TBSM 6.2
Failover Guide

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 13
5. Jazz for Service Management 1.1.3 – Fix Pack 2
6. IBM JAVA 8.0.5.6.
7. IBM Tivoli Netcool/Omnibus 8.1.0.4-webgui Fix Pack 15
8. IBM Tivoli Netcool/Impact 7.1 Fix Pack 15

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 /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.

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

All the TBSM prerequisites and components were installed as follows:

- On server 1: Installation Manager, Omnibus, Netcool/Impact Primary, TBSM Primary Data Server

- On server 2: Installation Manager, Netcool/Impact Secondary, TBSM Secondary Data Server

- On server 3: Installation Manager, DB2, TBSM Database Configuration Utility, WAS, JazzSM/DASH, WebGUI, TBSM Dashboard Server

Configurations that need attention for failover:

1. Netcool/Impact servers should be configured from the beginning as an Impact cluster, prior to any TBSM component installation process to begin.
2. While installing TBSM Primary data server, the secondary impact instance should be stopped.
3. While installing TBSM Secondary data server, the primary impact instance should be up and running.
4. During the TBSM Secondary installation process the Designated Backup option should be checked.
5. During the TBSM Dash installation process the HA/FO option should be checked.

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

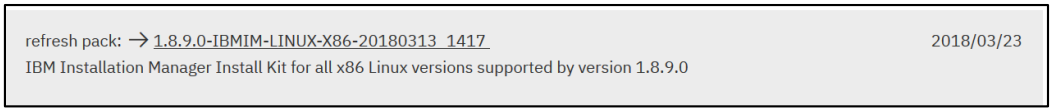
Setting up the server for TBSM Primary Data Server (server 1)

Install or upgrade to Installation Manager 1.8.9

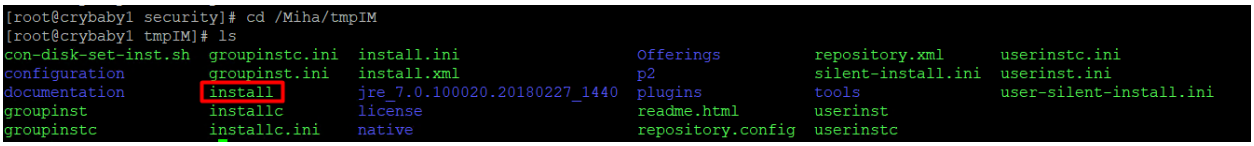
If Installation Manager is not installed on the server, you have the option to either install it along with Omnibus core installation as this one will automatically install IM if it detects that it doesn't exists, or you can manually install it after downloading IM package. If IM is installed on the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

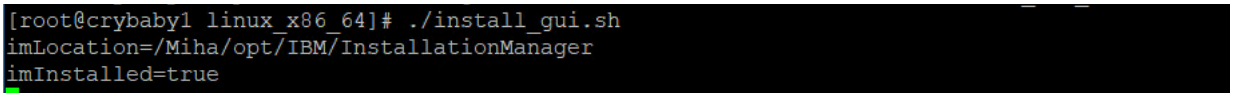


- extract IM 1.8.9 package, go to the extracted directory and run ./install :

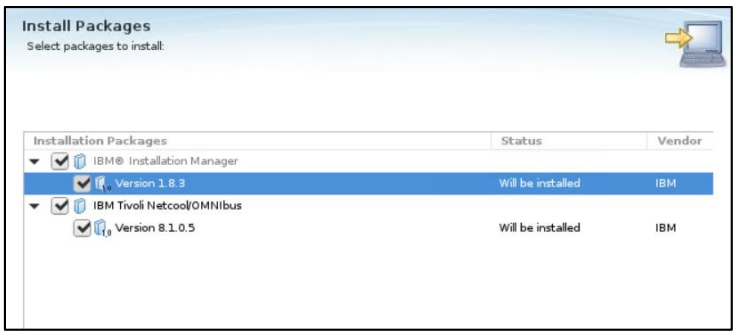


Option B: Install IM along with OMNIbus

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



You will get the option to install IM as well:

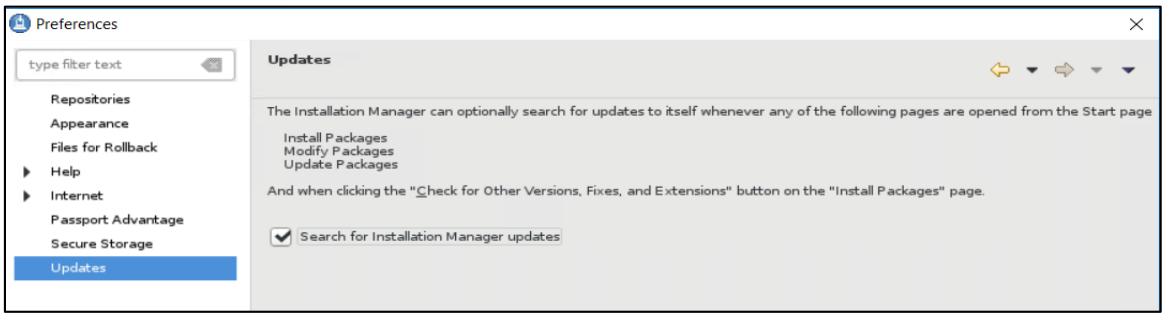


Option C: If IM is already installed or you have selected option B previously you can try to upgrade to the latest version.

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

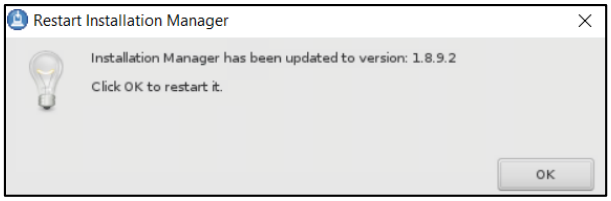
- on the Repositories tab, select Search service repositories during installation and updates.

- 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:



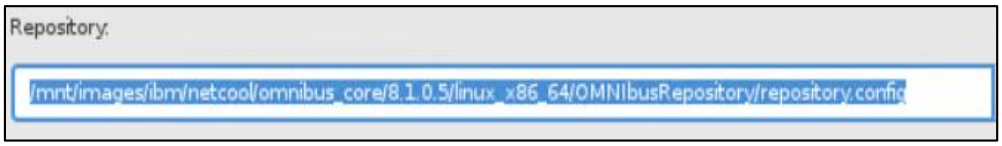
Install Omnibus 8.1.0.5 core and upgrade to Fix Pack 18

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

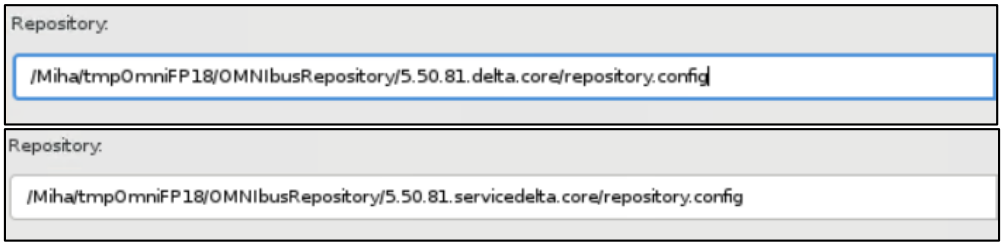
Download link for Omnibus 8.1 Fix pack 18:
https://www-01.ibm.com/support/docview.wss?uid=ibm10733443

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

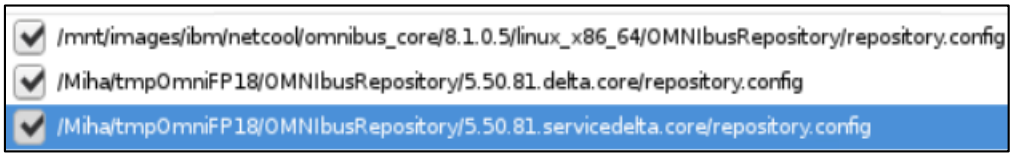
for omnibus core location path should be:
<extracted_core_path>/<OS>/OMNIbusRepository/repository.config



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

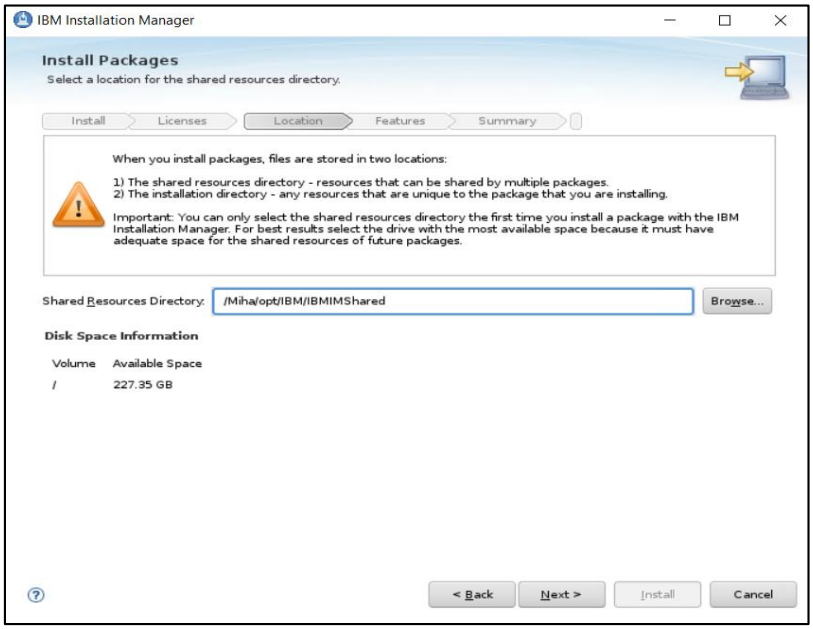


By adding all 3 repositories omnibus can be directly installed as 8.1.0.18.:

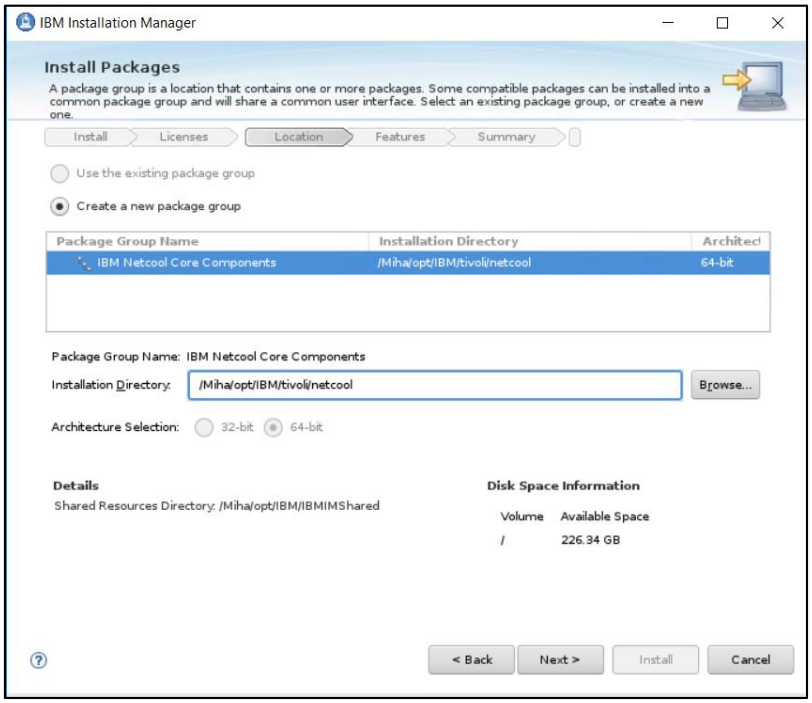


- After configuring the repository section, select “Install” option from IM main menu and check the product to be installed:

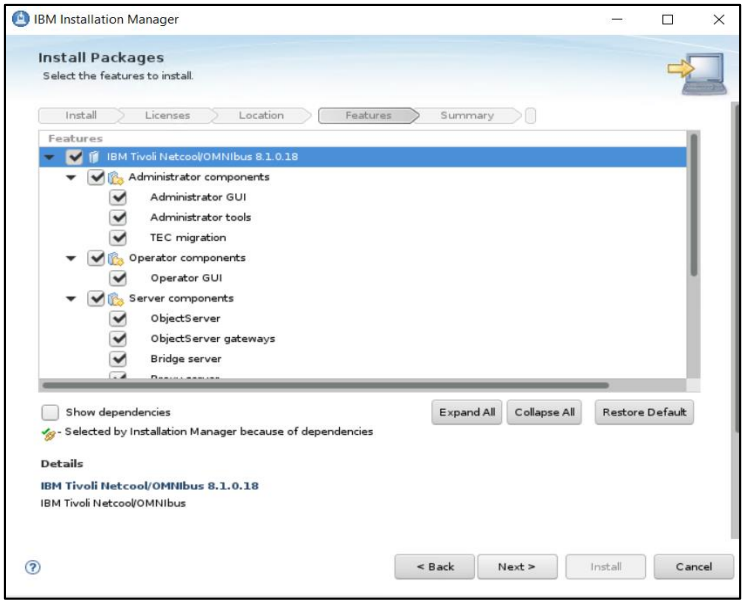
- enter the location path for the shared resources directory and continue with the installation:



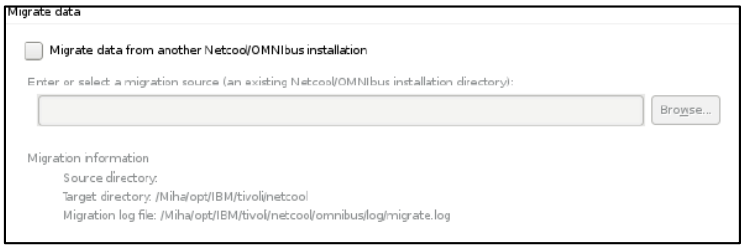
- enter the installation directory path for Omnibus 8.1.0.18 if the default one needs to be changed and click "Next" to continue with the installation process:



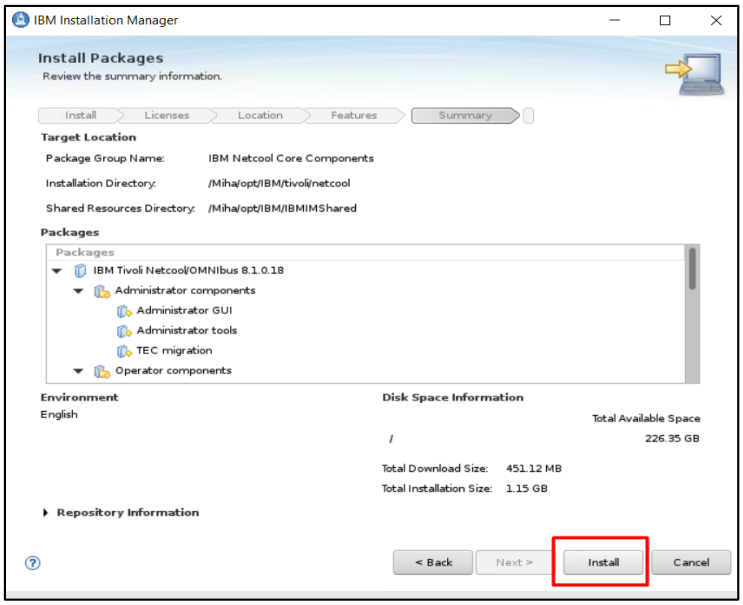
- select the features to be installed (by default all are selected):



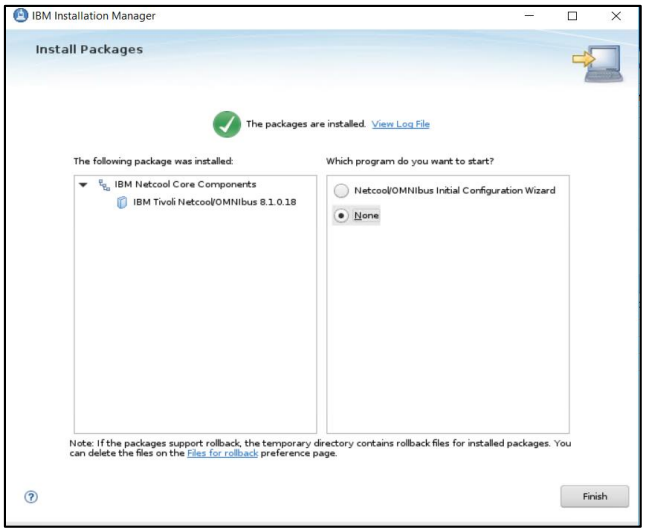
- you can select to migrate data from another omnibus install or you can do this post install if needed:



