# pwd
/tmpTBSM/data_linux/omnibus/schema_files
```

- run the following command:

./import_schema.sh $NCHOME tbsm_db_update.sql RAD <OBJServer_Name> root <root-password>

Command example:

```
[root@busy1 schema_files]# ./import_schema.sh /Miha/opt/IBM/tivoli/netcool tbsm_db_update.sql RAD NCOMS
```

in this material object server has root as administrative user with no password.

Any warnings about the existence of some of the objects could be safely ignored

```
[root@busy1 schema_files]# ./import_schema.sh /Miha/opt/IBM/tivoli/netcool tbsm_db_update.sql RAD NCOMS
Param 1:  InstallDir:  /Miha/opt/IBM/tivoli/netcool
Param 2:  Name/Location of RAD Schema file to use:  tbsm_db_update.sql
Param 3:  Pass in the schema validation string to use:  RAD
Param 4:  The ObjectServer name to use (NCOMS):  NCOMS
Param 5:  The ObjectServer user name to use (root):
Param 6:  The ObjectServer password to use ():  nusr-defined
Running:  export NCHOME=/Miha/opt/IBM/tivoli/netcool
Running:  export OMNIHOME=/Miha/opt/IBM/tivoli/netcool/omnibus
Determine if Object Server is running
ObjectServer is running, continue...
Running: cat tbsm_db_update.sql | /Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -s NCOMS -u root -p --hidden--
ERROR=Object exists on line 83 of statement
'-----------------------------------------------------------------...', at or
near 'BSM_Identity'
(0 rows affected)
(0 rows affected)
(0 rows affected)
ERROR=Object not found on line 15 of statement
'-----------------------------------------------------------------...', at
or near 'service_deps'
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
Verifying schema
Running:  describe=/Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -s NCOMS -u  -p --hidden-- << EOF
describe alerts.status;
go
EOF
echo $describe | grep -o RAD | wc -l
Error: unknown option

Number of imported schema records found:  0
Schema was not imported successfully
```

- run the following second command:

./import_schema.sh $NCHOME ClearServiceDeps.auto RAD <OBJServer_Name> root <root-password>

Command example:

```
[root@busy1 schema_files]# ./import_schema.sh /Miha/opt/IBM/tivoli/netcool ClearServiceDeps.auto RAD NCOMS root
```

```
[root@busy1 schema_files]# ./import_schema.sh /Miha/opt/IBM/tivoli/netcool ClearServiceDeps.auto RAD NCOMS root
Param 1:  InstallDir:  /Miha/opt/IBM/tivoli/netcool
Param 2:  Name/Location of RAD Schema file to use:  ClearServiceDeps.auto
Param 3:  Pass in the schema validation string to use:  RAD
Param 4:  The ObjectServer name to use (NCOMS):  NCOMS
Param 5:  The ObjectServer user name to use (root):  root
Param 6:  The ObjectServer password to use ():  nusr-defined
Running:  export NCHOME=/Miha/opt/IBM/tivoli/netcool
Running:  export OMNIHOME=/Miha/opt/IBM/tivoli/netcool/omnibus
Determine if Object Server is running
ObjectServer is running, continue...
Running: cat ClearServiceDeps.auto | /Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -s NCOMS -u root -p --hidden
--
(0 rows affected)
Verifying schema
Running:  describe=/Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -s NCOMS -u root -p --hidden-- << EOF
describe alerts.status;
go
EOF
echo $describe | grep -o RAD | wc -l

Schema import has been completed successfully. 33 rows found.
```

Install TBSM Database Configuration Utility

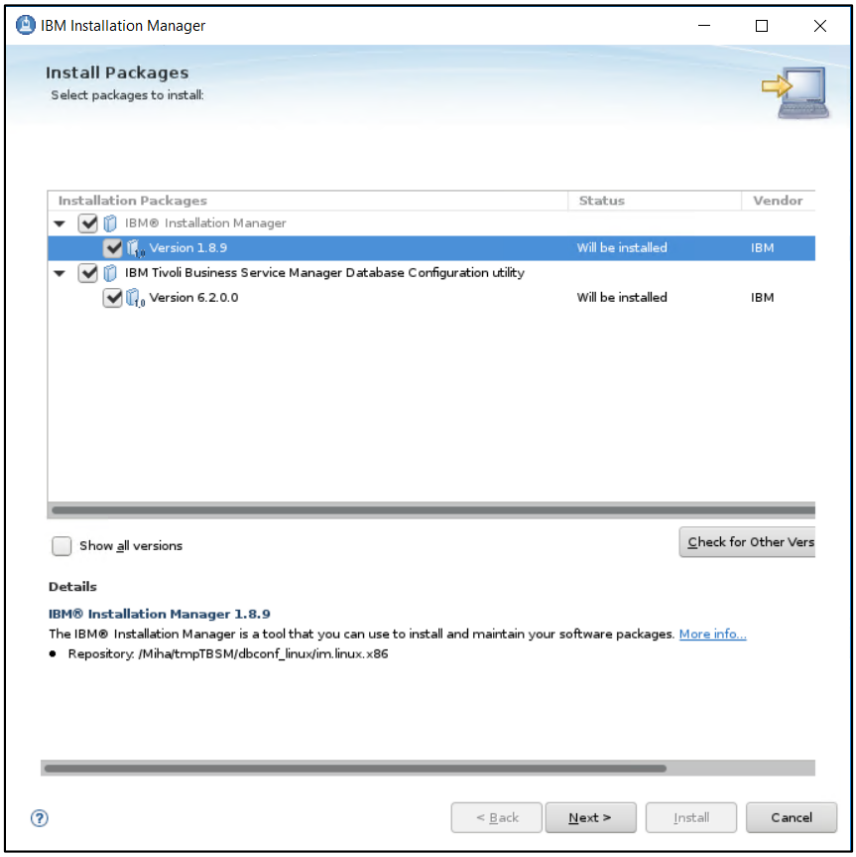
- login as db2inst1 user on server1 where DB2 has been installed
- go to the directory were TBSM package was extracted and from here go to dbconf_linux directory:

```
[db2inst1@busy1 ~]$ cd /tmpTBSM/dbconf_linux/
[db2inst1@busy1 dbconf_linux]$ ls
im.linux.x86  install_console_dbconf.sh  install_gui_dbconf.sh  install_silent_dbconf.sh  media_linux  scripts
[db2inst1@busy1 dbconf_linux]$
```

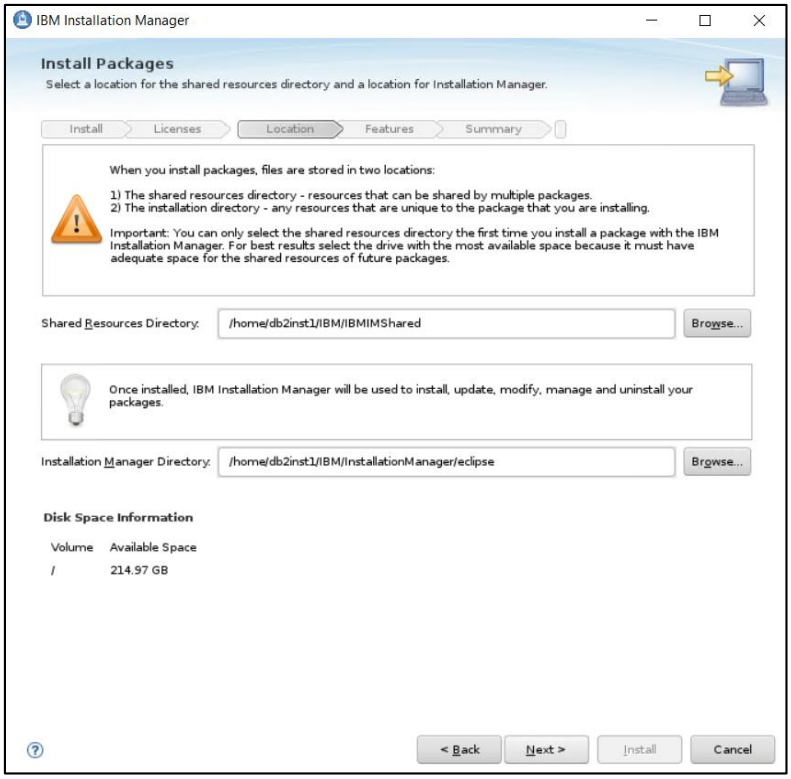
- run the following command:

./install_gui_dbconf.sh

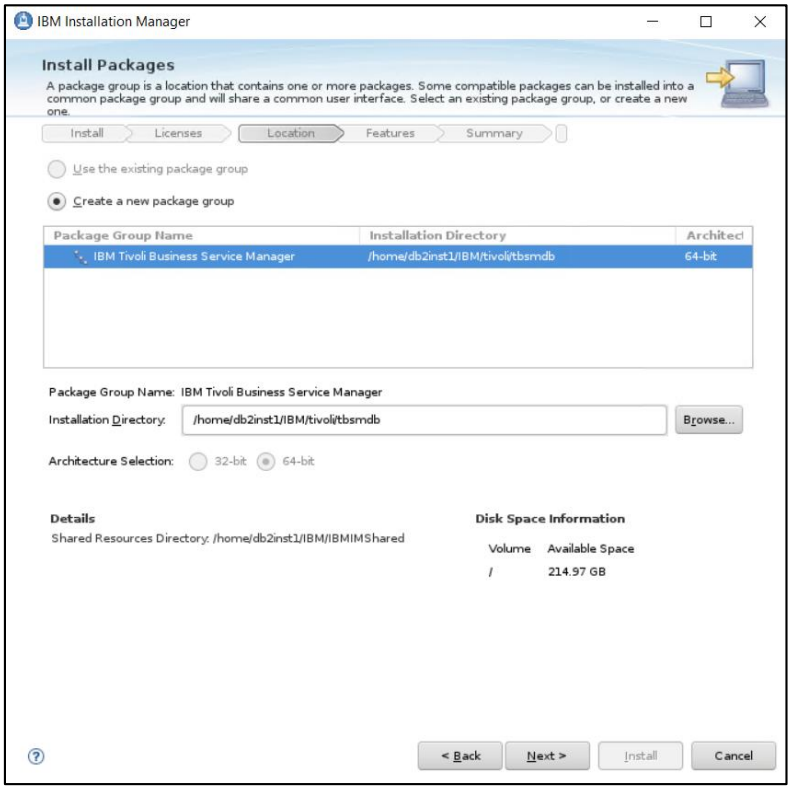
```
[db2inst1@busy1 dbconf_linux]$ ./install_gui_dbconf.sh
```



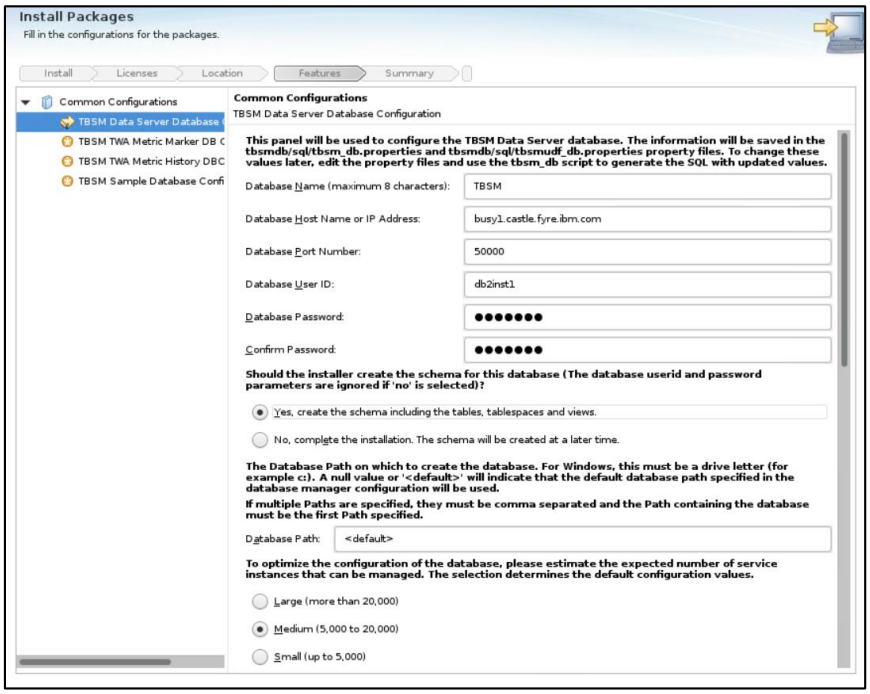
- enter installation directory for TBSM database configuration utility; db2inst1 user needs to have write permission to this directory



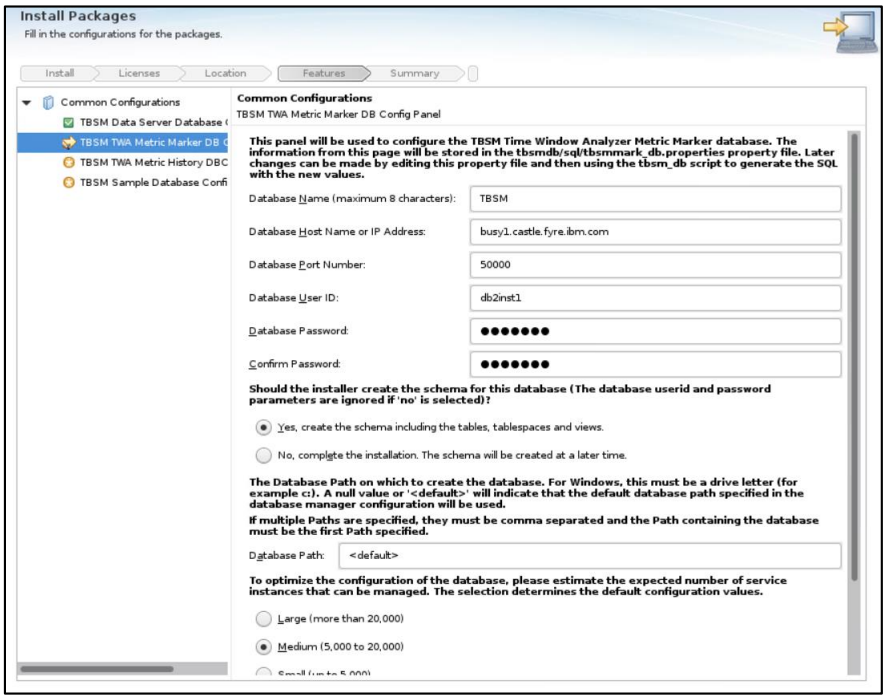
- enter installation path



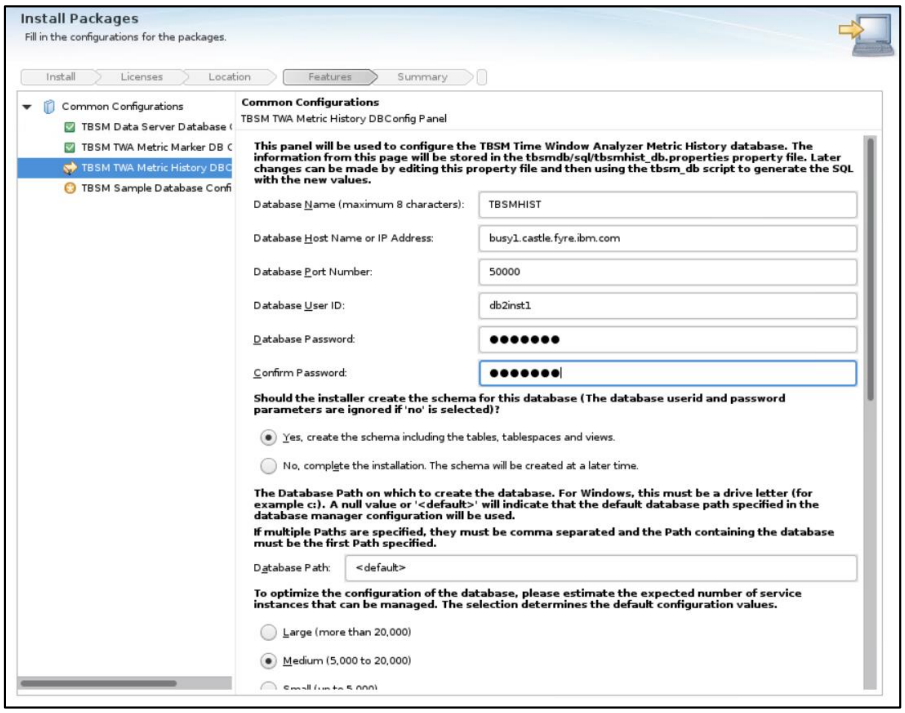
- add details for TBSM Data Server Database Configuration – database name, database hostname, port, user and its password (db2inst1 user is required



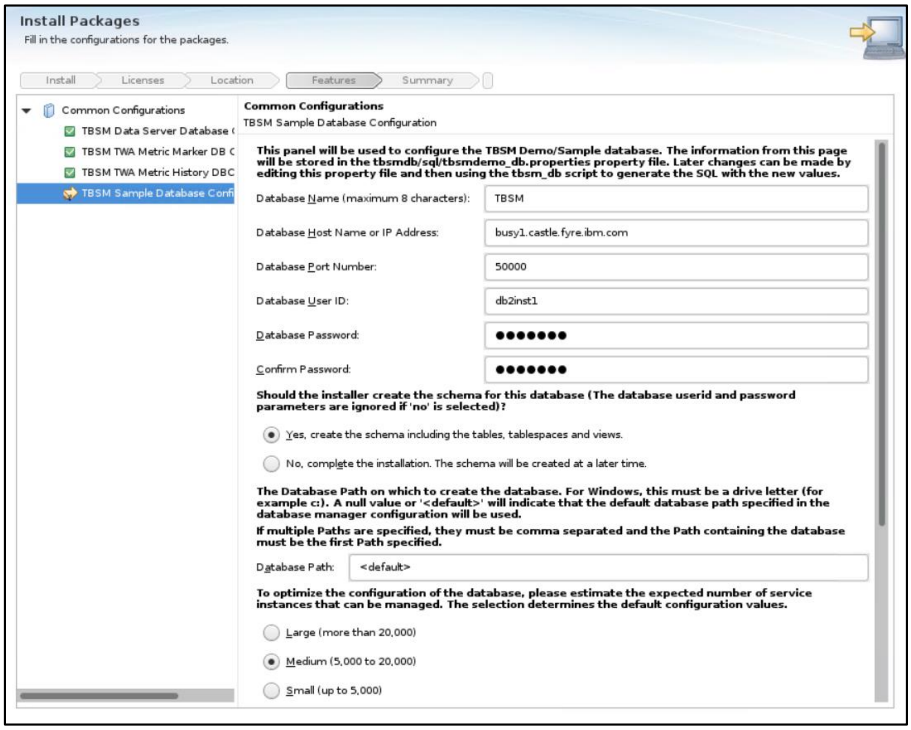
- add details for TBSM TWA Metric Marker DB - database name, database hostname, port, user and its password (db2inst1 user is required)

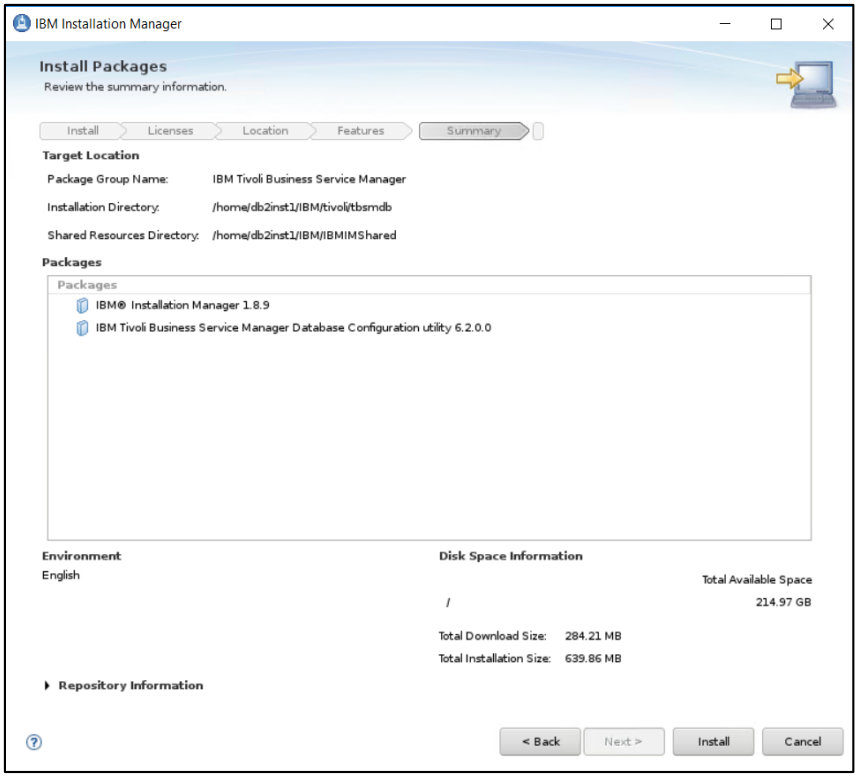


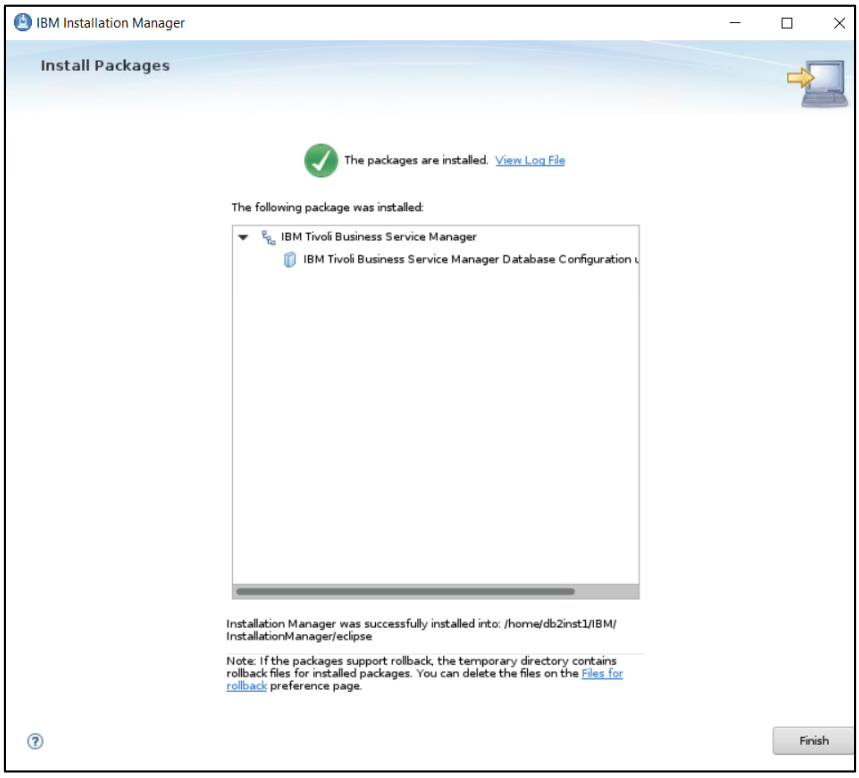
- add details for TBSM TWA Metric History DB - database name, database hostname, port, user and its password (db2inst1 user is required)



- add details for TBSM Sample DB configuration - database name, database hostname, port, user and its password (db2inst1 user is required)




IBM Installation Manager
Install Packages
Review the summary information.
Install
Licenses
Location
Features
Summary
Target Location
Package Group Name: IBM Tivoli Business Service Manager
Installation Directory: /home/db2inst1/IBM/tivoli/tbsmdb
Shared Resources Directory: /home/db2inst1/IBM/IBMIMShared
Packages
Packages
IBM® Installation Manager 1.8.9
IBM Tivoli Business Service Manager Database Configuration utility 6.2.0.0
Environment
English
Disk Space Information
Total Available Space
/ 214.97 GB
Total Download Size: 284.21 MB
Total Installation Size: 639.86 MB
Repository Information
< Back
Next >
Install
Cancel


IBM Installation Manager
Install Packages
The packages are installed. View Log File
The following package was installed:
IBM Tivoli Business Service Manager
IBM Tivoli Business Service Manager Database Configuration u
Installation Manager was successfully installed into: /home/db2inst1/IBM/InstallationManager/eclipse
Note: If the packages support rollback, the temporary directory contains rollback files for installed packages. You can delete the files on the Files for rollback preference page.
Finish

Install TBSM Data Server

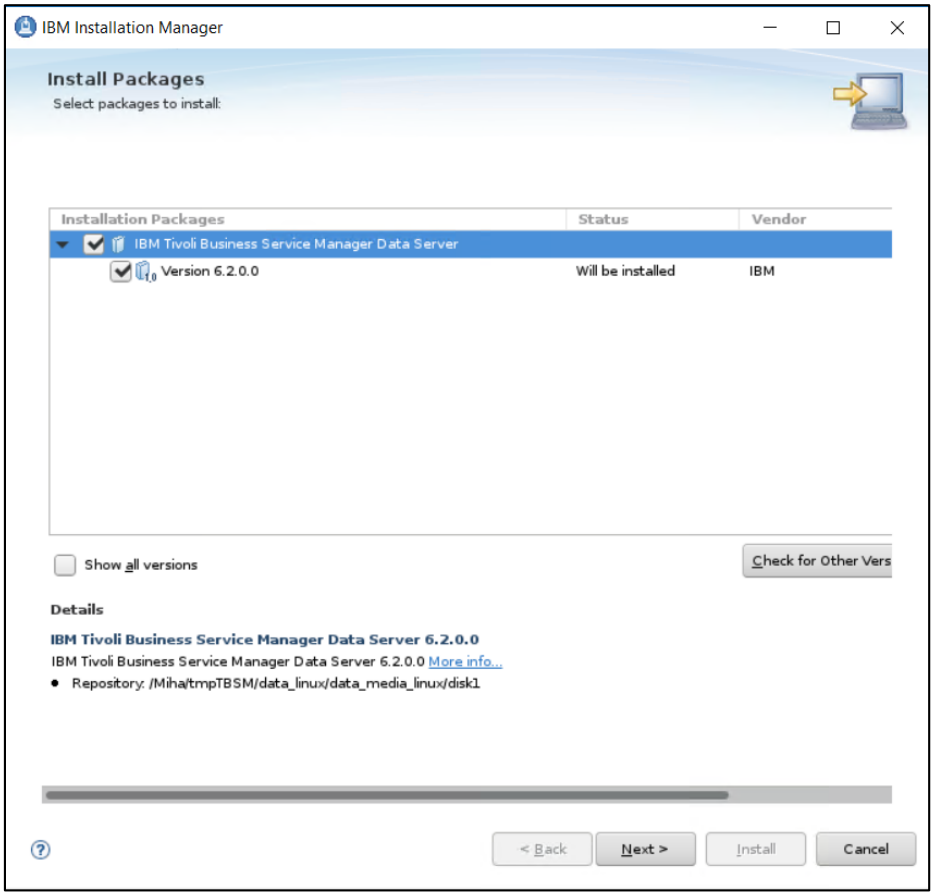
- go to the directory where TBSM was extracted on server 1 and from here to data_linux directory:

```
[root@busy1 data_linux]# pwd
/tmpTBSM/data_linux
[root@busy1 data_linux]# ls
data_media_linux          install_gui_data.sh     Reports
im.linux.x86              install_silent_data.sh  scripts
install_console_data.sh   omnibus                 TBSM_Dataserver_Migration_Linux.zip
```

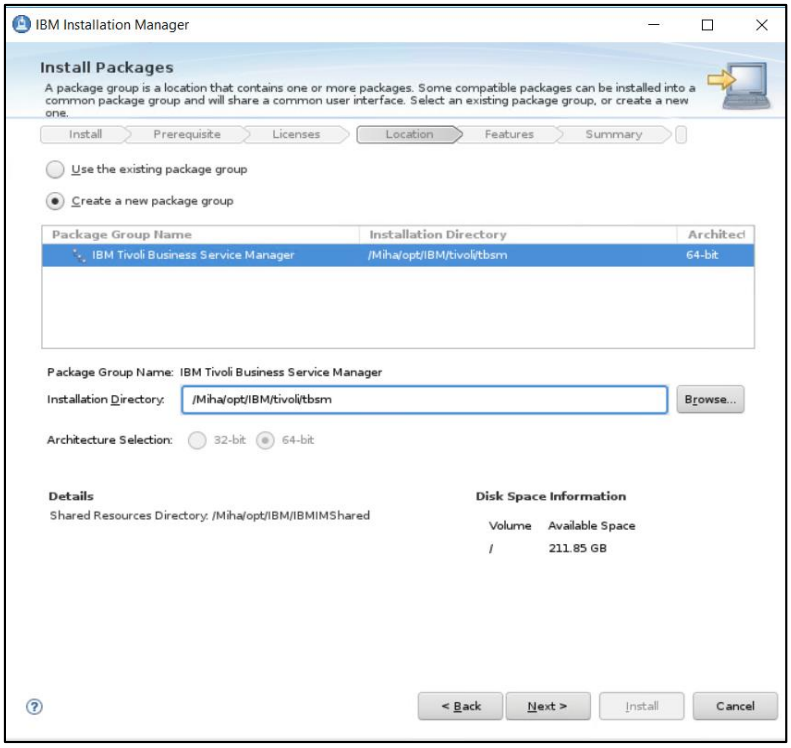
- run the following command and select TBSM Data Server to be installed:

./install_gui_data.sh

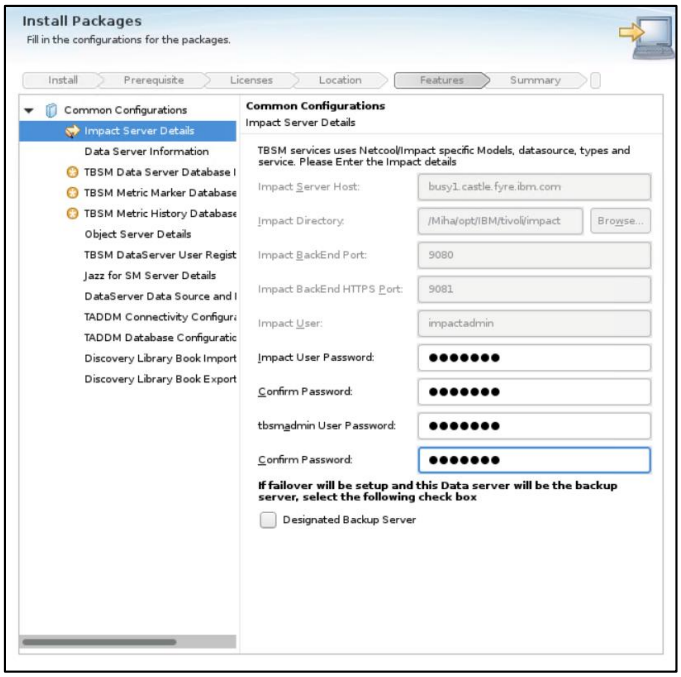
```
[root@busy1 data_linux]# ./install_gui_data.sh
```



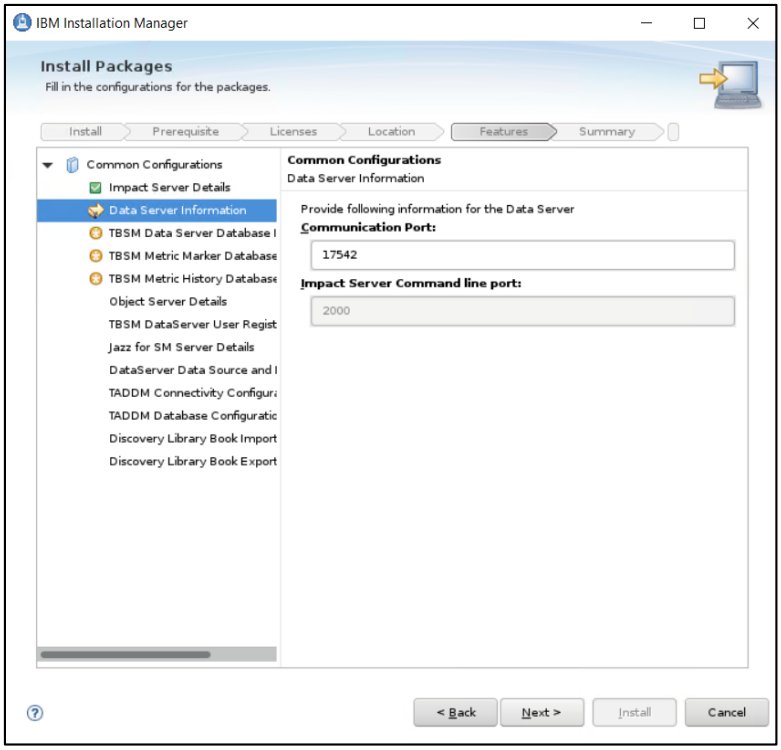
- enter the installation directory path for TBSM data server



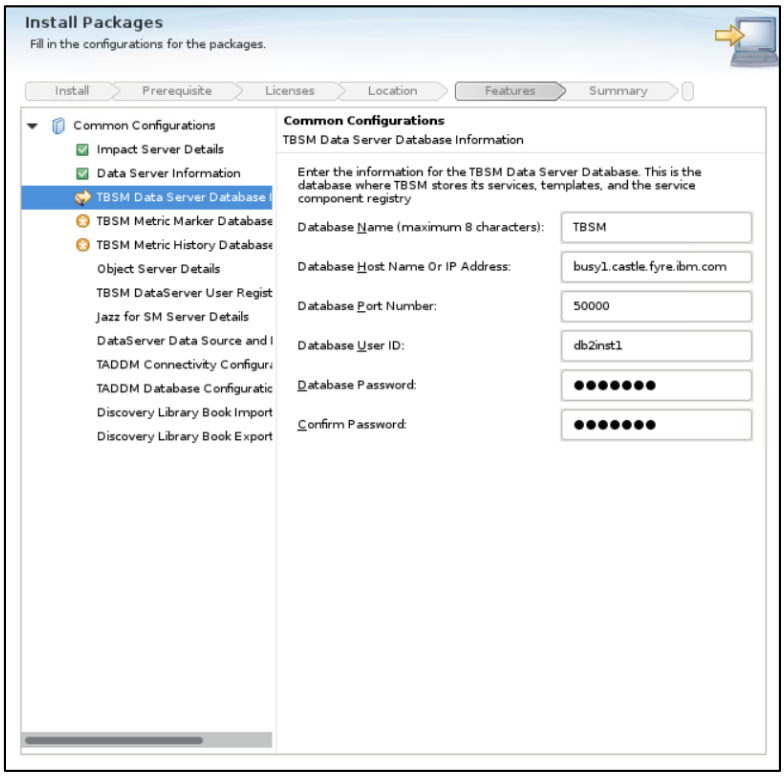
- enter Impact server username details (for host details FQDN is required, make sure /etc/hosts is properly configured) and also the password for the tbsmadmin user that will be created

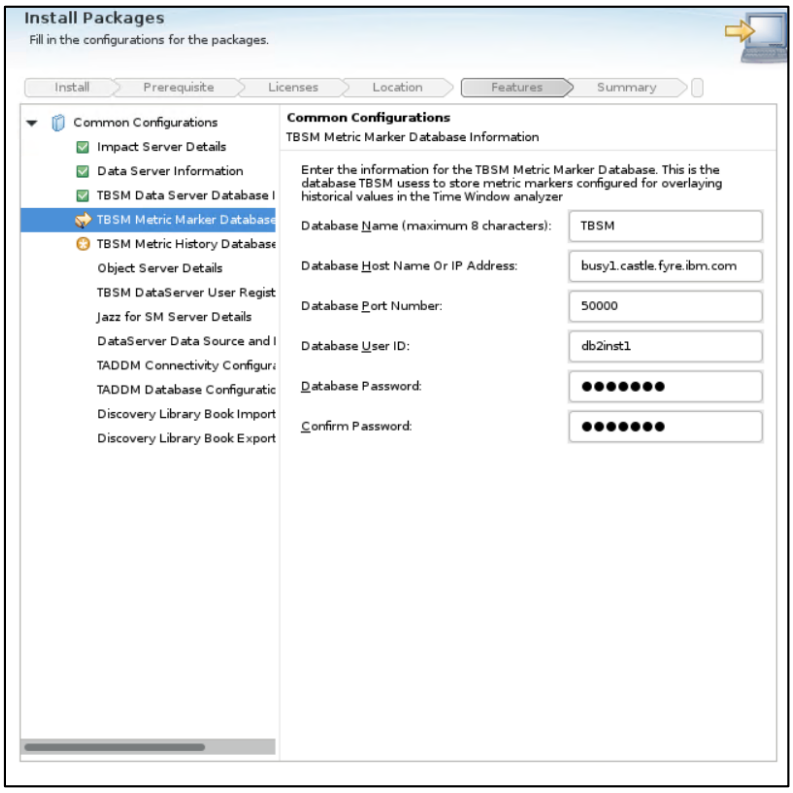


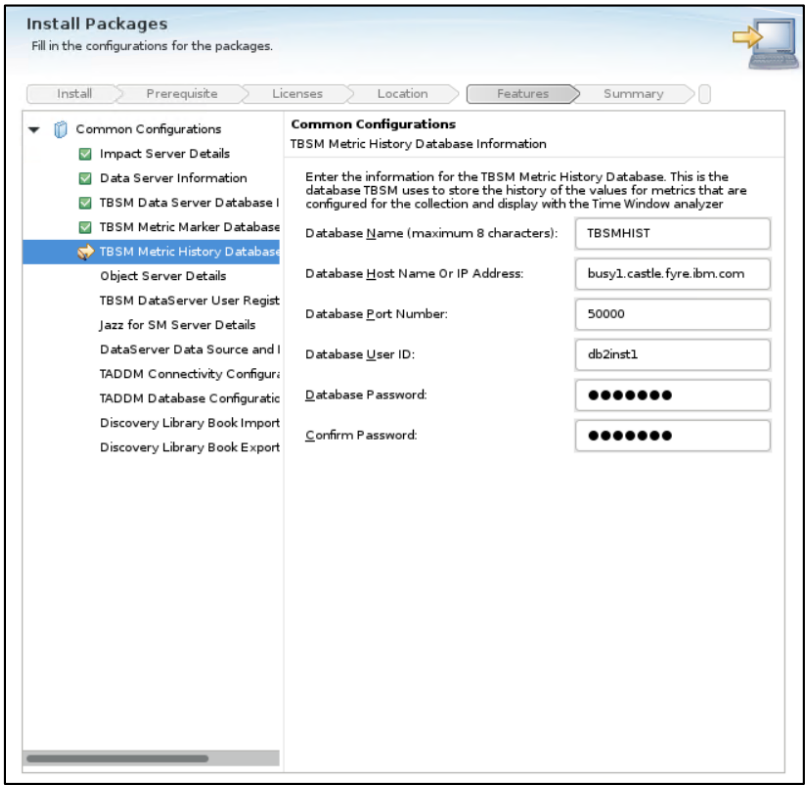
- enter data server communication port, by default this is 17542:



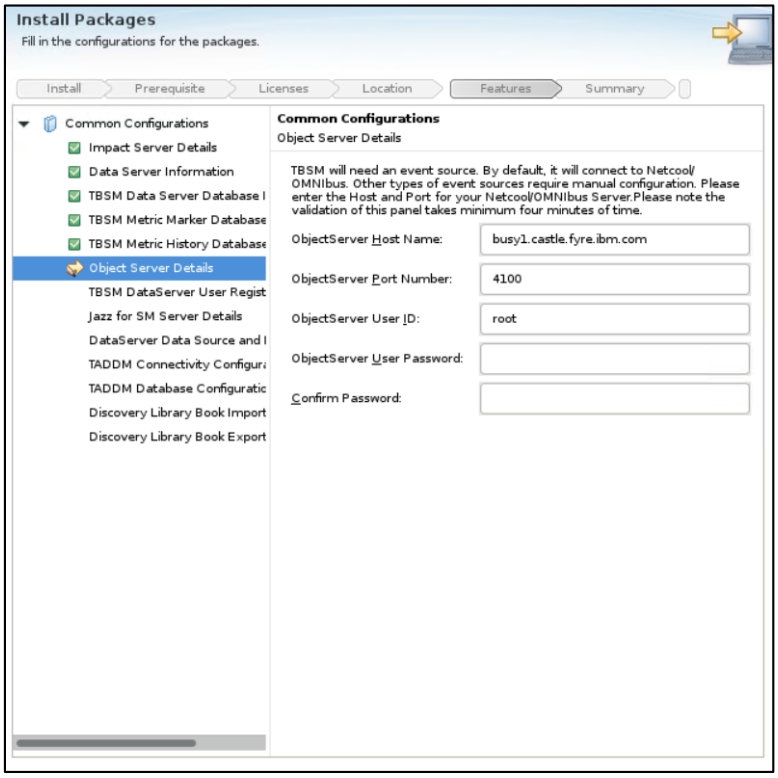
- enter TBSM Data Server Database information as configured during DB2 installation

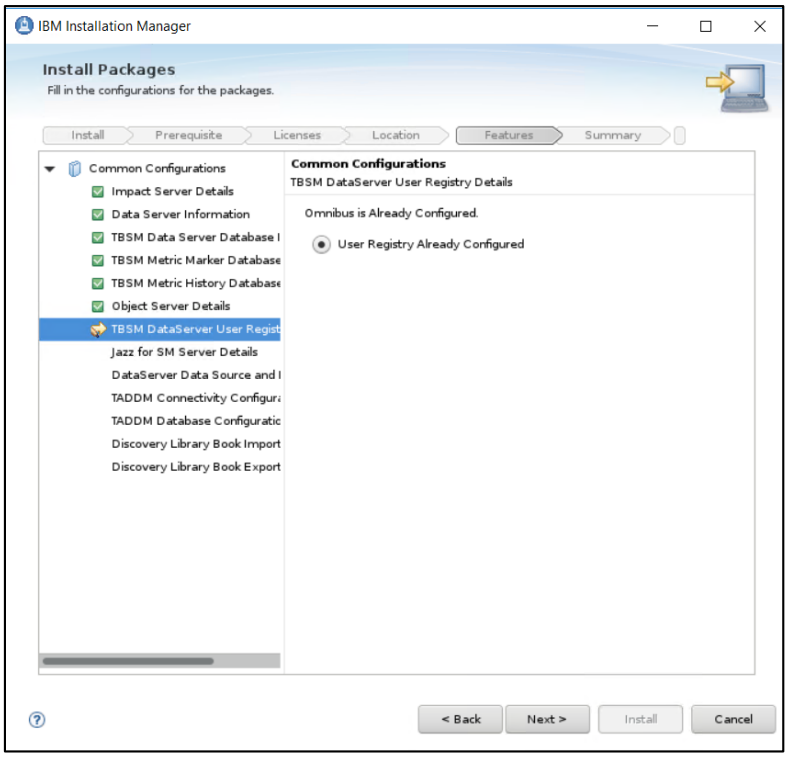



Install Packages
Fill in the configurations for the packages.
Install
Prerequisite
Licenses
Location
Features
Summary
Common Configurations
Impact Server Details
Data Server Information
TBSM Data Server Database I
TBSM Metric Marker Database
TBSM Metric History Database
Object Server Details
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
TBSM Metric Marker Database Information
Enter the information for the TBSM Metric Marker Database. This is the database TBSM usess to store metric markers configured for overlaying historical values in the Time Window analyzer
Database Name (maximum 8 characters):
TBSM
Database Host Name Or IP Address:
busy1.castle.fyre.ibm.com
Database Port Number:
50000
Database User ID:
db2inst1
Database Password:
Confirm Password:

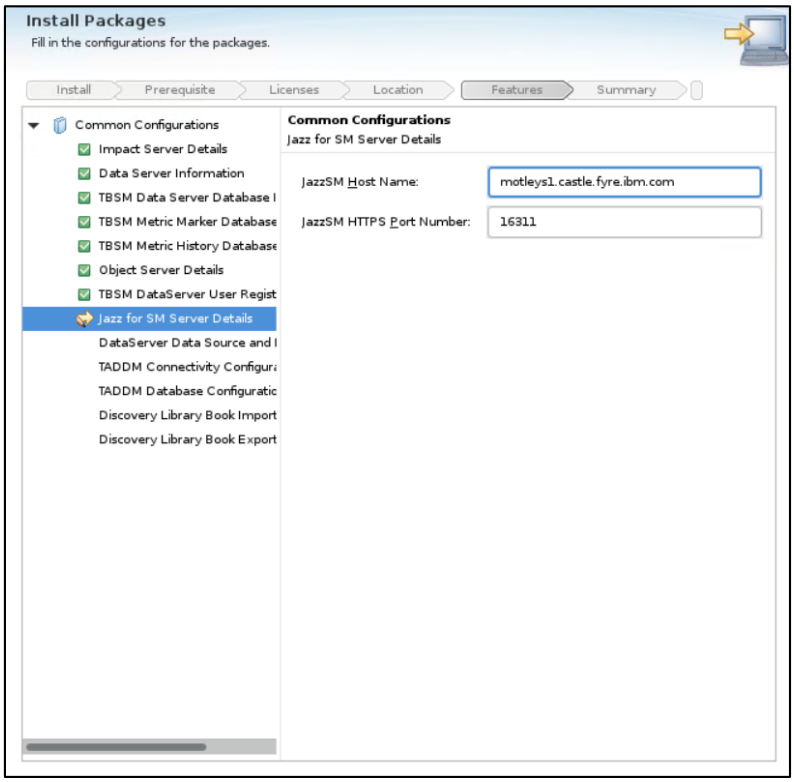

Install Packages
Fill in the configurations for the packages.
Install
Prerequisite
Licenses
Location
Features
Summary
Common Configurations
Impact Server Details
Data Server Information
TBSM Data Server Database I
TBSM Metric Marker Database
TBSM Metric History Database
Object Server Details
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
TBSM Metric History Database Information
Enter the information for the TBSM Metric History Database. This is the database TBSM uses to store the history of the values for metrics that are configured for the collection and display with the Time Window analyzer
Database Name (maximum 8 characters):
TBSMHIST
Database Host Name Or IP Address:
busy1.castle.fyre.ibm.com
Database Port Number:
50000
Database User ID:
db2inst1
Database Password:
Confirm Password:

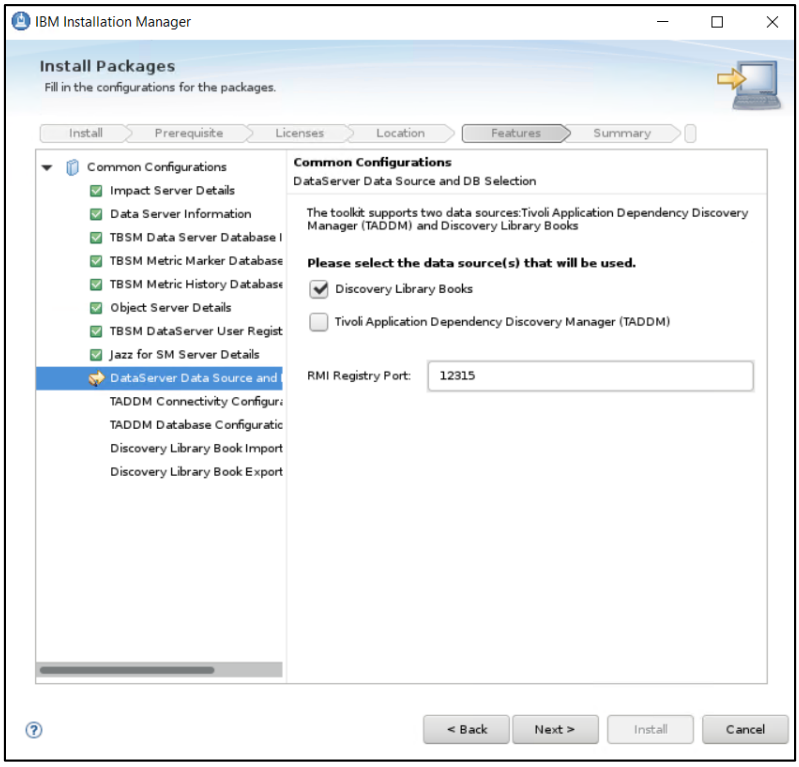
- enter object server details:

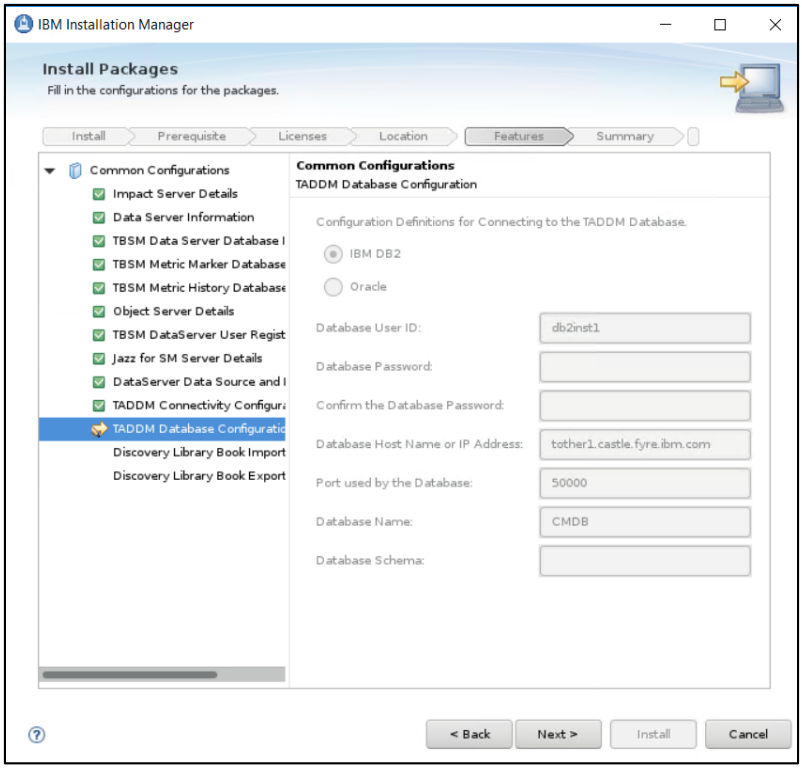


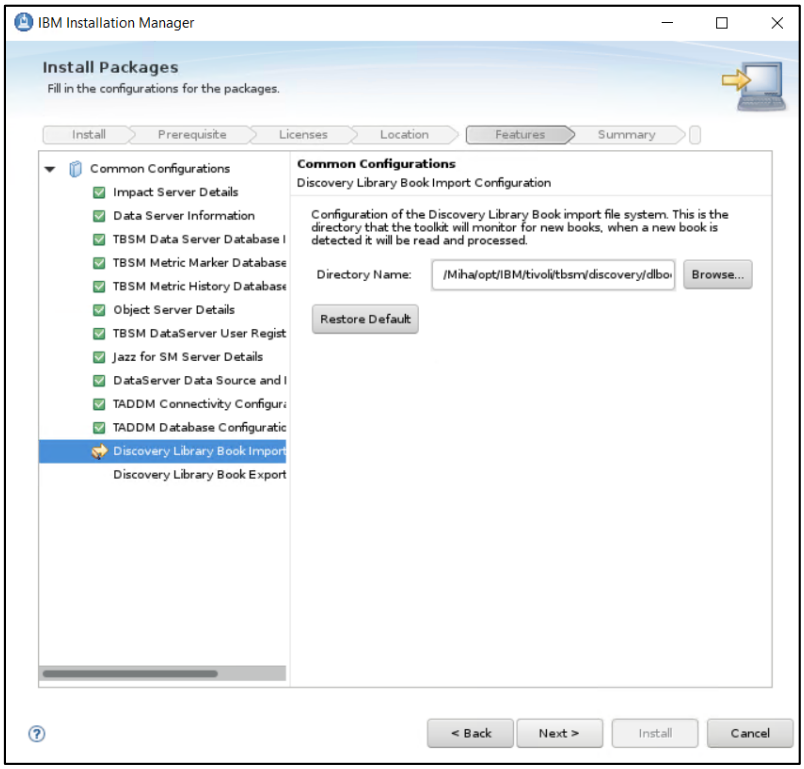


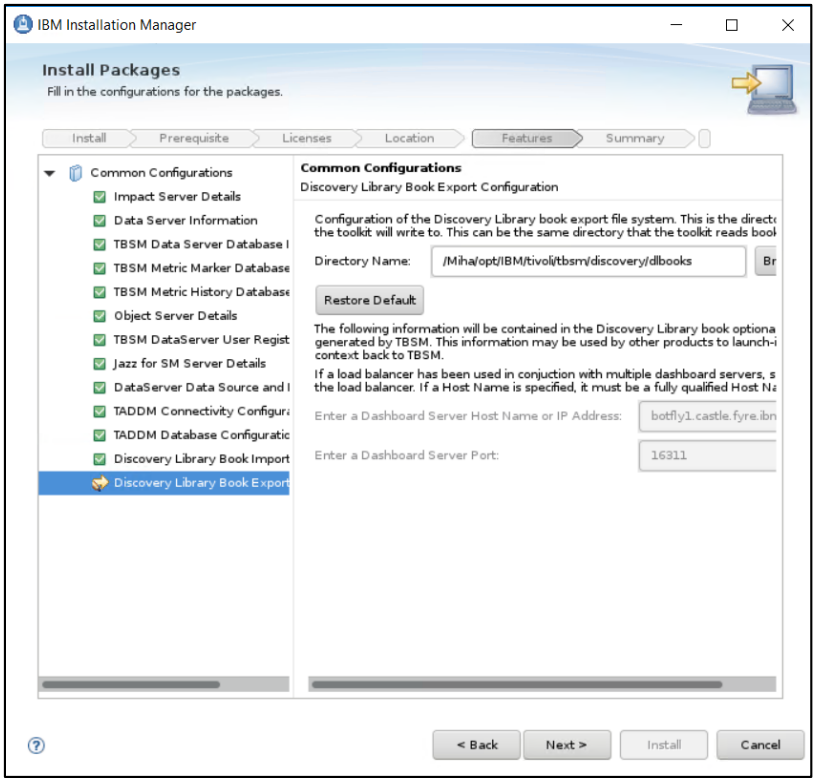
- enter Jazz SM details, make sure to add the correct FQDN from server 2 where JazzSM is installed

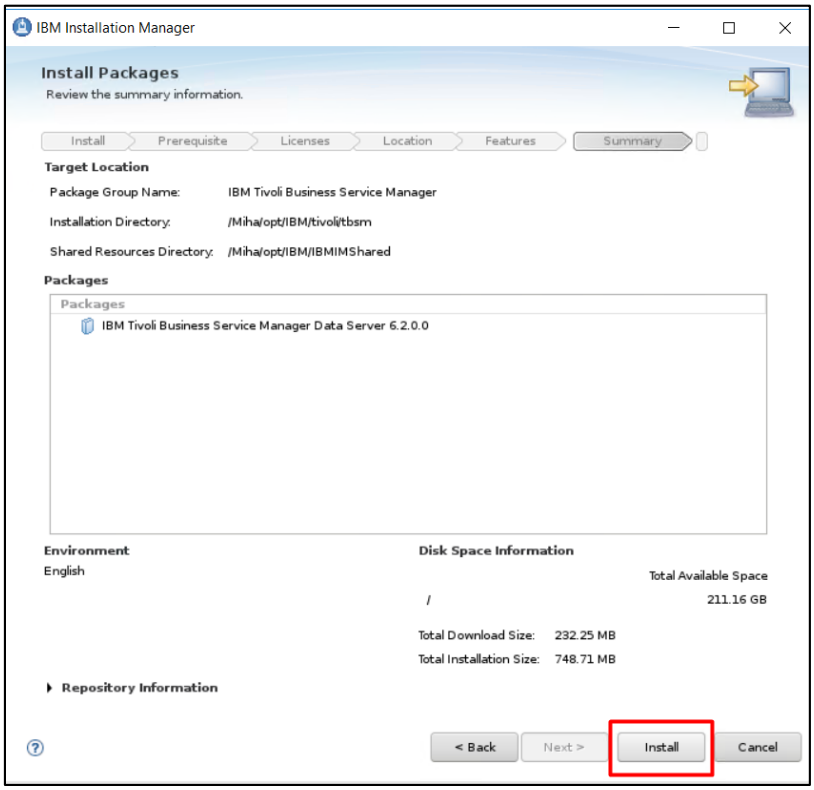




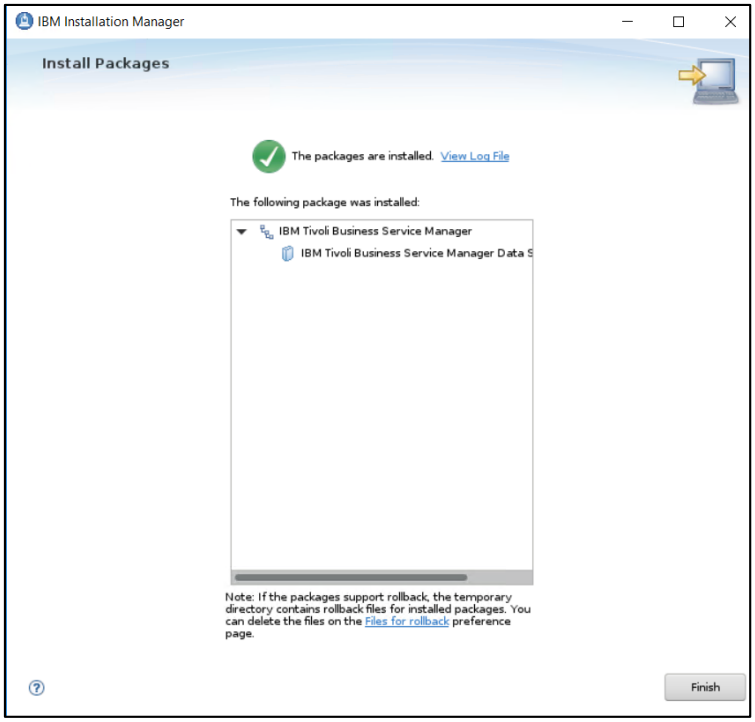

IBM Installation Manager
Install Packages
Fill in the configurations for the packages.
Install
Prerequisite
Licenses
Location
Features
Summary
Common Configurations
Impact Server Details
Data Server Information
TBSM Data Server Database I
TBSM Metric Marker Database
TBSM Metric History Database
Object Server Details
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
TADDM Database Configuration
Configuration Definitions for Connecting to the TADDM Database.
IBM DB2
Oracle
Database User ID:
db2inst1
Database Password:
Confirm the Database Password:
Database Host Name or IP Address:
tother1.castle.fyre.ibm.com
Port used by the Database:
50000
Database Name:
CMDB
Database Schema:
< Back
Next >
Install
Cancel


IBM Installation Manager
Install Packages
Fill in the configurations for the packages.
Install
Prerequisite
Licenses
Location
Features
Summary
Common Configurations
Impact Server Details
Data Server Information
TBSM Data Server Database I
TBSM Metric Marker Database
TBSM Metric History Database
Object Server Details
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
Discovery Library Book Import Configuration
Configuration of the Discovery Library Book import file system. This is the directory that the toolkit will monitor for new books, when a new book is detected it will be read and processed.
Directory Name:
/Miha/opt/IBM/tivoli/tbsm/discovery/dlbo
Browse...
Restore Default
< Back
Next >
Install
Cancel





- make sure everything completed successfully:



Install TBSM Dashboard Server

TBSM 6.2 package should be extracted on server 2 as well where WAS, JazzSM and webgui are installed. On this server TBSM Dash Server should be installed.

Make sure webgui is up and running and that you can run runwaapi commands as this is being used during TBSM dash install. For this waapi.init file should be configured.

Output example and waapi.init file configuration:

```
##########################################

waapi.host:localhost
waapi.port:16310
waapi.secureport:16311
waapi.contextpath:/ibm/console/webtop
waapi.user:smadmin
waapi.password:netcool
waapi.password.encryption:none
waapi.file:
waapi.timeoutsecs: 600

##########################################
```

```
[root@botfly1 bin]# cd /Miha/opt/IBM/netcool/gui/omnibus_webgui/waapi/bin/
[root@botfly1 bin]# ./runwaapi -file ../etc/samples/list_map.xml

************************************************************************
WAAPIClient: Request sent to server on http://localhost:16310/ibm/console/webtop/..
Tue Jan 15 02:48:47 PST 2019

Maps hosted on the server
************************************************************************
Example_E-Commerce
Example_Europe
Example_Geographic
************************************************************************
WAAPIClient: 1 method was fully executed.
```

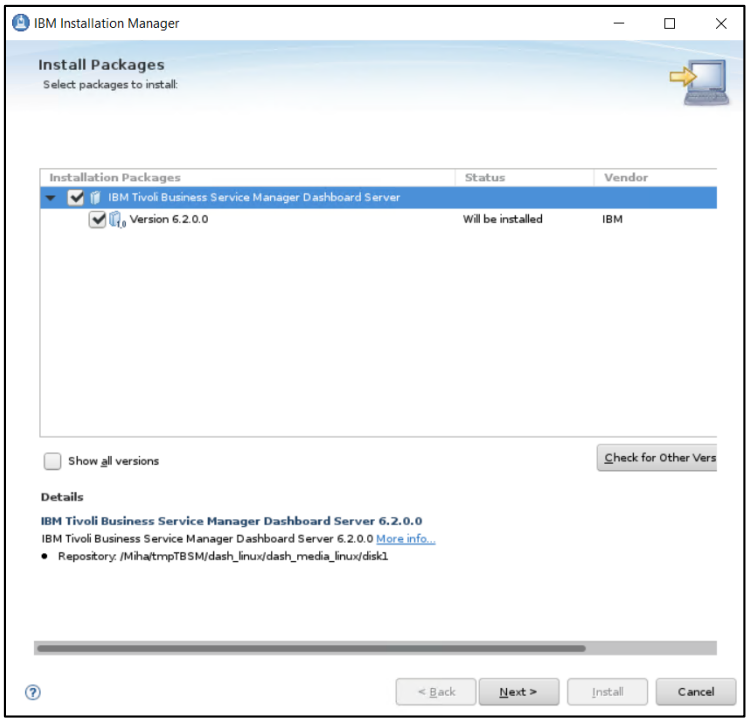
- go to the directory where TBSM was extracted and from here to dash_linux directory
- run the following command:

./install_gui_dash.sh

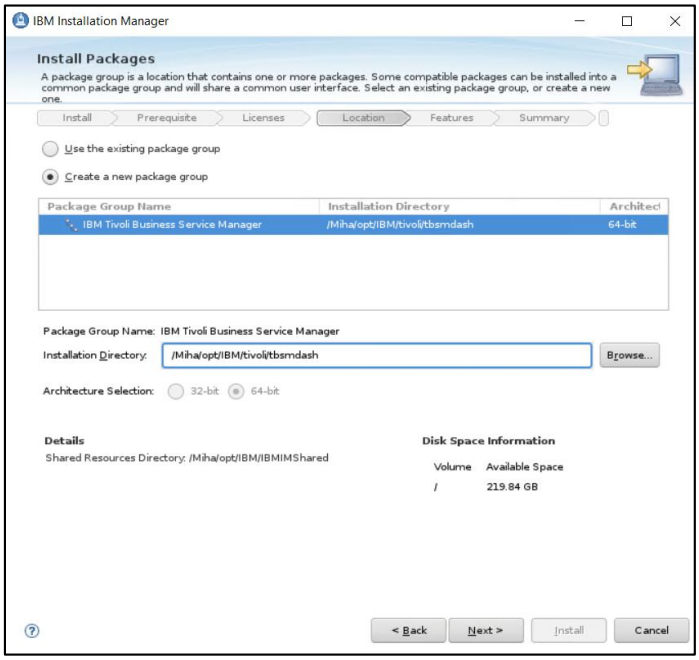
```
[root@motleys1 Miha]# cd /tmpTBSM62/dash_linux/
[root@motleys1 dash_linux]# ls
dash_media_linux  install_console_dash.sh  install_silent_dash.sh
im.linux.x86      install_gui_dash.sh      scripts
```