- 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@crybaby1 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: crybaby1.castle.fyre.ibm.com 4100
}
[NCO_GATE]
{
        Primary: crybaby1.castle.fyre.ibm.com 4300
}
[NCO_PA]
{
        Primary: crybaby1.castle.fyre.ibm.com 4200
}
[NCO_PROXY]
{
        Primary: crybaby1.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@crybaby1 bin]# /Miha/opt/IBM/tivoli/netcool/bin/nco_igen
```

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

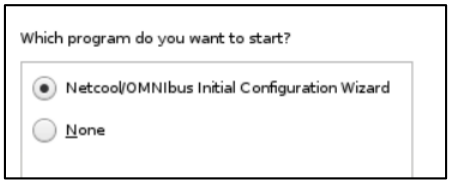
```
[root@crybaby1 bin]# cd /Miha/opt/IBM/tivoli/netcool/omnibus/bin/
[root@crybaby1 bin]# ./nco_objserv -name NCOMS &
```

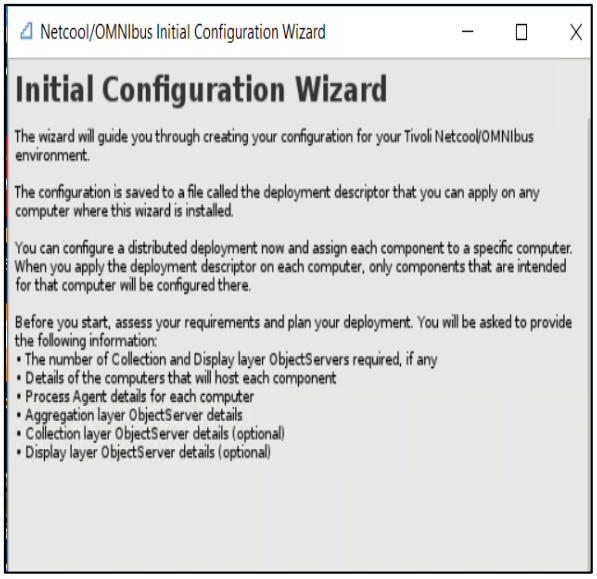
Check to see if the object server is up and running:

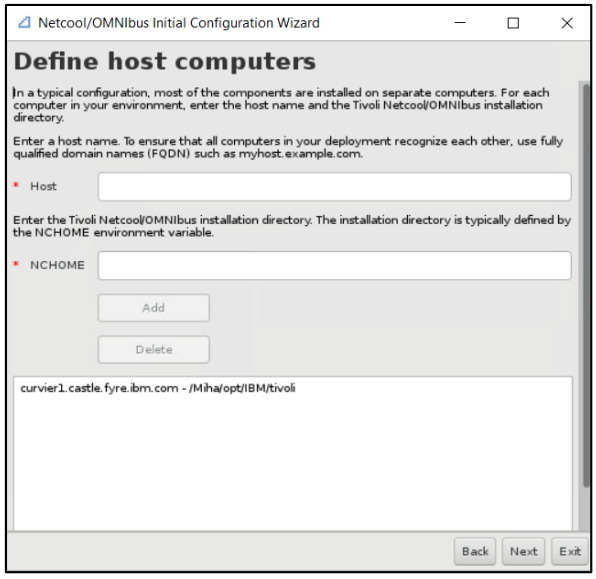
```
[root@tother1 security]# ps -ef|grep nco
root     18328  5731  0 02:03 pts/0    00:00:00 grep --color=auto nco
root     19981  5731  0 Jan14 pts/0    00:03:39 /Miha/opt/IBM/tivoli/netcool/omnibus/platform/linux2x86/bin64/nco_objserv -name NCOMS
```

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:





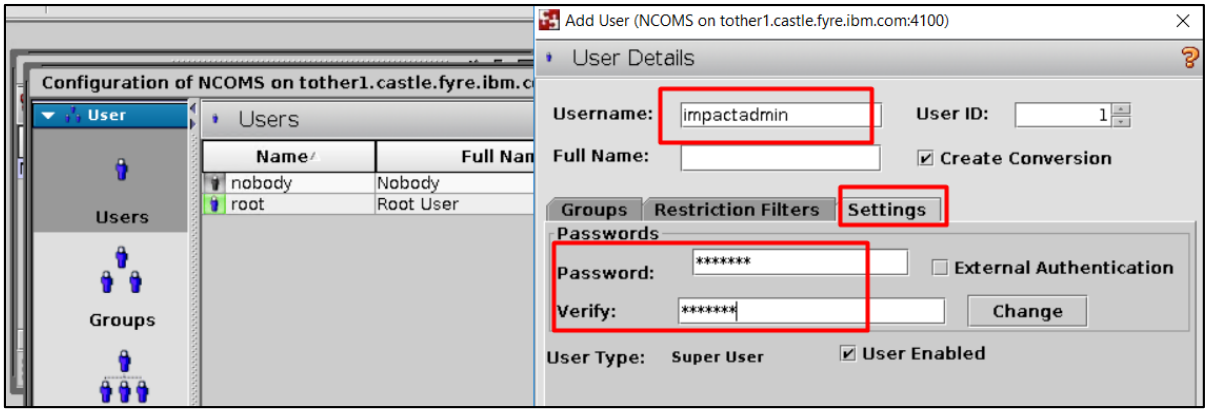


After having the object server properly configured and running, to prepare for Impact 7.1 installation, add **impactadmin** user within object, add its password and assign groups to this user:

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 Primary Netcool/Impact 7.1.0.14 and upgrade to Fix Pack 15

- download and extract Impact 7.1.0.14 and Fix Pack 15 for Impact

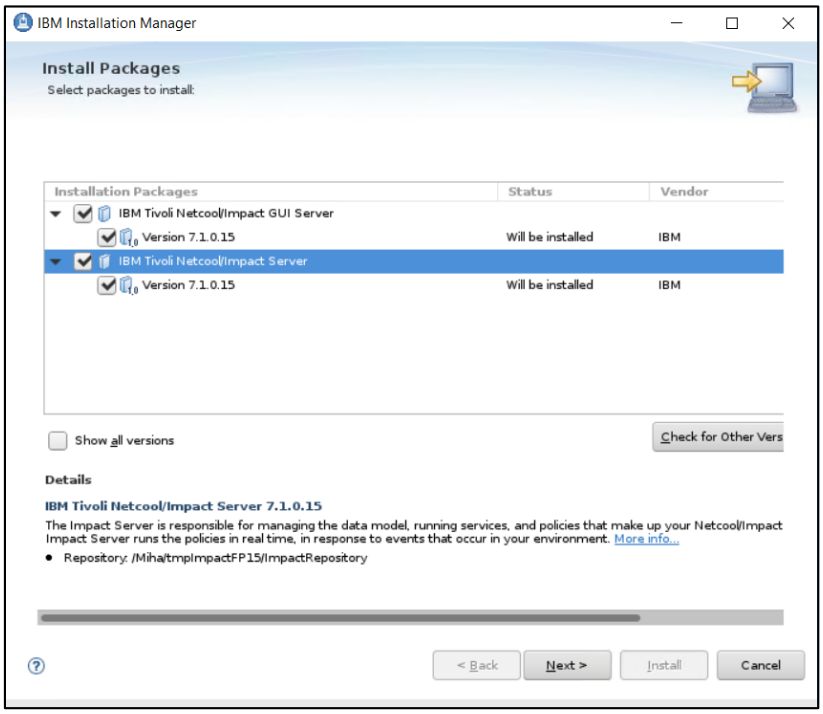
Download link for Fix Pack 15:
https://www-01.ibm.com/support/docview.wss?uid=ibm10739521

- add both the repository from Impact 7.1.0.14 base as well as the repositories from Impact Fix Pack 15 within Installation Manager -> Preferences panel:

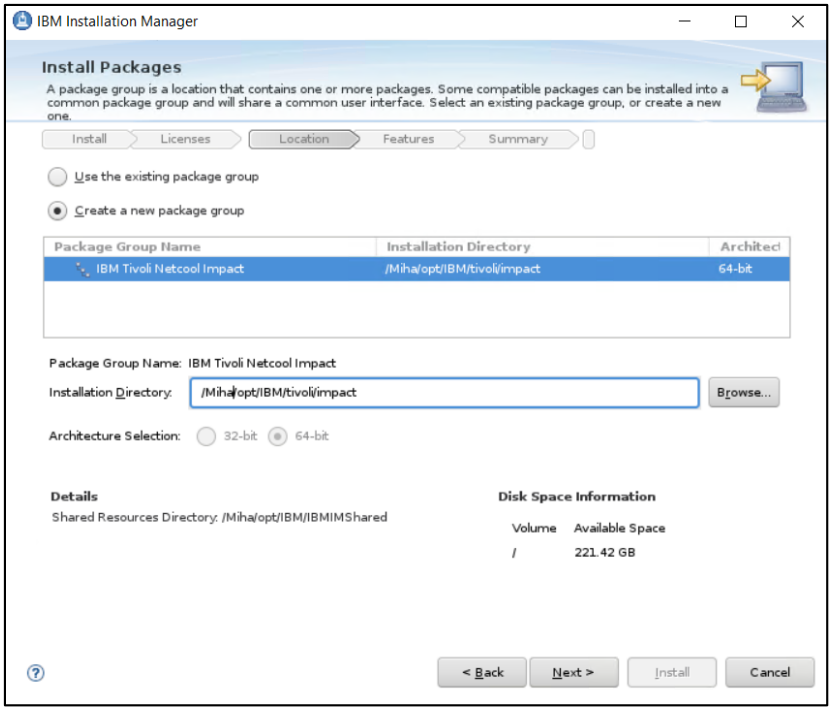
<extracted_path_for_impact71014>/ImpactRepository/disk1/diskTag.inf
<extracted_path_for_impactFP15>/ImpactRepository/repository.config

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

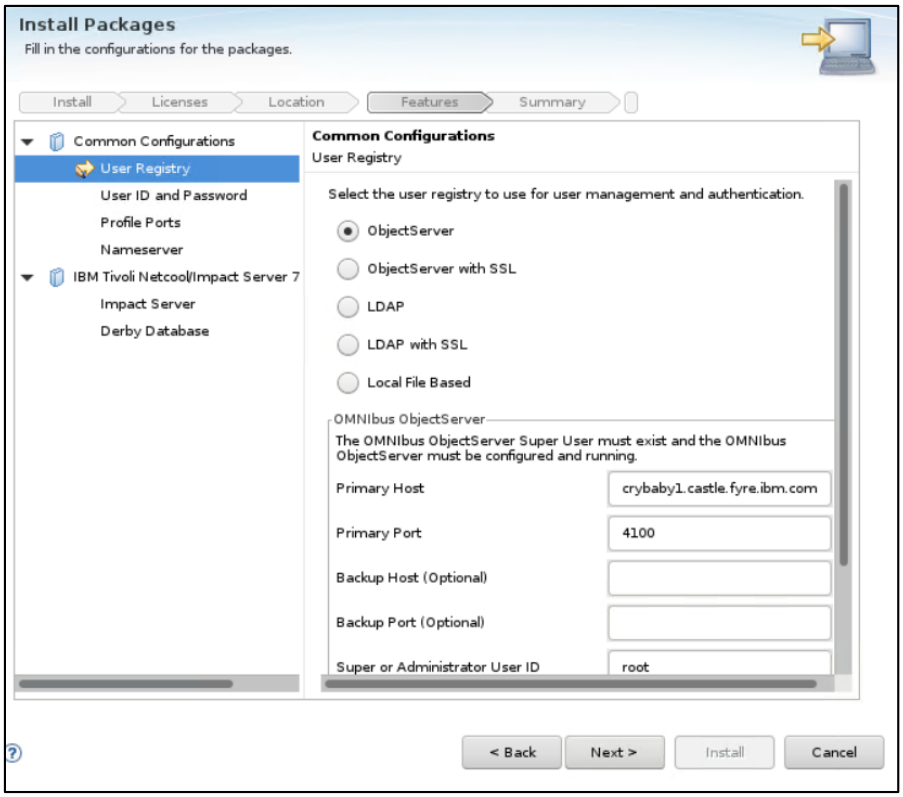
- select "Install" from IM main menu and check both GUI and Server options for Impact 7.1.0.15 to be installed:



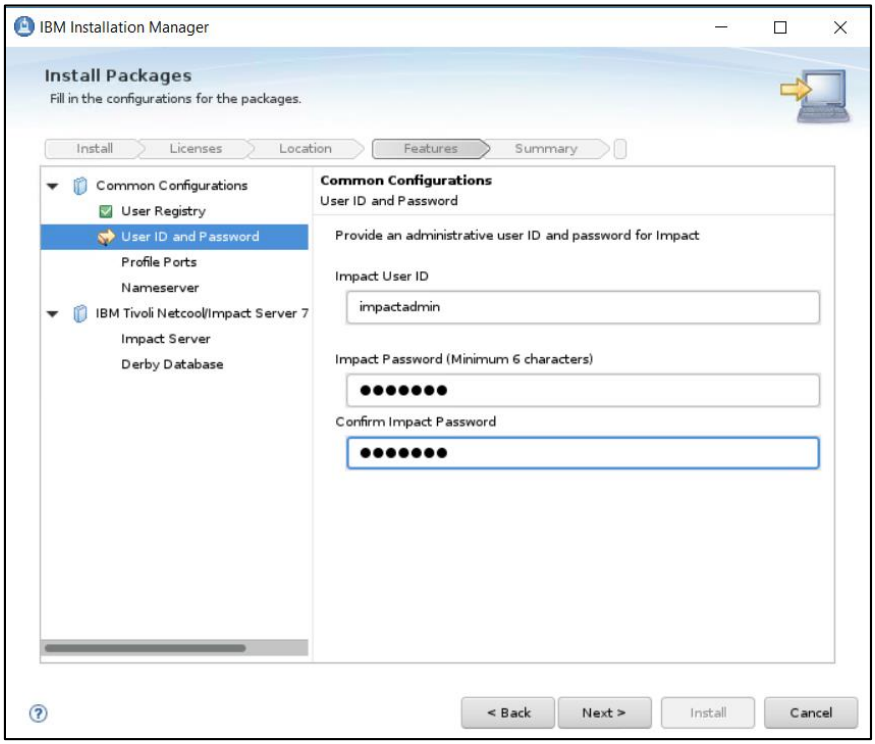
- enter installation path directory for Impact 7.1.0.15 and continue with the installation:



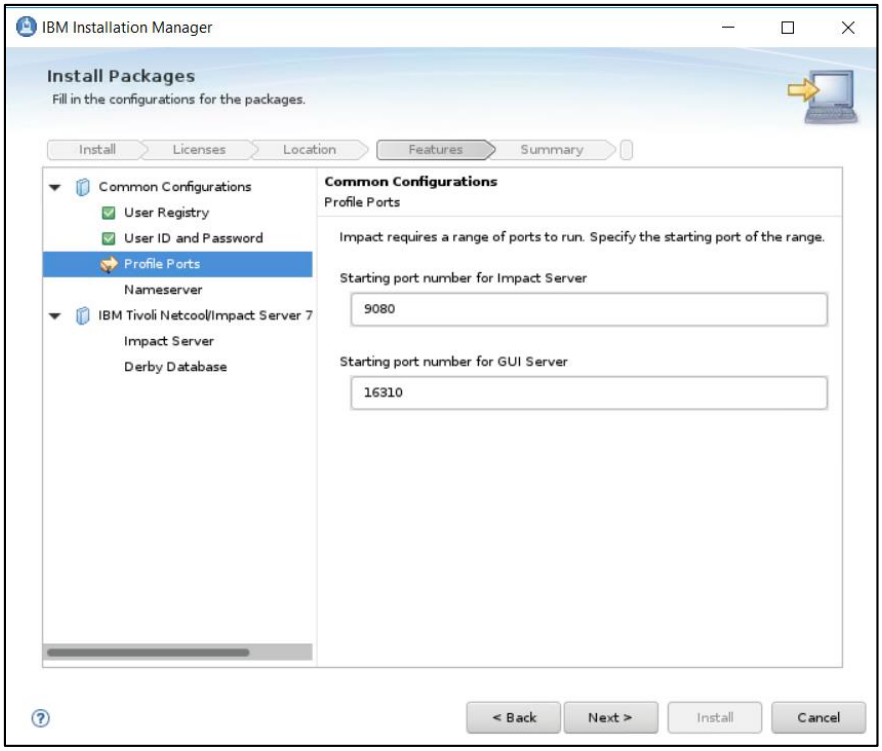
- configure user registry – this should be the same as for webgui and tbsm; in this example object server is being used for user registry, hence configure the required details for omnibus: host, port and credentials details



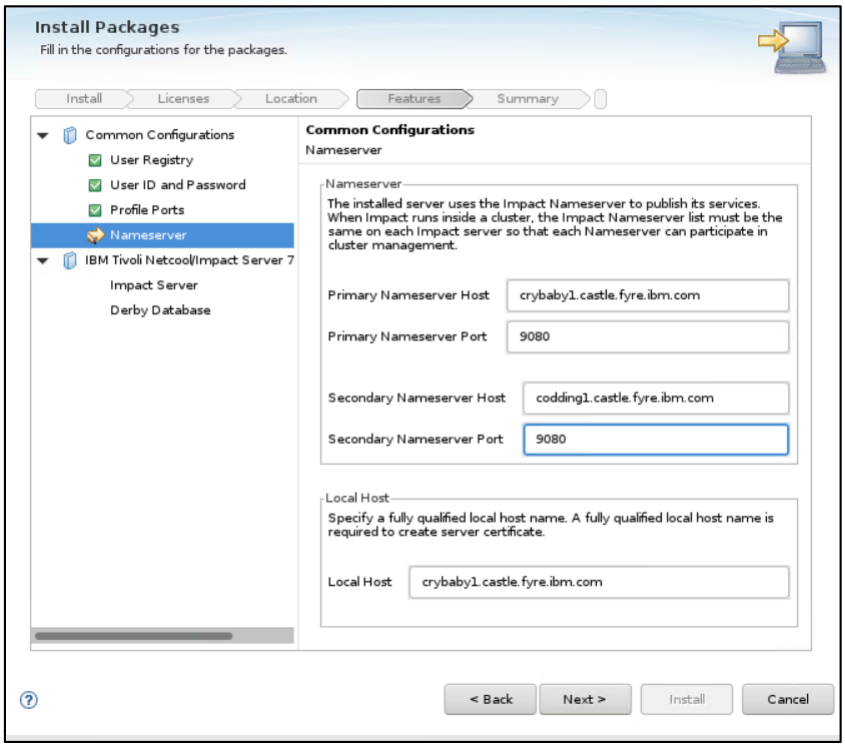
- enter impactadmin password – should be the same as the one configured in object server



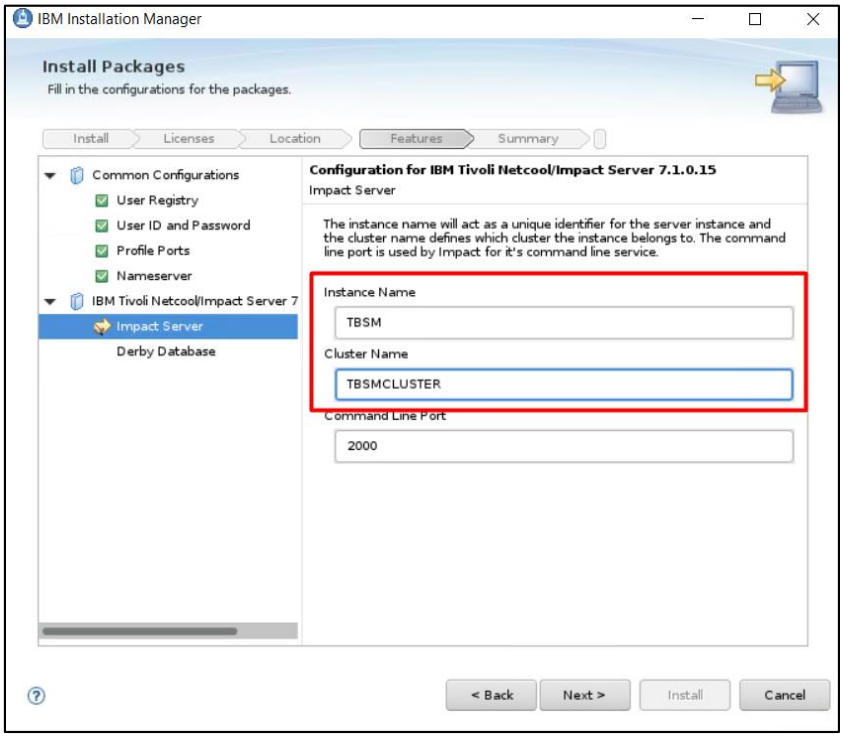
- enter port numbers for Impact Server and GUI Server



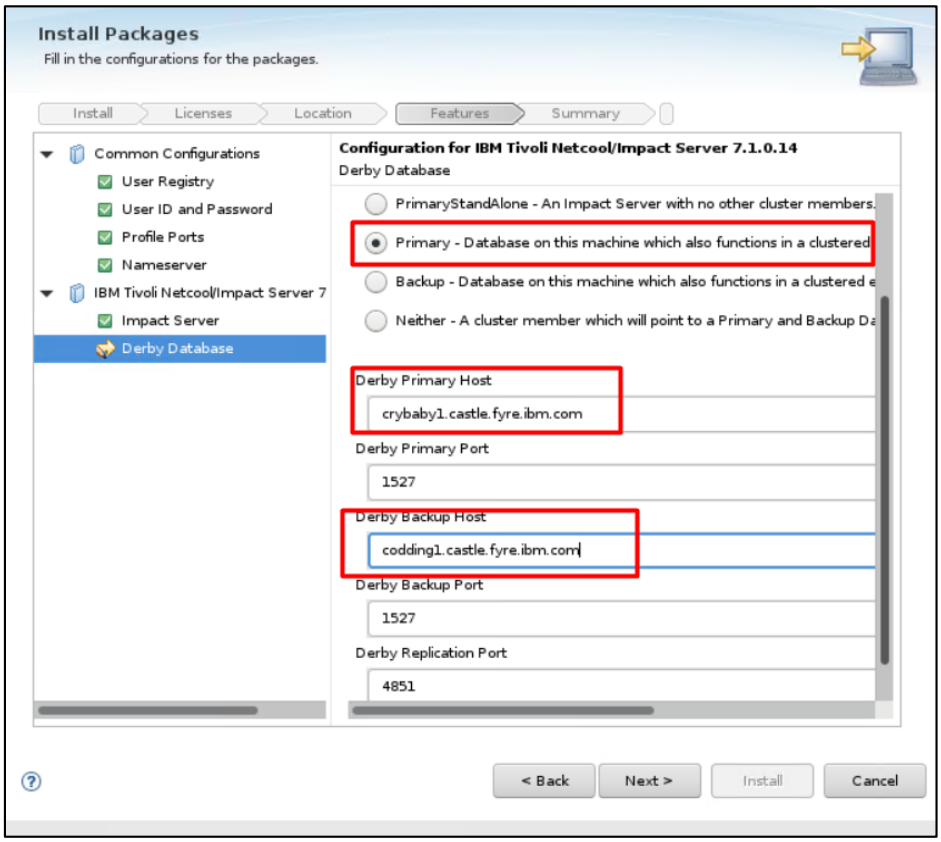
- make sure you use FQDN address; add both the primary and secondary servers' details for cluster configuration;



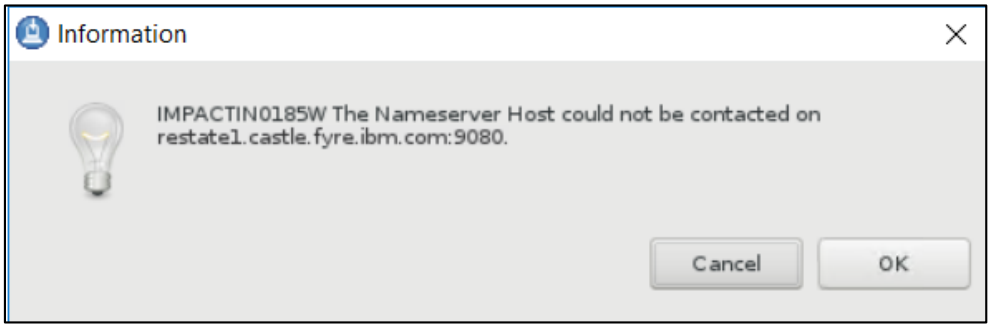
- Impact server name should be **TBSM** and cluster name should be **TBSMCLUSTER:**



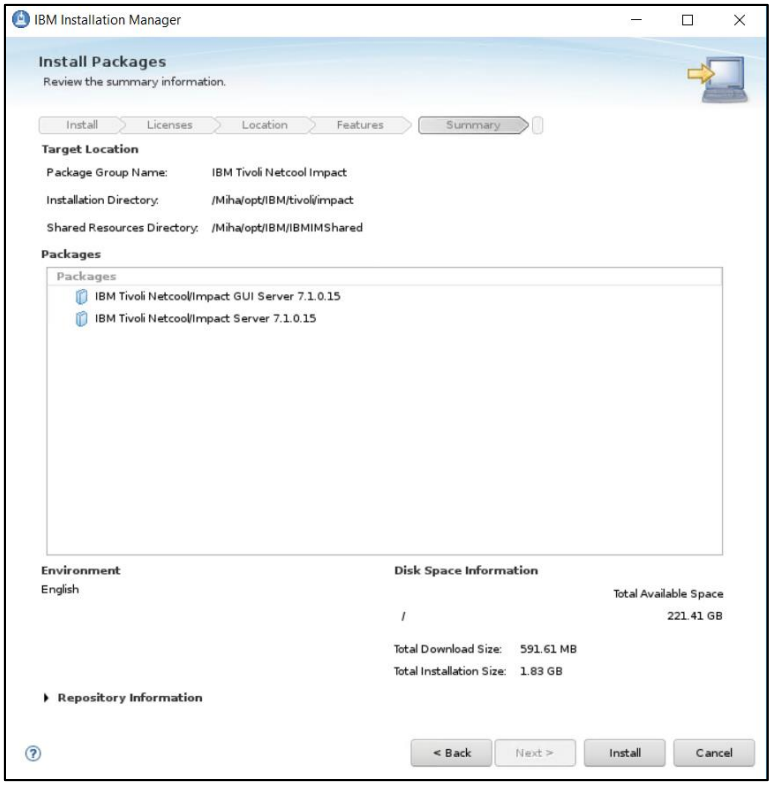
- select derby type – the option "Primary – database on this machine" should be used in this case and enter host name and port details for both primary and secondary servers:



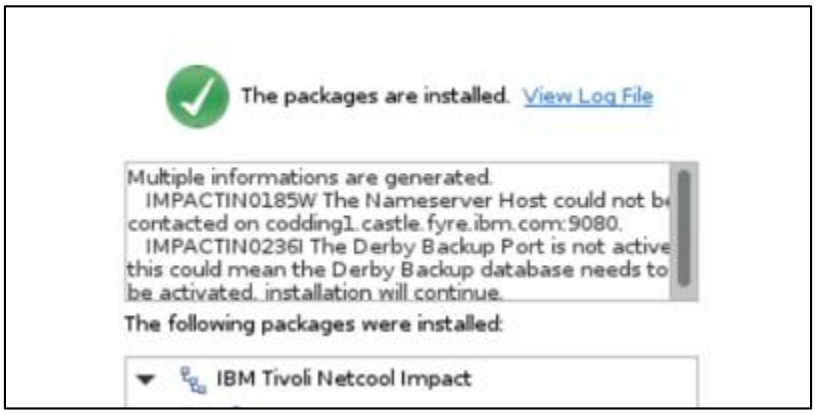
- you can safely ignore the pop-up that will appear stating that it cannot connect to the secondary server:



- continue with the Installation:



- make sure your installation finish with success:



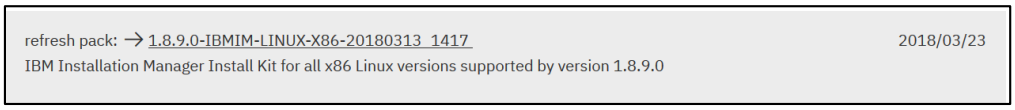
Setting up the server for TBSM Secondary Data Server (server 2)

Install or upgrade to Installation Manager 1.8.9

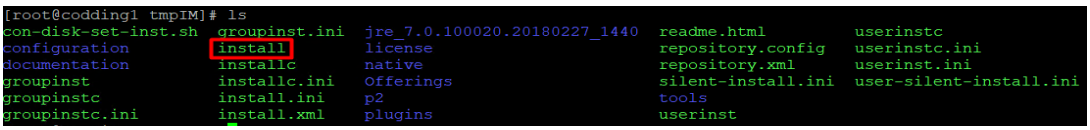
If Installation Manager is not installed on the server, you have the option to manually install it after downloading IM package. If IM is installed on the server and you have an older version, you can try to upgrade it to the latest version which is 1.8.9.

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



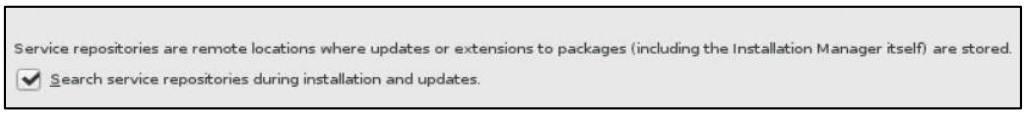
- extract IM 1.8.9 package, go to the extracted directory and run ./install :



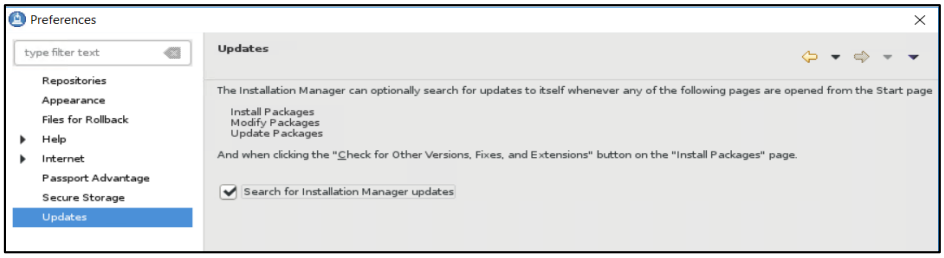
Option B: If IM is already installed or you have selected option B previously you can try to upgrade to the latest version.

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

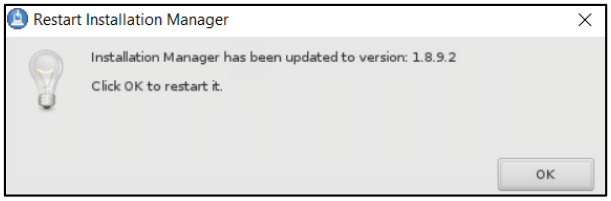
- on the Repositories tab, select Search service repositories during installation and updates.



- 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 Secondary Netcool/Impact 7.1.0.14 and upgrade to Fix Pack 15

- download and extract Impact 7.1.0.14 and Fix Pack 15 for Impact

Download link for Fix Pack 15:
https://www-01.ibm.com/support/docview.wss?uid=ibm10739521

- add both the repository from Impact 7.1.0.14 base as well as the repositories from Impact Fix Pack 15 within Installation Manager -> Preferences panel:

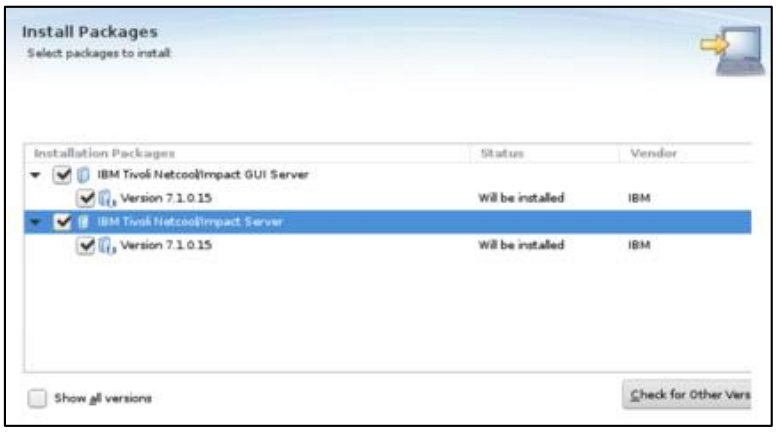
<extracted_path_for_impact71014>/ImpactRepository/disk1/diskTag.inf
<extracted_path_for_impactFP15>/ImpactRepository/repository.config

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

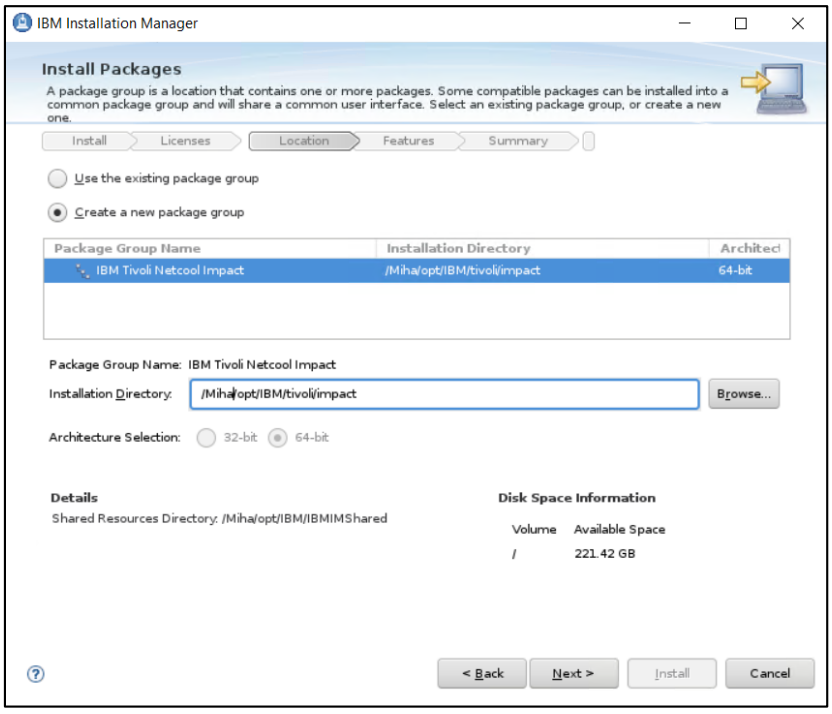
Stop primary Impact server before proceeding with the secondary server installation.

```
[root@crybaby1 eclipse]# /Miha/opt/IBM/tivoli/impact/bin/stopImpactServer.sh
Stopping server TBSM.
Server TBSM stopped.
[root@crybaby1 eclipse]#
[root@crybaby1 eclipse]#
[root@crybaby1 eclipse]# /Miha/opt/IBM/tivoli/impact/bin/stopGUIServer.sh
Stopping server ImpactUI.
Server ImpactUI stopped.
```

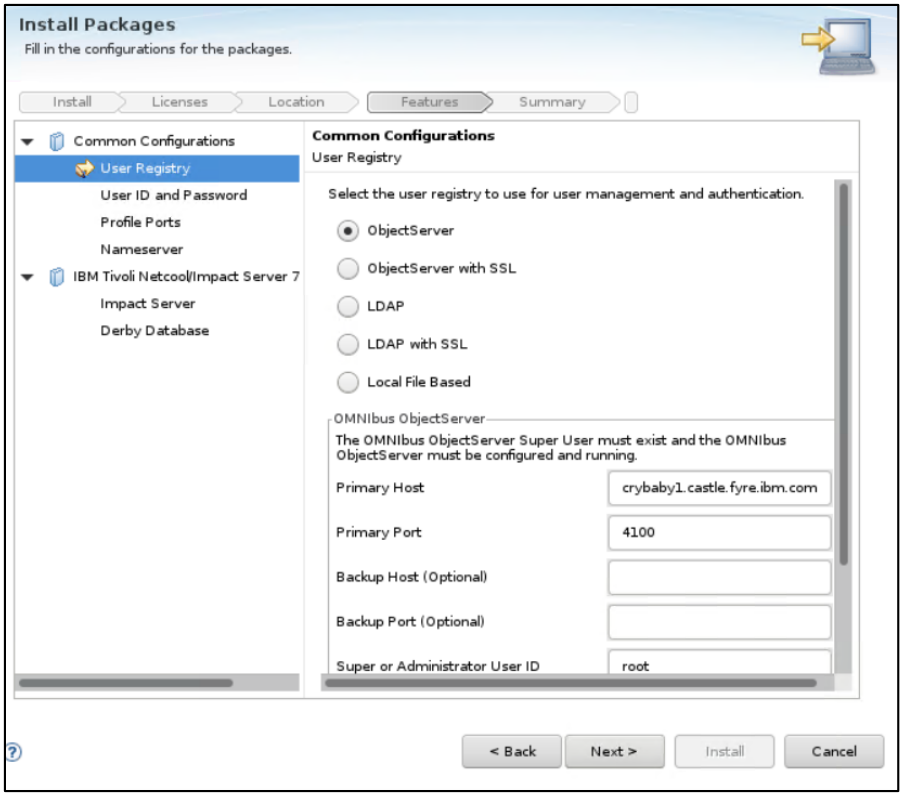
- select “Install” from IM main menu and check both GUI and Server options for Impact 7.1.0.15 to be installed:



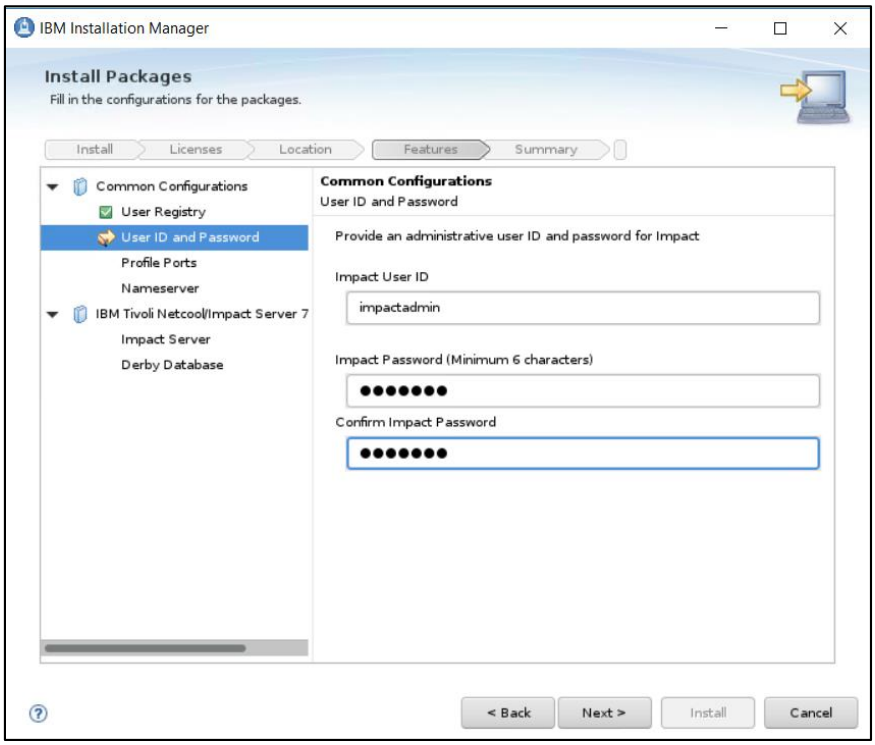
- enter installation path directory for Impact 7.1.0.15 and continue with the installation:



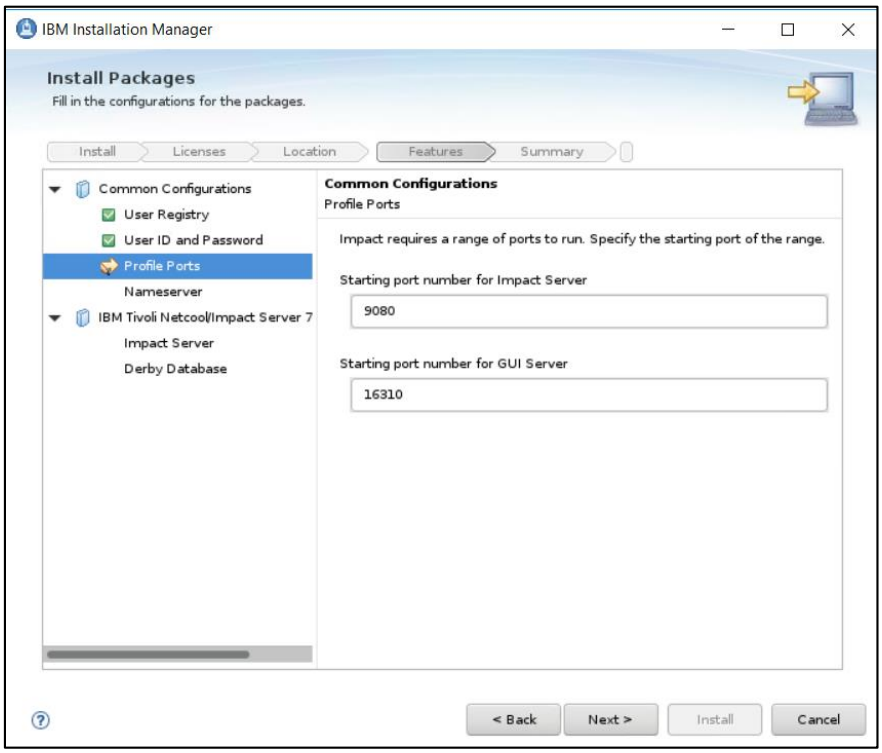
- configure user registry – this should be the same as for webgui and tbsm; in this example object server is being used for user registry, hence configure the required details for omnibus: host, port and credentials details



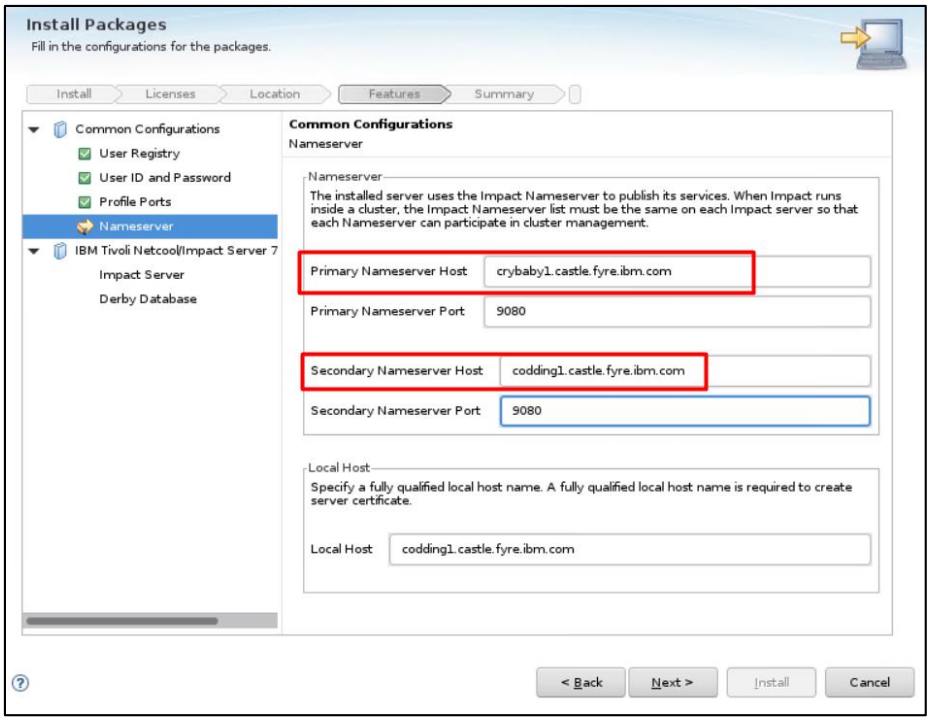
- enter impactadmin password – should be the same as the one configured in object server



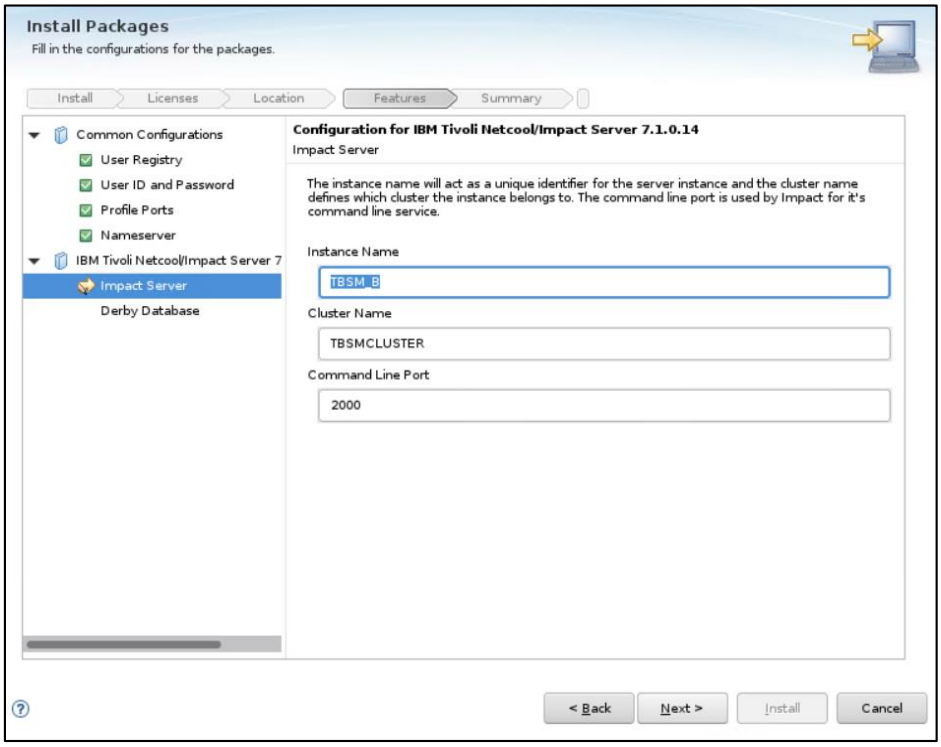
- enter port numbers for Impact Server and GUI Server



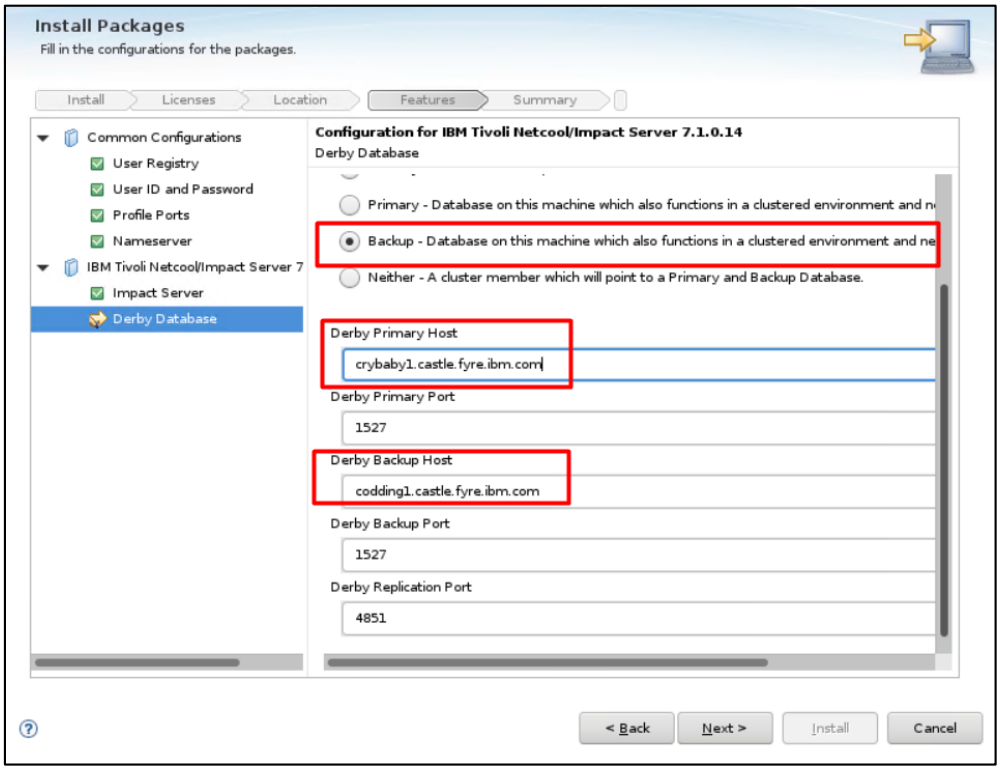
- make sure you use FQDN address; add both the primary and secondary servers' details for cluster configuration;



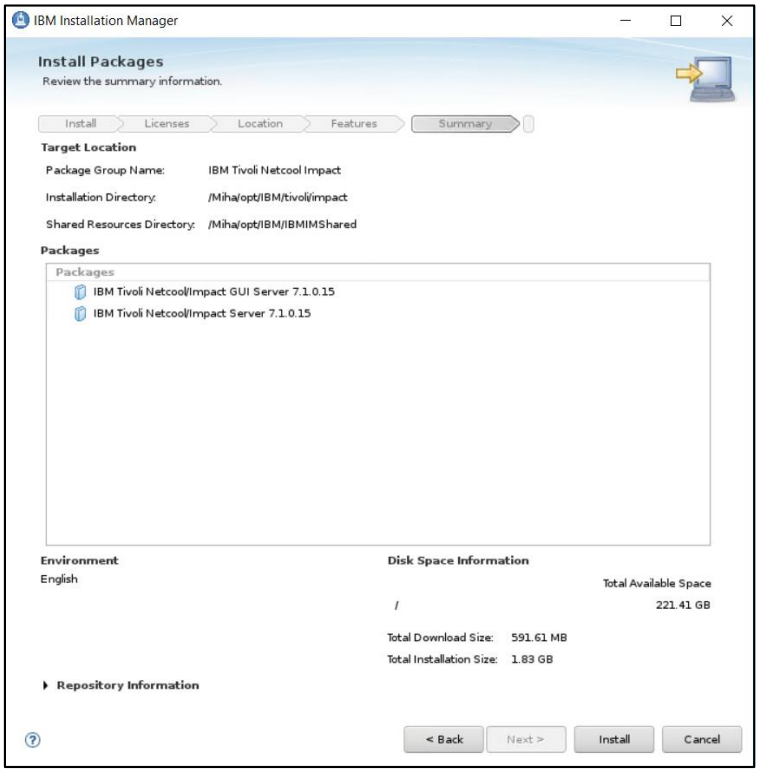
- Impact server name should be **TBSM_B** and cluster name should be **TBSMCLUSTER:**



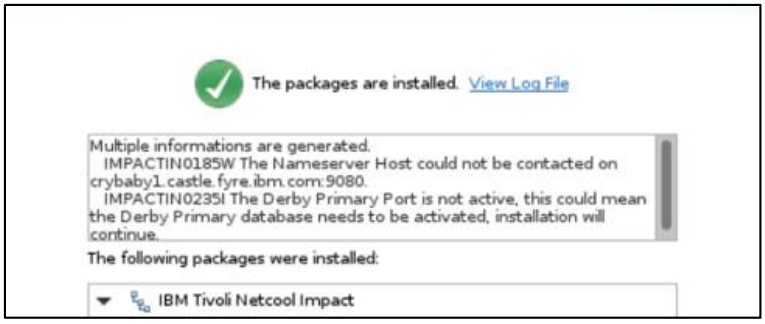
- select derby type – the option "Backup - database on this machine..." should be used in this case and enter host name and port details for both primary and secondary servers:



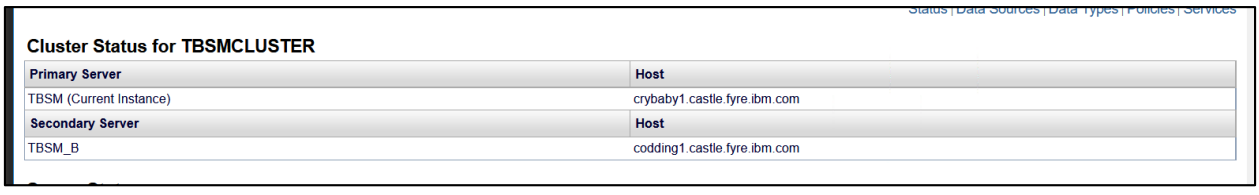
- continue with the Installation:



- make sure your installation finish with success:



Start primary and secondary Impact server, test the failover and make sure everything works fine.



Setting up the server for TBSM Dash Server (server 3)

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

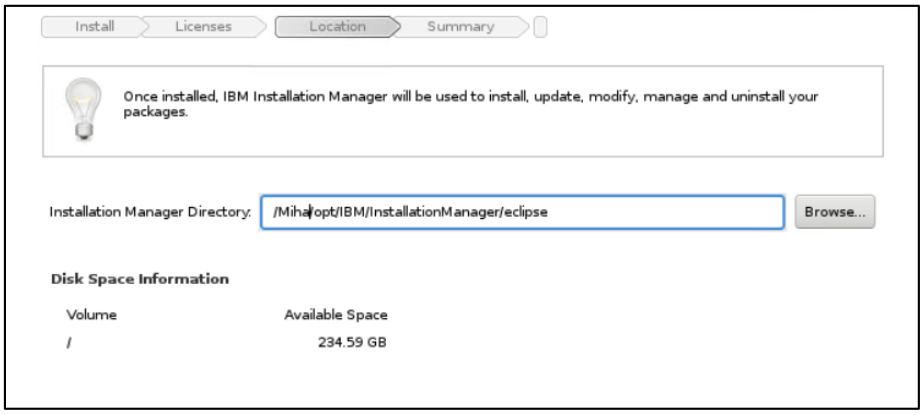
refresh pack: → 1.8.9.0-IBMIM-LINUX-X86-20180313_1417 2018/03/23
IBM Installation Manager Install Kit for all x86 Linux versions supported by version 1.8.9.0

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

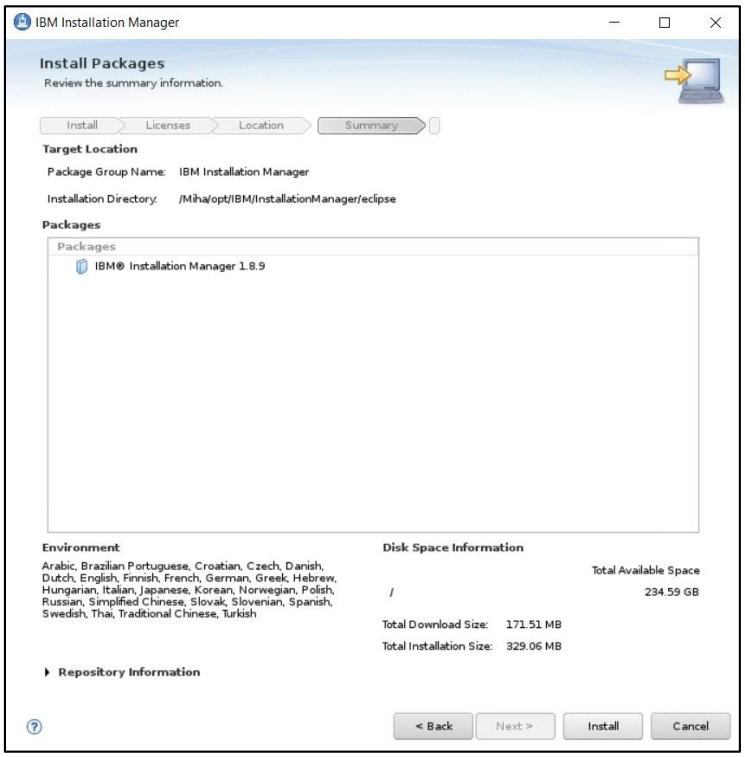
```
[root@yobs1 tmpIM]# ./install
```

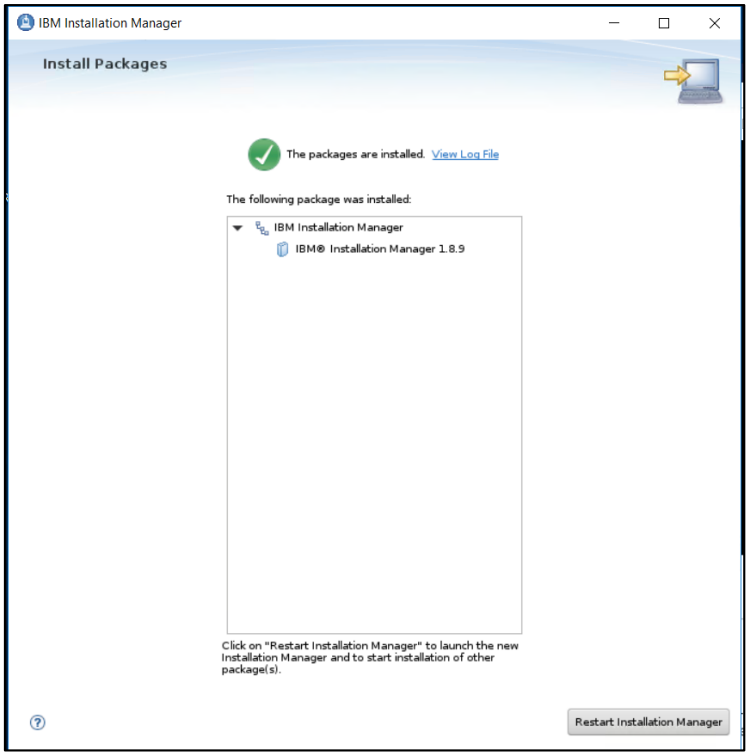
- select IBM Installation Manager Version 1.8.9 for this to be installed

- select the directory where you want to install Installation Manager



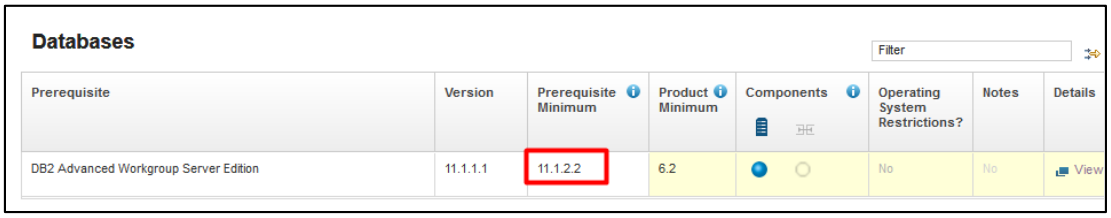
- continue with the installation by selecting “next” and “install”. Make sure everything worked fine, you should get “the packages are installed” message at the end:





Install 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:



Databases

Filter

Prerequisite	Version	Prerequisite Minimum	Product Minimum	Components	Operating System Restrictions?	Notes	Details
DB2 Advanced Workgroup Server Edition	11.1.1.1	11.1.2.2	6.2		No	No	View

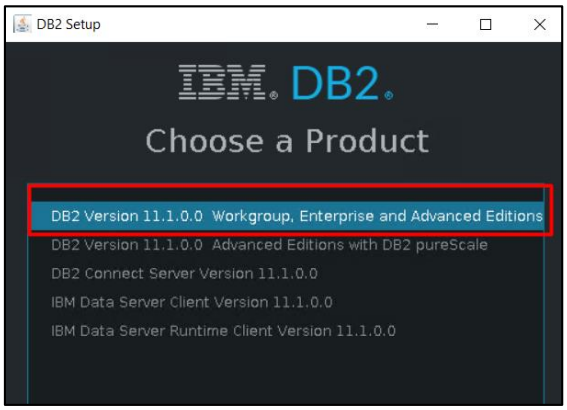
Download link for DB2 11.1 Mod 2 Fix Pack 2
http://www-01.ibm.com/support/docview.wss?uid=swg24043789

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

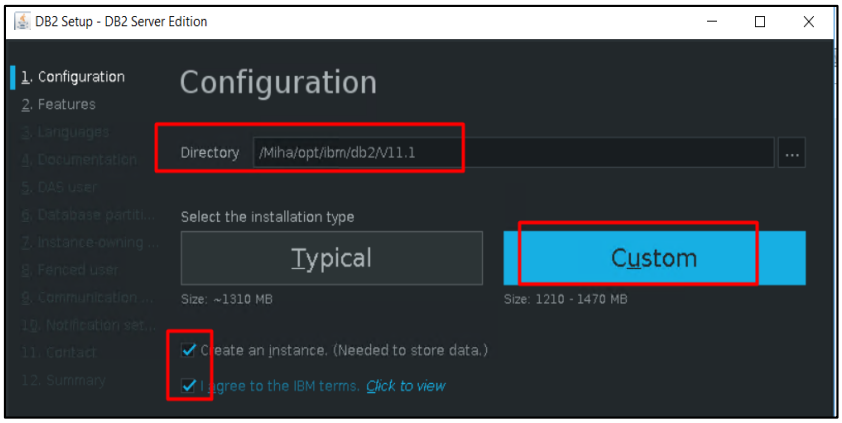
- go to the extracted directory and to */server_awse_o/* directory and run the following command from this directory:

  ./db2setup

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

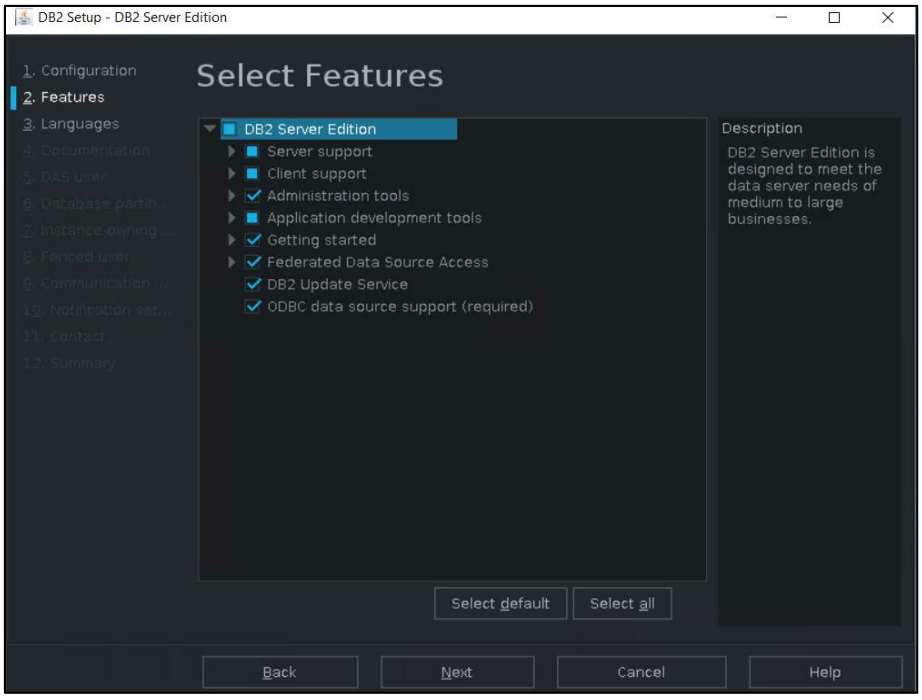


- enter installation directory for DB2. Afterwards you can select either "Custom" as installation Type in order to customize different properties for DB2 such as the DB2 instance port or select "Typical" and the default settings will be used. In this example I have selected "Custom" installation

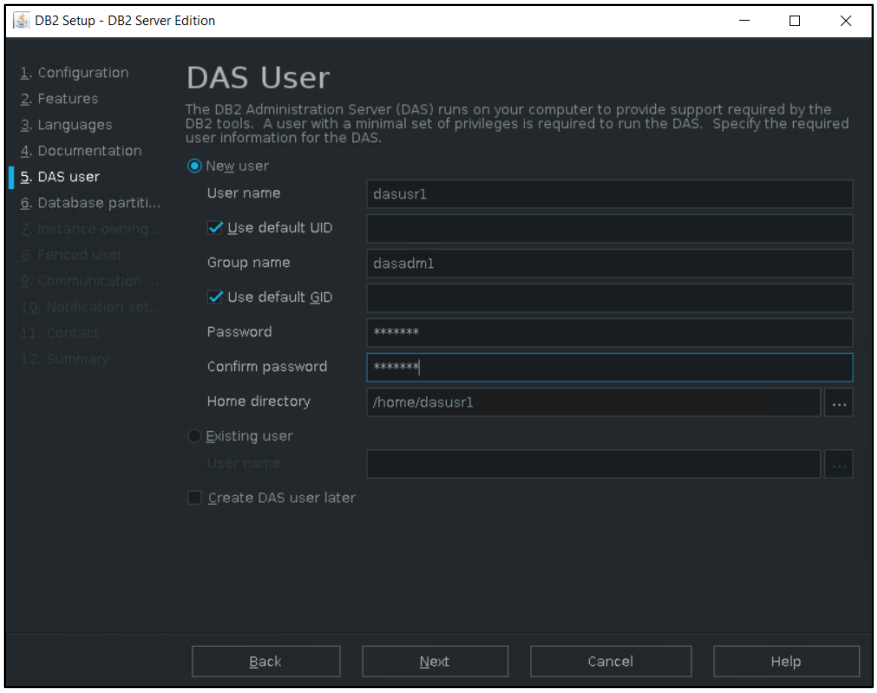


Make sure you select "Create an instance" and "I agree to the IBM terms".

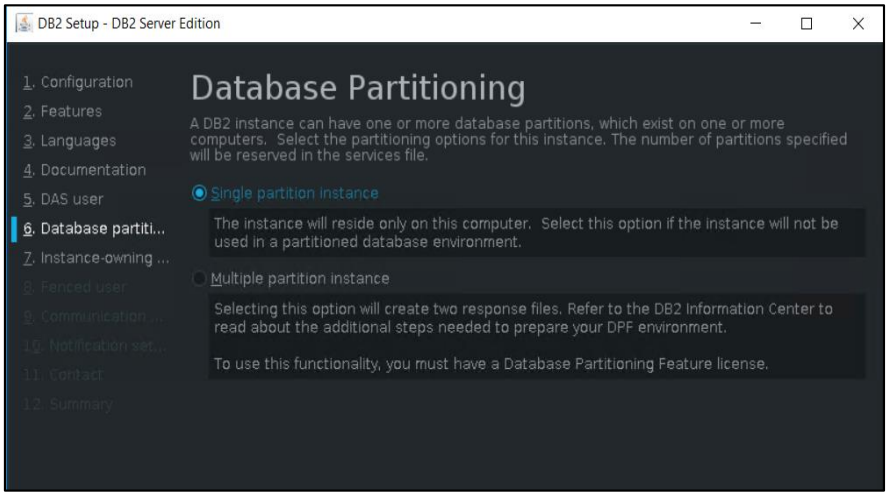
- select the DB2 features you want to install (you can let them as default):



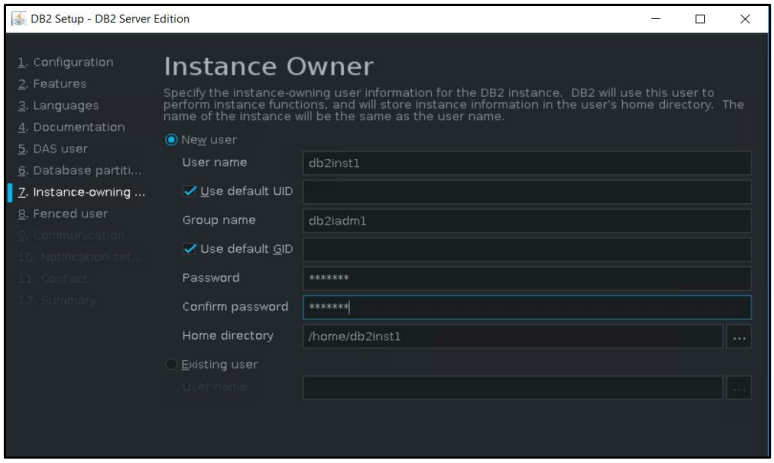
- configure DAS user name (by default dasusr1 user will be created; add a password for it):



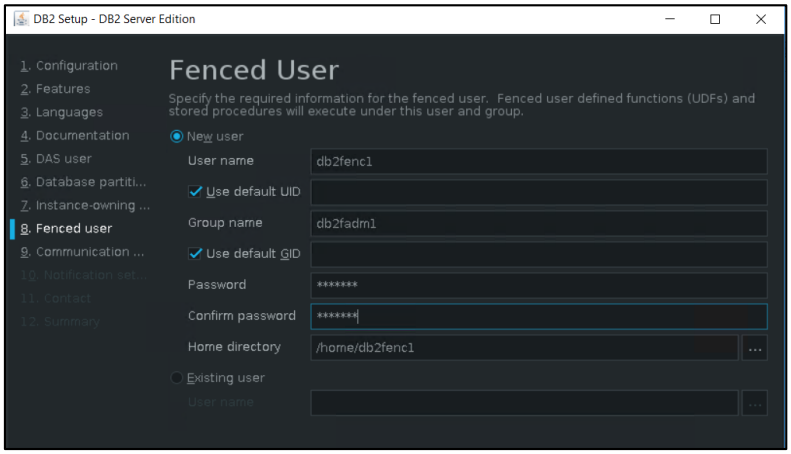
- select single partition instance for DB2



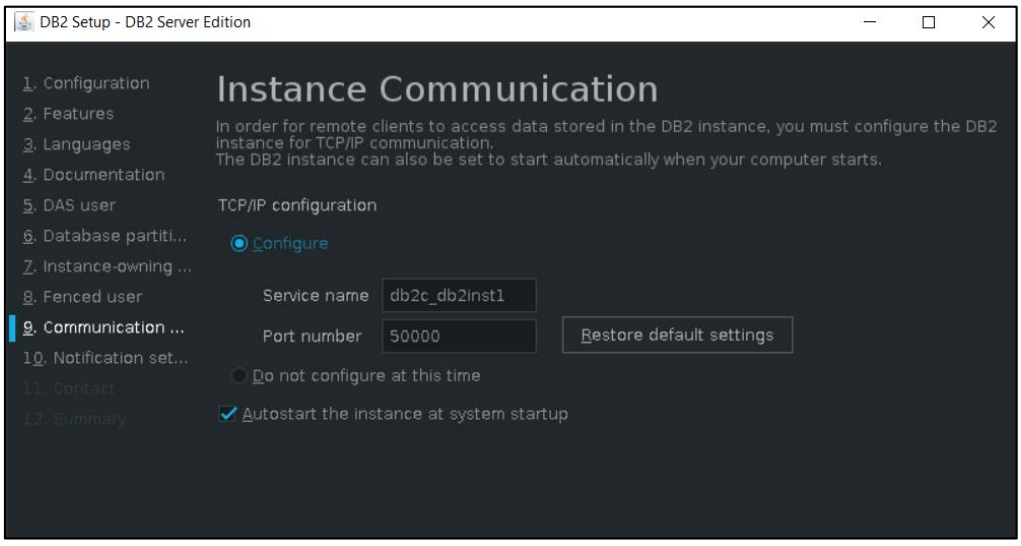
- configure Instance owner user (by default db2inst1 user will be created):



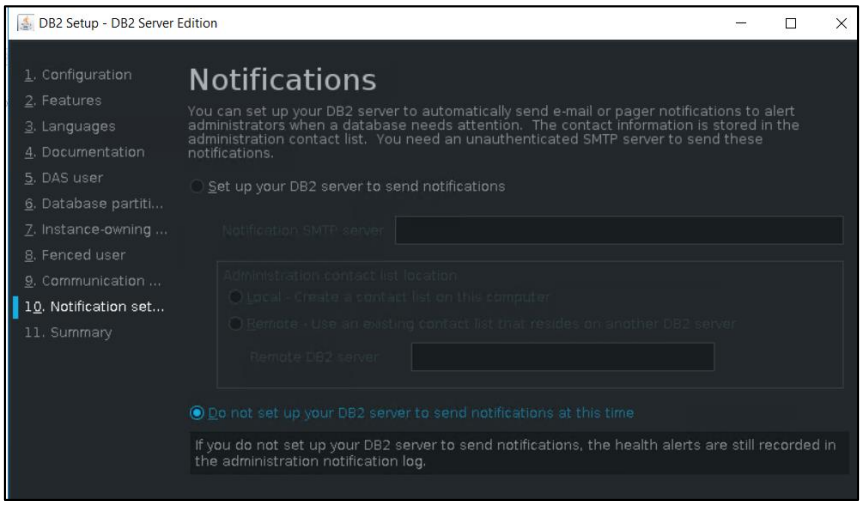
- configure fenced user for DB2 (by default db2fenc1 user will be created)



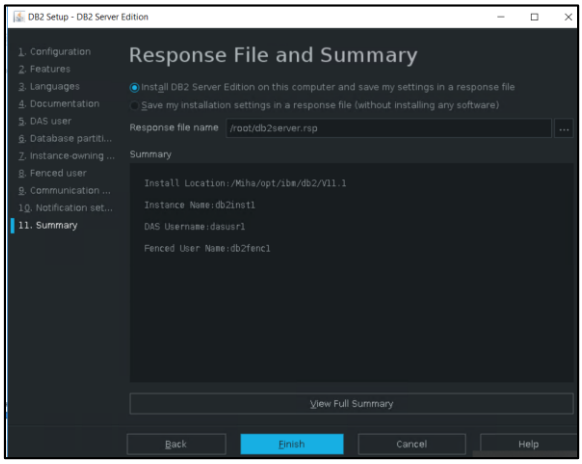
- Change the DB2 port or service name if needed, by default DB2 port will be 50000:

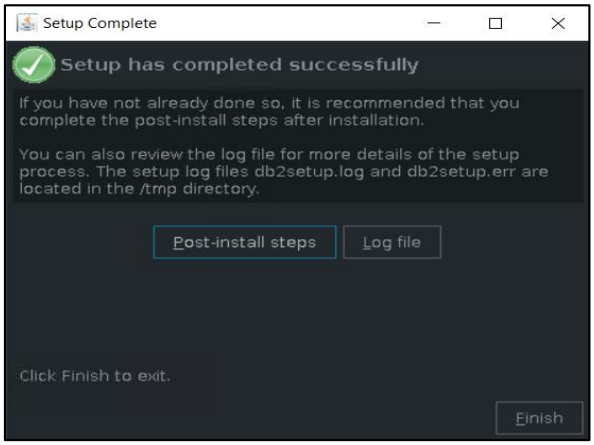


- configure if you want the DB2 server to send notification; within this example this won't be configured:



- 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 and 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".
```