```
[root@motleys1 dash_linux]# ./install_gui_dash.sh
```

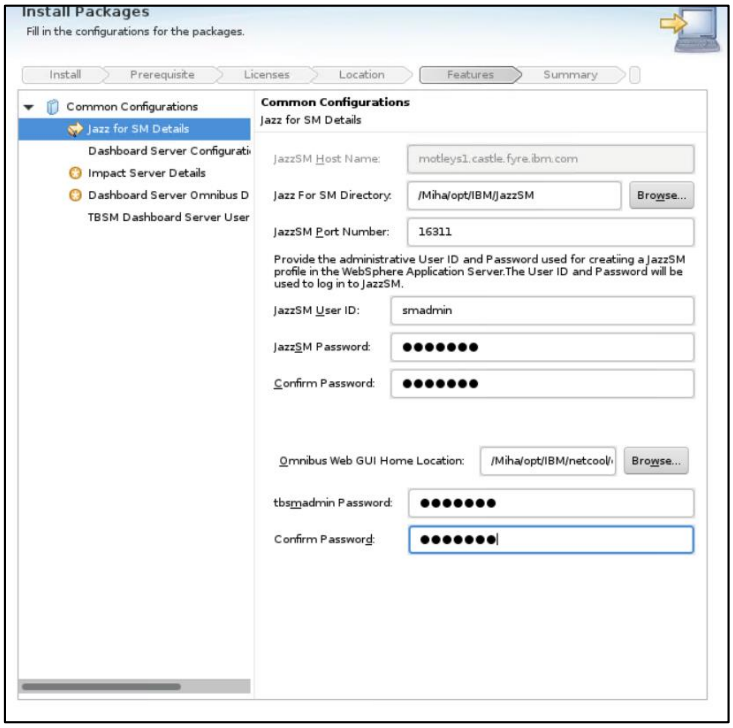
- select TBSM 6.2 Dashboard component to be installed:



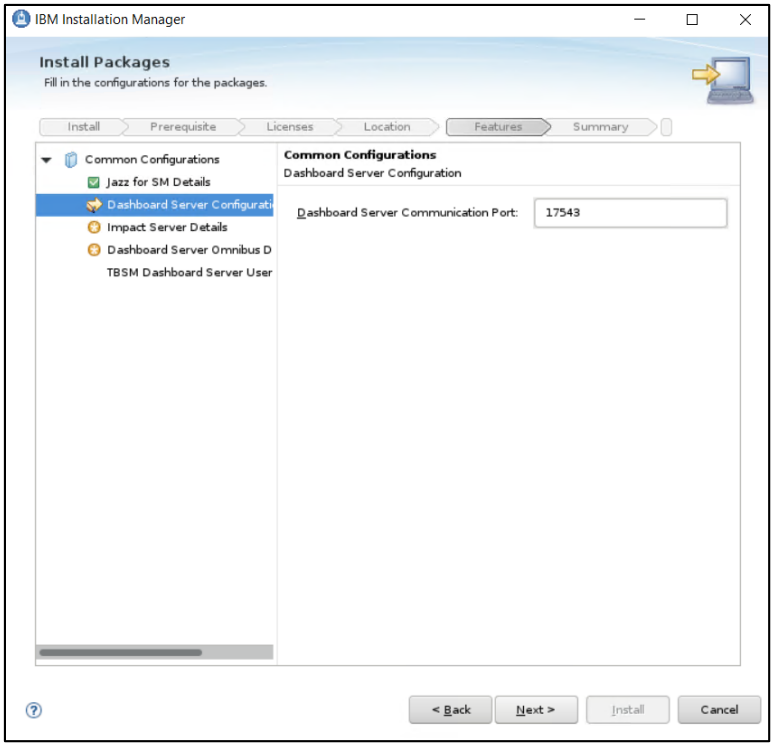
- enter installation directory for TBSM Dashboard server



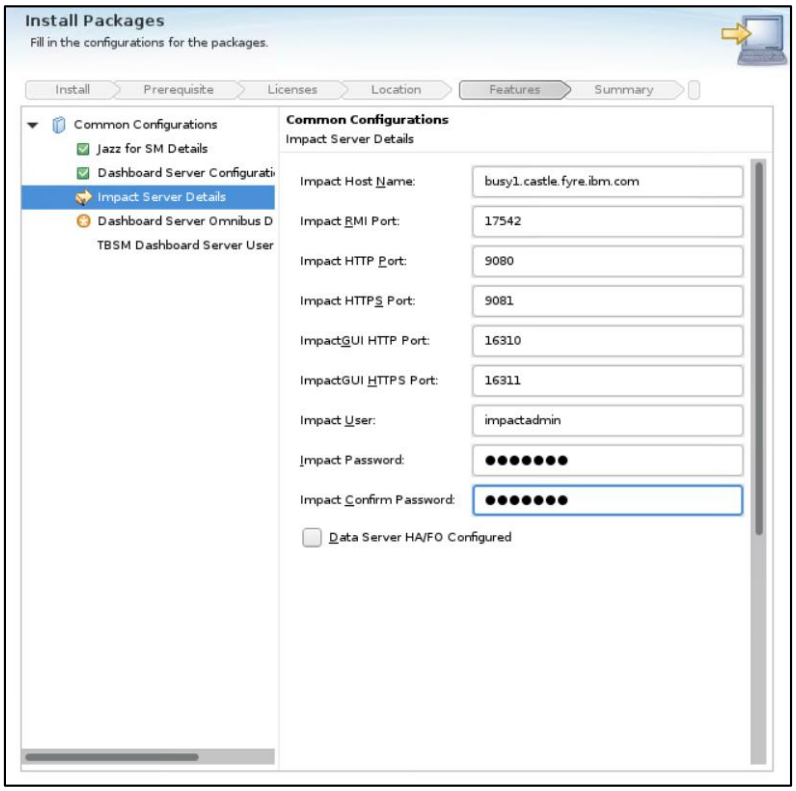
- enter Jazz SM and WebGUI details (make sure you entered the correct installation paths, JazzSM port, smadmin and tbsmadmin password).



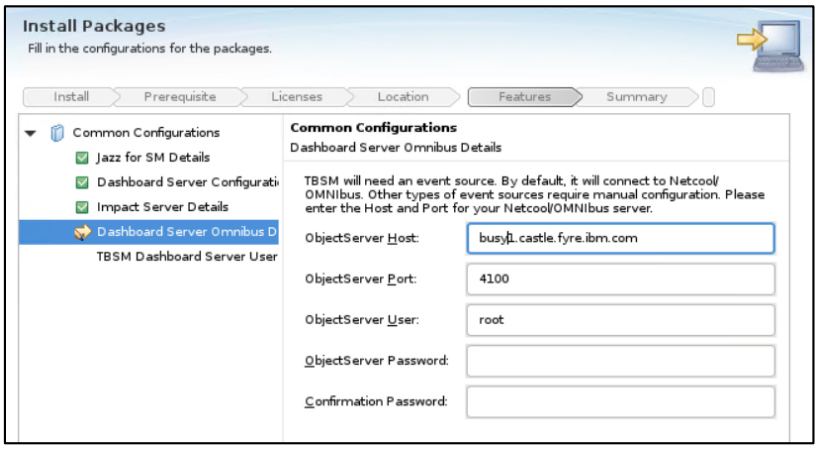
- enter dashboard communication port, by default this is 17543:



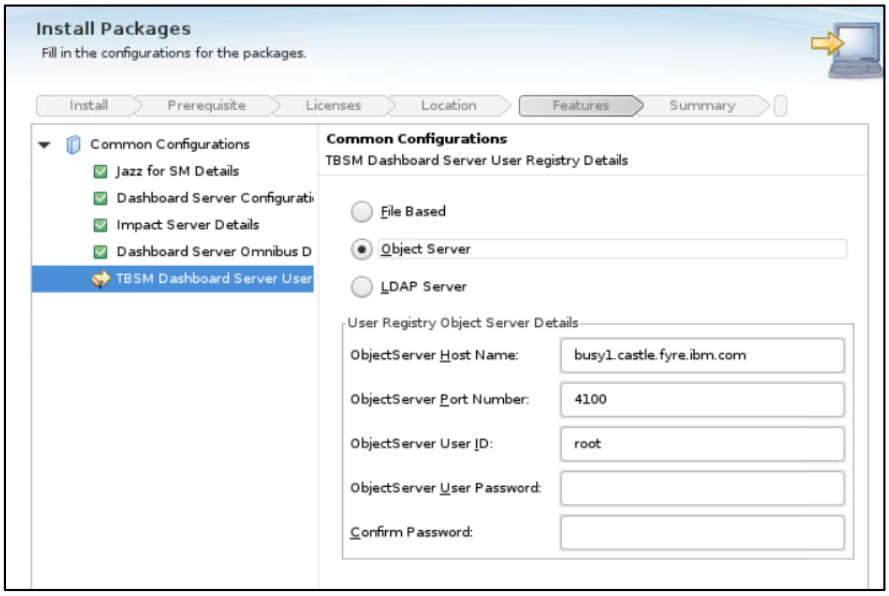
- enter impact server details as you have installed it on server1:



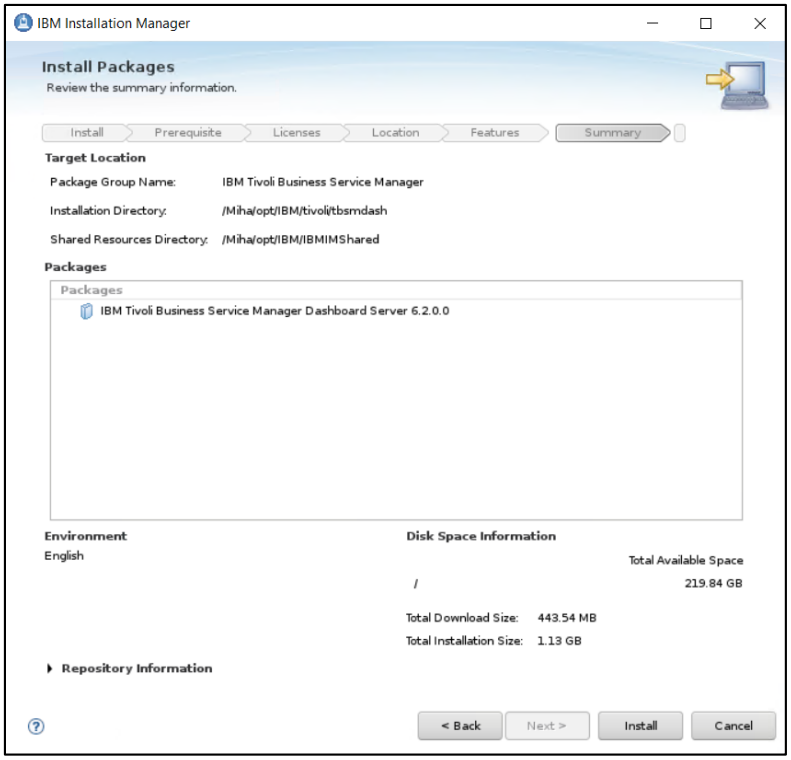
- enter object server details – these should be the same as the ones configured for impact and webgui:



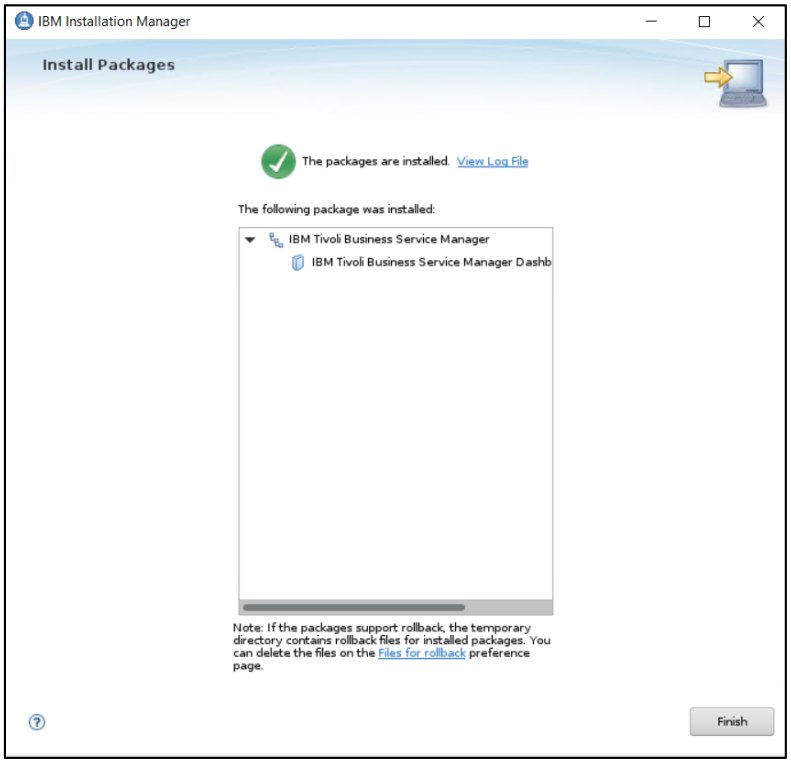
- enter user registry details – these should be the same as the ones configured for impact and webgui, in this example omnibus was user as user repository



- continue with the installation:



- make sure everything completed successfully:



Post-install steps

After everything is properly configured and running, in case an error appears when a user selects to edit a policy when creating or editing a TBSM Template Rule, then the steps documented under this section: "The Policy Editor gives exception when accessed from TBSM Rule editor" from the following list of known problems should be followed:

https://www-01.ibm.com/support/docview.wss?uid=ibm10716855

Firstly, Single Sign On between the Impact servers and the Jazz SM server must be enabled, if these steps were skipped from the above documented ones, then they should be followed now.

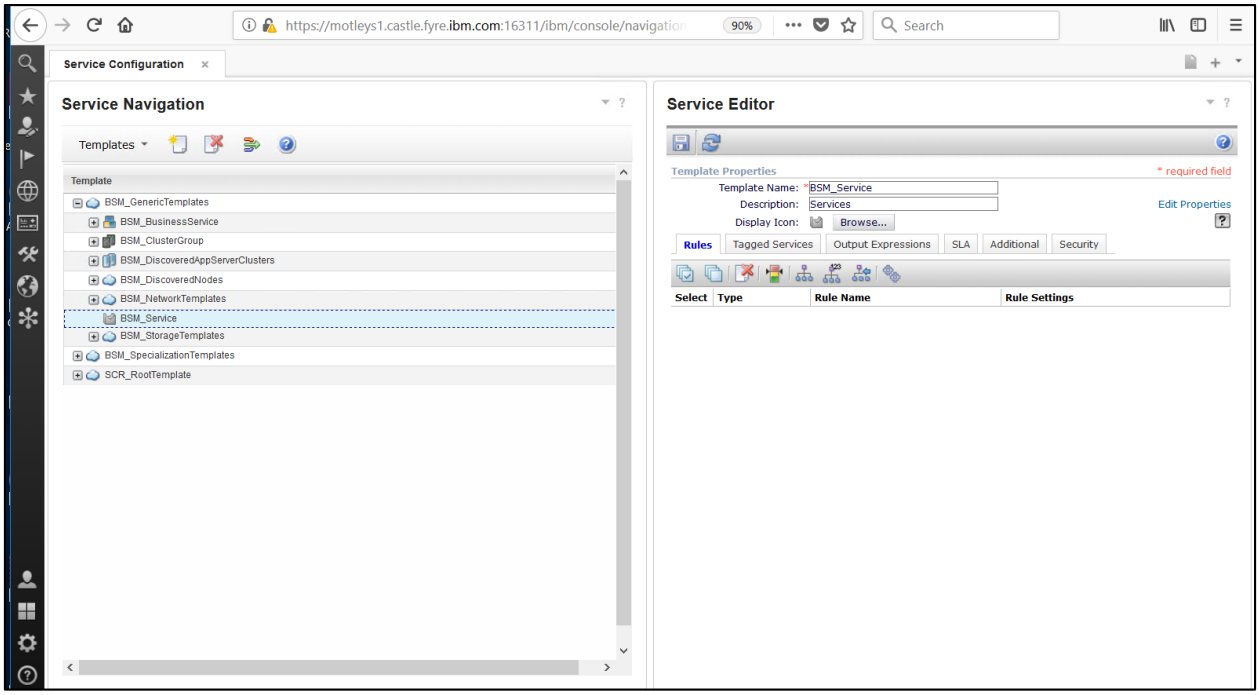
Once SSO is enabled, the user should enter this URL in a new tab

https://<TBSM_Dashboard_Server>:9081/restui/policyui/policy/NumericAttributeFunctions/loadPolicyOrTemplate?policyName=NumericAttributeFunctions&template=null

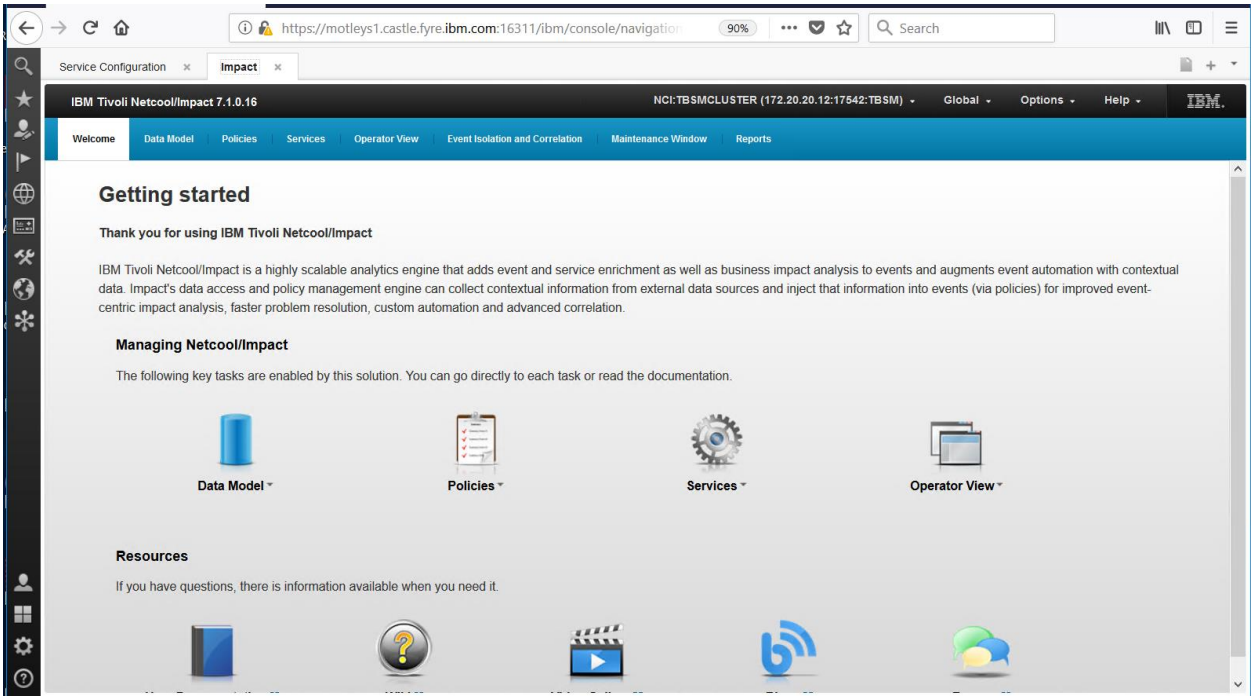
and accept the prompted certificates in the browser and the Policy Editor should be accessible afterwards.

Test TBSM features

Login to TBSM DASH with tbsmadmin user



You can either connect to the Data Server component (Impact) separately or through the integration console previously configured.



Additional steps needed to be followed in case the default Realm name is changed

In case the default realm name (defaultWIMFileBasedRealm) was changed to something else when the SSO steps were performed (example: dashtest), then, some problems may appear when the tbsmadmin user is used to create a new page in DASH and add a TBSM data source.

Within this situation the following error is being displayed in SystemOut.log file:

com.ibm.websphere.wim.security.authz. AccessException
com.ibm.websphere.wim.security.authz. AccessException: ***CWWIM2008E The principal 'uid=tbsmadmin,o=netcoolObjectServerRepository' is not authorized to perform the option 'GET PersonAccount' on 'uid=tbsmadmin,o=netcoolObjectServerRepository'***

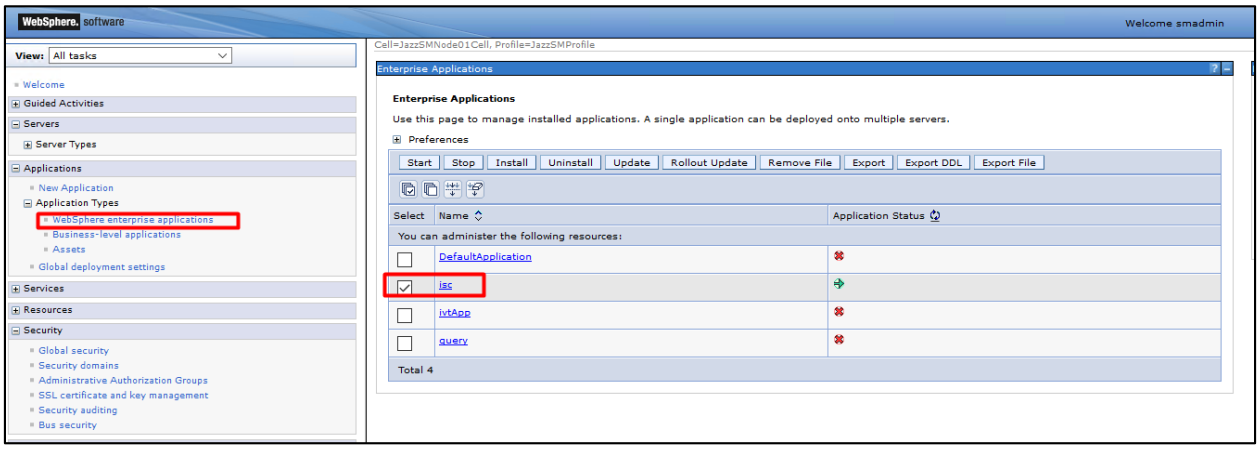
If the realm name is being restored back to its default name e.g. defaultWIMFileBasedRealm and SSO steps are followed again, everything appears to be working correctly and the authorized error is not being generated.

There are 2 workaround that could be used to be able to use a custom Realm Name, both of them described below as follows.

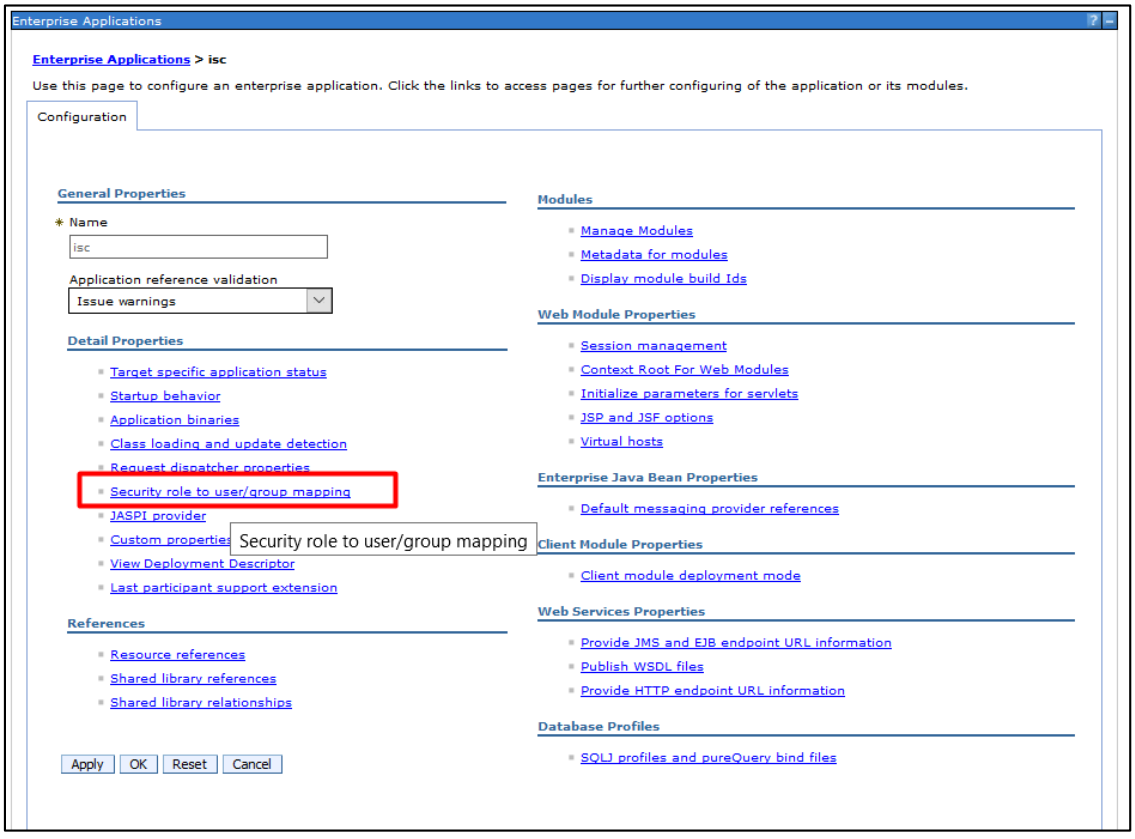
Solution 1:

via the WAS console delete all the role mappings and re-add them (administrative roles + audit roles (if this feature is enabled) +security role mappings)

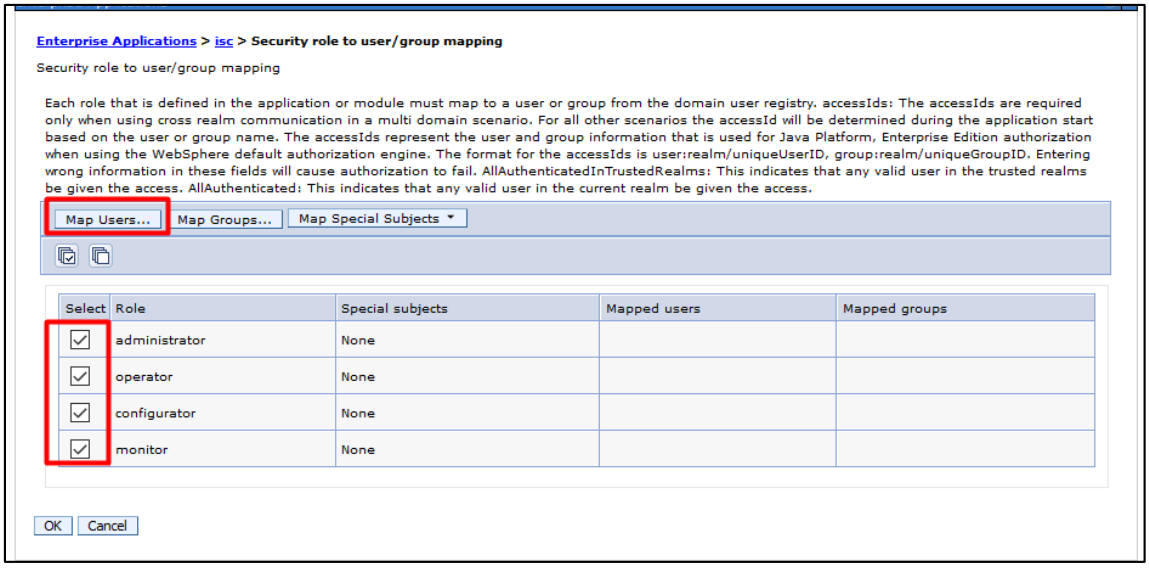
Login to WAS as smadmin user -> Applications -> WebSphere Enterprise Applications -> select **isc** and click on it:



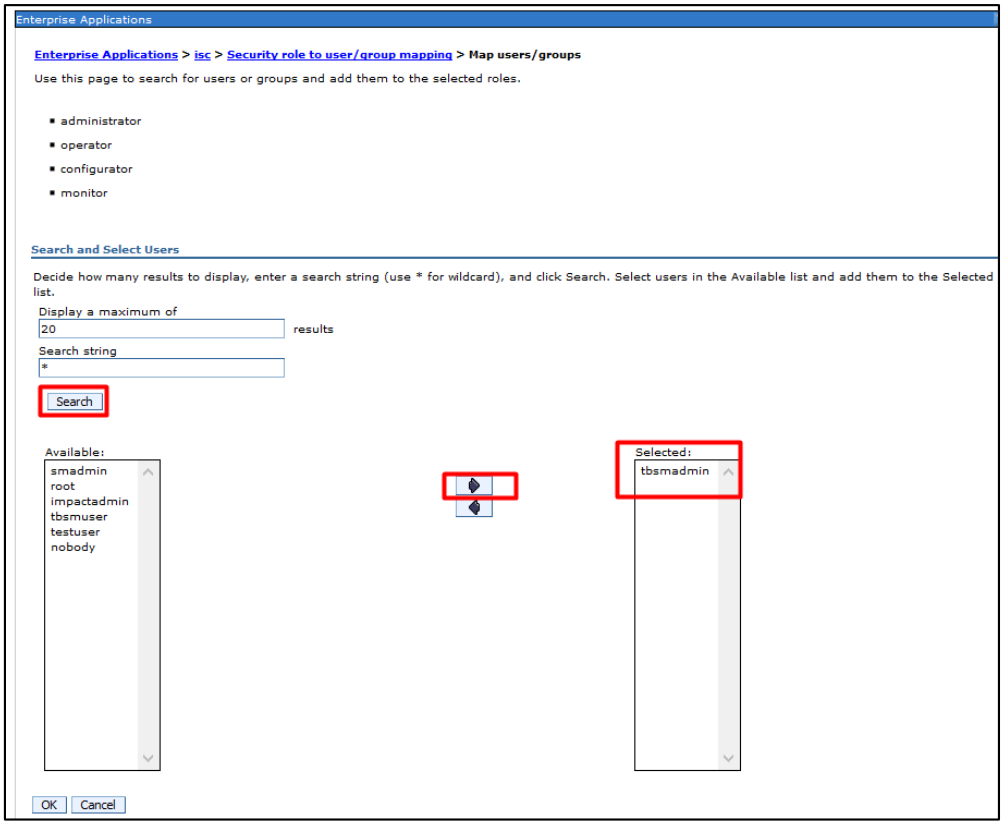
Select "Security role to user/groups mapping":



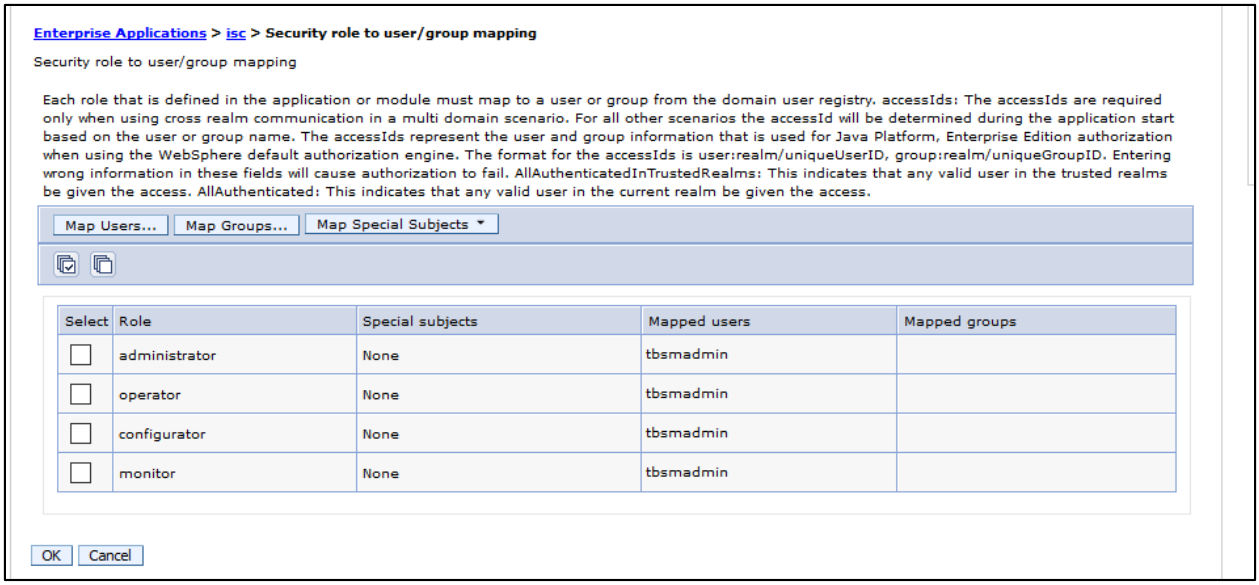
Select all roles -> click on Map Users:



Search for the tbsmadmin user and add it to the mapping list:

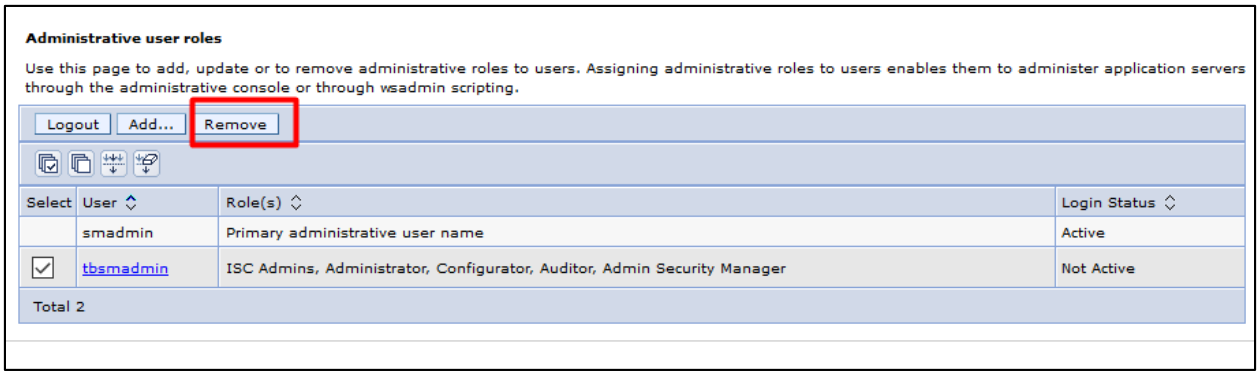


Click ok and save the configuration.

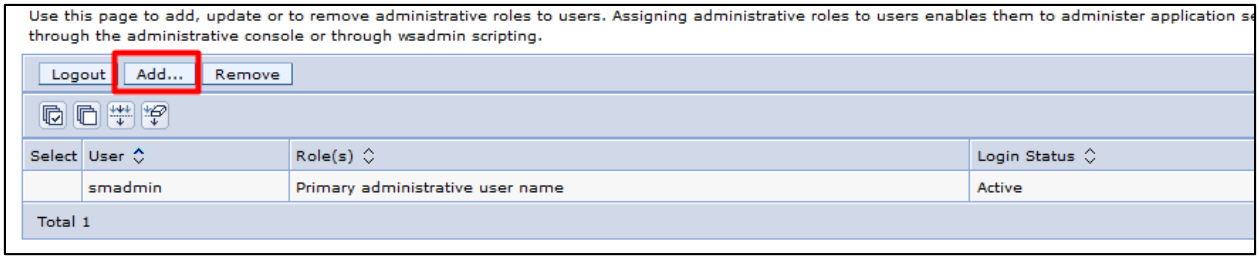


Afterwards, go to "Users and Groups" -> Administrative user roles

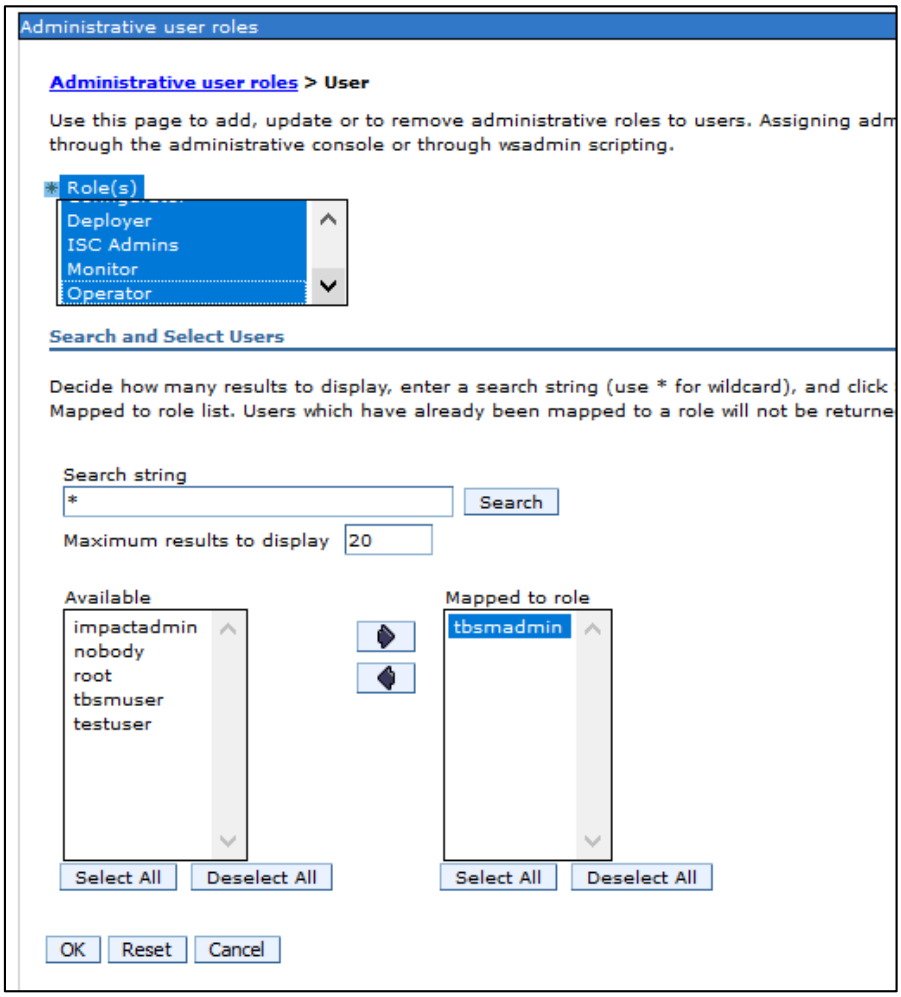
Remove tbsmadmin user as this was mapped by default with the initial realm name



Re-add the administrative roles to this user:

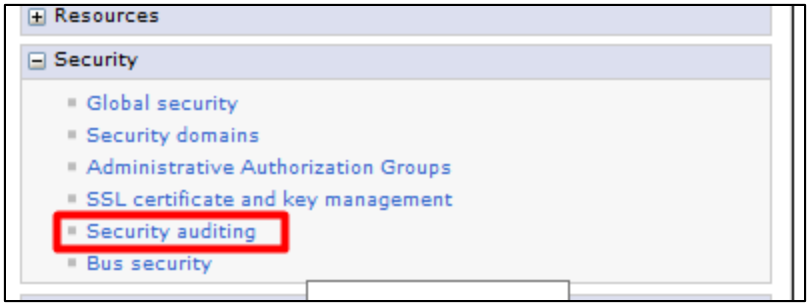


Select all the required roles and tbsmadmin user:



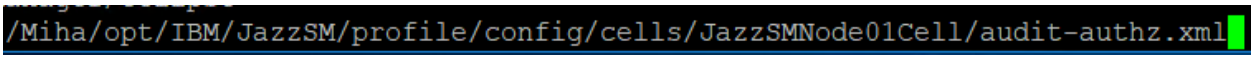
Ok and save the configuration.

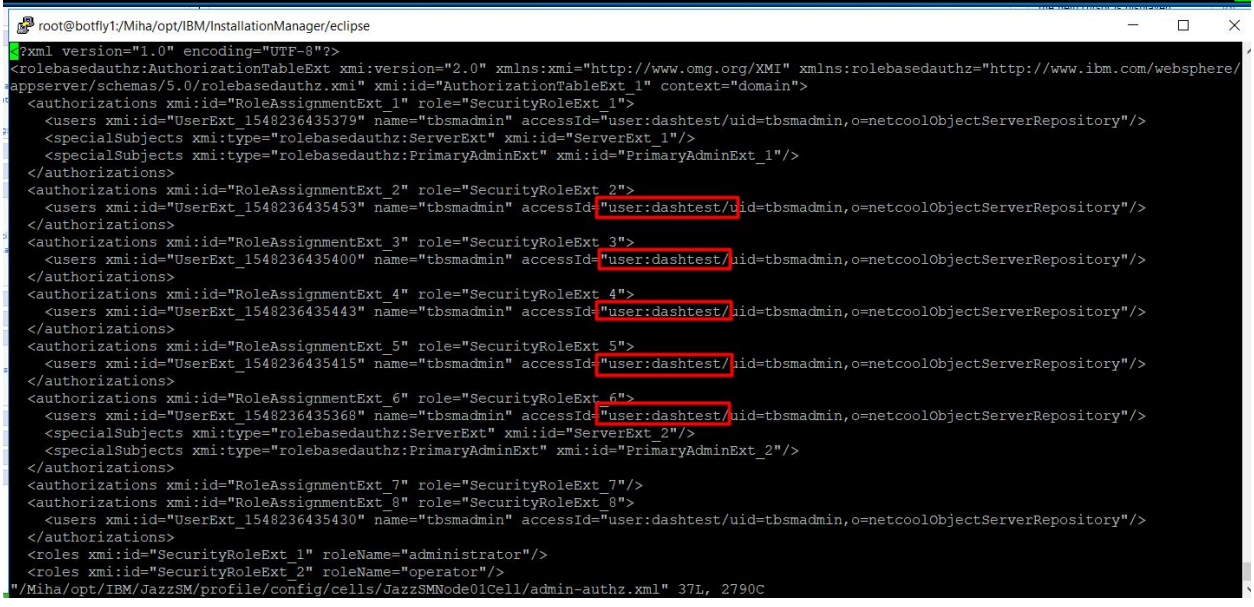
If security auditing was previously enabled, this this should be reconfigured again for tbsmadmin otherwise it is not required.



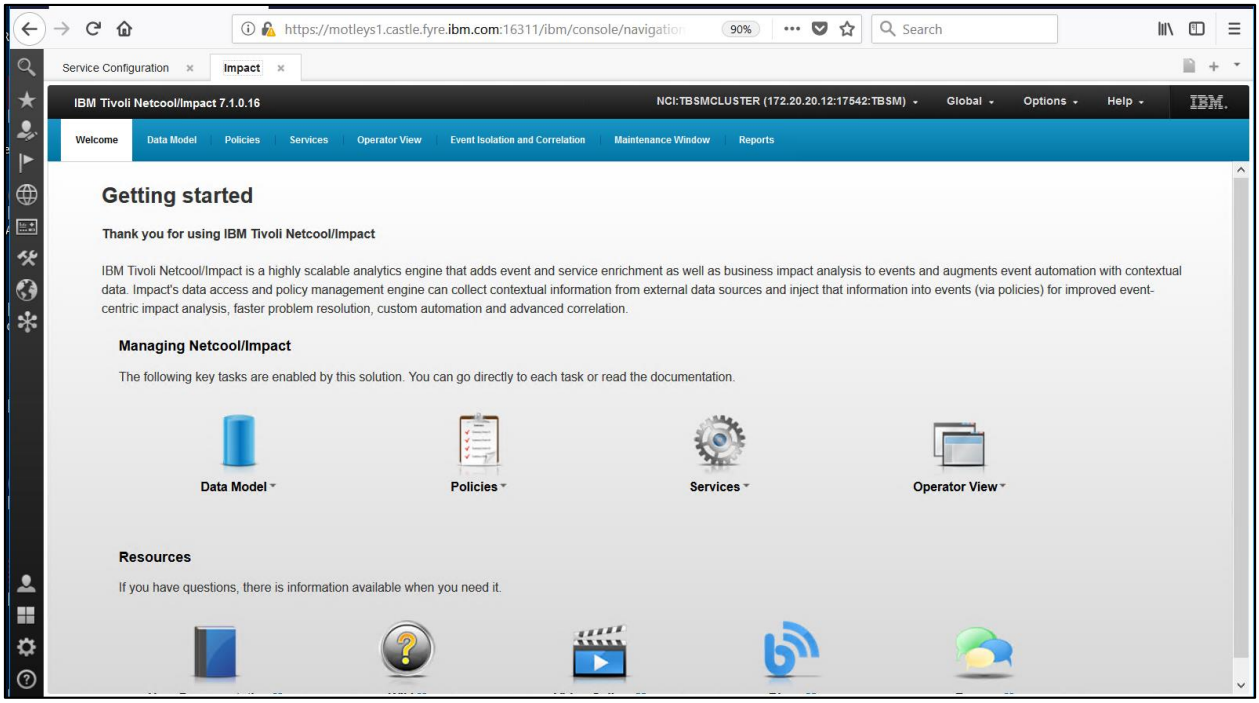
With all these changes, the below 2 files should now reflect the correct Realm name:

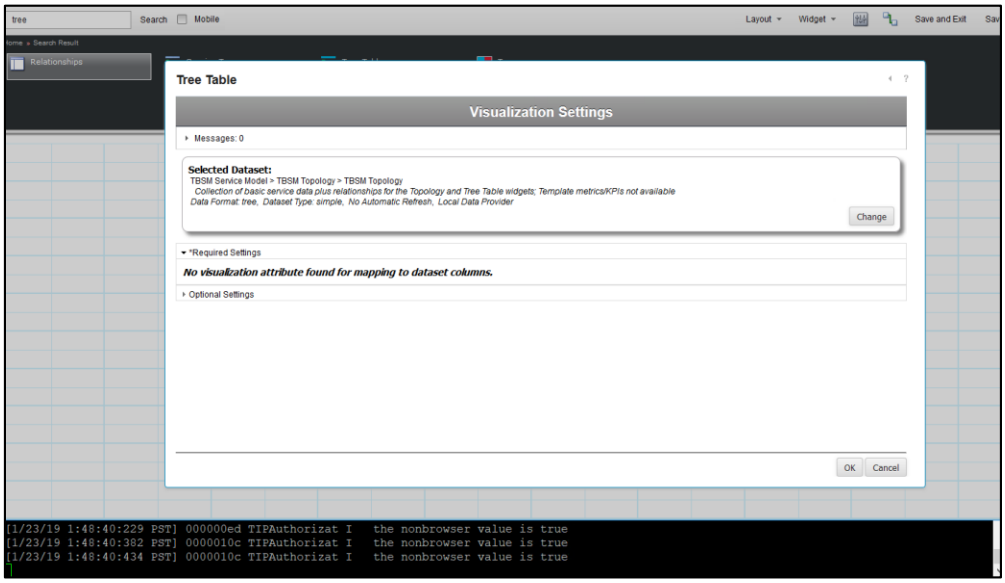
/Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/admin-authz.xml
/Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/audit-authz.xml





Then re-test the SSO and adding TBSM Topology as datasource for widgets -> everything seems to be working fine now, no “tbsmadmin user is not authorized” error anymore.





Solution 2:

The below 2 files can be manually edited to reflect the correct Realm name for tbsmadmin user and a server restart will be required to reflect the changes.

/Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/admin-authz.xml
/Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/audit-authz.xml

For the first file:

/Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/**admin-authz.xml**