Install WAS 8.5.5.13, JazzSM 1.1.3/DASH 3.1.3 and Java SDK 8.0.5.6

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 13

Download link for 8.5.5 Fix Pack 13:
http://www-01.ibm.com/support/docview.wss?uid=swg24044479

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

<extracted_path_8.5.5.9>/linux_x86_64/disk1/diskTag.inf
<extracted_path_8.5.5.13>/repository.config

- download and extract JazzSM 1.1.3 package and add the repository within Installation Manager -> Preferences panel:

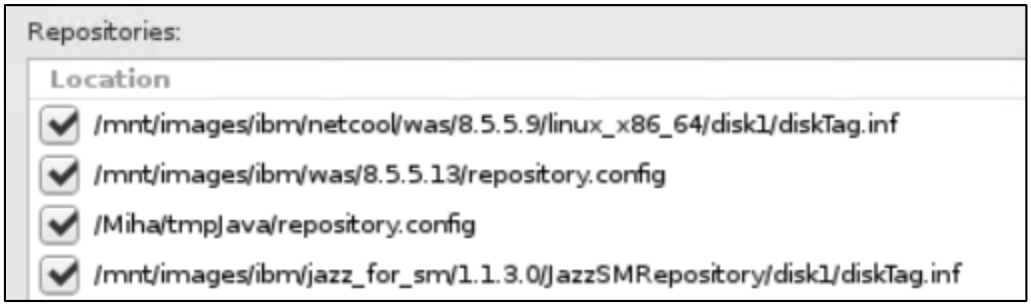
<extracted_path_JazzSM>/JazzSMRepository/disk1/diskTag.inf

- download and extract Java 8.0.5.6 package and add the repository within IM

<extracted_path_java>/repository.config

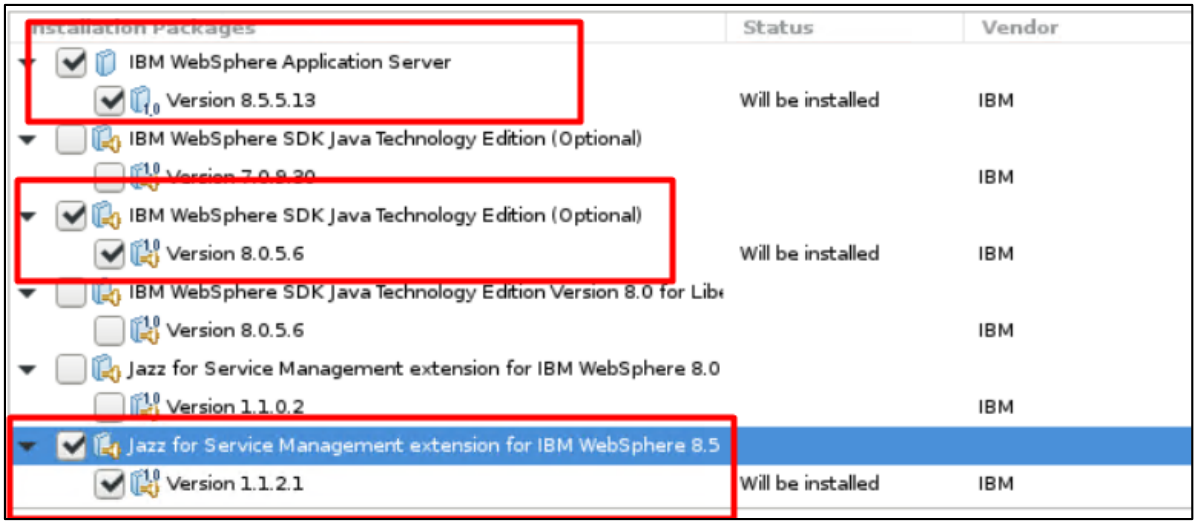
Download link for Java SDK 8.0.5.6:
https://www-01.ibm.com/support/docview.wss?uid=swg24044501

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

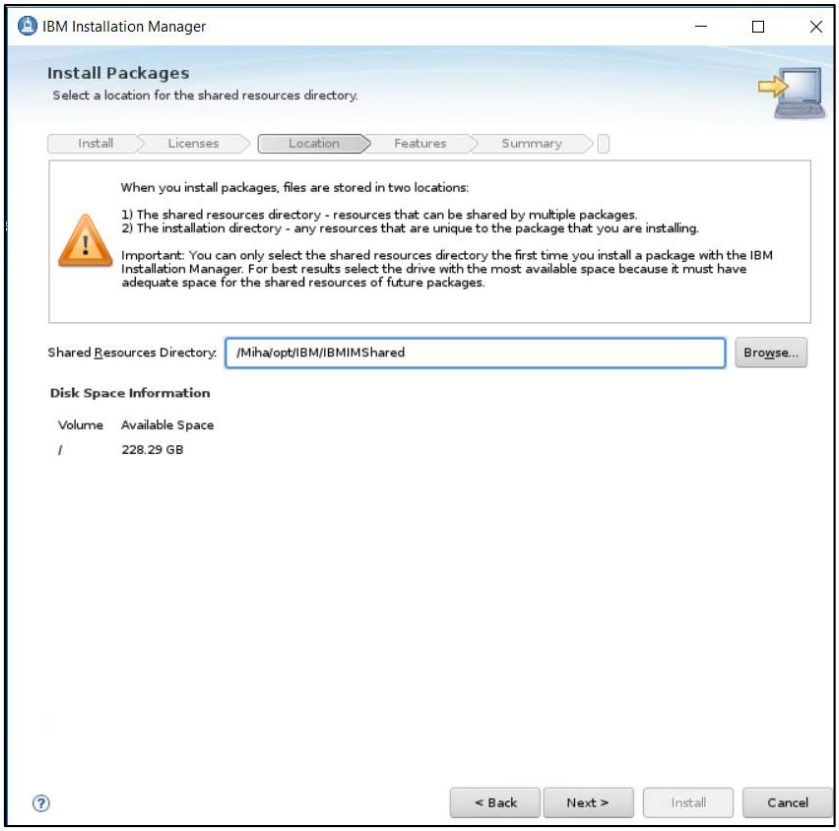


- return to Installation Manager main menu and select the Install option

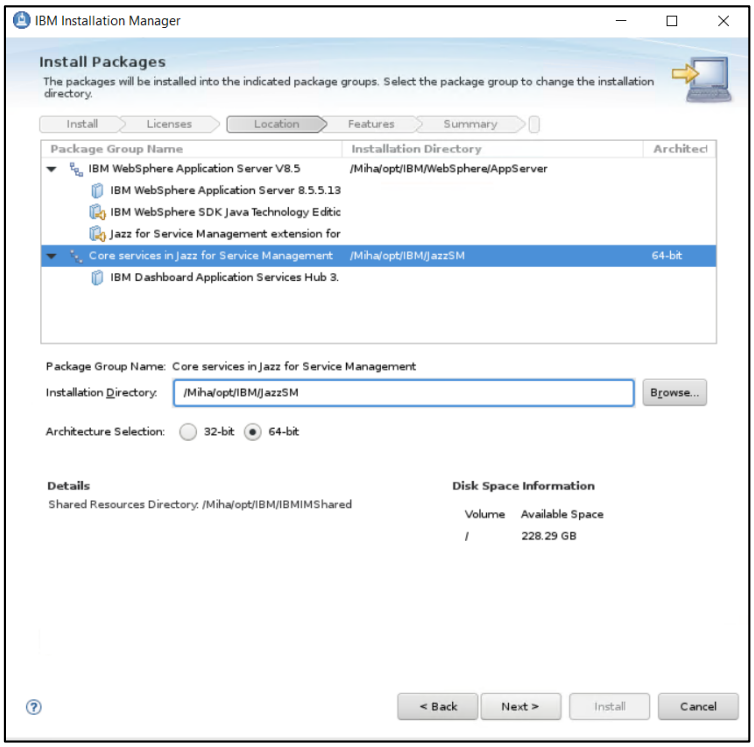
- select the products you want to install; you should select at least: WAS 8.5.5.13, Java SDK 8.0.5.6, Jazz for IBM WebSphere 8.5 version 1.1.2.1 and IBM Dash 3.1.3.0.



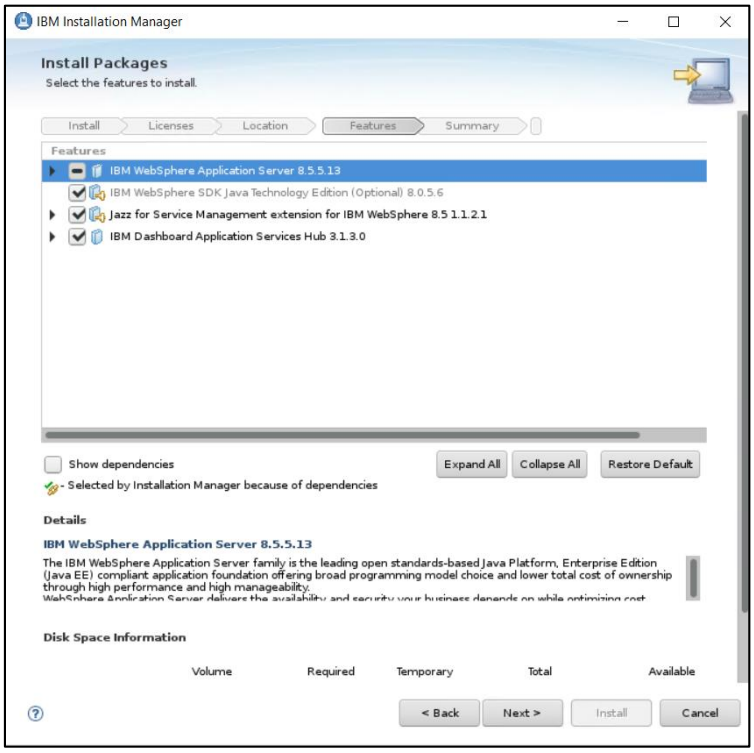
- continue with the installation and enter the location path for the shared resources directory:



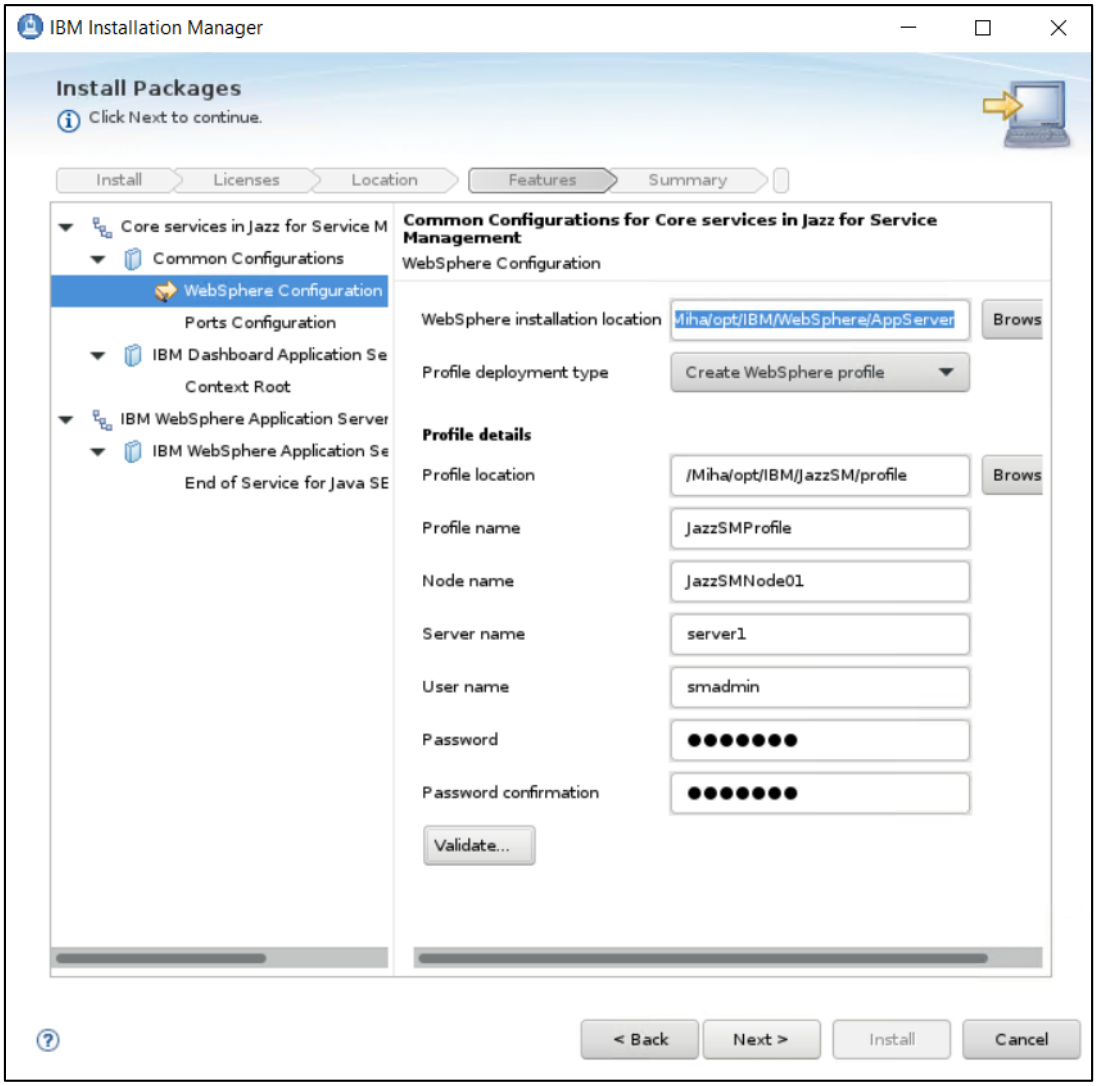
- enter installation directory for WAS 8.5.5.13 and for DASH (you have to select each of them to change their directories):



- continue with the installation:

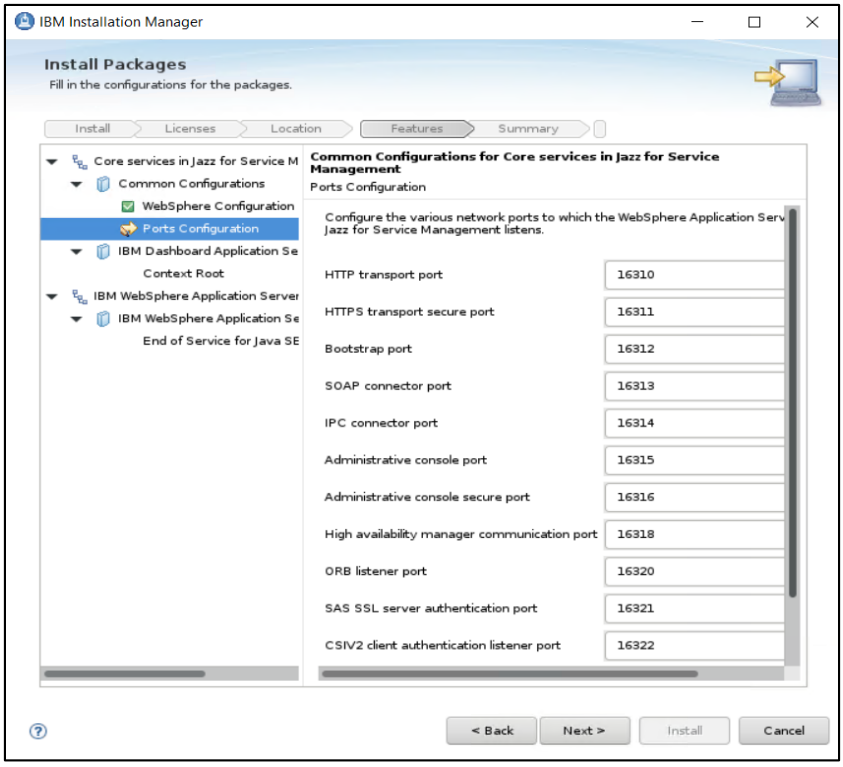


- enter WebSphere installation location as you initially added within the previous screens and the details needed to create a WAS profile (smadmin user password); afterwards click on the "Validate" option:

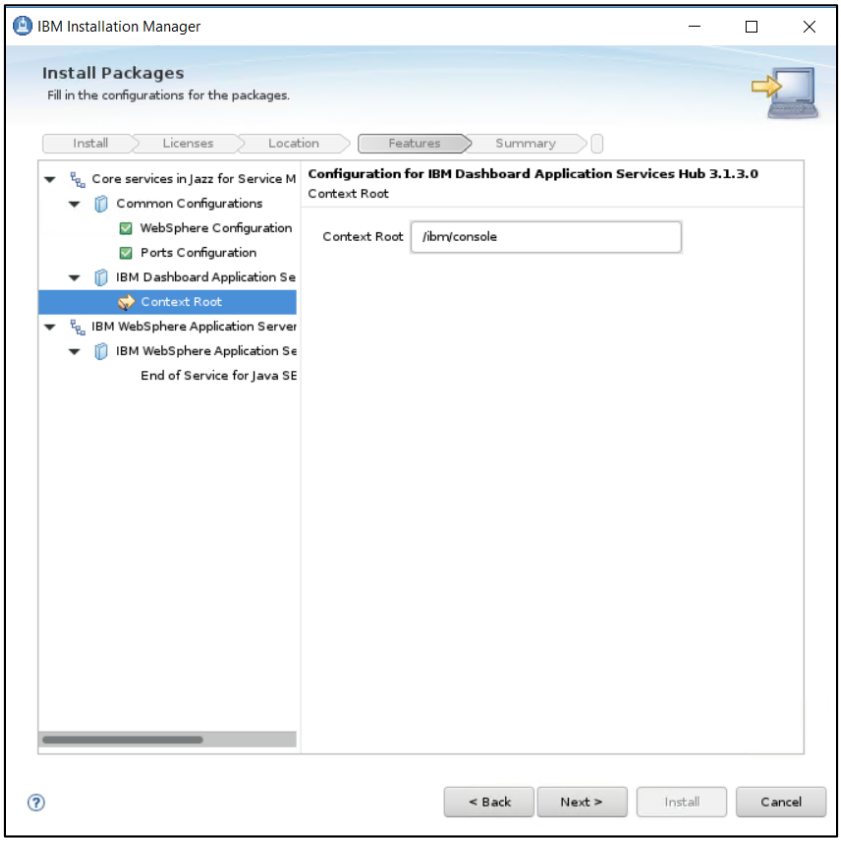


- change installation ports if needed and continue with the installation

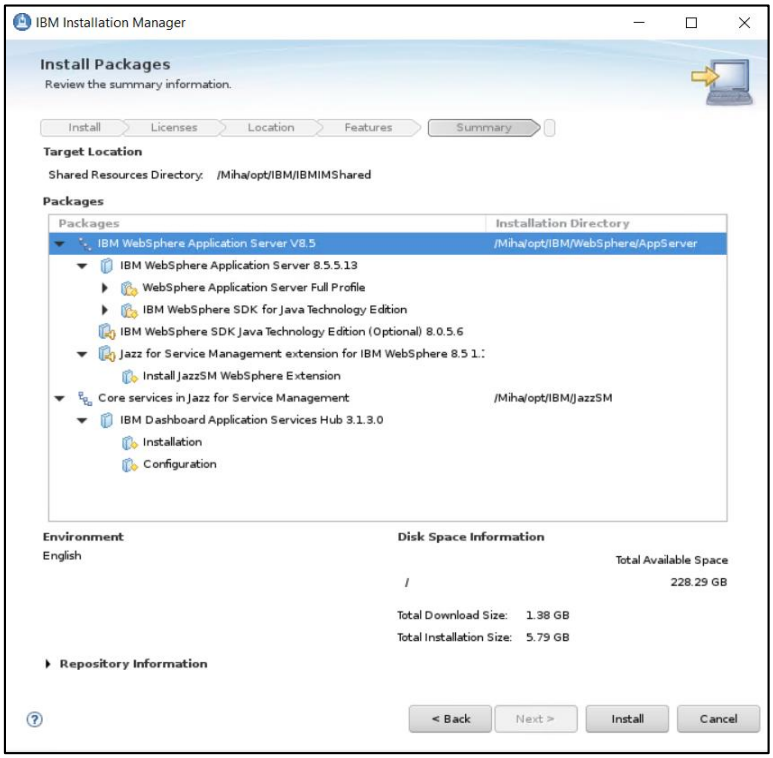
In case you are installing everything on the same box, these ports are easier to be changed than the ones from Impact as they cannot run on the same port at the same time.

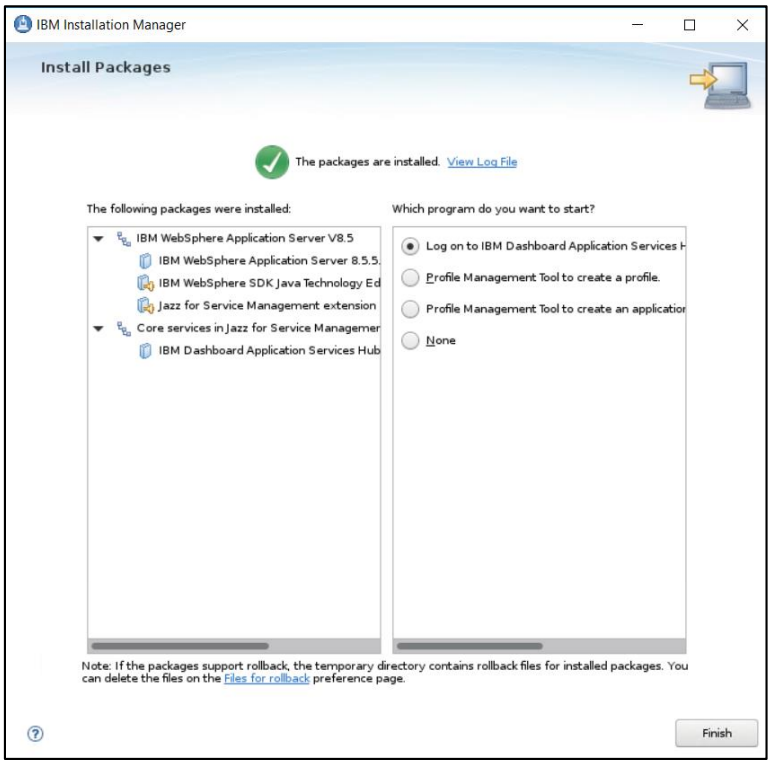


- by default, context root is /ibm/console; continue with the installation



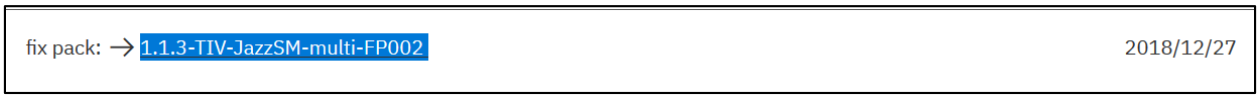
- proceed with the installation and make sure everything completed successfully:





Upgrade to JazzSM/DASH Fix Pack 2

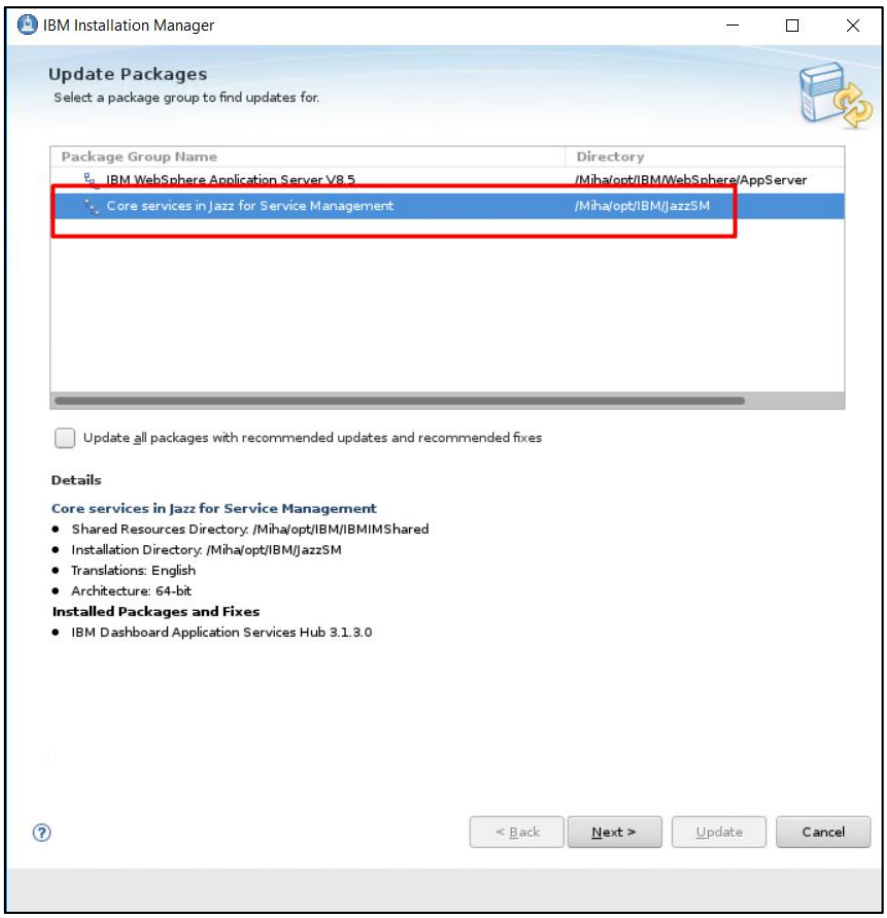
Download link:
https://www-945.ibm.com/support/fixcentral/swg/selectFixes?product=ibm%2FTivoli%2FJazz+for+Service+Management&fixids=1.1.3-TIV-JazzSM-multi-FP002&source=SAR&function=fixId&parent=ibm/Tivoli



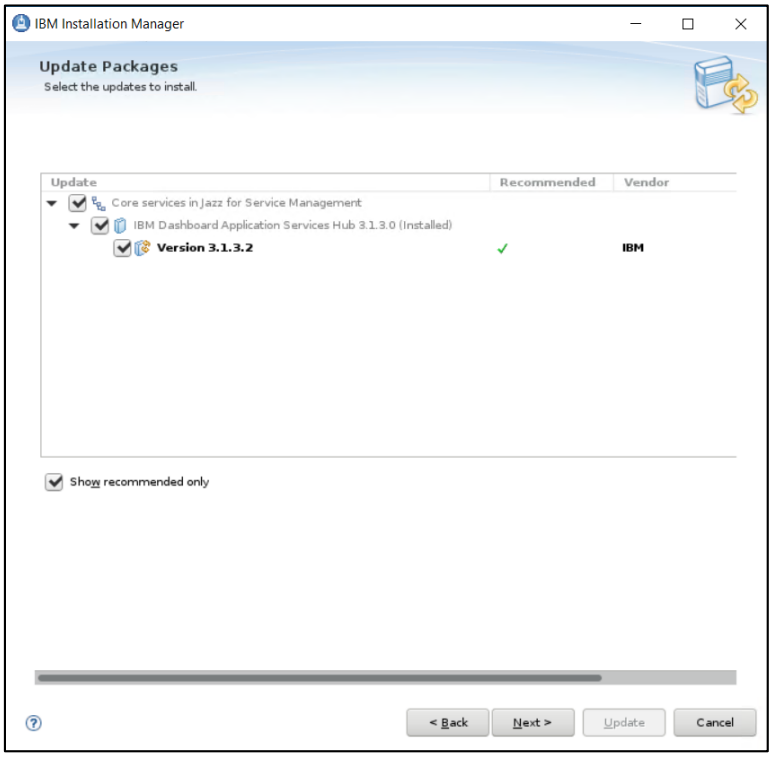
- download and extract FP2 package
- add the repository within Installation Manager -> preferences section

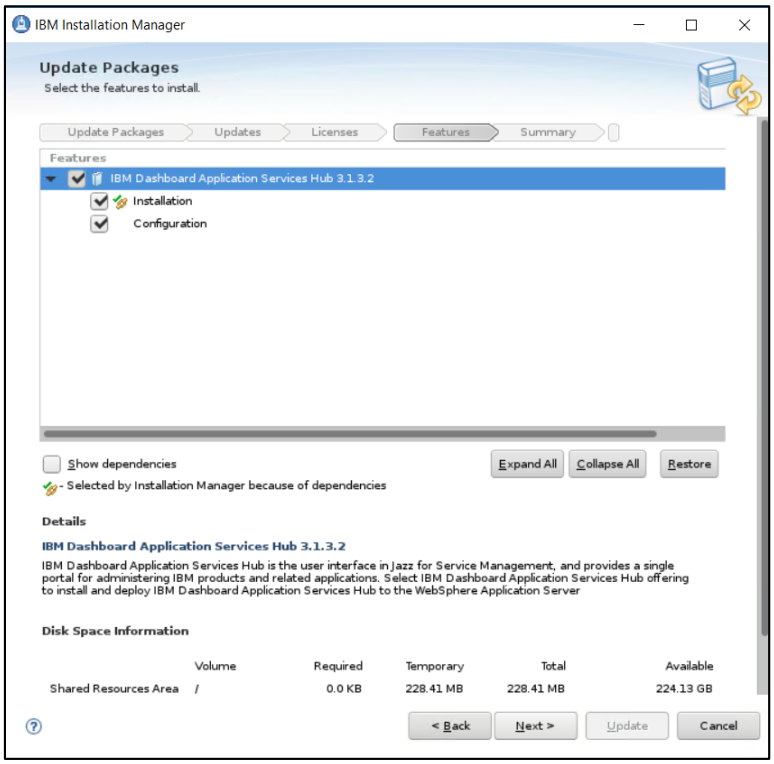
<extracted_path_JazzFP2>/JazzSMFPRepository/disk1/diskTag.inf

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

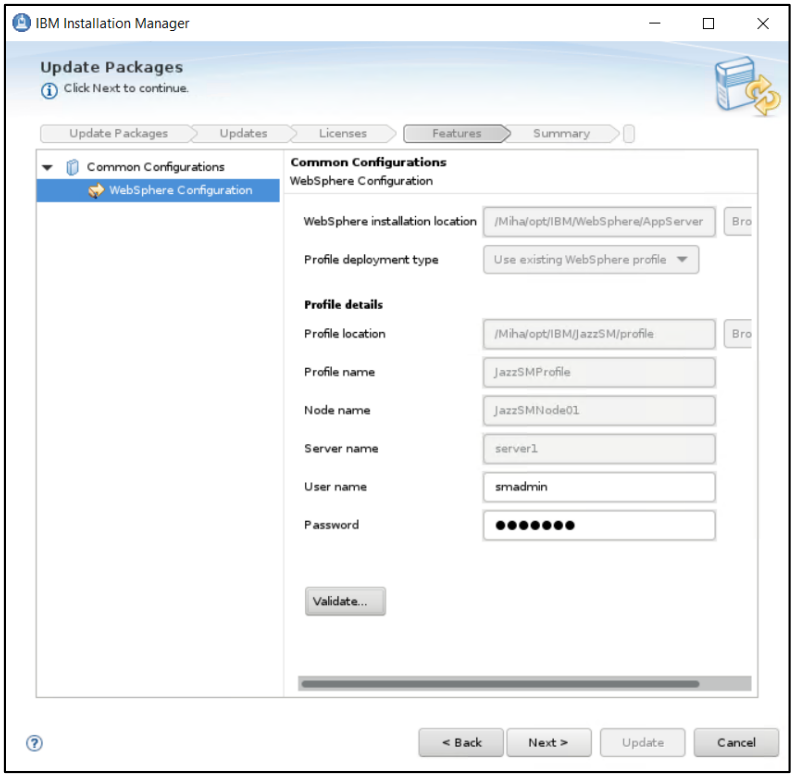


- continue with the installation:

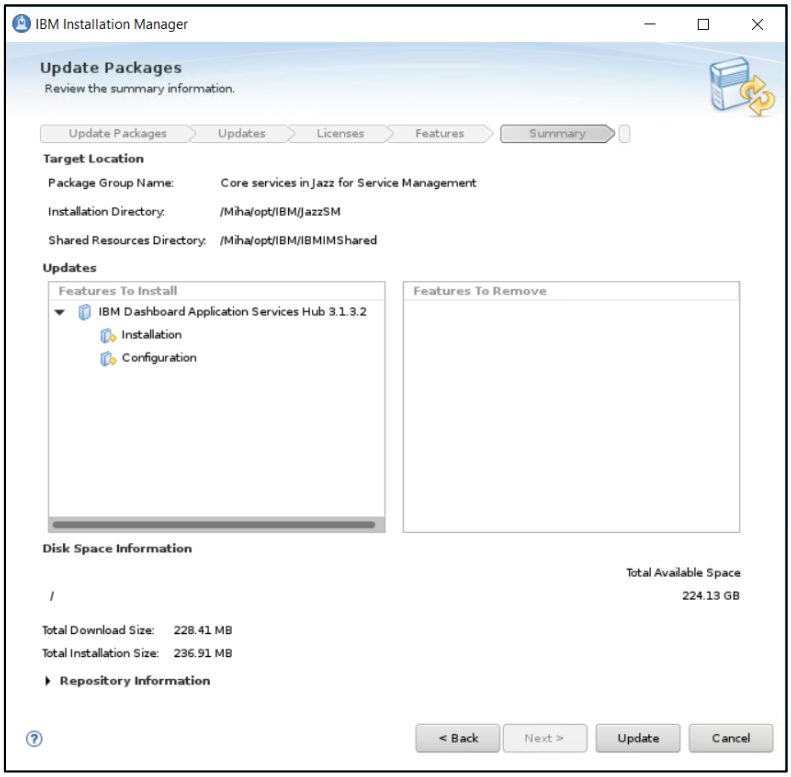


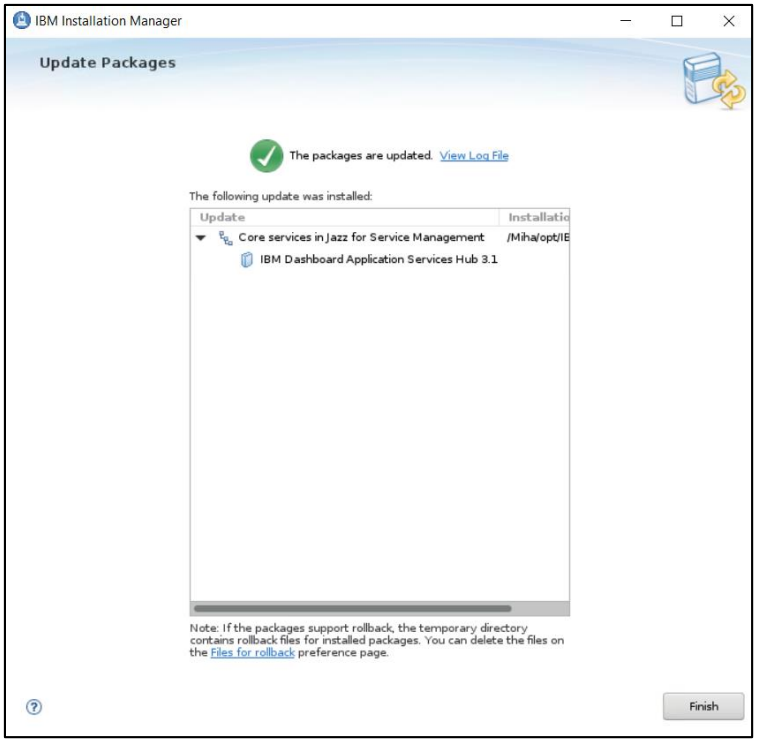


- enter smadmin user details and click on the "*Validate*" option:



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





Install WebGUI 7.1.0.14 and upgrade to Fix Pack 15

- download and extract the package for webgui 7.1.0.14 as well as the package for webgui 8.1 fix pack 15

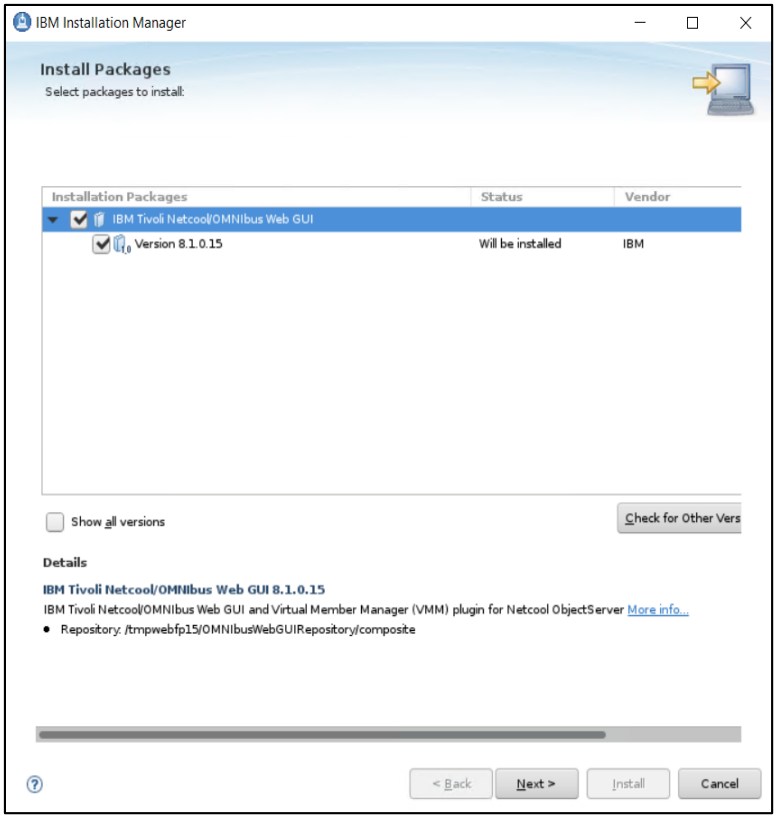
Download link for Fix Pack 15:
https://www-01.ibm.com/support/docview.wss?uid=ibm10733391

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

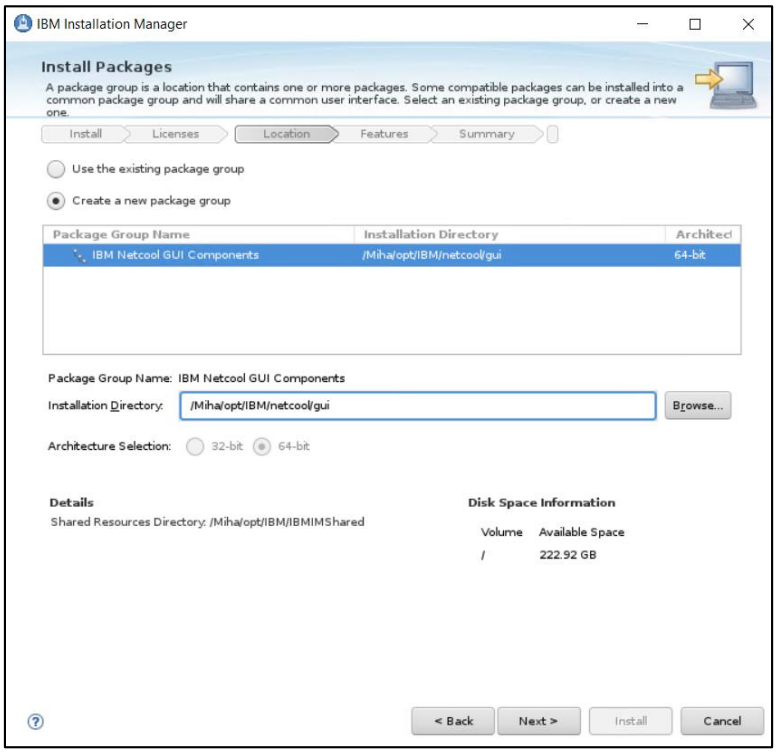
<extracted_path_webgui_base>/OMNIbusWebGUIRepository/repository.config
<extracted_path_webgui_FP15>/OMNIbusWebGUIRepository/composite/repository.config
<extracted_path_webgui_FP15>/OMNIbusWebGUIRepository/delta/repository.config

Add the repositories for NOI extension as well if needed.

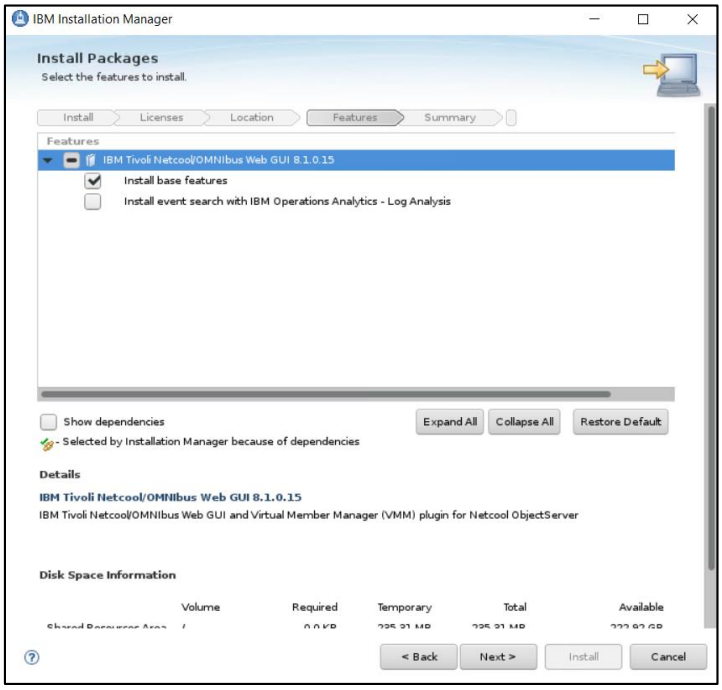
- select Install wizard from IM and choose the product to be installed:



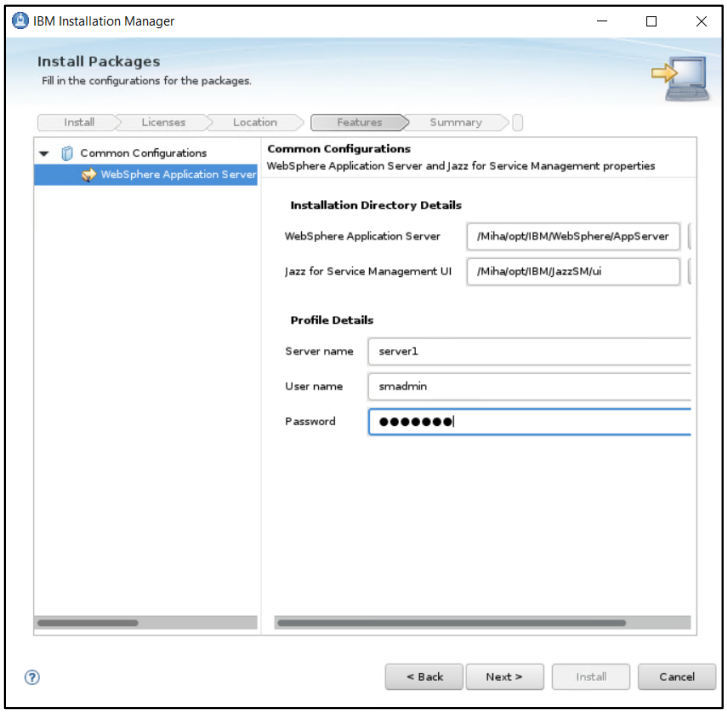
- enter installation path directory:

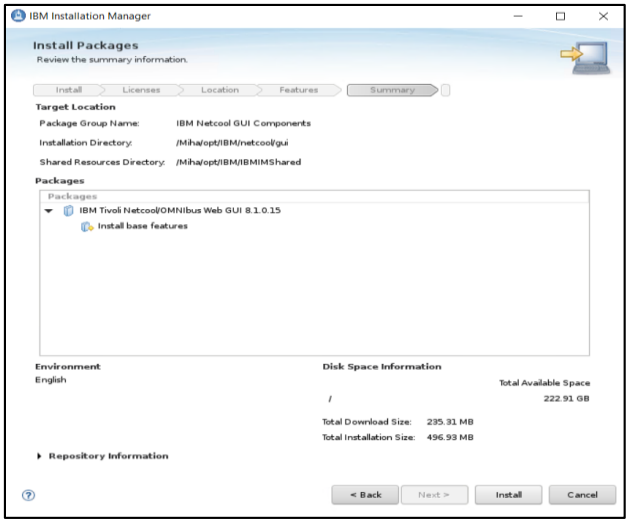


- select as least “Install base feature” option:

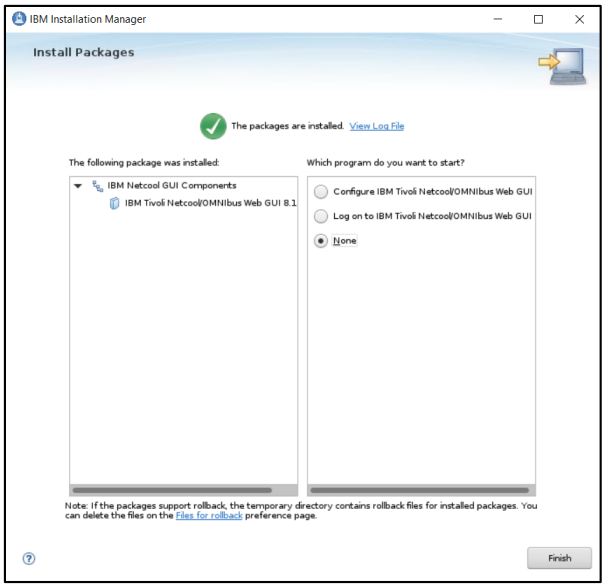


- enter WebSphere and JazzSM installation directories as well as the profile details for webgui (username and password). Afterwards continue with the installation:



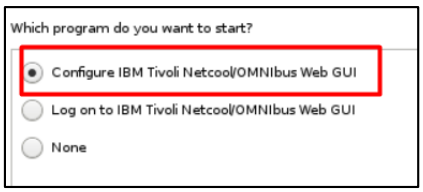


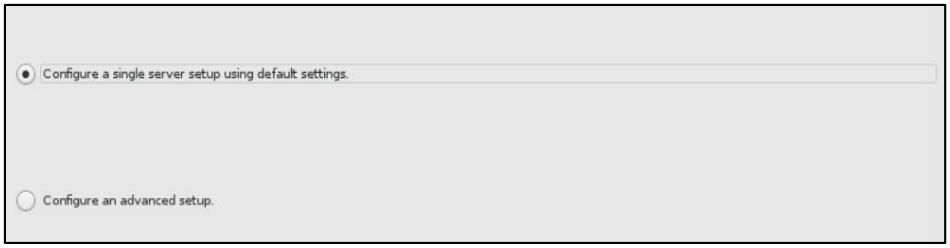
- make sure everything completed successfully. Afterwards webgui configuration can be made within the wizard that is available to be selected or manually after completing the installation.



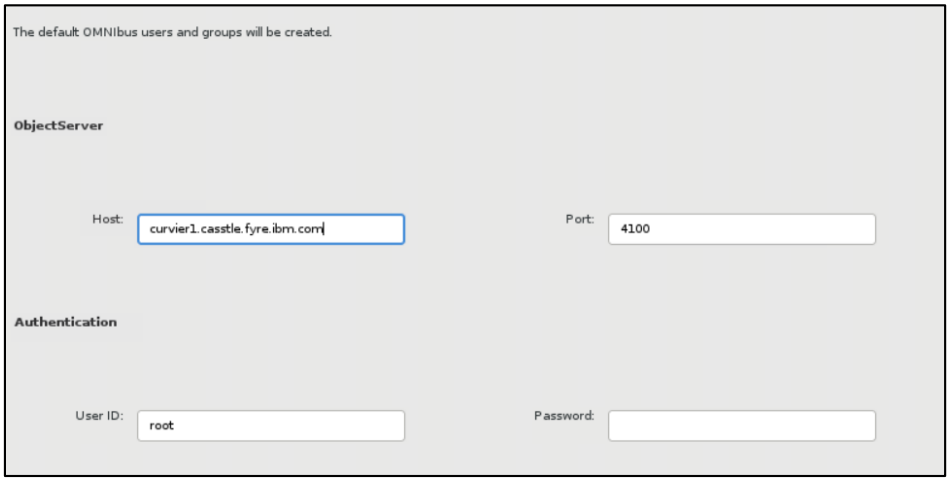
Add object server as repository for WebGUI and create datasource in webgui console

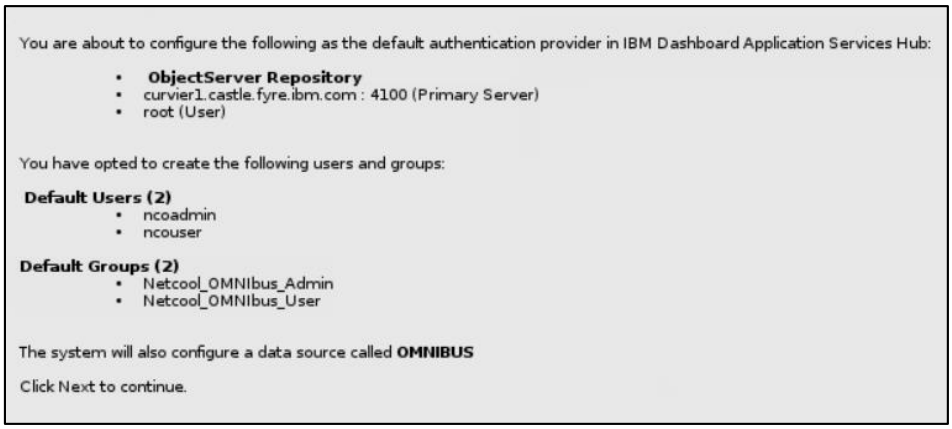
Option A: Use the wizard that is available at the end of webgui installation.