```
<?xml version="1.0" encoding="UTF-8"?>
<rolebasedauthz:AuthorizationTableExt xmi:version="2.0" xmlns:xmi="http://www.omg.org/XMI"
xmlns:rolebasedauthz="http://www.ibm.com/websphere/appserver/schemas/5.0/rolebasedauthz.xmi"
xmi:id="AuthorizationTableExt_1" context="domain">
 <authorizations xmi:id="RoleAssignmentExt_1" role="SecurityRoleExt_1">
  <users xmi:id="UserExt_1547584734008" name="tbsmadmin"
accessId="user:defaultWIMFileBasedRealm/uid=tbsmadmin,o=netcoolObjectServerRepository"/>
  <specialSubjects xmi:type="rolebasedauthz:ServerExt" xmi:id="ServerExt_1"/>
  <specialSubjects xmi:type="rolebasedauthz:PrimaryAdminExt" xmi:id="PrimaryAdminExt_1"/>
 </authorizations>
 <authorizations xmi:id="RoleAssignmentExt_2" role="SecurityRoleExt_2"/>
 <authorizations xmi:id="RoleAssignmentExt_3" role="SecurityRoleExt_3">
  <users xmi:id="UserExt_1547584734049" name="tbsmadmin"
accessId="user:defaultWIMFileBasedRealm/uid=tbsmadmin,o=netcoolObjectServerRepository"/>
 </authorizations>
 <authorizations xmi:id="RoleAssignmentExt_4" role="SecurityRoleExt_4"/>
 <authorizations xmi:id="RoleAssignmentExt_5" role="SecurityRoleExt_5"/>
 <authorizations xmi:id="RoleAssignmentExt_6" role="SecurityRoleExt_6">
  <users xmi:id="UserExt_1547584733976" name="tbsmadmin"
accessId="user:defaultWIMFileBasedRealm/uid=tbsmadmin,o=netcoolObjectServerRepository"/>
  <specialSubjects xmi:type="rolebasedauthz:ServerExt" xmi:id="ServerExt_2"/>
  <specialSubjects xmi:type="rolebasedauthz:PrimaryAdminExt" xmi:id="PrimaryAdminExt_2"/>
 </authorizations>
 <authorizations xmi:id="RoleAssignmentExt_7" role="SecurityRoleExt_7"/>
 <authorizations xmi:id="RoleAssignmentExt_8" role="SecurityRoleExt_8">
  <users xmi:id="UserExt_1547584734100" name="tbsmadmin"
accessId="user:defaultWIMFileBasedRealm/uid=tbsmadmin,o=netcoolObjectServerRepository"/>
 </authorizations>
 <roles xmi:id="SecurityRoleExt_1" roleName="administrator"/>
 <roles xmi:id="SecurityRoleExt_2" roleName="operator"/>
 <roles xmi:id="SecurityRoleExt_3" roleName="configurator"/>
 <roles xmi:id="SecurityRoleExt_4" roleName="monitor"/>
 <roles xmi:id="SecurityRoleExt_5" roleName="deployer"/>
 <roles xmi:id="SecurityRoleExt_6" roleName="adminsecuritymanager"/>
 <roles xmi:id="SecurityRoleExt_7" roleName="nobody"/>
 <roles xmi:id="SecurityRoleExt_8" roleName="iscadmins"/>
</rolebasedauthz:AuthorizationTableExt>
```

➔ All the entries "**defaultWIMFileBasedRealm"** should be changed to reflect the correct realm name

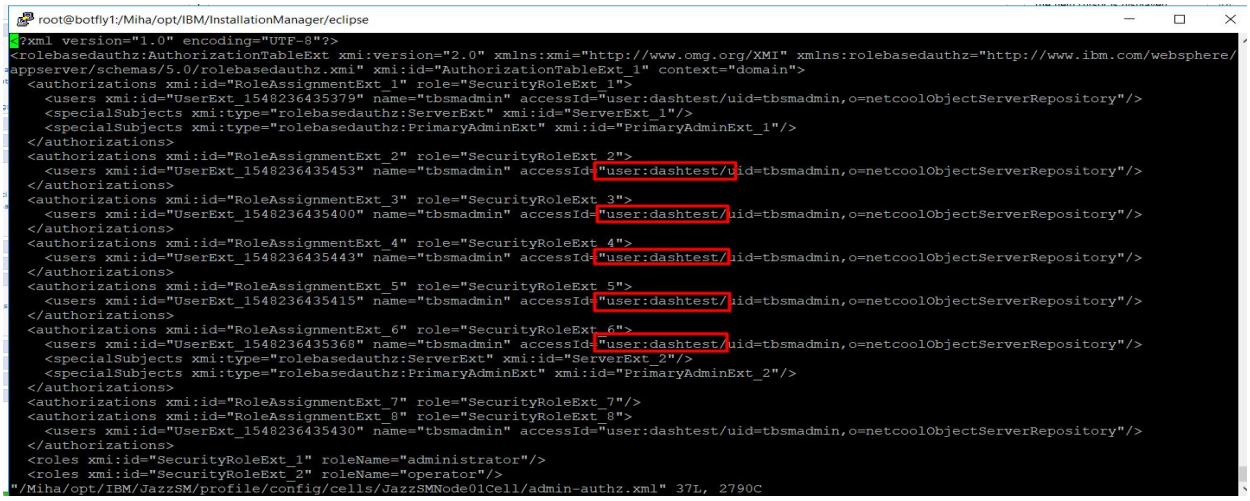
Same for /Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Cell/**audit-authz.xml** file

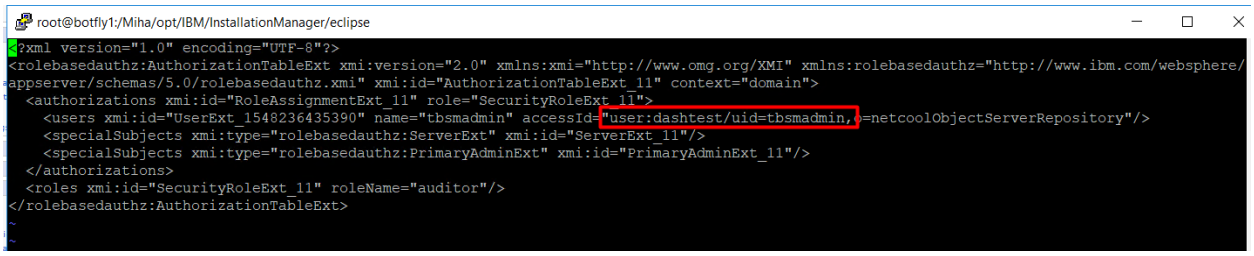
```
<?xml version="1.0" encoding="UTF-8"?>
```

<rolebasedauthz:AuthorizationTableExt xmi:version="2.0" xmlns:xmi="http://www.omg.org/XMI" xmlns:rolebasedauthz="http://www.ibm.com/websphere/appserver/schemas/5.0/rolebasedauthz.xmi" xmi:id="AuthorizationTableExt_11" context="domain">
 <authorizations xmi:id="RoleAssignmentExt_11" role="SecurityRoleExt_11">
  <users xmi:id="UserExt_1547584733889" name="tbsmadmin" accessId="user:**defaultWIMFileBasedRealm**/uid=tbsmadmin,o=netcoolObjectServerRepository"/>
  <specialSubjects xmi:type="rolebasedauthz:ServerExt" xmi:id="ServerExt_11"/>
  <specialSubjects xmi:type="rolebasedauthz:PrimaryAdminExt" xmi:id="PrimaryAdminExt_11"/>
 </authorizations>
 <roles xmi:id="SecurityRoleExt_11" roleName="auditor"/>
</rolebasedauthz:AuthorizationTableExt>

➔ **defaultWIMFileBasedRealm** -> should be changed to the correct realm

After restarting the server and re-tested, everything appears to be working correctly, the error is no longer present.





TBSM 6.2 Upgrade to Fix Pack 1

This section has the purpose to illustrate a complete step by step example for TBSM 6.2 upgrade to FixPack 1 including the additional steps needed to be followed in case the base version of TBSM 6.2 that is already installed is the one from July 2018 instead of the November 2018 version.

Download link Fix Pack 1:
https://www-01.ibm.com/support/docview.wss?uid=ibm10876634

The one used in this example, for linux:
https://www-945.ibm.com/support/fixcentral/swg/selectFixes?product=ibm%2FTivoli%2FTivoli+Business+Service+Manager&fixids=6.20-TIV-BSM-LINUX-FP0001&source=SAR&function=fixId&parent=ibm/Tivoli

List of minimum prerequisites as described within the Readme.txt file that comes with the fix pack binary:

- This Fix pack requires IBM Tivoli Business Service Manager Version 6.2.0.0 to be installed.
- Installation Manager on your machine should be 1.8.8 or higher
- JazzSM 1.1.3 Fixpack3 (DASH 3.1.3 FP3)
- Impact 7.1.0 Fix Pack 15

For this guide DASH FP3 and Impact FP16 have been used.

Before installing the Fix Pack 1 it is mandatory to check the build version of the TBSM 6.2.0.0 package currently on the environment. This can be done running the versioninfo script located in the <TBSM_HOME>/bin directory.

If the utility header output shows a build date of 20181106 you *only need to run steps 7 and 8* without the additional steps for the old release!!

If the utility header output shows a built date of 2018072 then follow all the steps described in this document.

Example:

```
[root@busy1 schema_files]# /Miha/opt/IBM/tivoli/tbsm/bin/versioninfo

================================================================================
TBSM Version Utility:  Build date: 6.2.0. - 201807231316
================================================================================
Gathered:    Thu Jul 04 05:41:56 PDT 2019

Java:        1.8.0_211 [IBM Corporation]
             /Miha/opt/IBM/tivoli/impact/sdk/jre

Java VM:     IBM J9 VM [j9jit29]

Platform:    Linux
             3.10.0-862.3.2.el7.x86_64
             amd64

TBSM_HOME:   /Miha/opt/IBM/tivoli/tbsm
IMPACT_HOME: /Miha/opt/IBM/tivoli/impact

Machine:     busy1.castle.fyre.ibm.com [172.20.20.12]
```

1. Download the refresh TBSM 6.2.0.0 Installation package. The following are the updated TBSM 6.2.0.0 base install packages with a build date of **20181106**:

   CNXG3ML IBM Tivoli Business Service Manager V6.2 Linux 64-bit Multilingual
   TBSM_V6.2_LINUX_64_BIT_MULTI.zip

   CNXG4ML IBM Tivoli Business Service Manager V6.2 AIX 64-bit Multilingual
   TBSM_V6.2_AIX_64_BIT_MULTI.zip

   CNXG5ML IBM Tivoli Business Service Manager V6.2 Windows 64-bit Multilingual
   TBSM_V6.2_WIN_64_BIT_MULTI.zip

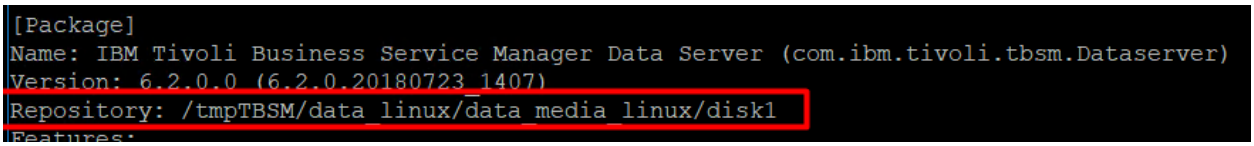
2. Determine location where the original installation package was placed. This is the location of the original repositories directory that were used for TBSM installation. This can be done by example by running Installation Manager imcl "command line" utility to list the installed packages.

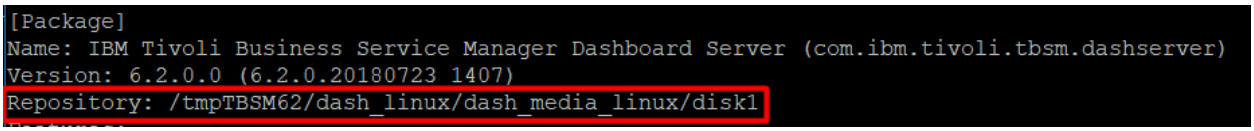
Command: /opt/IBM/InstallationManager/eclipse/tools/imcl listInstalledPackages -verbose

Example:

```
[root@busy1 schema_files]# /Miha/opt/IBM/InstallationManager/eclipse/tools/imcl listInstalledPackages -verbose
```

Look for the "Repository" information associated with both the Dashboard and Data Server applications. For example:





3. Backup or rename the repository locations (identified at step 2) for each of the TBSM components (Data and Dashboard Server).

/tmpTBSM/data_linux/data_media_linux/disk1
/tmpTBSM62/dash_linux/dash_media_linux/disk1

mv / tmpTBSM /tmpTBSM.old

4. Replace the old version (build 20180723) with the new base build version (build 20181106) by extracting the new downloaded Installation package into the same location where the initial one was present.

mkdir /tmpTBSM
unzip TBSM_V6.2_LINUX_64-BIT_MULTI.zip -d /tmpTBSM

5. Copy data server and dash server offerings jar files of the new Installation package of TBSM 6.2 into the Offerings directory of your Installation Manager.

Offerings directory of Installation Manager:
/var/ibm/InstallationManager/installRegistry/metadata/Offerings/

Files needed to be copied into the above directory:
com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249.jar
com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249_SE.jar
com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249.jar
com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249_SE.jar

Their current location is under the extracted location of TBSM 6.2 base package (Nov edition):

/tmpTBSM/data_linux/data_media_linux/disk1/md/Offerings
/tmpTBSM62/dash_linux/dash_media_linux/disk1/md/Offerings

```
[root@busy1 tmpTBSM]# cd /tmpTBSM/data_linux/data_media_linux/disk1/md/Offerings
[root@busy1 Offerings]# ls
com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249.jar     toc.xml
com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249_SE.jar
```

```
[root@motleys1 test]# ls /tmpTBSM62/dash_linux/dash_media_linux/disk1/md/Offerings
com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249.jar     toc.xml
com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249_SE.jar
```

Therefore, commands to be run:

cp /tmpTBSM/data_linux/data_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/

cp /tmpTBSM/data_linux/data_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249_SE.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/

```
[root@busy1 Offerings]# cp /tmpTBSM/data_linux/data_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbsm.Dataserver_
6.2.0.20181106_0249.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/
[root@busy1 Offerings]# cp /tmpTBSM/data_linux/data_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbsm.Dataserver_
6.2.0.20181106_0249_SE.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/
```

cp /tmpTBSM62/dash_linux/dash_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249_SE.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/

cp /tmpTBSM62/dash_linux/dash_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/