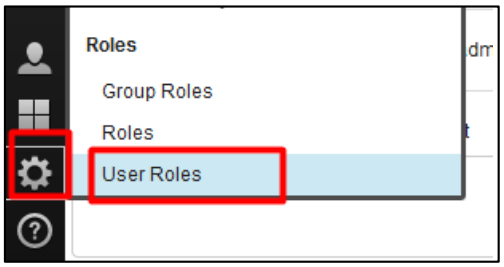


- enter object server details (host, port, user id and password):





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

```
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:

./conf4vmm4ncos.sh $JazzSM_HOME/profile objserver_root_user objserver_root_user_pass FQDN_omnibus objserver_port

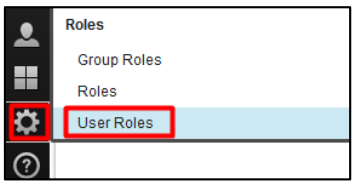
Command example:

```
[root@yobs1 bin]# ./confvmm4ncos.sh /Miha/opt/IBM/JazzSM/profile root '' crybaby
1.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:

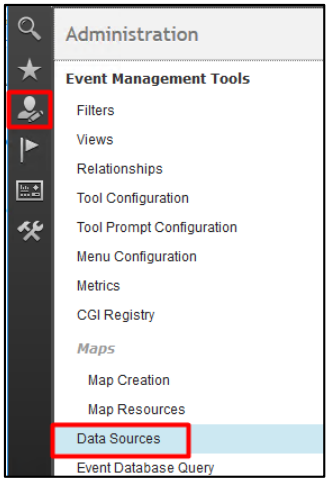
./stopServer.sh server1
./startServer.sh server1

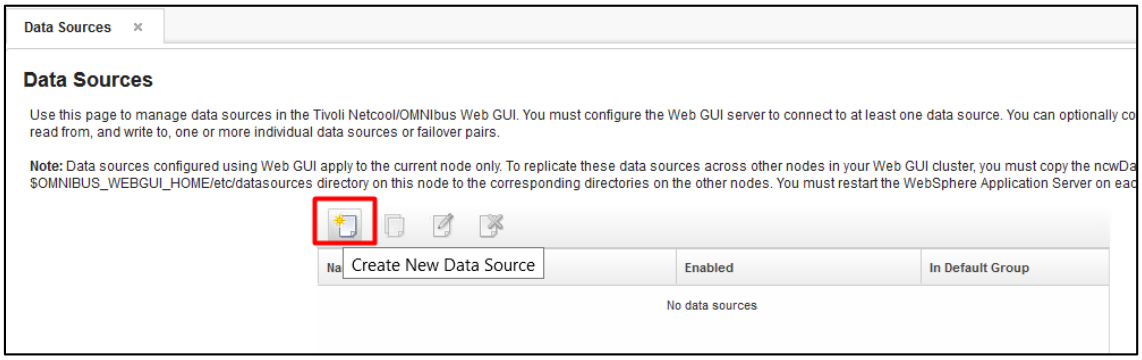
- login to webgui console and add roles to smadmin user



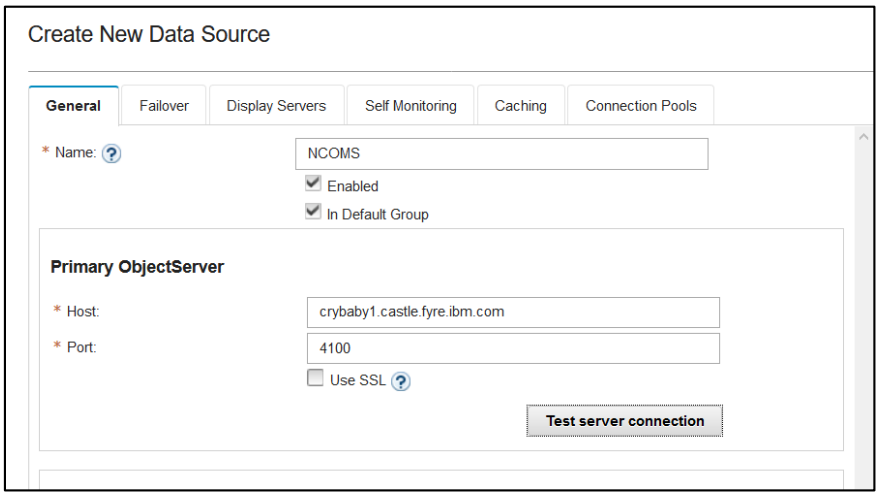
- click on Search -> select smadmin user -> select all roles -> save configuration

- 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



Install TBSM Components

Before starting the installation of the Data Servers, 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 all servers.
TBSM 6.2 primary data server will be installed on server 1, along with Omnibus, Impact.
TBSM 6.2 secondary 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@crybaby1 tmptbsm]# cd /Miha/tmptbsm/data_linux/omnibus/schema_files/
[root@crybaby1 schema_files]#
```

- run the following command:

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

Command example:

```
[root@crybaby1 schema_files]# ./import_schema.sh /Miha/opt/IBM/tivoli/netcool tbsm_db_update.sql RAD NCOMS root
Param 1:  InstallDir:  /Miha/opt/IBM/tivoli/netcool
Param 2:  Name/Location of RAD Schema file to use:  tbsm_db_update.sql
```

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

- run the following second command:

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

Command example:

```
[root@crybaby1 schema_files]# ./import_schema.sh /Miha/opt/IBM/tivoli/netcool ClearServiceDeps.auto RAD NCOMS root
Param 1:  InstallDir:  /Miha/opt/IBM/tivoli/netcool
```

Install TBSM Database Configuration Utility

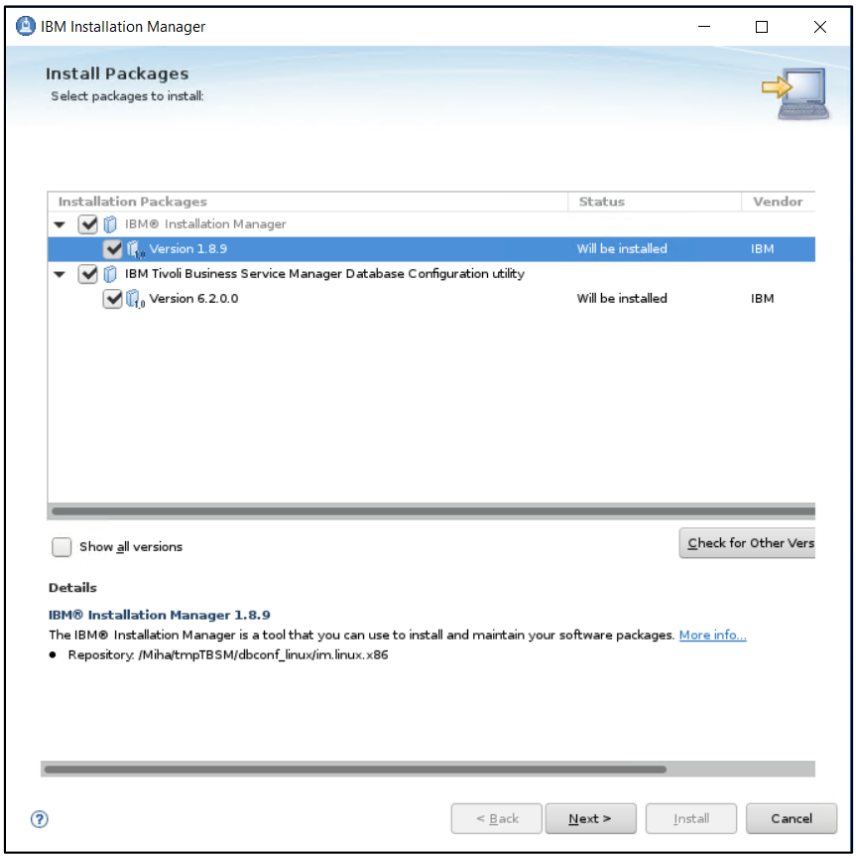
- login as db2inst1 user on server1 where DB2 has been installed
- go to the directory were TBSM package was extracted and from here go to dbconf_linux directory:

```
[db2inst1@yobs1 ~]$ cd /Miha/tmptbsm/dbconf_linux/
[db2inst1@yobs1 dbconf_linux]$
```

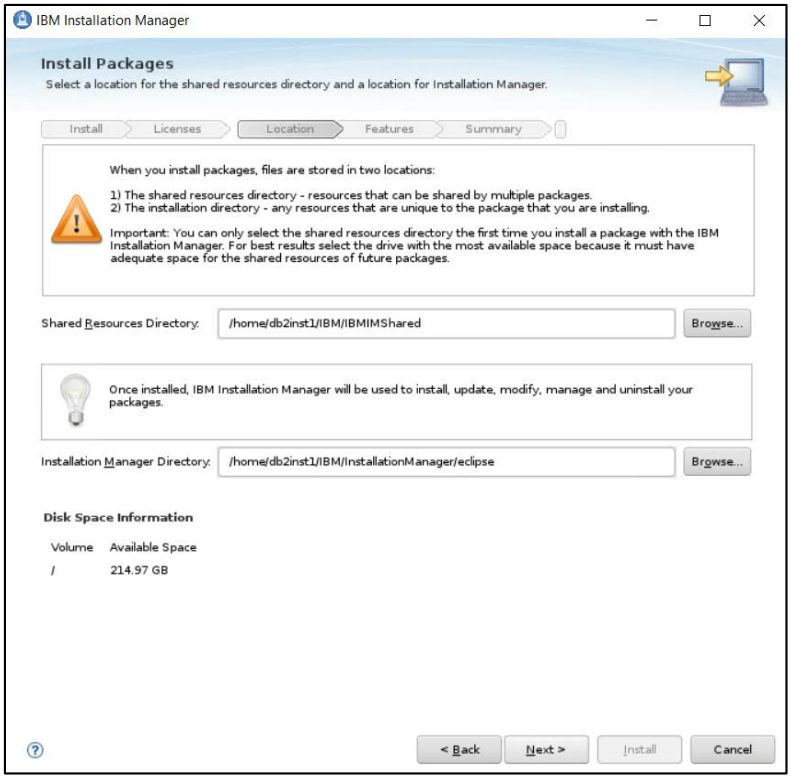
- run the following command:

./install_gui_dbconf.sh

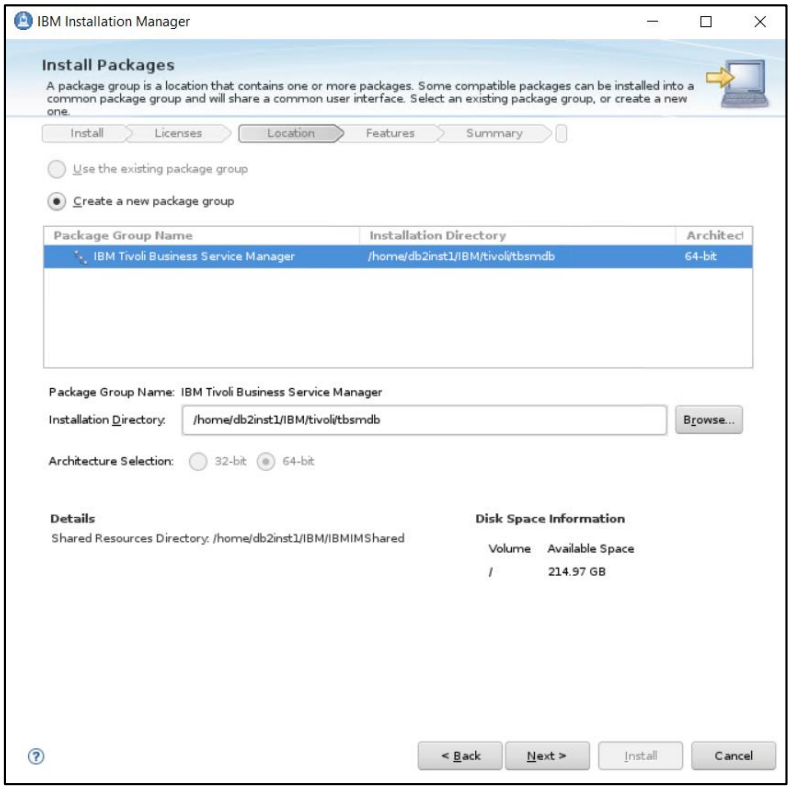
```
[db2inst1@yobs1 dbconf_linux]$ ./install_gui_dbconf.sh
```



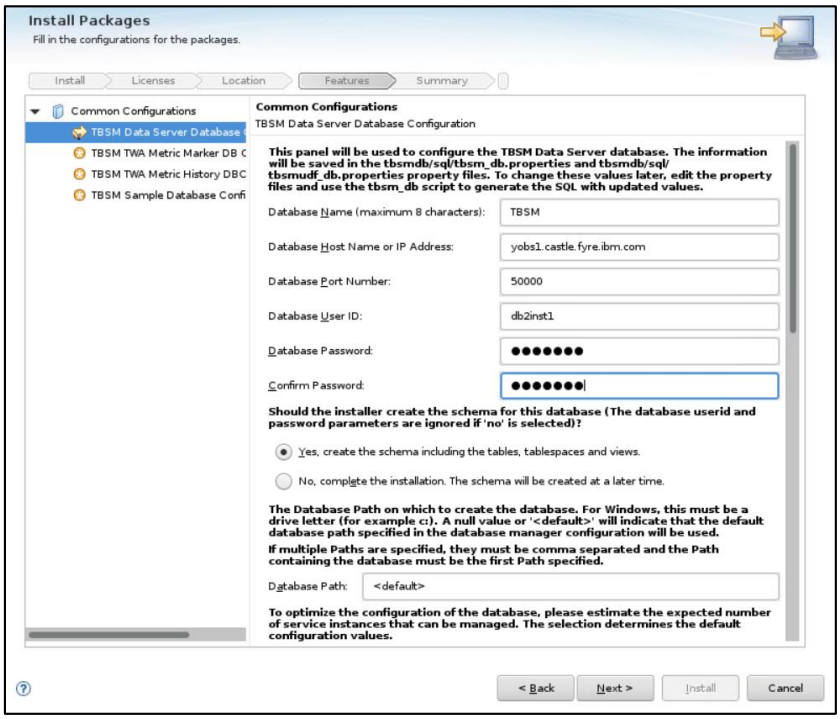
- enter installation directory for TBSM database configuration utility; db2inst1 user needs to have write permission to this directory



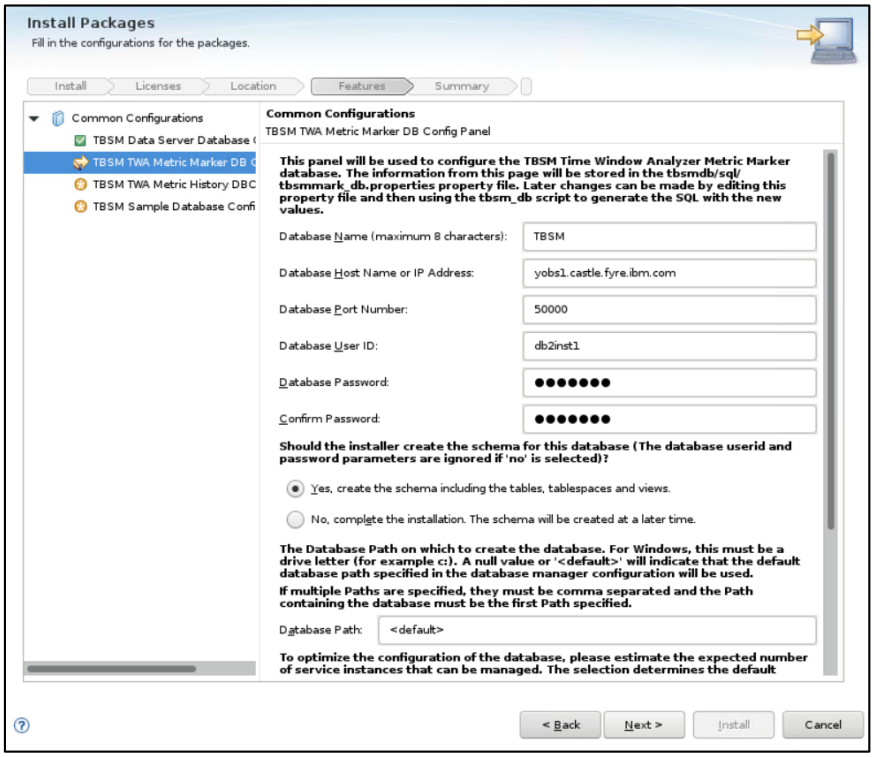
- enter installation path



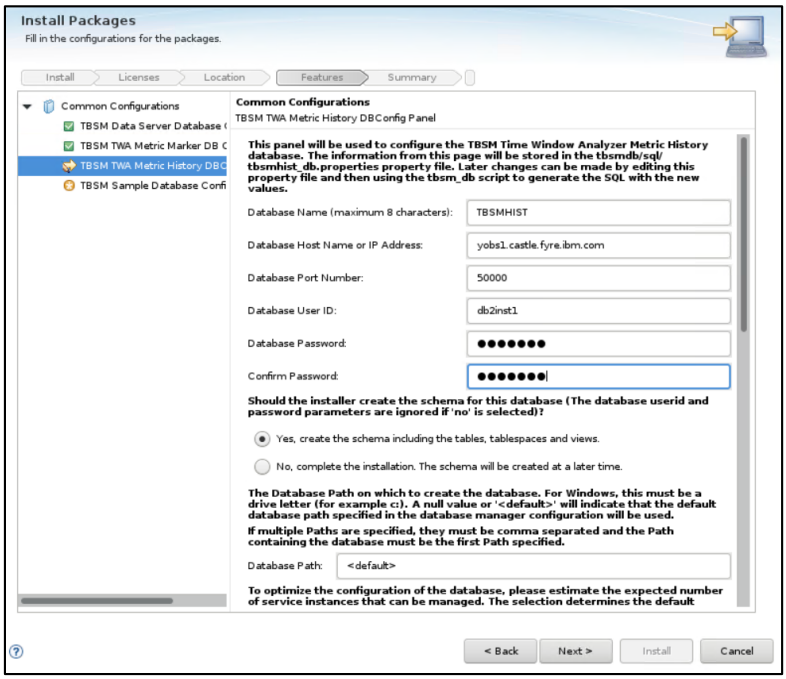
- add details for TBSM Data Server Database Configuration – database name, database hostname, port, user and its password (db2inst1 user is required



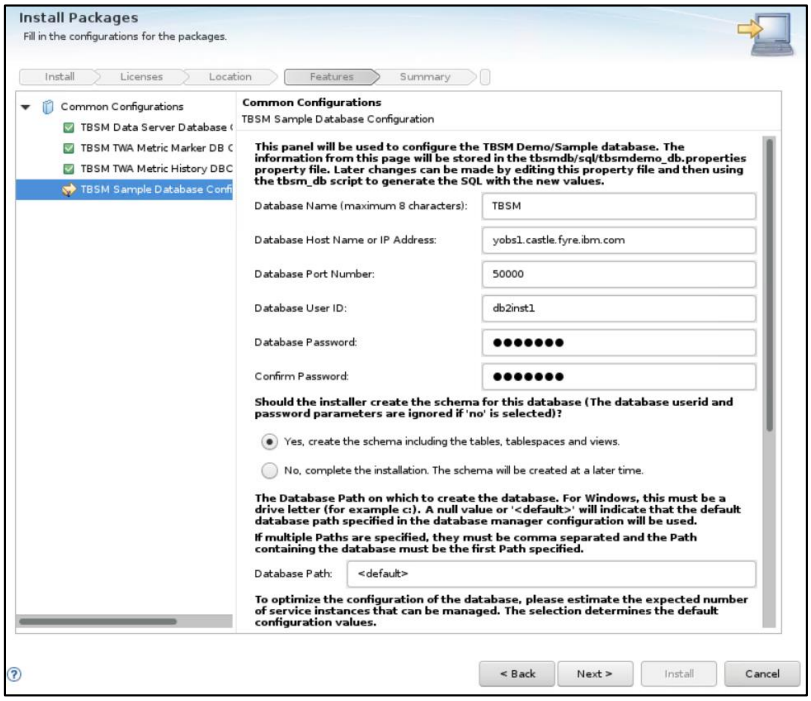
- add details for TBSM TWA Metric Marker DB - database name, database hostname, port, user and its password (db2inst1 user is required)

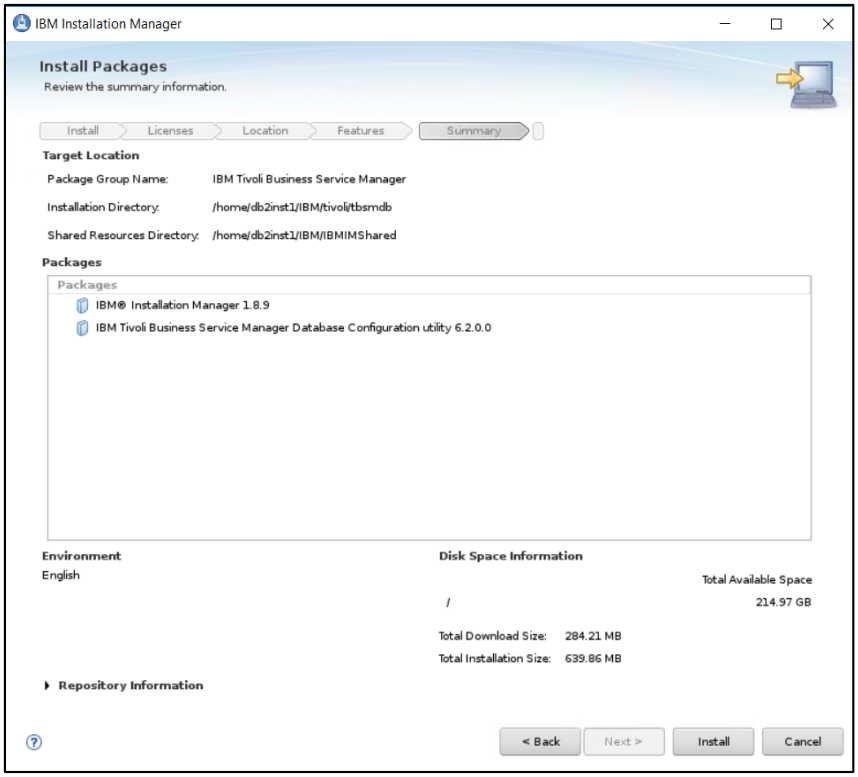


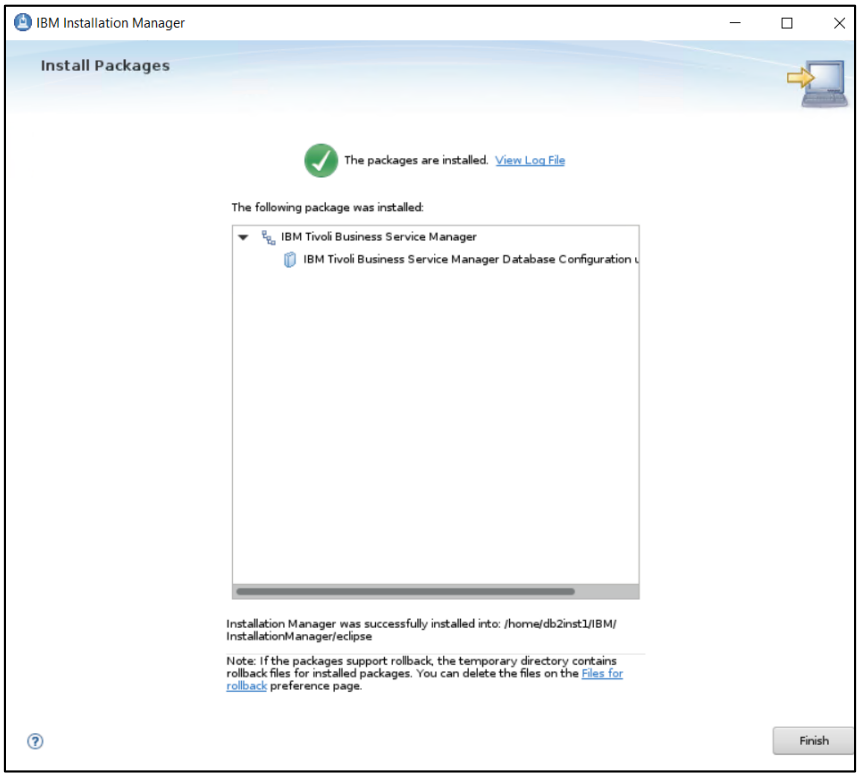
- add details for TBSM TWA Metric History DB - database name, database hostname, port, user and its password (db2inst1 user is required)



- 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 Primary Data Server

Make sure Impact Primary server is running and that Impact Secondary server is stopped.

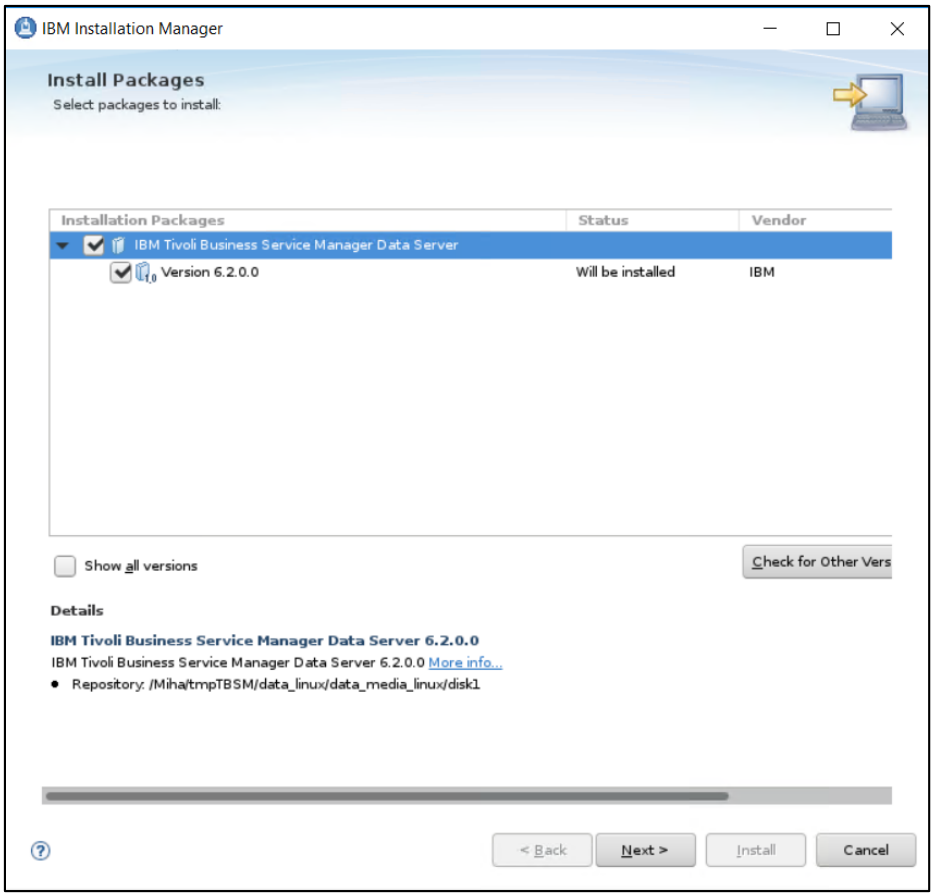
- go to the directory where TBSM was extracted on server 1 and from here to data_linux directory:

```
[root@crybaby1 tmptbsm]# cd data_linux/
[root@crybaby1 data_linux]# ls
data_media_linux  install_console_data.sh  install_silent_data.sh  Reports  TBSM_Dataserver_Migration_Linux.zip
im.linux.x86      install_gui_data.sh      omnibus                 scripts
```

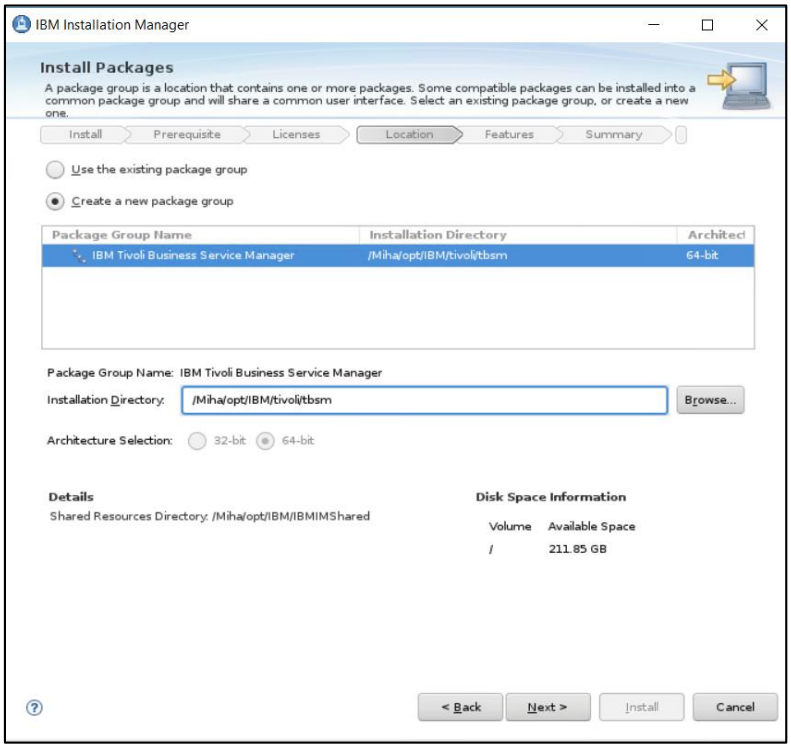
- run the following command and select TBSM Data Server to be installed:

./install_gui_data.sh

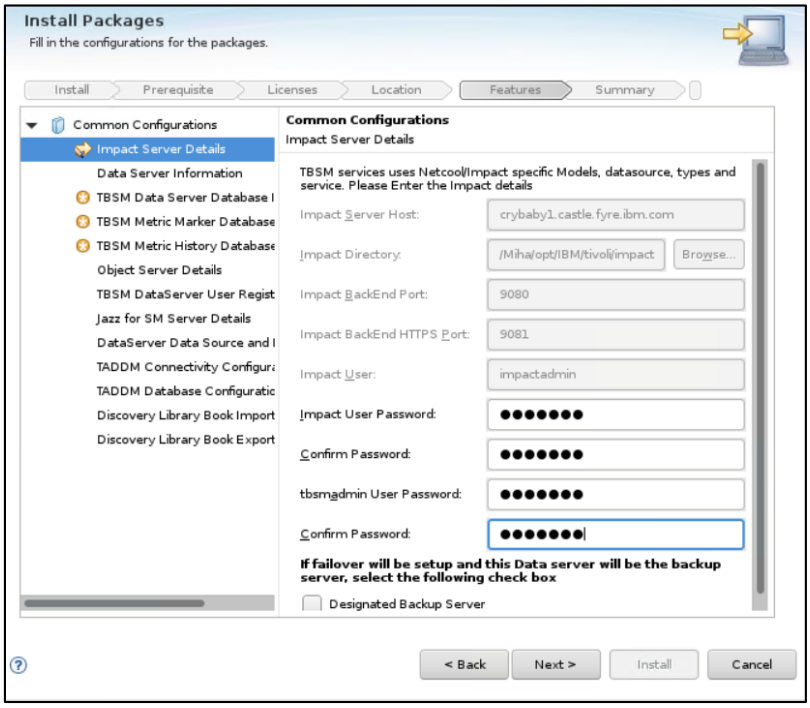
```
[root@crybaby1 data_linux]# ./install_gui_data.sh
```



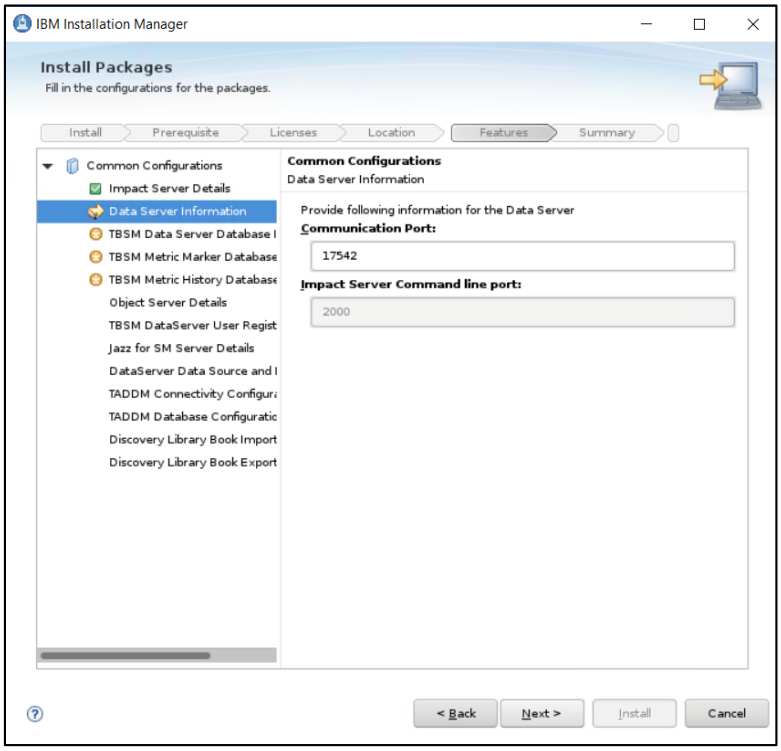
- enter the installation directory path for TBSM data server



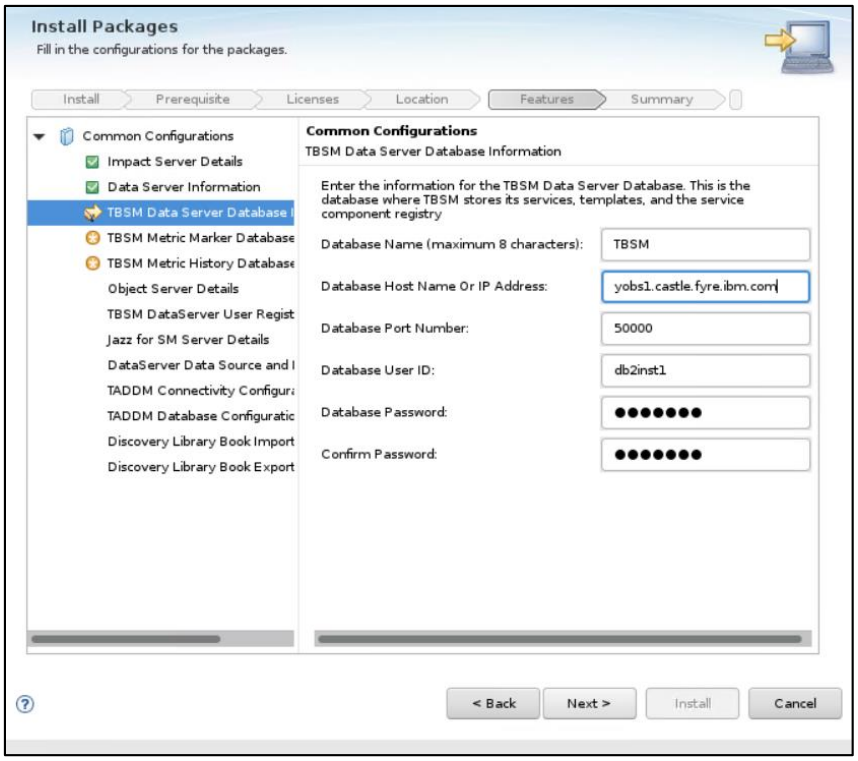
- enter Impact server username details (for host details FQDN is required, make sure /etc/hosts is properly configured) and the password for the tbsmadmin user that will be created

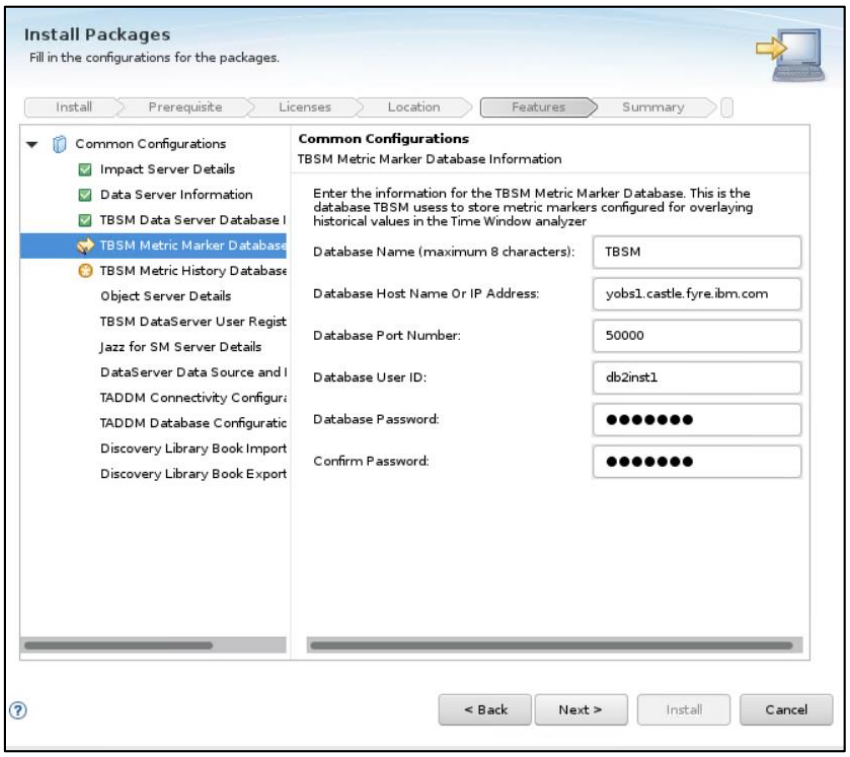


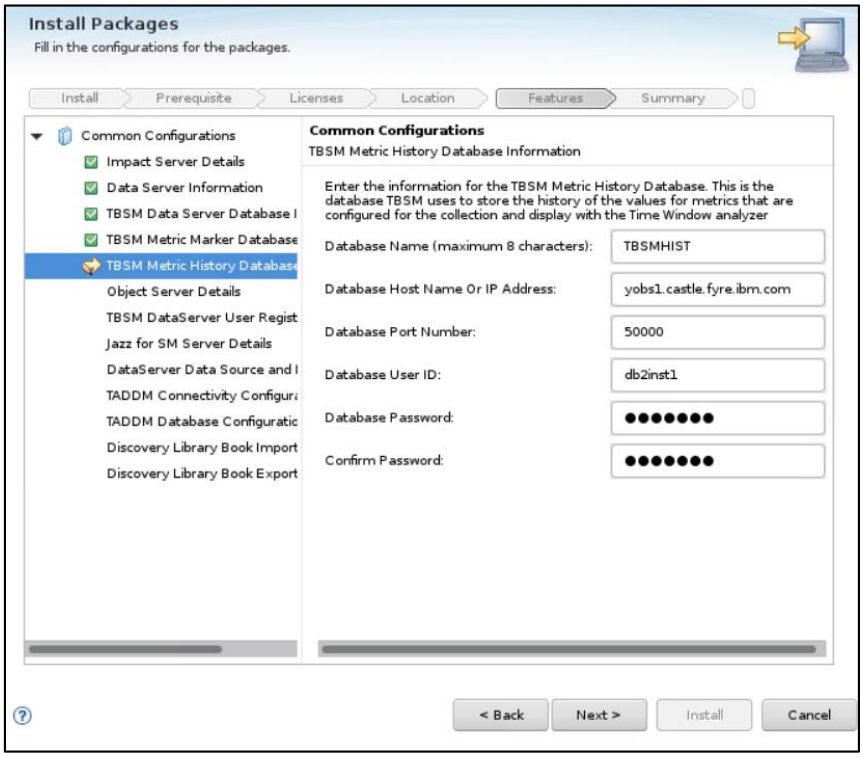
- enter data server communication port, by default this is 17542:



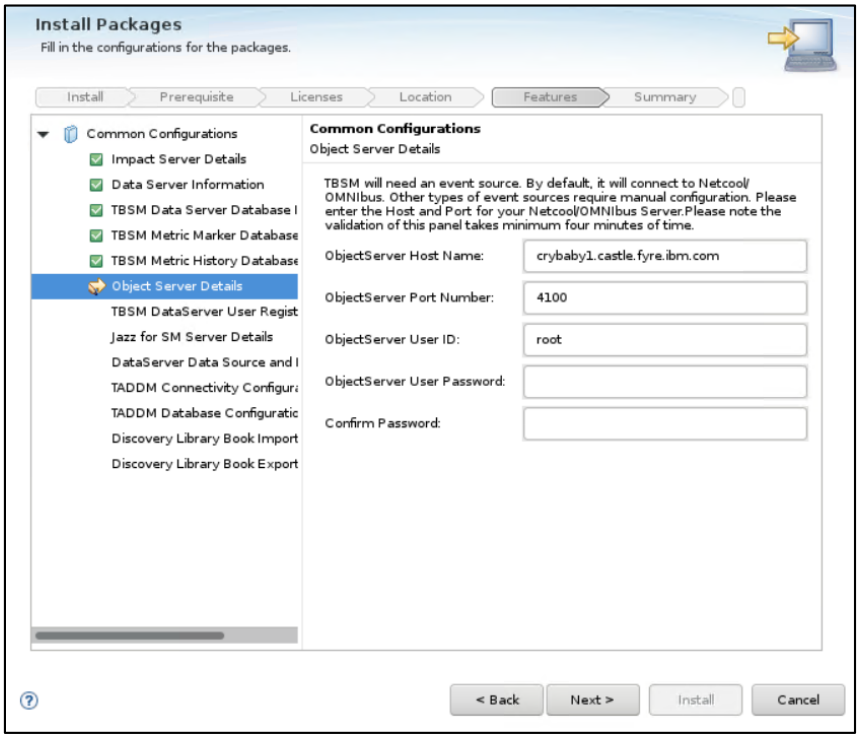
- enter TBSM Data Server Database information as configured during DB2 installation

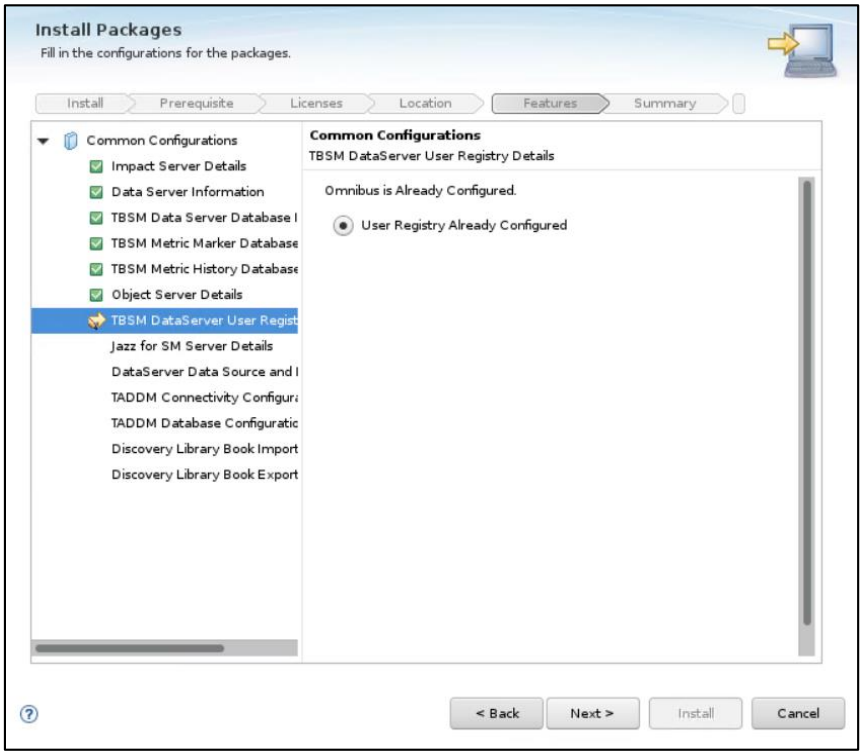



Install Packages
Fill in the configurations for the packages.
Install
Prerequisite
Licenses
Location
Features
Summary
Common Configurations
Impact Server Details
Data Server Information
TBSM Data Server Database I
TBSM Metric Marker Database
TBSM Metric History Database
Object Server Details
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configura
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:
yobs1.castle.fyre.ibm.com
Database Port Number:
50000
Database User ID:
db2inst1
Database Password:
Confirm Password:
< Back
Next >
Install
Cancel

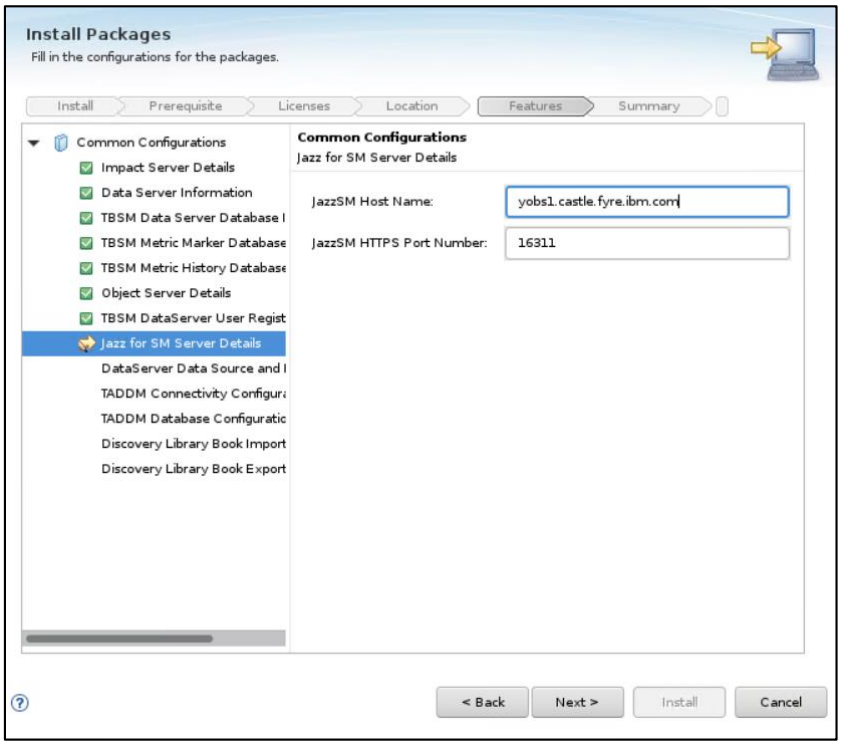

Install Packages
Fill in the configurations for the packages.
Install
Prerequisite
Licenses
Location
Features
Summary
Common Configurations
Impact Server Details
Data Server Information
TBSM Data Server Database I
TBSM Metric Marker Database
TBSM Metric History Database
Object Server Details
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configura
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:
yobs1.castle.fyre.ibm.com
Database Port Number:
50000
Database User ID:
db2inst1
Database Password:
Confirm Password:
< Back
Next >
Install
Cancel

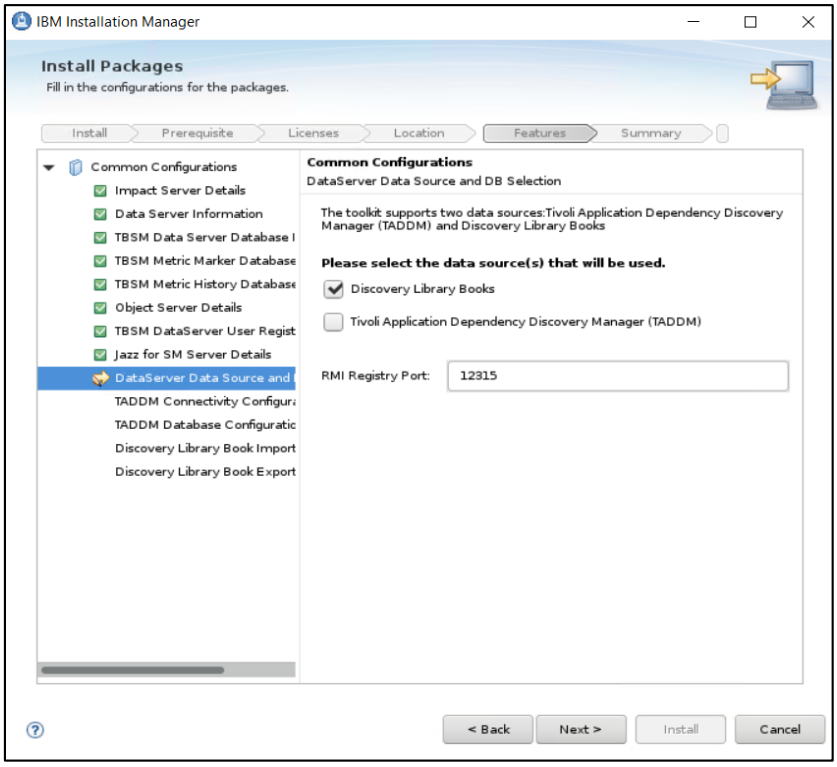
- enter object server details:

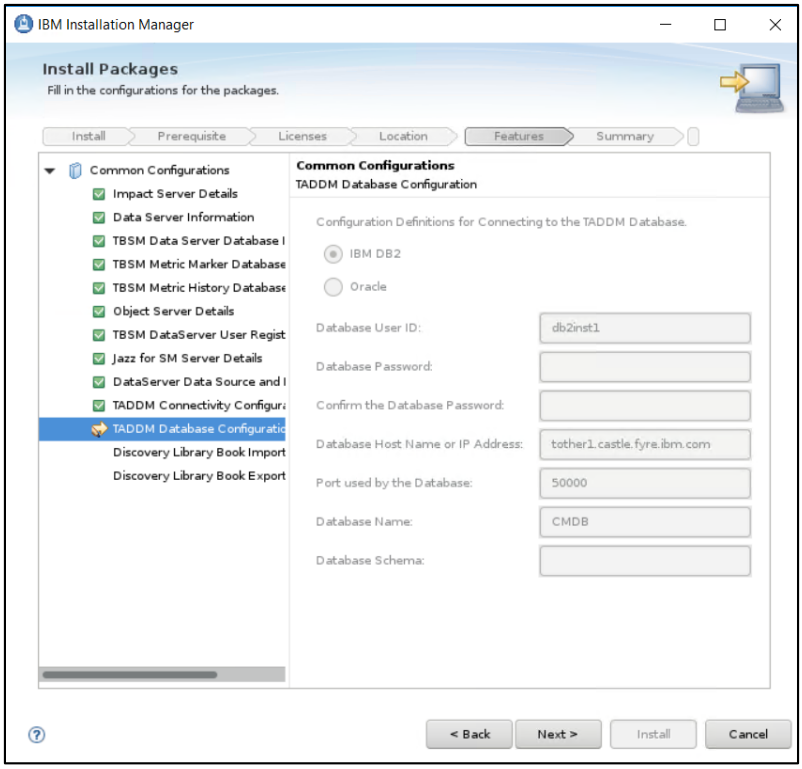




- enter Jazz SM details, make sure to add the correct FQDN from server 2 where JazzSM is installed






IBM Installation Manager
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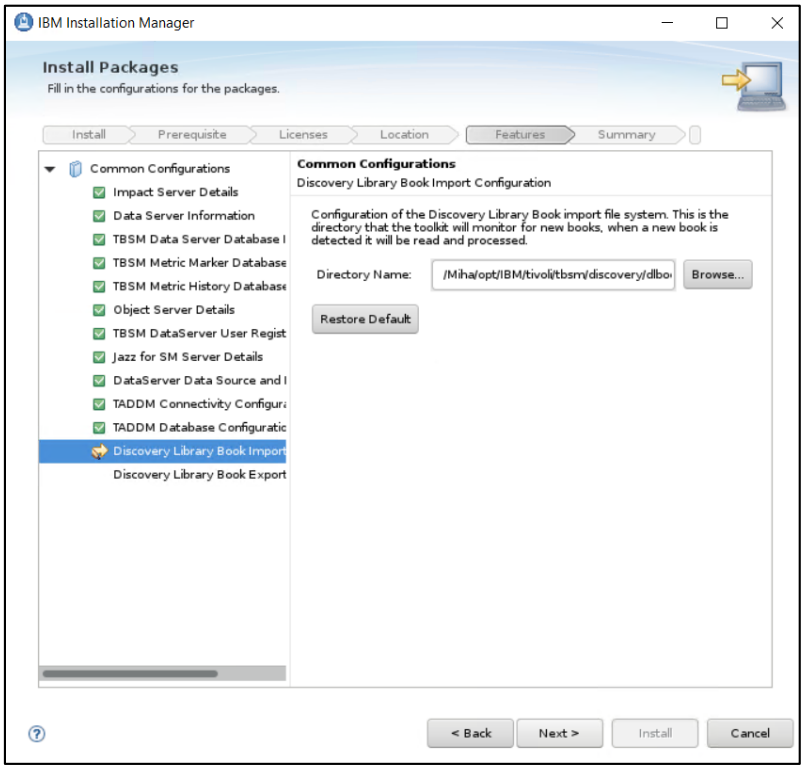
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
TADDM Database Configuration
Configuration Definitions for Connecting to the TADDM Database.
IBM DB2
Oracle
Database User ID:
db2inst1
Database Password:
Confirm the 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
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Fill in the configurations for the packages.
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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
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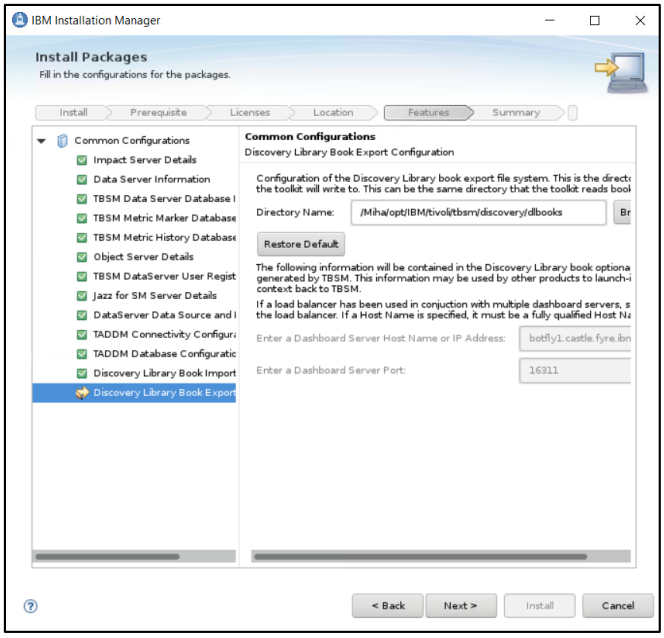
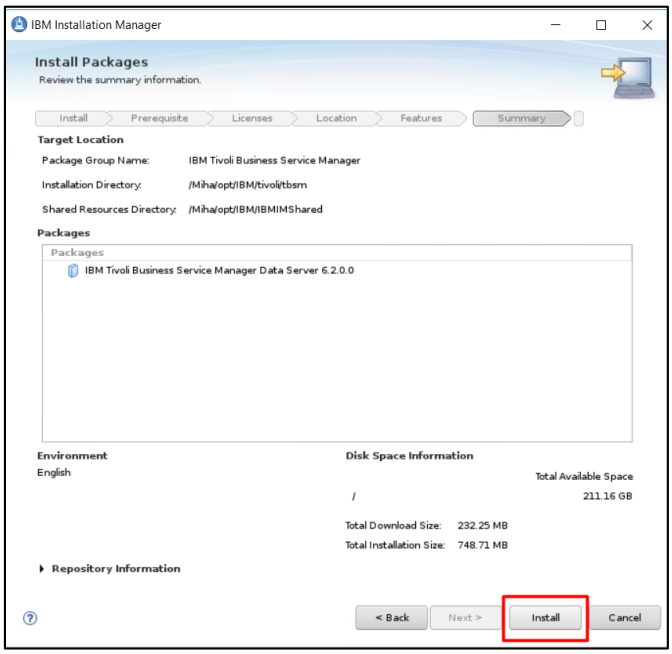
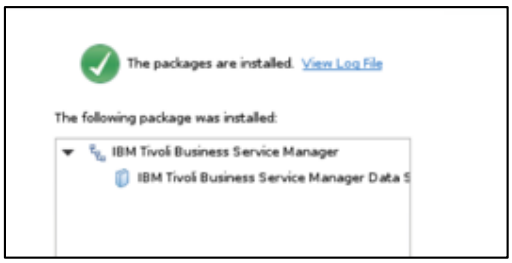
Install
Cancel





- make sure everything completed successfully:

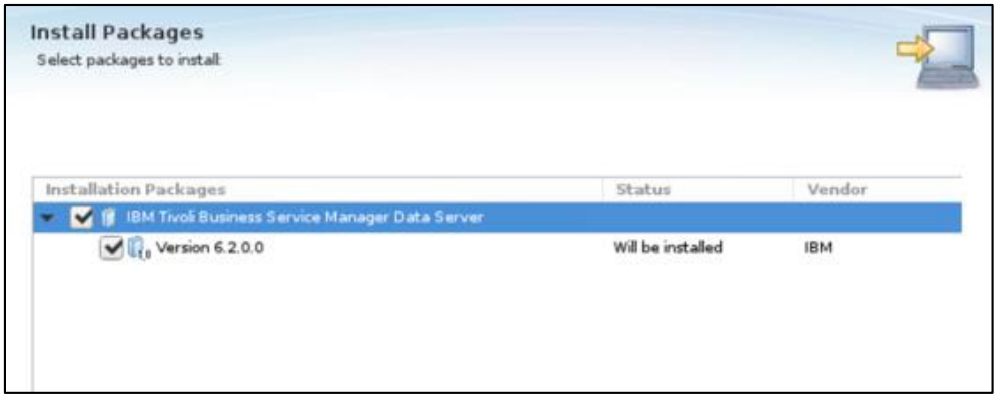


Install TBSM Secondary Data Server

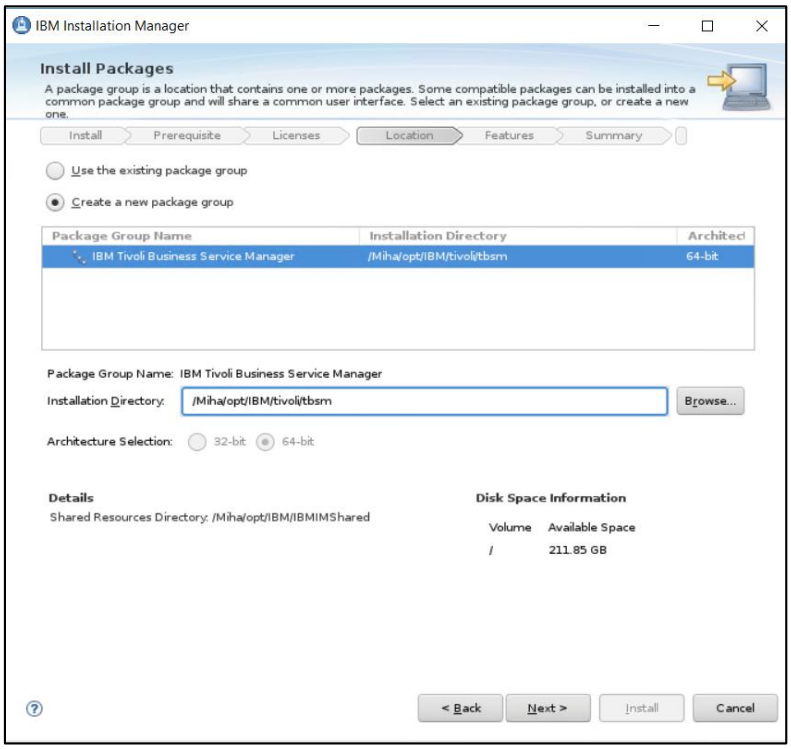
Make sure Impact Primary server is running and also that the Impact Secondary server is running.

- go to the directory where TBSM was extracted on server 2 and from here to data_linux directory and run the following command and select TBSM Data Server to be installed:

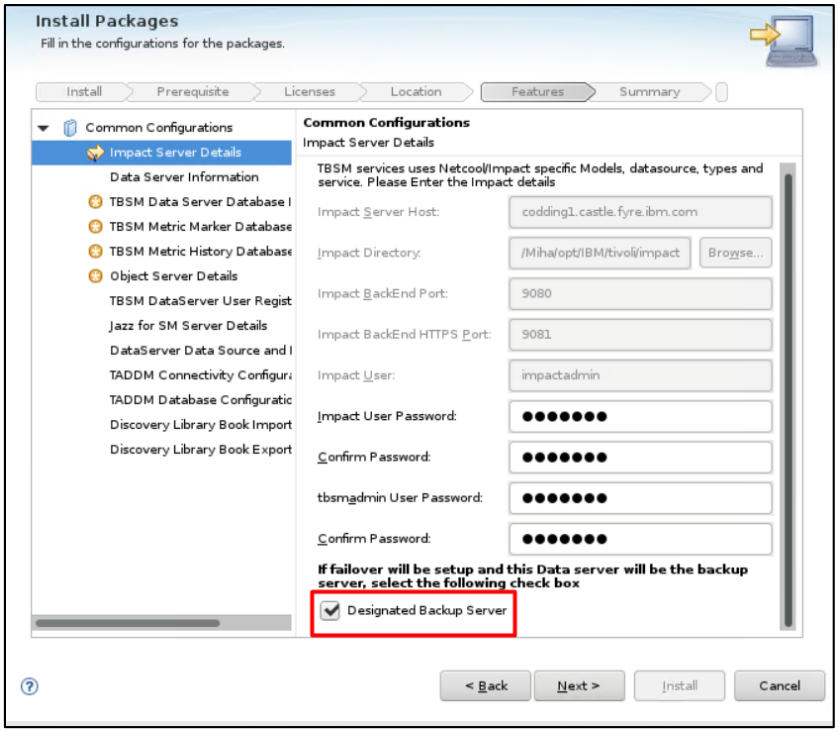
```
[root@codding1 tmptbsm]# cd data_linux/
[root@codding1 data_linux]# ./install_gui_data.sh
```



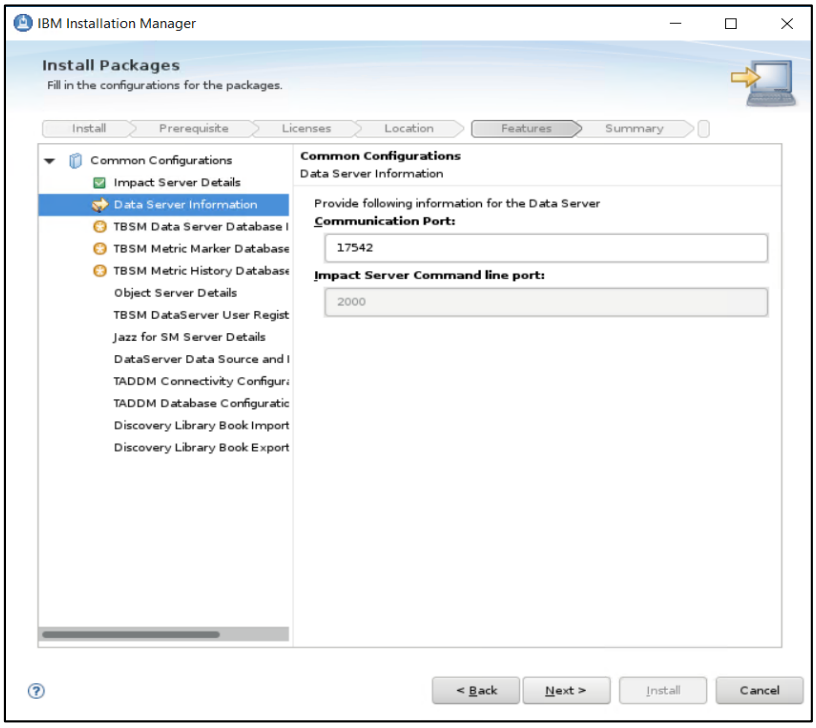
- enter the installation directory path for TBSM data server



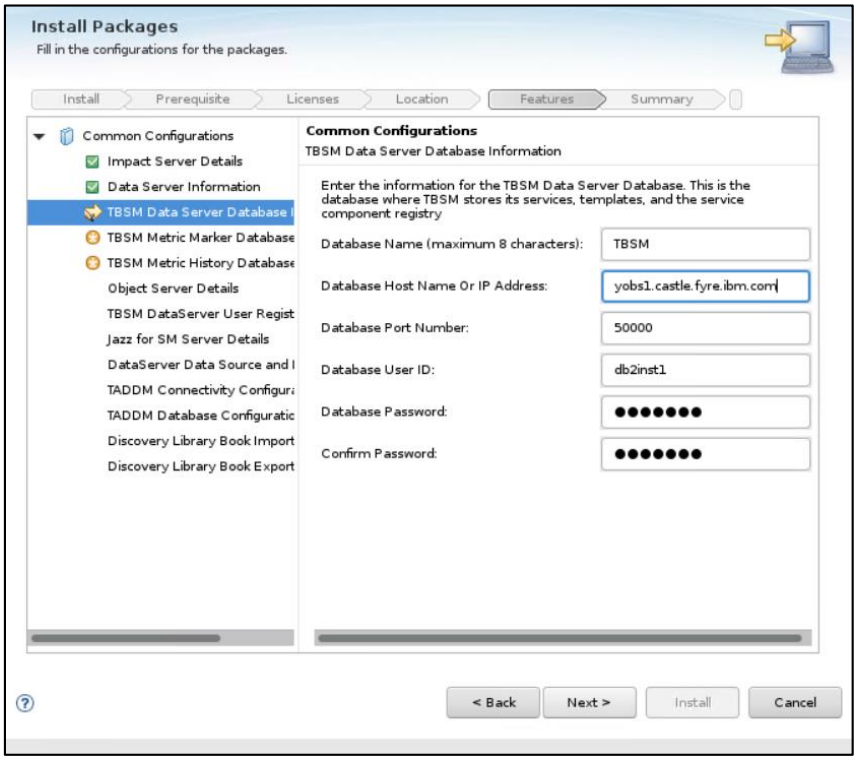
- enter Impact server username details (for host details FQDN is required, make sure /etc/hosts is properly configured) and the password for the tbsmadmin;
- it is important that the Designated Backup Server to be checked

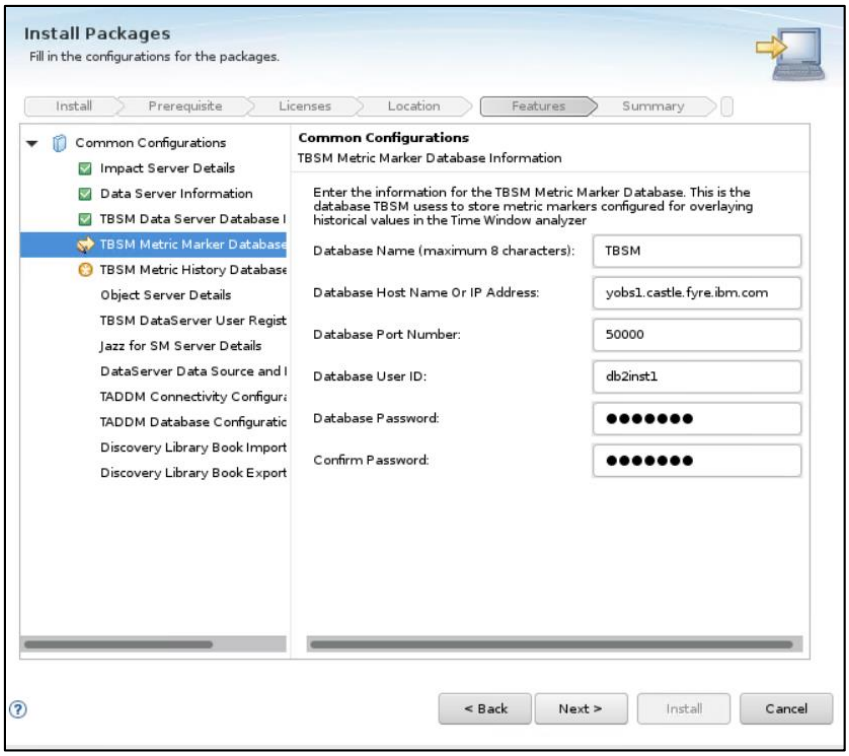


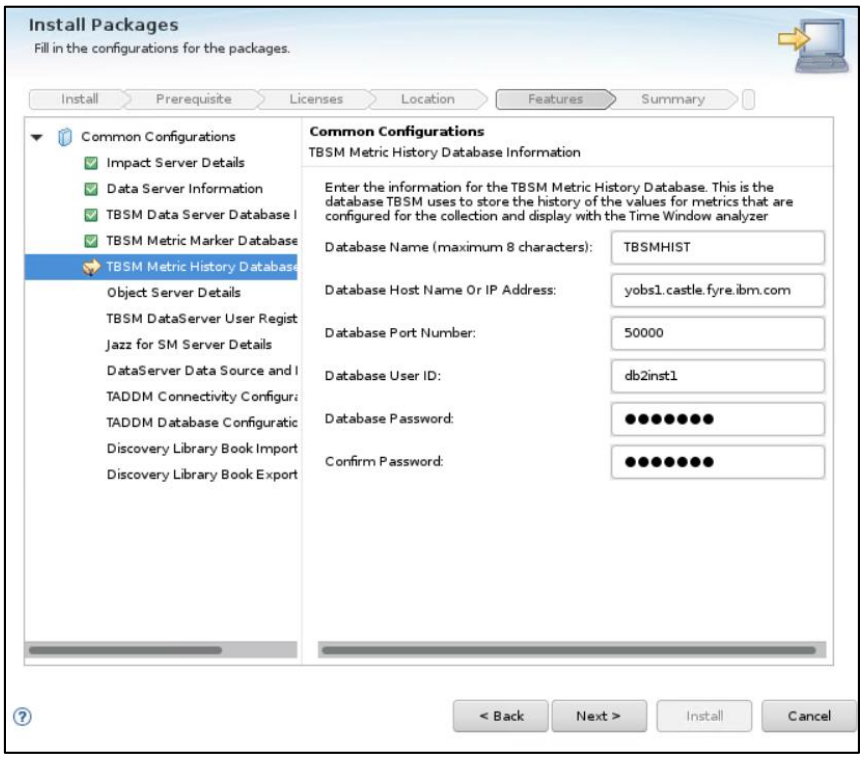
- enter data server communication port, by default this is 17542:



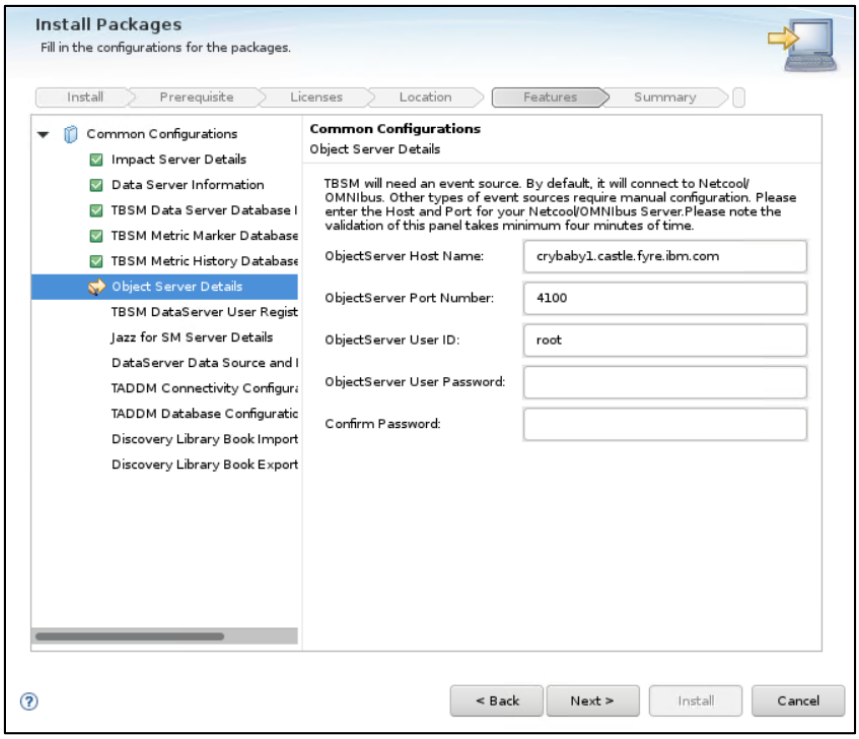
- enter TBSM Data Server Database information as configured during DB2 installation

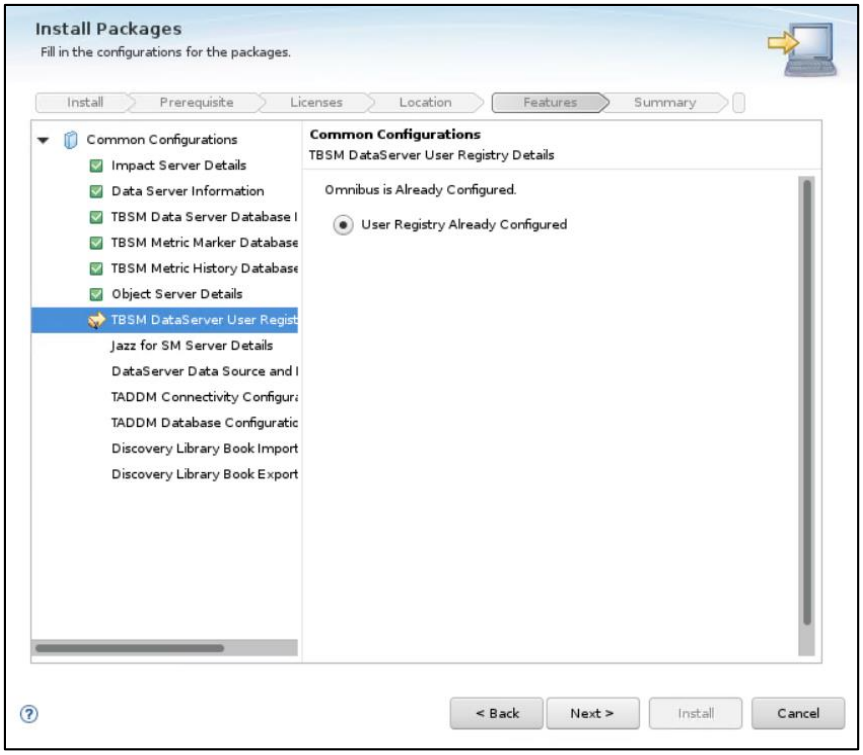




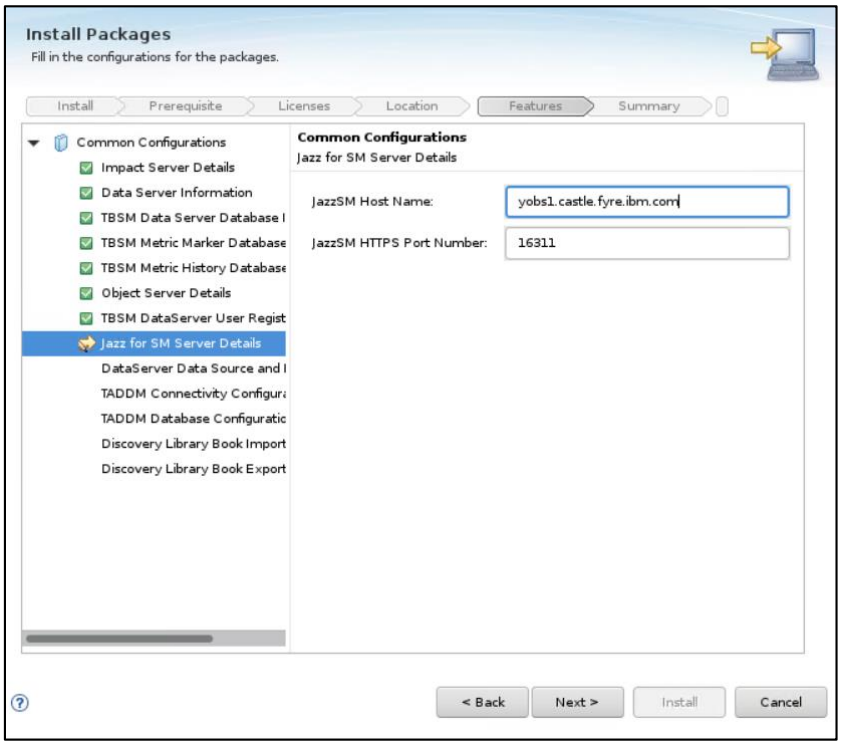


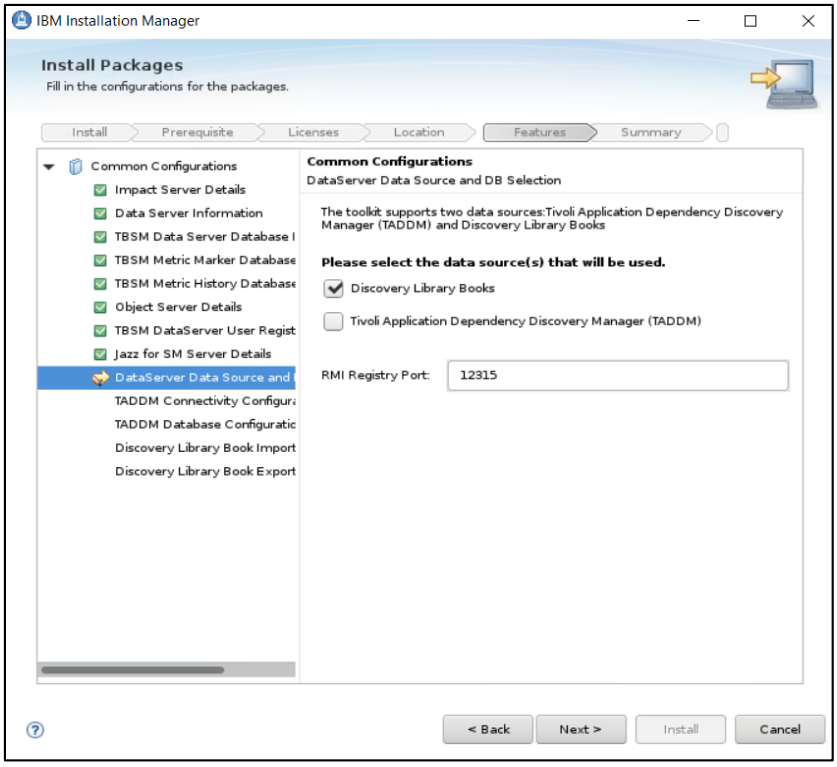
- enter object server details:





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

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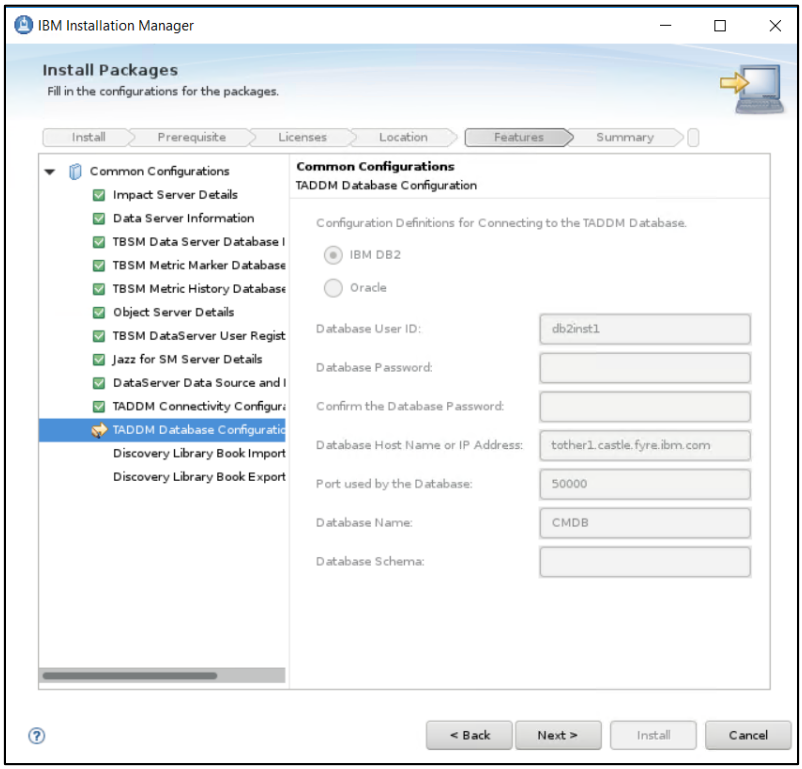
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
DataServer Data Source and DB Selection
The toolkit supports two data sources:Tivoli Application Dependency Discovery Manager (TADDM) and Discovery Library Books
Please select the data source(s) that will be used.
Discovery Library Books
Tivoli Application Dependency Discovery Manager (TADDM)
RMI Registry Port:
12315
< Back
Next >
Install
Cancel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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
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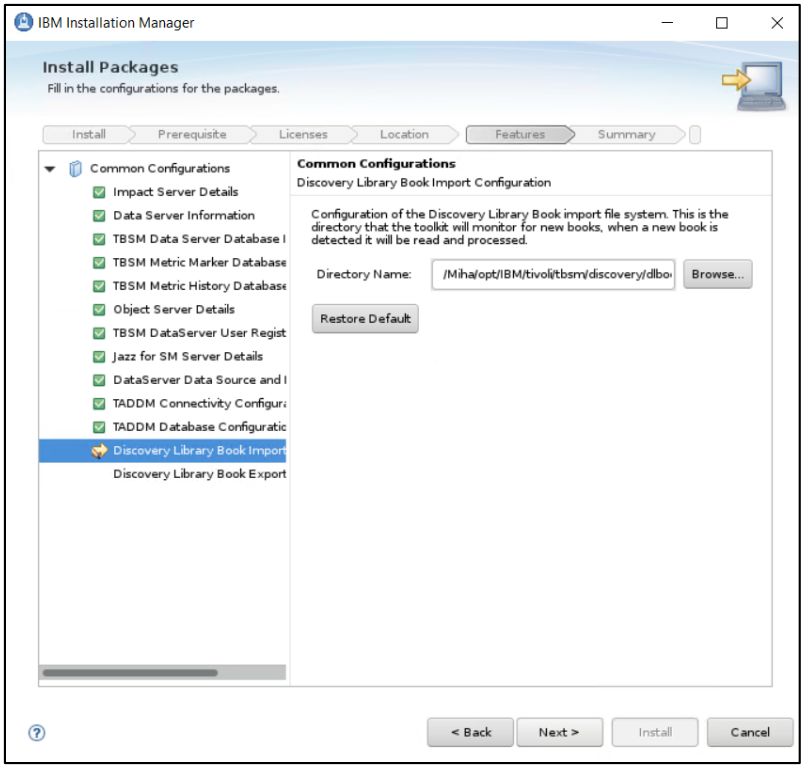
Cancel


IBM Installation Manager
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Object Server Details
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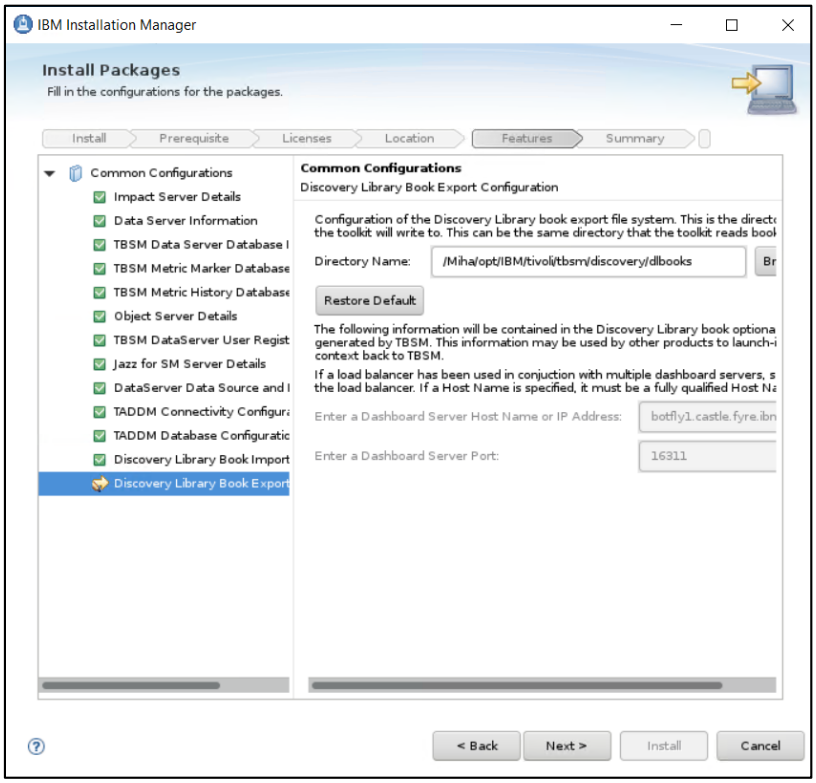
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
Discovery Library Book Import Configuration
Configuration of the Discovery Library Book import file system. This is the directory that 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


IBM Installation Manager
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