```
[root@motleys1 test]# cp /tmpTBSM62/dash_linux/dash_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbs
rver_6.2.0.20181106_0249_SE.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/
[root@motleys1 test]# cp /tmpTBSM62/dash_linux/dash_media_linux/disk1/md/Offerings/com.ibm.tivoli.tbs
rver_6.2.0.20181106_0249.jar /var/ibm/InstallationManager/installRegistry/metadata/Offerings/
```

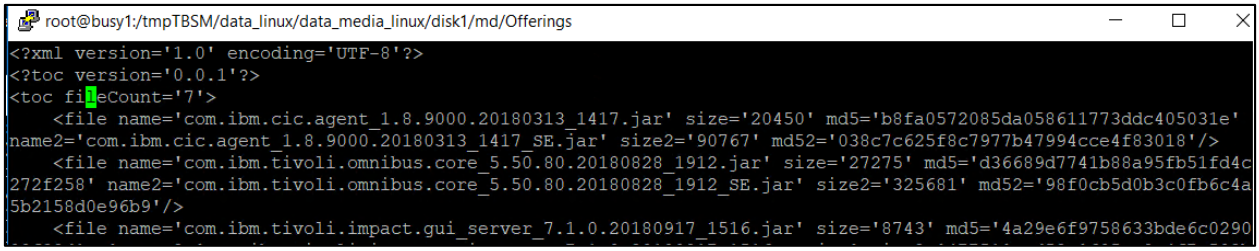
6. Edit toc.xml to add the recently added Offerings jar files on each server

vi */var/ibm/InstallationManager/installRegistry/metadata/Offerings/toc.xml*

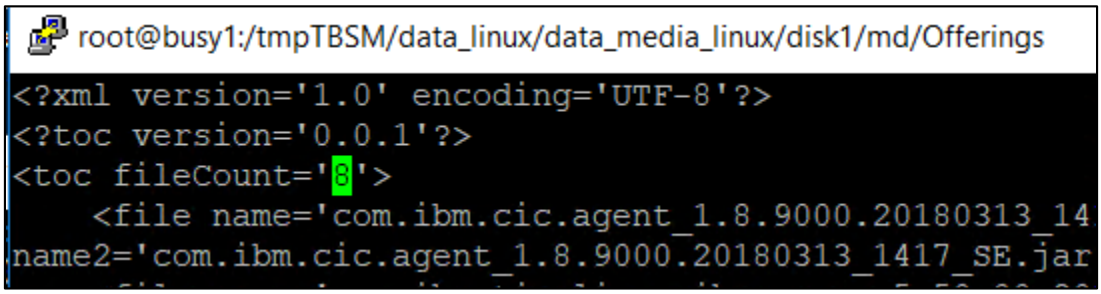
Check the number of items you have at the beginning of the script and increase it by 1.

example:

from 7

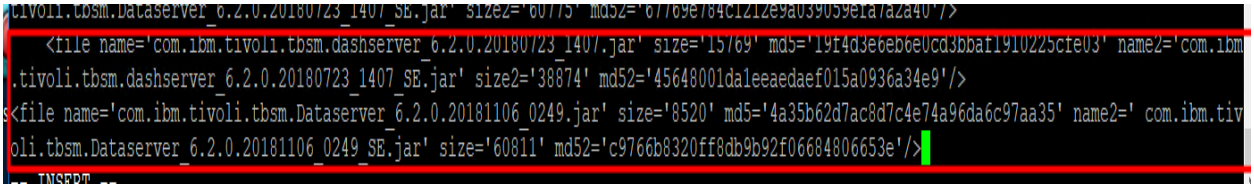


to 8:



At the end of the file add the following entry for the dataserver jar files that were added:

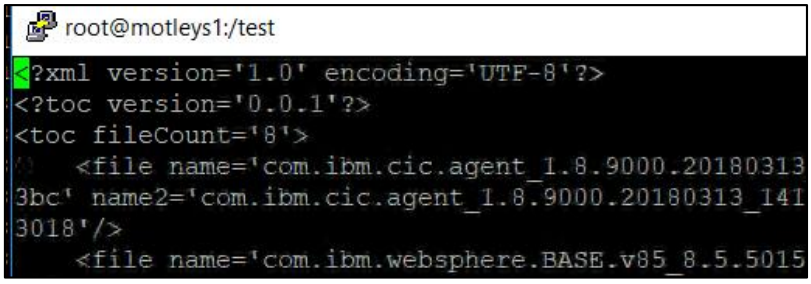
<file name='com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249.jar' size='8520' md5='4a35b62d7ac8d7c4e74a96da6c97aa35' name2='com.ibm.tivoli.tbsm.Dataserver_6.2.0.20181106_0249_SE.jar' size='60811' md52='c9766b8320ff8db9b92f06684806653e'/>



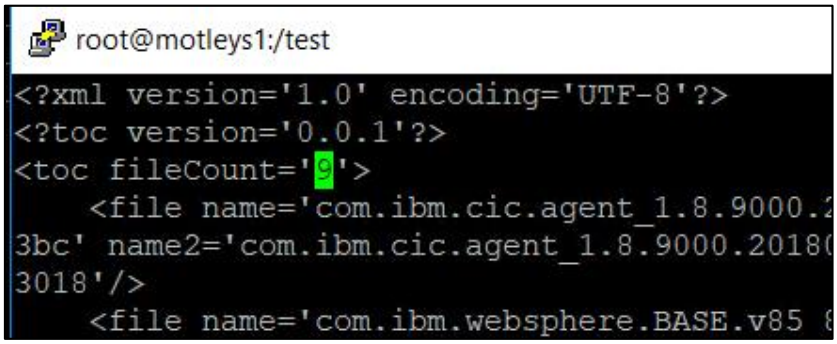
Do the same for the dash server and at the end of the file add the following entry for the dash jar files that were added:

vi */var/ibm/InstallationManager/installRegistry/metadata/Offerings/toc.xml*

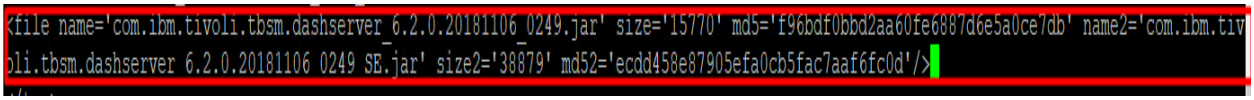
From:



to:



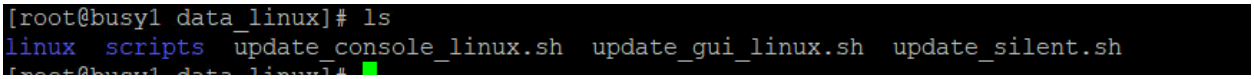
<file name='com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249.jar' size='15770' md5='f96bdf0bbd2aa60fe6887d6e5a0ce7db' name2='com.ibm.tivoli.tbsm.dashserver_6.2.0.20181106_0249_SE.jar' size2='38879' md52='ecdd458e87905efa0cb5fac7aaf6fc0d'/>

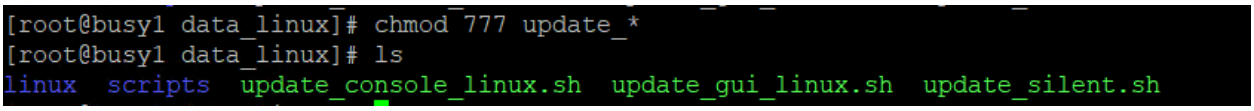


All non-vital programs should be closed prior to installation of the Fixpack. This includes the Impact Data and Dashboard servers, as well as, JazzSM (hosting the TBSM Dashboard Server).

7. Run the update script for the TBSM Data Server component

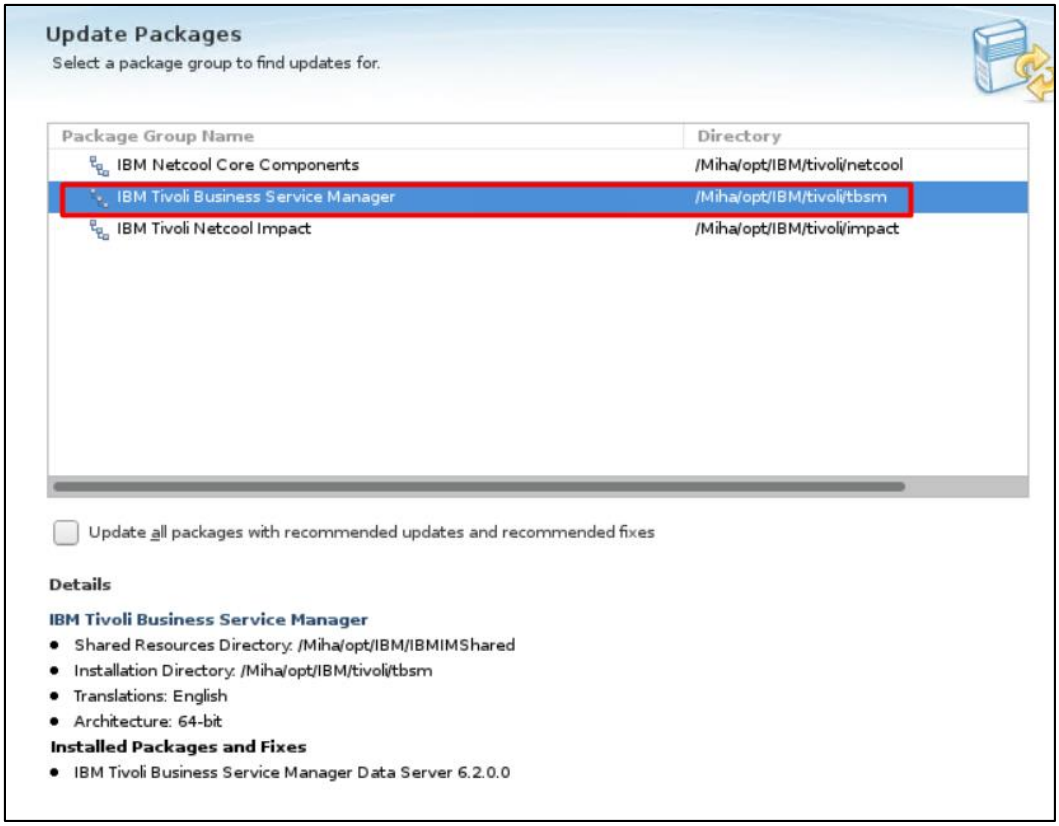
Go to the directory where you have extracted fix pack 1 and select the data_linux component. If needed, add the necessary permissions for the scripts to be executed.

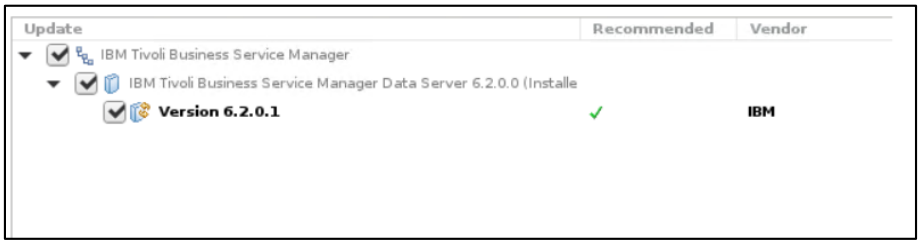


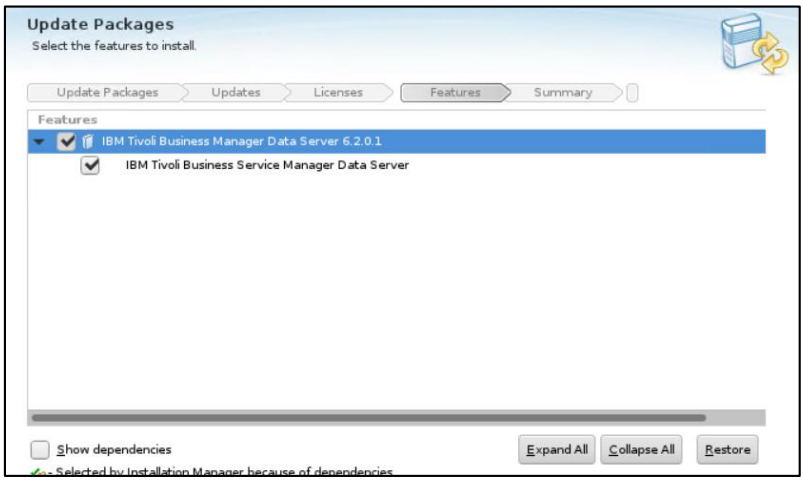


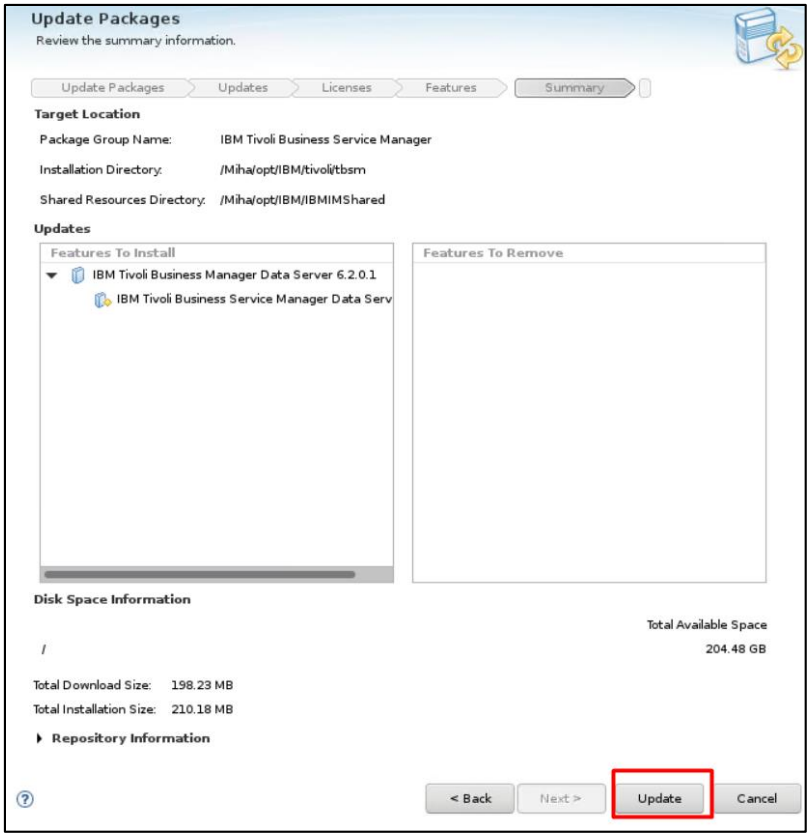
For example, for installing via gui mode, run update_gui_linux.sh script:

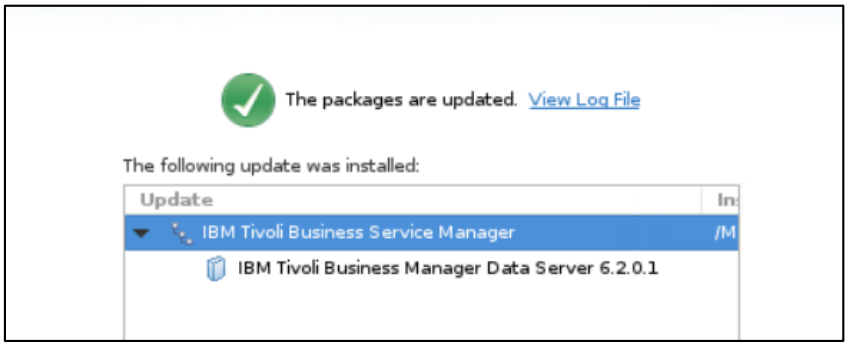
Select the TBSM Data server package:


Update Packages
Select a package group to find updates for.
Package Group Name
Directory
IBM Netcool Core Components
/Miha/opt/IBM/tivoli/netcool
IBM Tivoli Business Service Manager
/Miha/opt/IBM/tivoli/tbsm
IBM Tivoli Netcool Impact
/Miha/opt/IBM/tivoli/impact
Update all packages with recommended updates and recommended fixes
Details
IBM Tivoli Business Service Manager
Shared Resources Directory: /Miha/opt/IBM/IBMIMShared
Installation Directory: /Miha/opt/IBM/tivoli/tbsm
Translations: English
Architecture: 64-bit
Installed Packages and Fixes
IBM Tivoli Business Service Manager Data Server 6.2.0.0


Update
Recommended
Vendor
IBM Tivoli Business Service Manager
IBM Tivoli Business Service Manager Data Server 6.2.0.0 (Installe
Version 6.2.0.1
IBM


Update Packages
Select the features to install.
Update Packages
Updates
Licenses
Features
Summary
Features
IBM Tivoli Business Manager Data Server 6.2.0.1
IBM Tivoli Business Service Manager Data Server
Show dependencies
Expand All
Collapse All
Restore





8. Run the update script for the TBSM DASH Server component

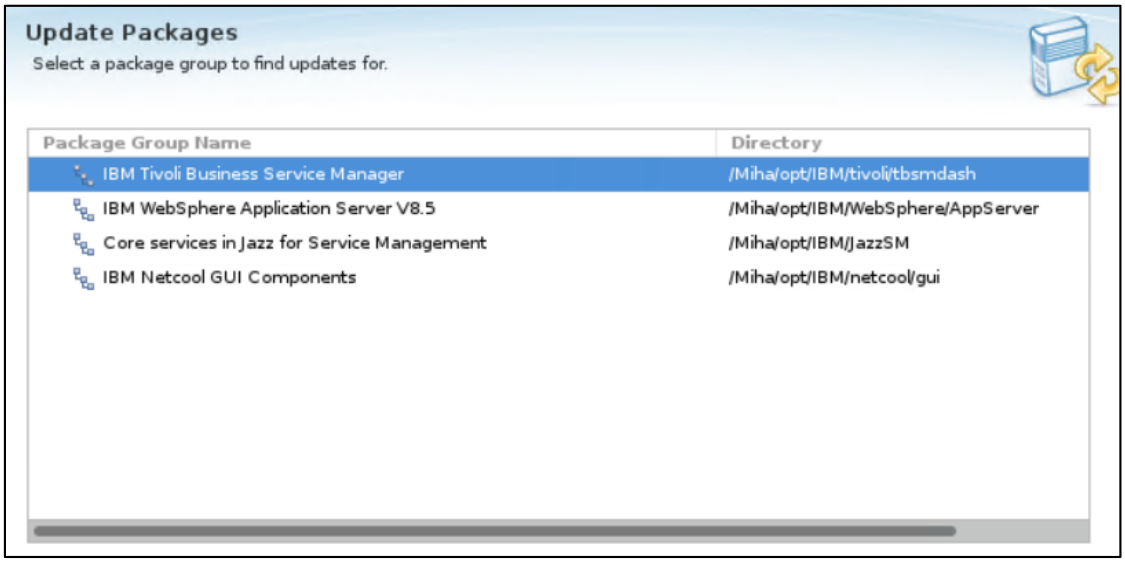
Go to the directory where you have extracted fix pack 1 and select the dash_linux component. If needed, add the necessary permissions for the scripts to be executed.

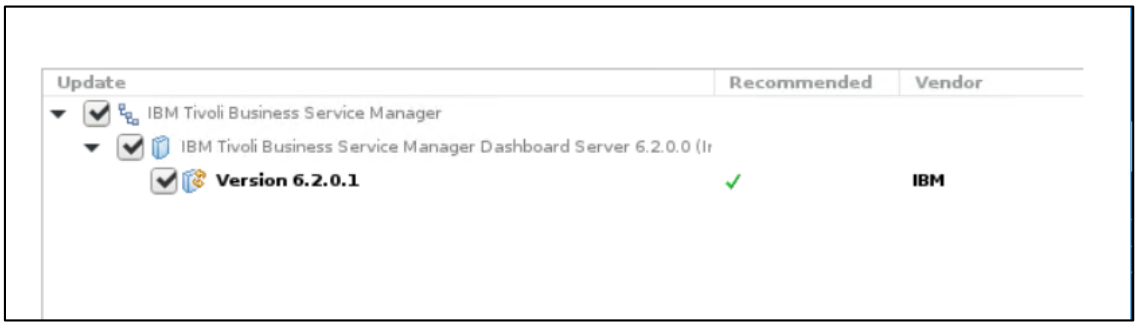
```
[root@motleys1 6.20-TIV-BSM-LINUX-FP0001]# cd dash_linux/
[root@motleys1 dash_linux]# ls
linux  scripts  update_console_linux.sh  update_gui_linux.sh  update_silent.sh
[root@motleys1 dash_linux]#
[root@motleys1 dash_linux]#
[root@motleys1 dash_linux]# chmod 777 update_*
[root@motleys1 dash_linux]# ls
linux  scripts  update_console_linux.sh  update_gui_linux.sh  update_silent.sh
```

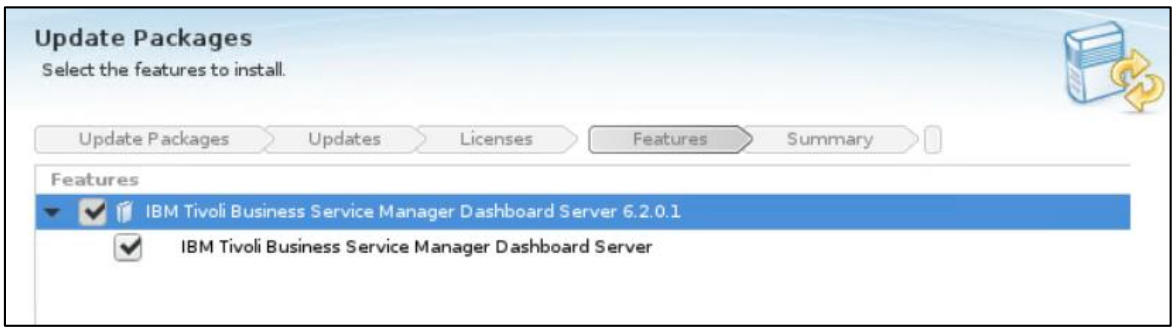
For example, for installing via gui mode, run update_gui_linux.sh script:

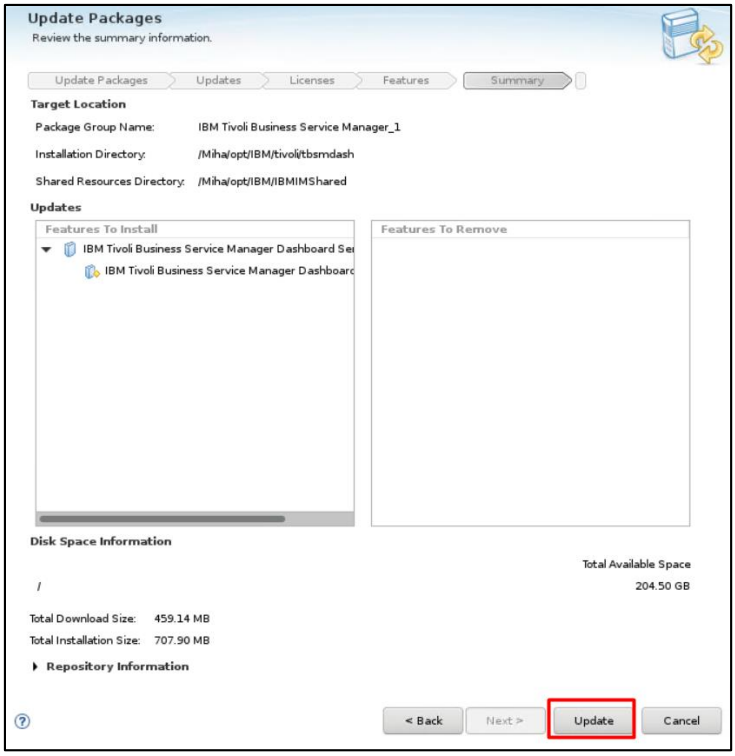
```
[root@motleys1 dash_linux]# ./update_gui_linux.sh
```

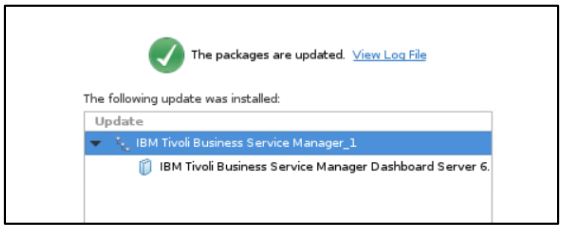
Select the TBSM Dash server package:











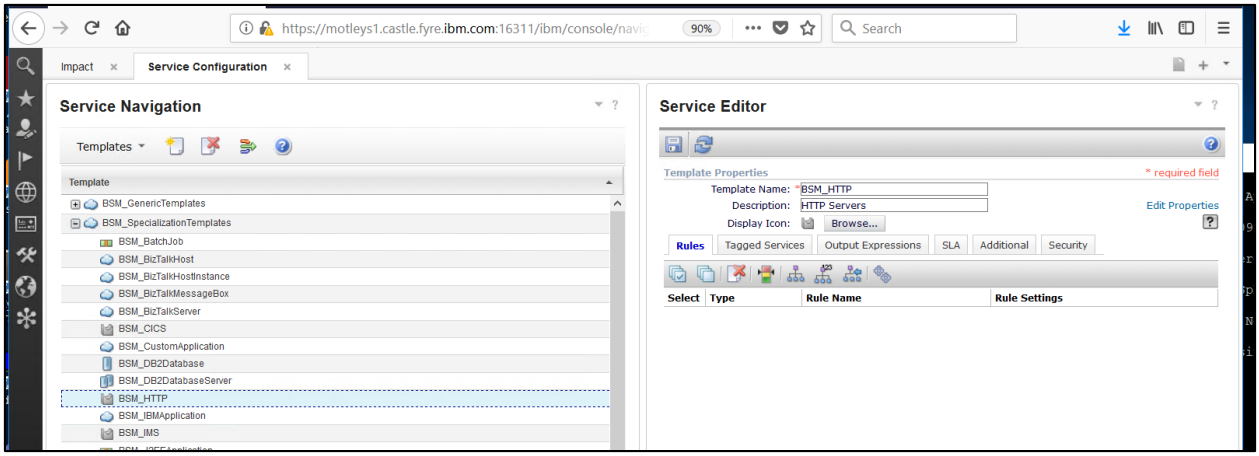
Restart the servers, check the versions and make sure everything is running correctly.

cd /Miha/opt/IBM/InstallationManager/eclipse/tools/

./imcl listInstalledPackages -long -features

```
/Miha/opt/IBM/tivoli/tbsm : com.ibm.tivoli.tbsm.Dataserver_6.2.0.20190320_0120 : IBM Tivoli Business Manager Data
Server : 6.2.0.1 : com.ibm.tivoli.DataServer
```

```
/Miha/opt/IBM/tivoli/tbsmdash : com.ibm.tivoli.tbsm.dashserver_6.2.0.20190320_0129 : IBM Tivoli Busin
ice Manager Dashboard Server : 6.2.0.1 : com.ibm.tivoli.DashServer
```



Configure SSL between DASH and Impact for TBSM 6.2

The following steps have worked correctly for configuring SSL within TBSM 6.2.0.1 test environment:

1. Add impact.server.iphostname=FQDN within TBSM_server.props on Impact Server and restart Impact.

/Miha/opt/IBM/tivoli/impact/etc/TBSM_server.props

```
impact.server.iphostname=busy1.castle.fyre.ibm.com
```

2. Enable SSL between Impact components

To enable SSL, run the following command:

./configImpactSSL.sh enable <keystore password>

Where <keystore password> is the keystore password that is set during the Netcool/Impact installation.

```
[root@busy1 IBM]# /Miha/opt/IBM/tivoli/impact/install/security/configImpactSSL.sh enable netcool

BUILD SUCCESSFUL
Total time: 47 seconds
Done. Please exchange the SSL certificates between all of the Netcool/Impact and GUI servers, and then start the p
rimary server first, followed by the secondary servers.
```

3. Restart Impact

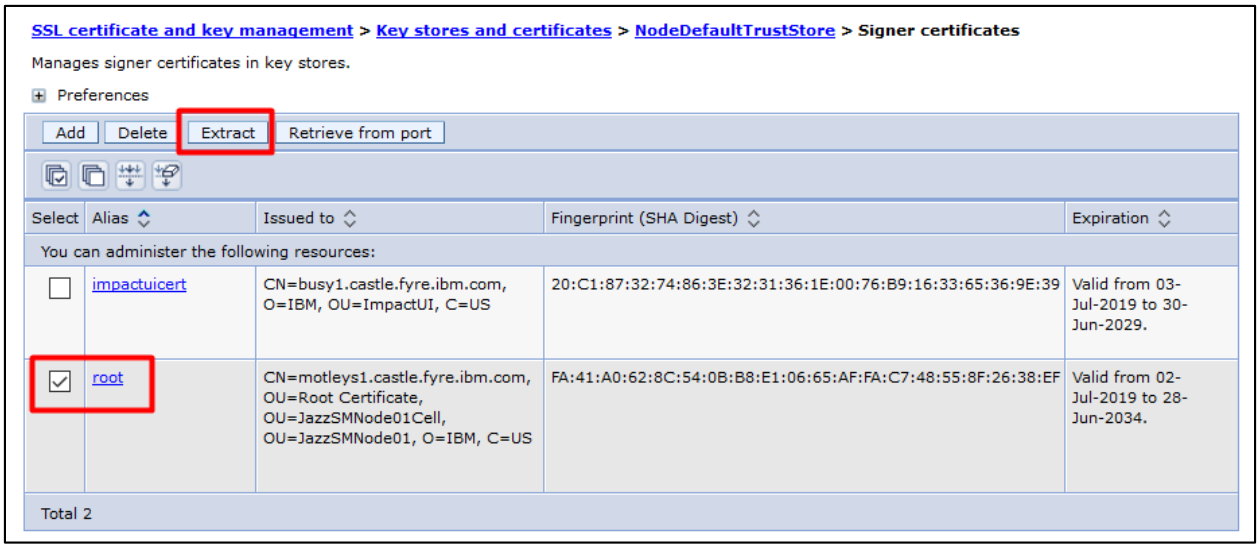
/Miha/opt/IBM/tivoli/impact/bin/startImpactServer.sh

/Miha/opt/IBM/tivoli/impact/bin/startGUIServer.sh

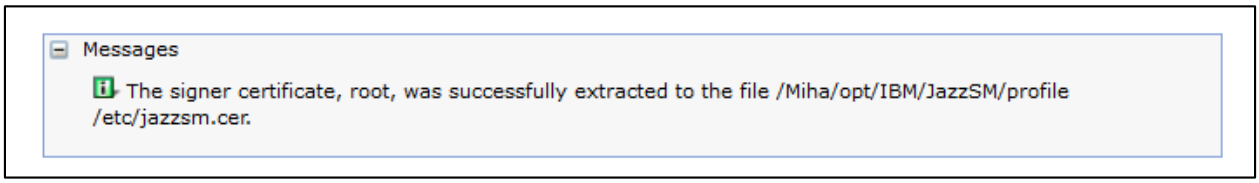
4. Exchange certificates between DASH and TBSM

4.1. From the DASH

WAS -> Security -> SSL certificate and key management -> Key stores and certificates -> NodeDefaultTrustStore > Signer certificates -> Select the root JazzSM certificate and select to extract this certificate.



Enter a name for the jazzsm certificate and save it.



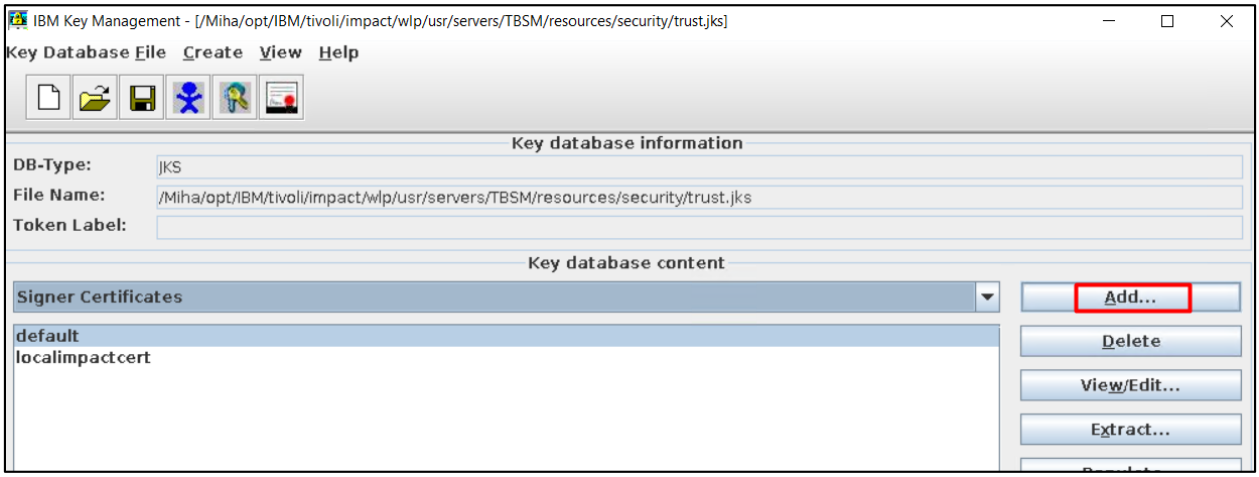
/Miha/opt/IBM/JazzSM/profile/etc/jazzsm.cer

Import jazzsm.cer into trust.jks for the front and backend components (TBSM and ImpactIUI). One option to perform this is by running:

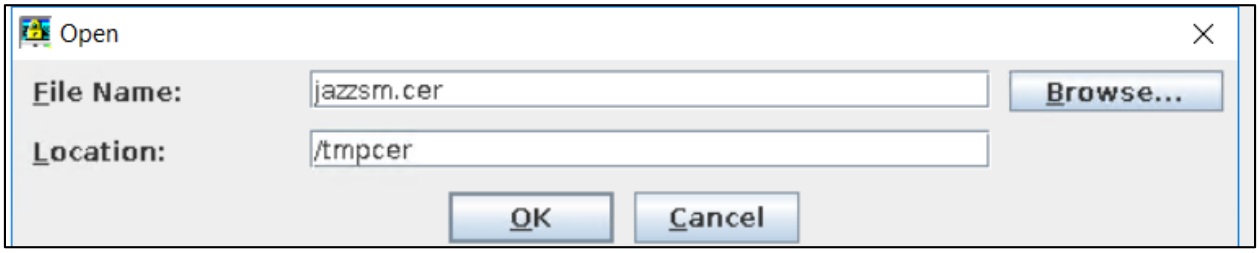
/Miha/opt/IBM/tivoli/impact/sdk/jre/bin/ikeyman

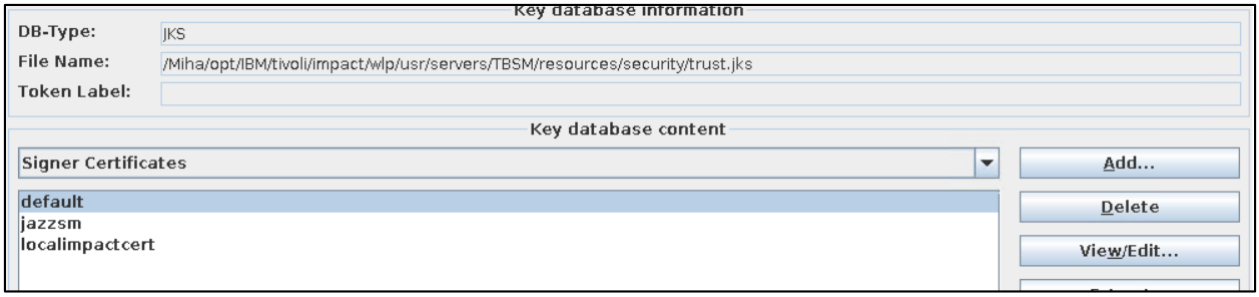
Open truststore location for TBSM:

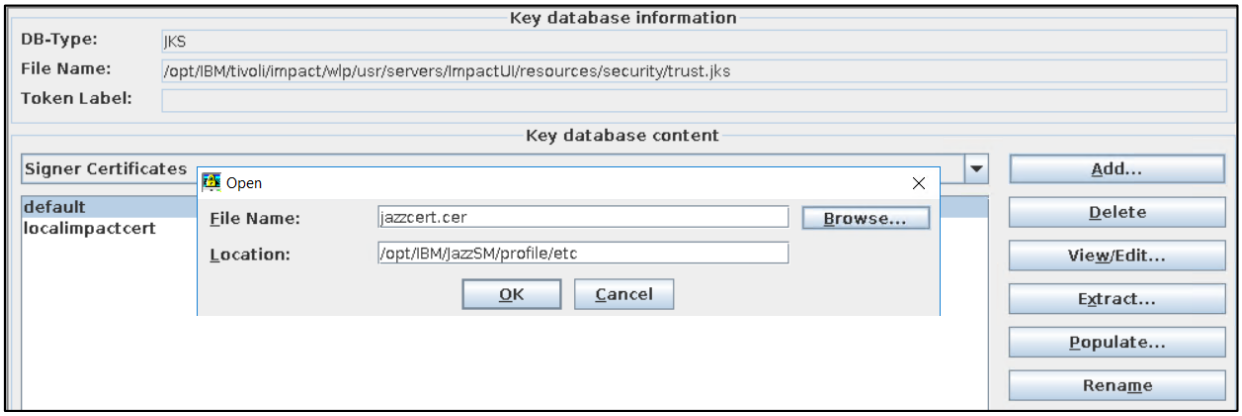
Select “signer certificated” and add a new certificate:



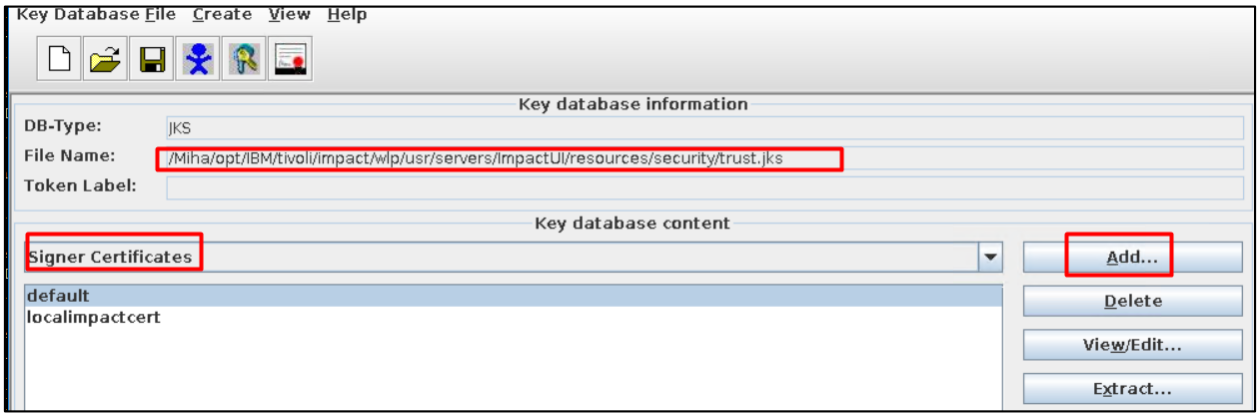
Add jazzsm certificate that was copied from JazzSM server:

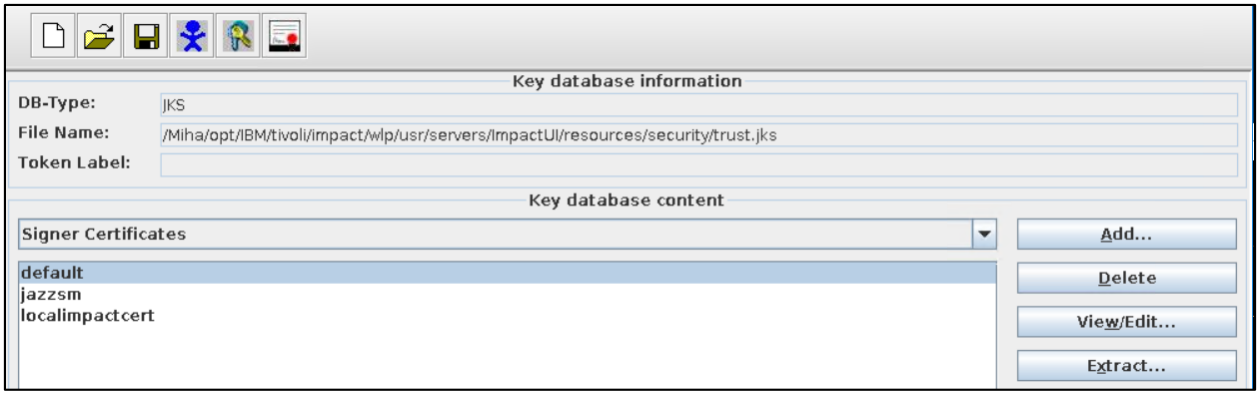






Add the same jazzsm certificate into ImpactUI truststore location as well.



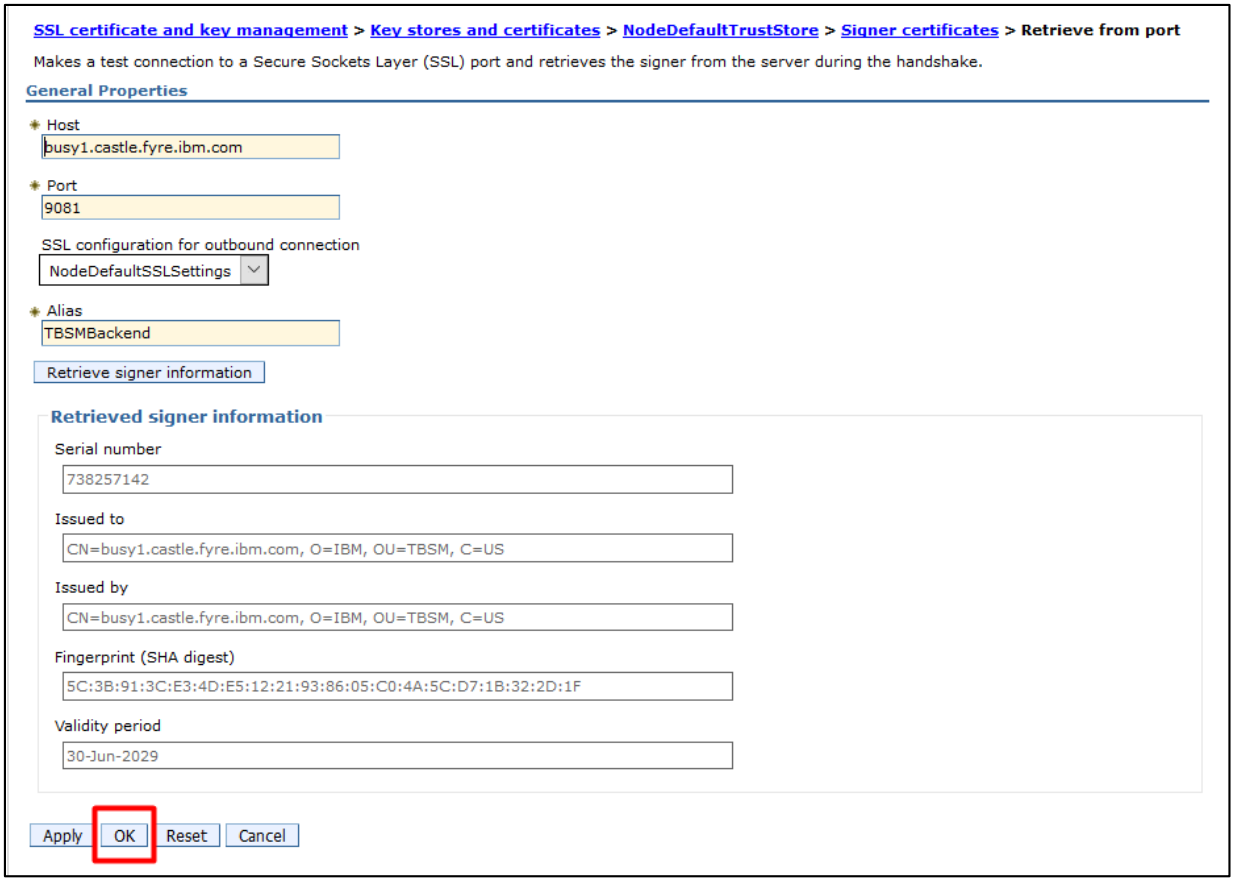


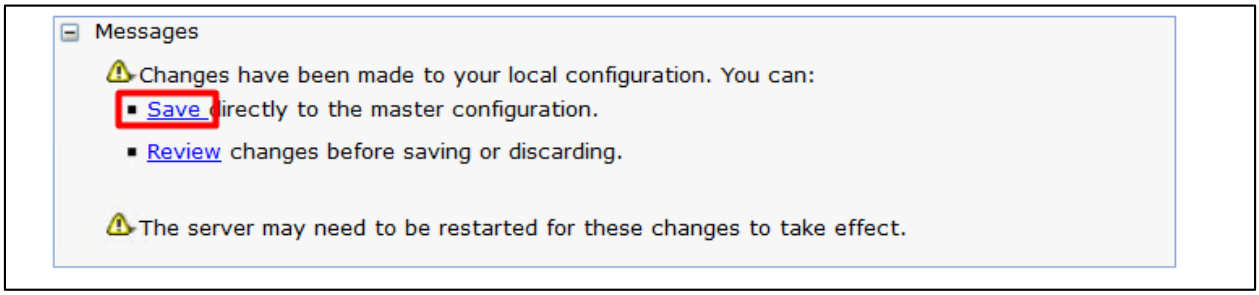
4.2. From TBSM UI and backend to DASH

Go to WAS -> SSL certificate and key management > Key stores and certificates > NodeDefaultTrustStore > Signer certificates > Retrieve from port

As SSO has been configured already within this guide the TBSM UI certificate is already present:

The nameserver 9081 certificate for TBSM backend is also required.





☐	impactuicert	CN=busy1.castle.fyre.ibm.com, O=IBM, OU=ImpactUI, C=US	20:C1:87:32:74:86:3E:32:31:36:1E:00:76:B9:16:33:65:36:9E:39	Valid from 03-Jul-2019 to 30-Jun-2029.
☐	root	CN=motleys1.castle.fyre.ibm.com, OU=Root Certificate, OU=JazzSMNode01Cell, OU=JazzSMNode01, O=IBM, C=US	FA:41:A0:62:8C:54:0B:B8:E1:06:65:AF:FA:C7:48:55:8F:26:38:EF	Valid from 02-Jul-2019 to 28-Jun-2034.
☐	tbsmbackend	CN=busy1.castle.fyre.ibm.com, O=IBM, OU=TBSM, C=US	5C:3B:91:3C:E3:4D:E5:12:21:93:86:05:C0:4A:5C:D7:1B:32:2D:1F	Valid from 03-Jul-2019 to 30-Jun-2029.

The following steps are also required to perform all the changes needed for SSL to be configured.

For DASH:

1. Update the chart services:

Go to JazzSM_home/ui/bin directory:

```
[root@motleys1 dash_linux]# cd /Miha/opt/IBM/JazzSM/ui/bin
```

and run the following commands after changing hostname/port, user/password parameters where needed.

./consolecli.sh ChartConnection --action delete --name TBSMChartService --username smadmin --password netcool

./consolecli.sh ChartConnection --action create --name TBSMChartService --protocol https --hostname motleys1.castle.fyre.ibm.com --port 16311 --serviceName ibm/sla/rad --renderFormat BIRT --credentialType SSO --username smadmin --password netcool

```
[root@motleys1 bin]# ./consolecli.sh ChartConnection --action delete --name TBSMChartService --username smadm
in --password netcool
Connection TBSMChartService deleted successfully.

CTGWA4017I The command completed successfully.
[root@motleys1 bin]# ./consolecli.sh ChartConnection --action create --name TBSMChartService --protocol https
 --hostname motleys1.castle.fyre.ibm.com --port 16311 --serviceName ibm/sla/rad --renderFormat BIRT --credent
ialType SSO --username smadmin --password netcool
Connection TBSMChartService created successfully.
CTGWA4017I The command completed successfully.
```

2. Update the following 3 files locate under:

/Miha/opt/IBM/JazzSM/profile/installedApps/JazzSMNode01Cell/isc.ear/sla.war/etc/

```
[root@motleys1 bin]# cd /Miha/opt/IBM/JazzSM/profile/installedApps/JazzSMNode01Cell/isc.ear/sla.war/etc/
[root@motleys1 etc]# ls
installer                          RAD_FlatFile_DS.ds            RAD_PostgresSingleUrl.ds
nameserver.props                   RAD_help_eclipse.props        RAD_projectlist
RAD_actionlist                     RAD_help.props                RAD_radserviceclientupdatehandler.props
RAD_actiontreelogger.props         RAD_internaldsas.props        RAD_ReportsHSQLDB.ds
RAD_av.props                       RAD_namevalidator.props       RAD_server.props
RAD_chart.props                    RAD_ObjectServer_DS.ds        RAD_servicelist
RAD_ClientInstance.type            RAD_OutputObjectServer_DS.ds  RAD_sla.props
RAD_dashboard_dataprovider.props   RAD_policylist                RAD_sla.props.append
RAD_datasourcelist                 RAD_policylogger.props        RAD_sourcecontactinfo.props
RAD_defaultobjectserver.ds         RAD_PostgresDB.ds             RAD_typelist
RAD_editactions.props              RAD_PostgreSQL_DS.ds
```

nameserver.props

impact.nameserver.0.port=9080 -> change to: **impact.nameserver.0.port=9081**
impact.nameserver.ssl_enabled=false -> change to: **impact.nameserver.ssl_enabled=true**

```
impact.nameserver.0.host=busy1.castle.fyre.ibm.com
impact.nameserver.0.port=9081
impact.nameserver.0.location=/nameserver/services

impact.registry.1.host=
impact.registry.1.port=
impact.registry.1.location=


impact.nameserver.count=1

impact.nameserver.ssl_enabled=true
impact.nameserver.netcall_timeout=60
```

RAD_server.props

impact.server.http.port=9080 -> **impact.server.http.port=9081**
impact.server.http.protocol=http -> **impact.server.http.protocol=https**
impact.replication.replicationhttpport=9080 -> **impact.replication.replicationhttpport=9081**
impact.server.ssl_enabled=false -> **true**

```
impact.server.http.port=9081
impact.server.http.protocol=https
impact.replication.replicationhttpport=9081
impact.server.ssl_enabled=true
```

RAD_sla.props

impact.sla.serverhttpport=9080 -> **impact.sla.serverhttpport=9081**
impact.sla.serverhttpport.backup=9080 -> **impact.sla.serverhttpport.backup=9081**
impact.sla.serverhttpprotocol=http -> **impact.sla.serverhttpprotocol=https**
impact.rad.birtcharts.service.protocol=http -> **impact.rad.birtcharts.service.protocol=https**
impact.sla.dashboard.redirect.protocol=http -> **impact.sla.dashboard.redirect.protocol=https**

```
impact.sla.serverhttpport=9081
#  <http port of failover backend server>
impact.sla.serverhttpport.backup=9081
impact.sla.propertiestoexport=Order,GroupName,MapURL,SLAHourlyPenalty,TBSM_Dat
impact.sla.serverhttpprotocol=https
```

```
impact.rad.birtcharts.service.protocol=https
```

For DATA server:

Update the following 2 files under the below location:

/Miha/opt/IBM/tivoli/impact/etc

```
[root@busy1 etc]# pwd
/Miha/opt/IBM/tivoli/impact/etc
```

TBSM_server.props

impact.server.http.port=9080->**impact.server.http.port=9081**
impact.server.http.protocol=http -> **impact.server.http.protocol=https**

```
impact.server.http.port=9081
impact.server.http.protocol=https
```

TBSM_sla.props

impact.rad.birtcharts.service.protocol=http -> **impact.rad.birtcharts.service.protocol=https**

and add all these as well as they are not present, can be placed anywhere within the TBSM_sla.props file:

impact.sla.serverhttpport=9081
impact.sla.serverhttpport.backup=9081
impact.sla.serverhttpprotocol=https
impact.sla.dashboard.redirect.protocol=https

```
# Protocol to use for chart service
impact.rad.birtcharts.service.protocol=https
impact.sla.serverhttpport=9081
impact.sla.serverhttpport.backup=9081
impact.sla.serverhttpprotocol=https
impact.sla.dashboard.redirect.protocol=https
```

Stop DASH and Impact server and apply the test fix received from IBM for APAR IJ17100. This is created based on the Impact version used for TBSM. If you don't already have the test fix raise a case with IBM and ask for a test fix for IJ17100 for your Impact version.

Go to the location where you have extracted the zip file:

```
[root@motleys1 test]# cd /testfix/
[root@motleys1 testfix]# ls
ncCommon.jar  nciClient.jar  nci.jar
```

Replace those 3 jar files under the below directory with the ones from the test fix.

/Miha/opt/IBM/JazzSM/profile/installedApps/JazzSMNode01Cell/isc.ear/sla.war/WEB-INF/lib

Take a backup of the following jar files outside this directory:

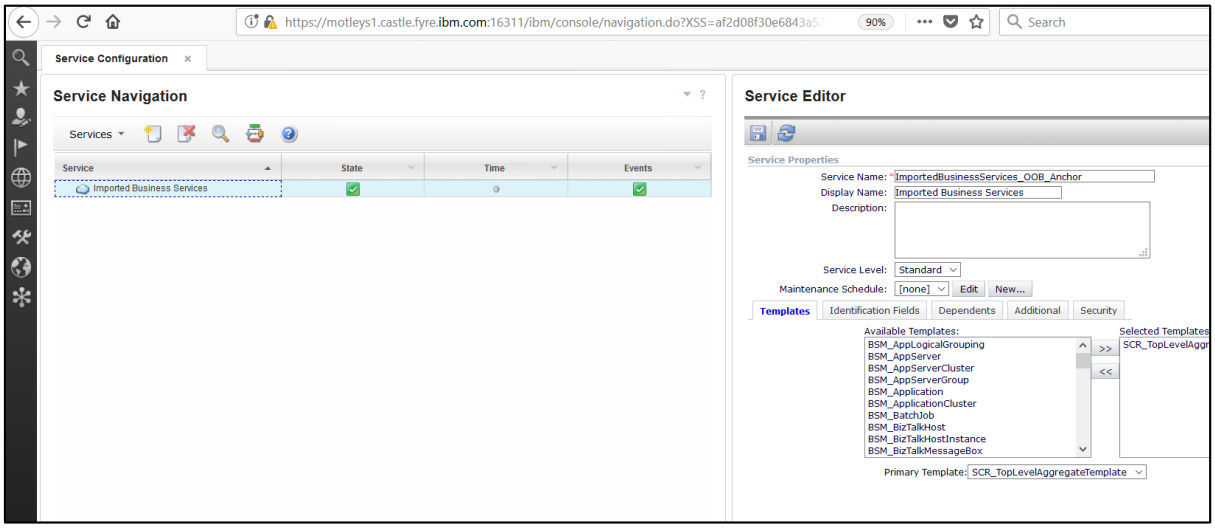
ncCommon.jar
nciClient.jar
nci.jar

Replace the jar files with the ones from the test fix:

```
[root@motleys1 lib]# cp /testfix/ncCommon.jar ncCommon.jar
cp: overwrite 'ncCommon.jar'? y
[root@motleys1 lib]# cp /testfix/nci.jar nci.jar
cp: overwrite 'nci.jar'? y
[root@motleys1 lib]# cp /testfix/nciClient.jar nciClient.jar
cp: overwrite 'nciClient.jar'? y
```

Restart DASH and Impact and make sure everything works fine.

TBSM features:



Configure SSL between TBSM 6.2 and OMNIbus

There is a limitation in TBSM 6.2 related to the rad_sendevent utility which does not currently support connecting to the Netcool/OMNIBus ObjectServer over SSL. As a result, if the ObjectServer is configured to only accept SSL connections, then rad_sendevent will fail. To work around this limitation, the ObjectServer needs to be configured to accept connections on an additional, non-SSL port.

Configure OMNIbus 8.1 in SSL mode

Edit omni.dat file and set a SSL port for the object server definition.

```
[root@busy1 backuptest]# vi /Miha/opt/IBM/tivoli/netcool/etc/omni.dat
```

```
#
# omni.dat file as prototype for interfaces file
#
# Ident: $Id: omni.dat 1.5 1999/07/13 09:34:20 chris Development $
#
[NCOMS]
{
        Primary: busy1.castle.fyre.ibm.com 4100 ssl 5100
}
```

Run nco_igen script to generate the interfaces and afterwards re-start the object server

cd /Miha/opt/IBM/Tivoli/netcool/bin
./nco_igen

```
[root@busy1 backuptest]# /Miha/opt/IBM/tivoli/netcool/bin/nco_igen
```

```
[root@busy1 backuptest]# /Miha/opt/IBM/tivoli/netcool/omnibus/bin/nco_objserv -n
ame NCOMS &
[1] 14094
[root@busy1 backuptest]#
Netcool/OMNIbus Object Server - Version 8.1.0 64-bit

(C) Copyright IBM Corp. 1994, 2012

Server 'NCOMS' initialised - entering RUN state.
```

Create OMNIbus certificate for SSL

1.1. Create CMS key database (Acting as Issuing CA):

./nc_gskcmd -keydb -create -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -stash -expire 3660

```
[root@busy1 bin]# ./nc_gskcmd -keydb -create -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool
 -stash -expire 3660
```

1.2. Create self-signed CA certificate:

./nc_gskcmd -cert -create -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -label "CA" -size 1024 -ca true -dn "CN=CA,O=IBM,OU=Support,L=IBMRO,ST=Bucharest" -expire 3660 -x509version 3

```
[root@busy1 bin]# ./nc_gskcmd -cert -create -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool
-label "CA" -size 1024 -ca true -dn "CN=CA,O=IBM,OU=test,L=IBMRO,ST=Bucharest" -expire 3660 -x509version 3
[root@busy1 bin]#
```

1.3. Export the CA Certificate for distribution:

./nc_gskcmd -cert -extract -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -label "CA" -target "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/cacert.arm"

```
[root@busy1 bin]# ./nc_gskcmd -cert -extract -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool
 -label "CA" -target "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/cacert.arm"
```

1.4. Create certificate request for primary ObjectServer:

Note: Label is same as the server name in omni.dat file as is the Common Name (CN)

./nc_gskcmd -certreq -create -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -label "NCOMS" -size 2048 -dn "CN=NCOMS,O=IBM,OU=Support,L=IBMRO,ST=Bucharest" -file "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/NCOMS_req.arm"

```
[root@busy1 bin]# ./nc_gskcmd -cert -create -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool
-label "NCOMS" -size 2048 -dn "CN=NCOMS,O=IBM,OU=test,L=IBMRO,ST=Bucharest" -file "/Miha/opt/IBM/tivoli/netcool/etc/se
curity/keys/NCOMS_req.arm"
```

1.5. Sign the certificate requests using above created signer certificate label CA:

./nc_gskcmd -cert -sign -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -label "CA" -target "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/NCOMS_req.arm" -expire 3660 -file "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/NCOMS_req.arm"

```
[root@busy1 bin]# ./nc_gskcmd -cert -sign -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -l
abel "CA" -target "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/NCOMS_req.arm" -expire 3660 -file "/Miha/opt/IBM/tiv
oli/netcool/etc/security/keys/NCOMS_req.arm"
```

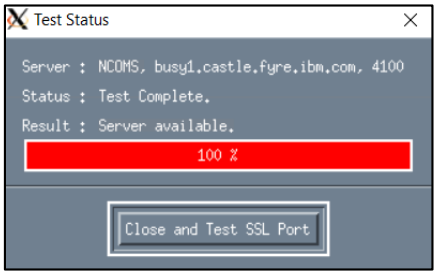
1.6. Receive the signed certificate in omni.kdb file:

./nc_gskcmd -cert -receive -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool -file "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/NCOMS_req.arm"

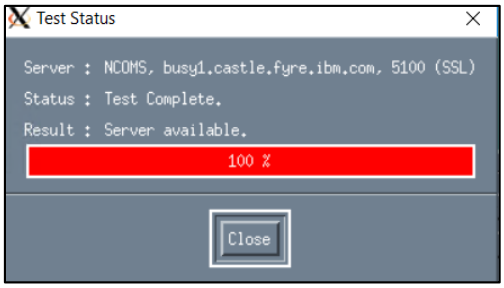
```
[root@busy1 bin]# ./nc_gskcmd -cert -receive -db "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/omni.kdb" -pw netcool
 -file "/Miha/opt/IBM/tivoli/netcool/etc/security/keys/NCOMS_req.arm"
[root@busy1 bin]#
```

1.7. Restart Object server and test SSL for OMNI

Run nco_xigen:



Select close and Test SSL Port:



Import Object Server signer's certificates into trust stores of TBSM servers

The object server certificate that will need to be imported is:

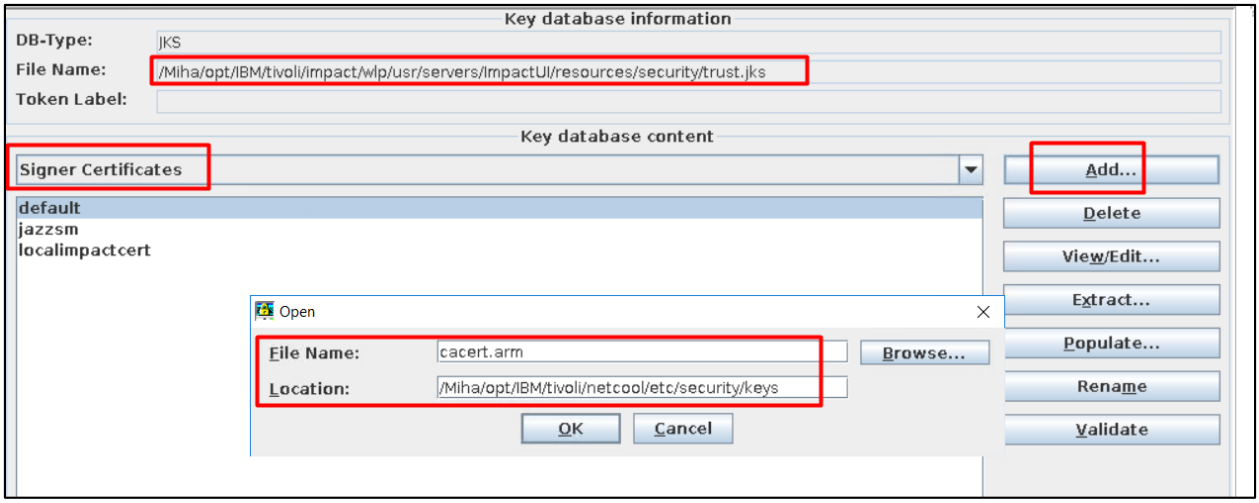
/Miha/opt/IBM/tivoli/netcool/etc/security/keys/cacert.arm

Import the certificate into the TBSM Impact Server and GUI trust-store.

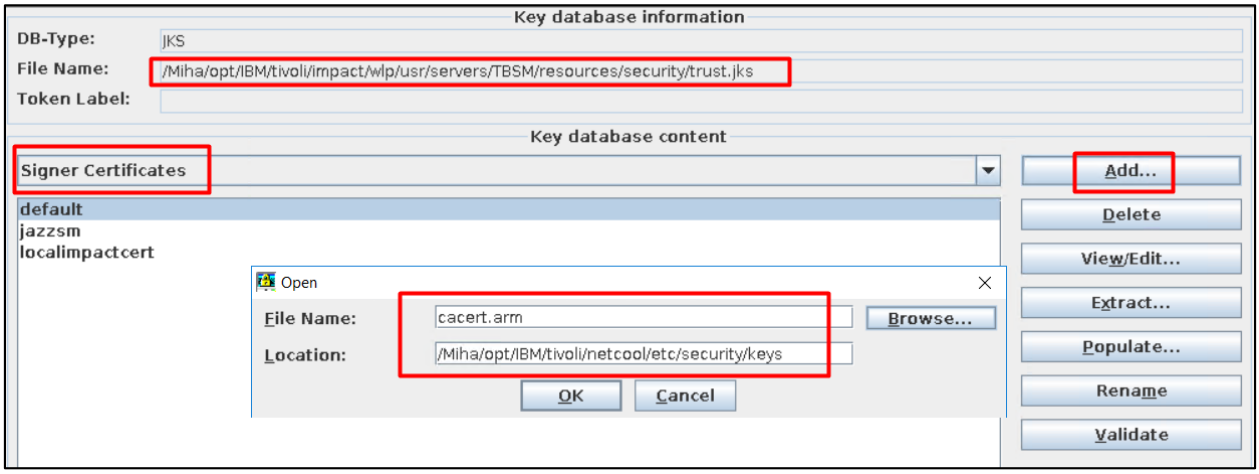
Run ikeyman from /opt/IBM/Tivoli/impact/sdk/jre/bin directory:

```
/Miha/opt/IBM/tivoli/impact/sdk/jre/bin/ikeyman
```

Add the cacert.arm certificate from omnibus into ImpactUI truststore:



Add the cacert.arm certificate from omnibus into TBSM truststore:



Configure ObjectServer data sources on Data server

Take a backup of these files:

$IMPACT_HOME/etc/TBSM_ObjectServer_DS.ds
$IMPACT_HOME/etc/TBSM_OutputObjectServer_DS.ds
$IMPACT_HOME/etc/TBSM_eventbroker.props

Update the following files with change the values of the following properties from FALSE to TRUE and if the secure ObjectServer channel was configured over a different port than the typical 4100, change these port number properties accordingly.

TBSM_ObjectServer_DS.ds:

USESSLPRIMARY=TRUE
USESSLBACKUP=TRUE

PRIMARYPORT
BACKUPPORT

```
[root@busy1 security]# vi /Miha/opt/IBM/tivoli/impact/etc/TBSM_ObjectServer_DS.ds
```

```
#This file was written by server.
#Thu Nov 05 07:57:22 EST 2009
ObjectServer_DS.ObjectServer.USESSLPRIMARY=TRUE
ObjectServer_DS.ObjectServer.BACKUPHOST=
ObjectServer_DS.ObjectServer.PRIMARYHOST=busy1.castle.fyre.ibm.com
ObjectServer_DS.ObjectServer.MAXSQLCONNECTION=5
ObjectServer_DS.ObjectServer.USESSLBACKUP=TRUE
ObjectServer_DS.ObjectServer.BACKUPPORT=
ObjectServer_DS.ObjectServer.PRIMARYPORT=5100
ObjectServer_DS.ObjectServer.JDBCDRIVER=com.sybase.jdbc3.jdbc.SybDriver
ObjectServer_DS.ObjectServer.FAILOVERPOLICY=DISABLED
ObjectServer_DS.ObjectServer.DBUSERNAME=root
ObjectServer_DS.ObjectServer.DISABLEFAILOVER=false
ObjectServer_DS.ObjectServer.DBPASSWORD=
~
```

TBSM_OutputObjectServer_DS.ds:

USESSLPRIMARY=TRUE
USESSLBACKUP=TRUE
PRIMARYPORT
BACKUPPORT

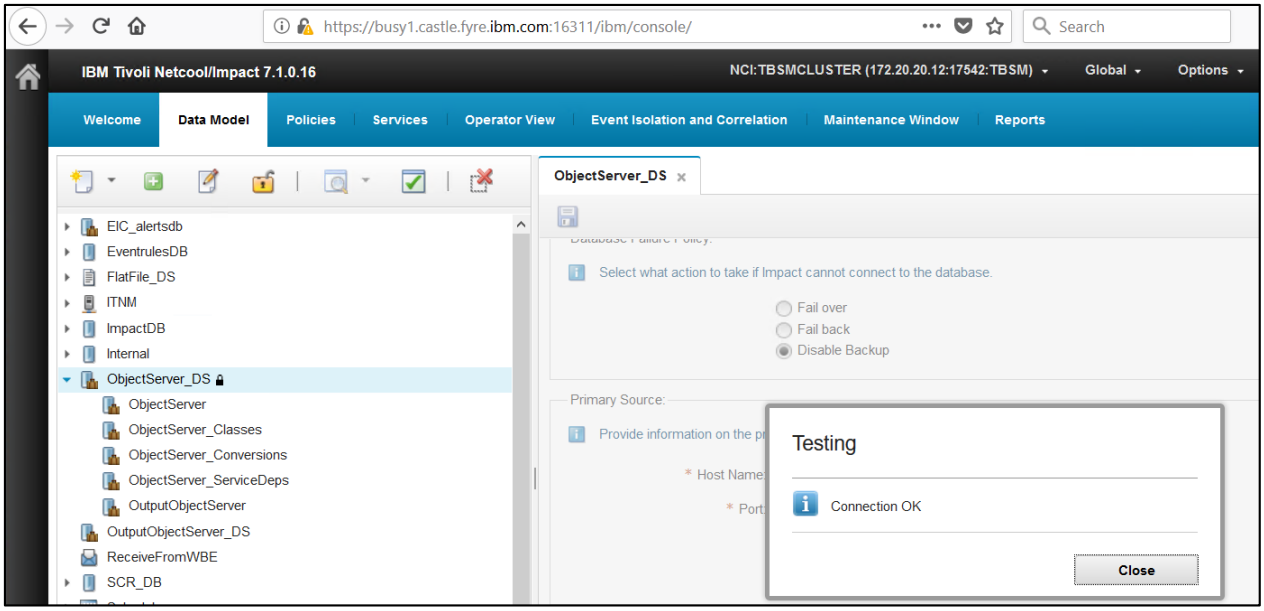
```
 vi /Miha/opt/IBM/tivoli/impact/etc/TBSM_OutputObjectServer_DS.ds
```

```
OutputObjectServer_DS.ObjectServer.DBUSERNAME=root
OutputObjectServer_DS.ObjectServer.DBPASSWORD=
OutputObjectServer_DS.ObjectServer.PRIMARYHOST=busy1.castle.fyre.ibm.com
OutputObjectServer_DS.ObjectServer.PRIMARYPORT=5100
OutputObjectServer_DS.ObjectServer.BACKUPHOST=
OutputObjectServer_DS.ObjectServer.BACKUPPORT=
OutputObjectServer_DS.ObjectServer.JDBCDRIVER=com.sybase.jdbc3.jdbc.SybDriver
OutputObjectServer_DS.ObjectServer.USESSLPRIMARY=TRUE
OutputObjectServer_DS.ObjectServer.USESSLBACKUP=TRUE
```

Restart data server after all these changes.

/Miha/opt/IBM/tivoli/impact/bin/stopImpactServer.sh
/Miha/opt/IBM/tivoli/impact/bin/stopGUIServer.sh

/Miha/opt/IBM/tivoli/impact/bin/startImpactServer.sh
/Miha/opt/IBM/tivoli/impact/bin/startGUIServer.sh

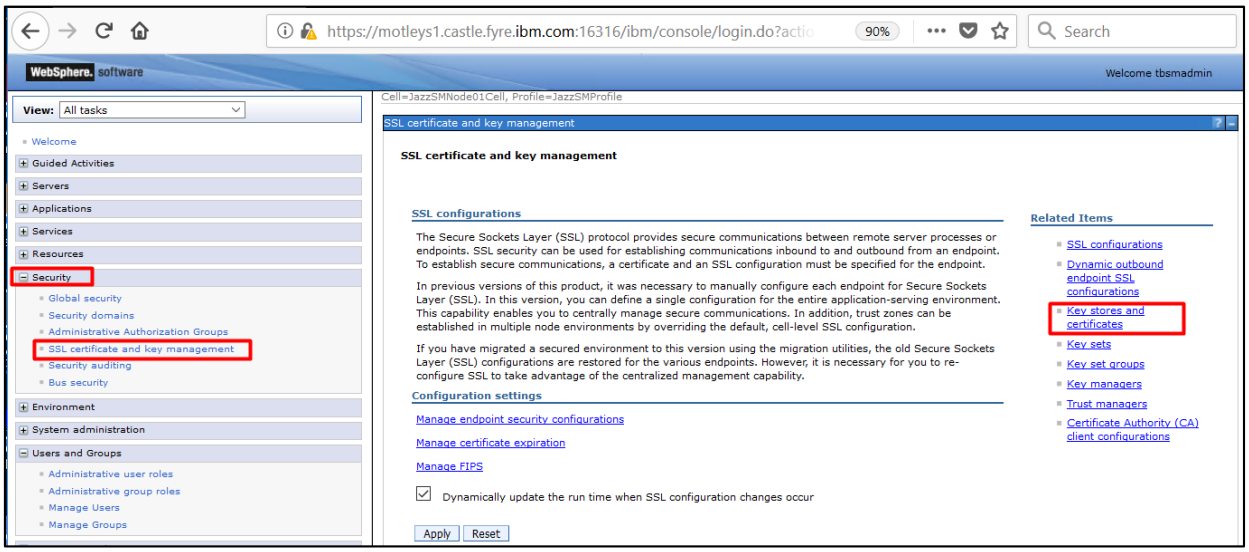


Configuring dashboard server secure connection to Netcool/OMNIbus as user repository

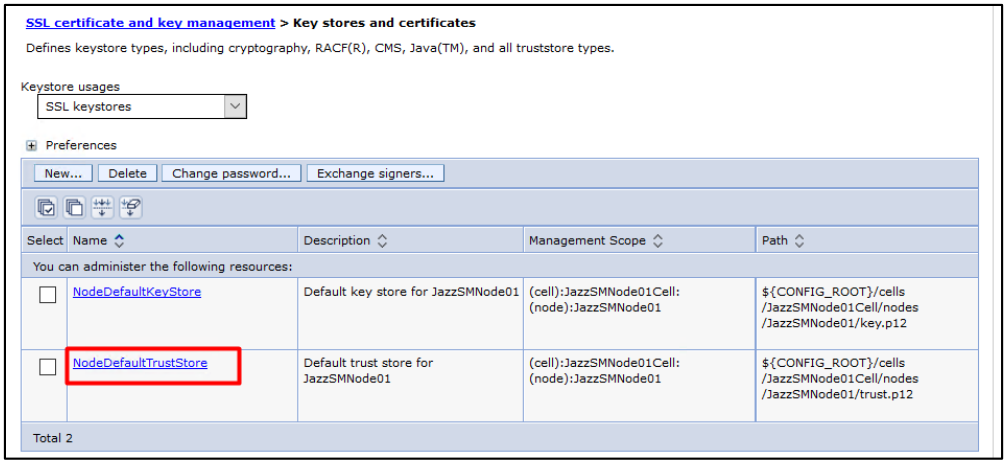
Follow these steps to establish a secure channel for communications between a TBSM dashboard server and the ObjectServer when the ObjectServer is being used as a user registry.

Retrieve the ObjectServer certificate and save it into the trust store of the dashboard server.

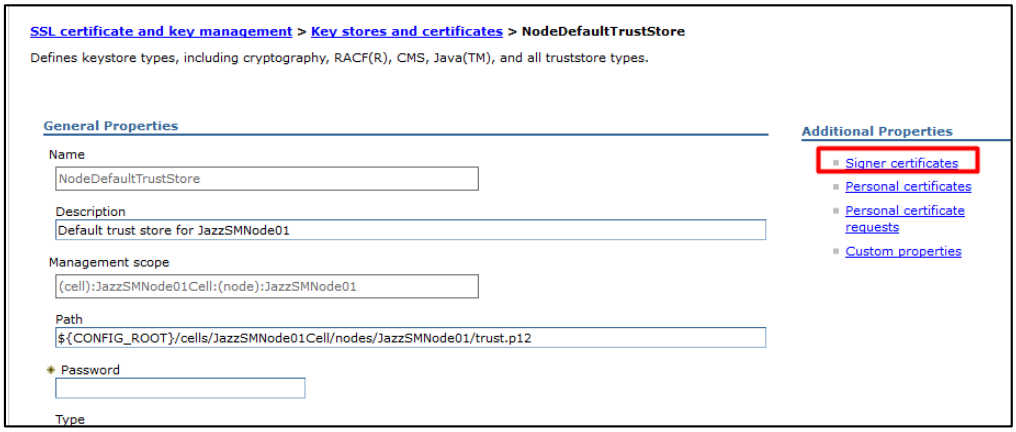
Go to WebSphere Administrative Console -> Security -> SSL Certificate and key management -> Key stores and certificate:



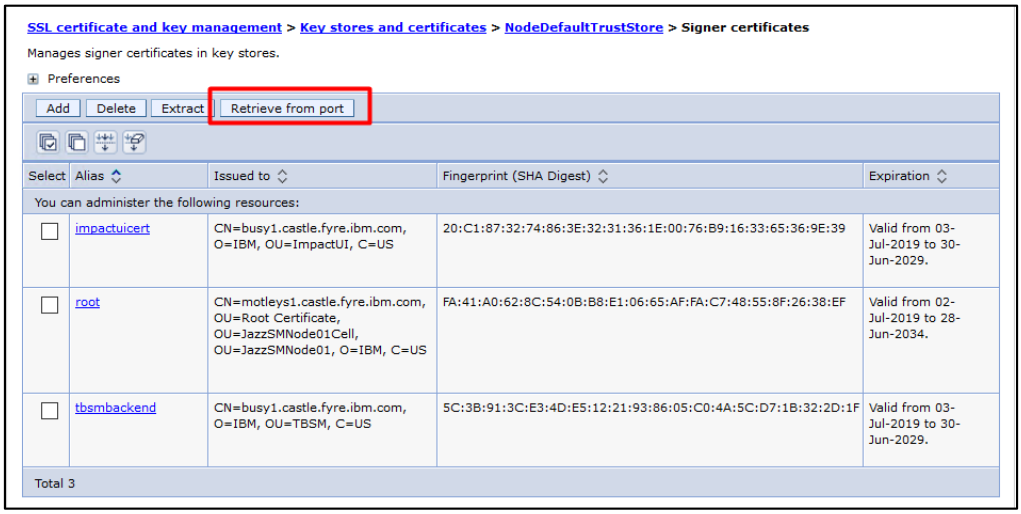
Select NodeDefaultTrustStore:



Select Signer Certificate:

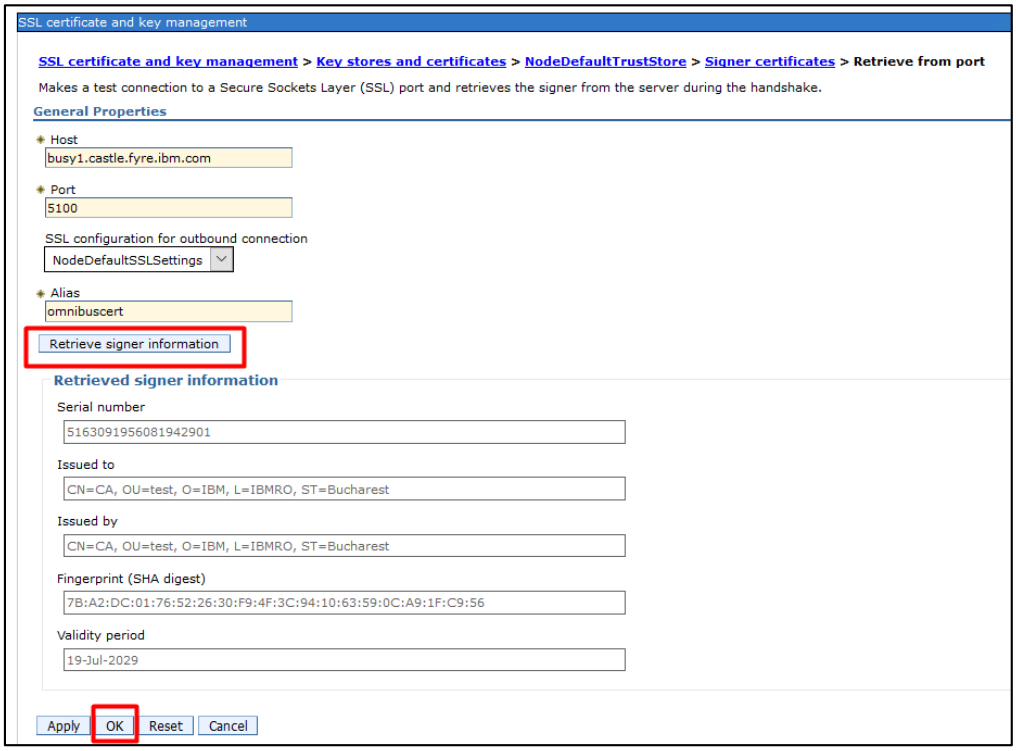


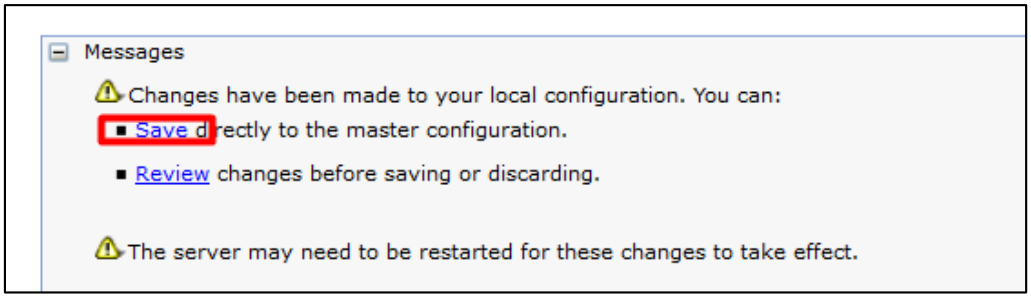
Click on Retrieve from port:

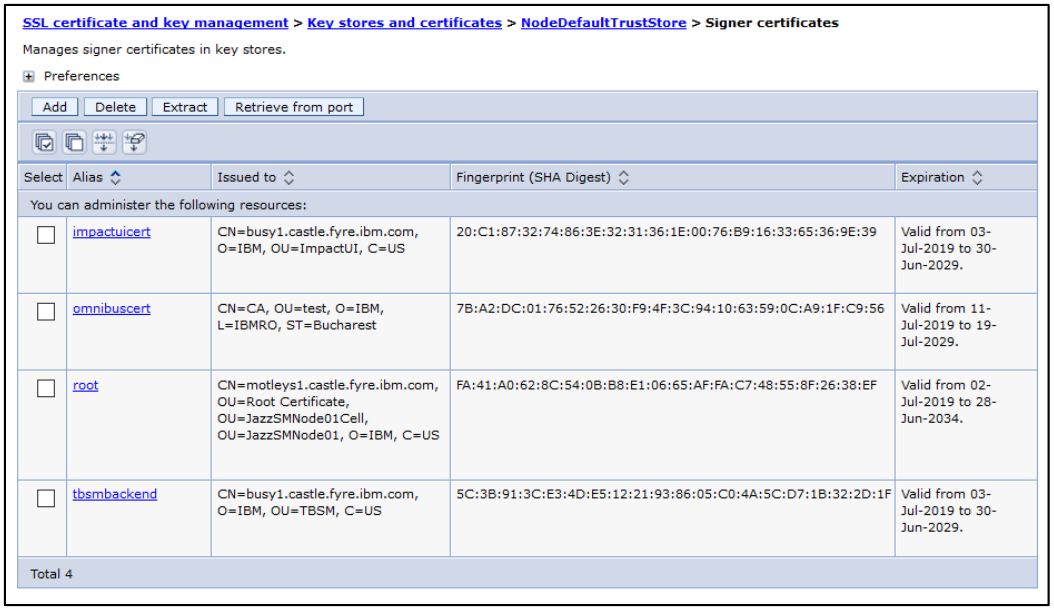


Fill in with the object server hostname and SSL port details:

Click on retrieve signer information and afterwards save the changes:







SSL certificate and key management > Key stores and certificates > NodeDefaultTrustStore > Signer certificates

Manages signer certificates in key stores.

Preferences

Add | Delete | Extract | Retrieve from port

Select	Alias	Issued to	Fingerprint (SHA Digest)	Expiration
You can administer the following resources:				
☐	impactuicert	CN=busy1.castle.fyre.ibm.com, O=IBM, OU=ImpactUI, C=US	20:C1:87:32:74:86:3E:32:31:36:1E:00:76:B9:16:33:65:36:9E:39	Valid from 03-Jul-2019 to 30-Jun-2029.
☐	omnibuscert	CN=CA, OU=test, O=IBM, L=IBMRO, ST=Bucharest	7B:A2:DC:01:76:52:26:30:F9:4F:3C:94:10:63:59:0C:A9:1F:C9:56	Valid from 11-Jul-2019 to 19-Jul-2029.
☐	root	CN=motleys1.castle.fyre.ibm.com, OU=Root Certificate, OU=JazzSMNode01Cell, OU=JazzSMNode01, O=IBM, C=US	FA:41:A0:62:8C:54:0B:B8:E1:06:65:AF:FA:C7:48:55:8F:26:38:EF	Valid from 02-Jul-2019 to 28-Jun-2034.
☐	tbsmbackend	CN=busy1.castle.fyre.ibm.com, O=IBM, OU=TBSM, C=US	5C:3B:91:3C:E3:4D:E5:12:21:93:86:05:C0:4A:5C:D7:1B:32:2D:1F	Valid from 03-Jul-2019 to 30-Jun-2029.

Total 4

Make sure that SSL is enabled within the following file on the DASH server:

/Miha/opt/IBM/JazzSM/profile/installedApps/JazzSMNode01Cell/isc.ear/sla.war/etc/RAD_server.props

The following property should be set to true:

impact.server.ssl_enabled=true

```
[root@motleys1 lib]# vi /Miha/opt/IBM/JazzSM/profile/installedApps/JazzSMNode01C
ell/isc.ear/sla.war/etc/RAD_server.props
```

```
# Controls whether Impact internal connections use SSL or not.  Note:  certifica
te
# exchanges between servers need to take place before the value of this property
 is
# set to true.
impact.server.ssl_enabled=true
```

Restart DASH server.

Configuring DASH/WebGUI connection to Netcool/OMNIBus

Take a backup of the following files:

$NCHOME/omnibus_webgui/etc/server.init
$NCHOME/omnibus_webgui/etc/datasources/ncwDataSourceDefinitions.xml
$JazzSM_HOME/profile/config/cells/JazzSMNode01Cell/wim/config/wimconfig.xml

```
[root@motleys1 lib]# cp /Miha/opt/IBM/netcool/gui/omnibus_webgui/etc/server.init
 /Miha/opt/IBM/netcool/gui/omnibus_webgui/etc/server.init_back
```

```
[root@motleys1 lib]# cp /Miha/opt/IBM/netcool/gui/omnibus_webgui/etc/datasources
/ncwDataSourceDefinitions.xml /Miha/opt/IBM/netcool/gui/omnibus_webgui/etc/datas
ources/ncwDataSourceDefinitions.xml_back
```

Edit server.init file and set the trust store password for the property:

webtop.ssl.trustStorePassword

The default password for WebSphere trust stores is **WebAS**, so the property would look as follows:

webtop.ssl.trustStorePassword:WebAS

```
############################################################

webtop.ssl.trustStore:
webtop.ssl.trustStorePassword:WebAS
webtop.ssl.trustManagerType:IbmX509
```

Edit ncwDataSourceDefinitions.xml file and change the value of the ssl attribute from false to true and change the port to match the one configured for ssl:

```
                    <ncwPrimaryServer>
                            <ncwOSConnection minPoolSize="5" port="5100" hos
t="busy1.castle.fyre.ibm.com" maxPoolSize="10" ssl="true"/>
                    </ncwPrimaryServer>
```

Edit com.sybase.jdbc3.jdbc.SybDriver.props file and set the properties to true.

```
[root@motleys1 bin]# vi /Miha/opt/IBM/JazzSM/profile/etc/com.sybase.jdbc3.SybDri
ver.props
```

```
#Wed Jul 03 05:00:14 PDT 2019
USESSLPRIMARY=true
USESSLBACKUP=true
```

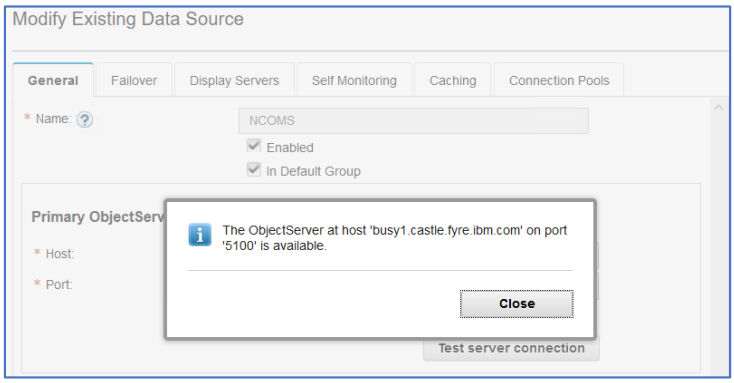
Edit wimconfig.xml file and change the value of the object server port to use the ssl port that has been configured within the com.ibm.tivoli.tip.vmm4ncos.ObjectServerAdapter section as bellow:

```
[root@motleys1 bin]# vi /Miha/opt/IBM/JazzSM/profile/config/cells/JazzSMNode01Ce
ll/wim/config/wimconfig.xml
```

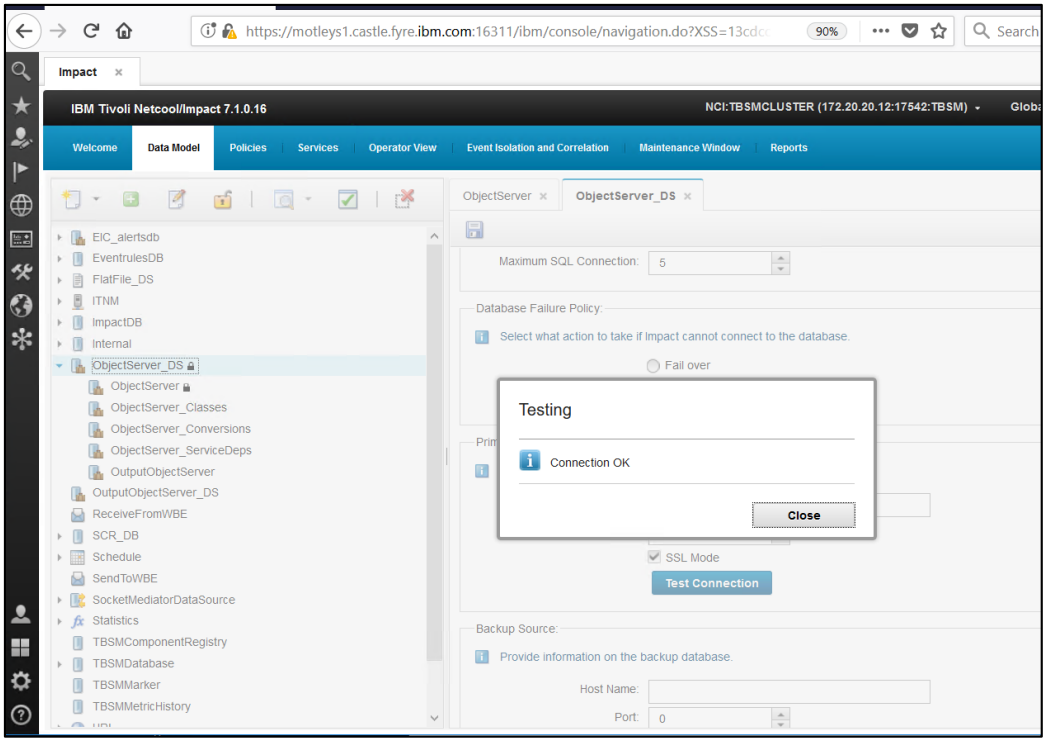
```
    <config:repositories adapterClassName="com.ibm.tivoli.tip.vmm4ncos.ObjectSer
verAdapter"
        id="NetcoolObjectServer" supportPaging="false">
      <config:baseEntries name="o=netcoolObjectServerRepository"/>
      <config:CustomProperties name="password" value="{AES}2CB84456AF424C51AC7B7
9F29A27C86E"/>
      <config:CustomProperties name="username" value="root"/>
      <config:CustomProperties name="host1" value="busy1.castle.fyre.ibm.com"/>
      <config:CustomProperties name="port1" value="5100"/>
    </config:repositories>
```

Restart DASH and afterwards make sure that everything works fine.

Test the connection to the object server in DASH (WebGUI -> Data Sources -> Select the created data source and click on Test Server connection option):



Check SSO to Impact from DASH and also Object Server datasouce connection in Impact:



Test TBSM features: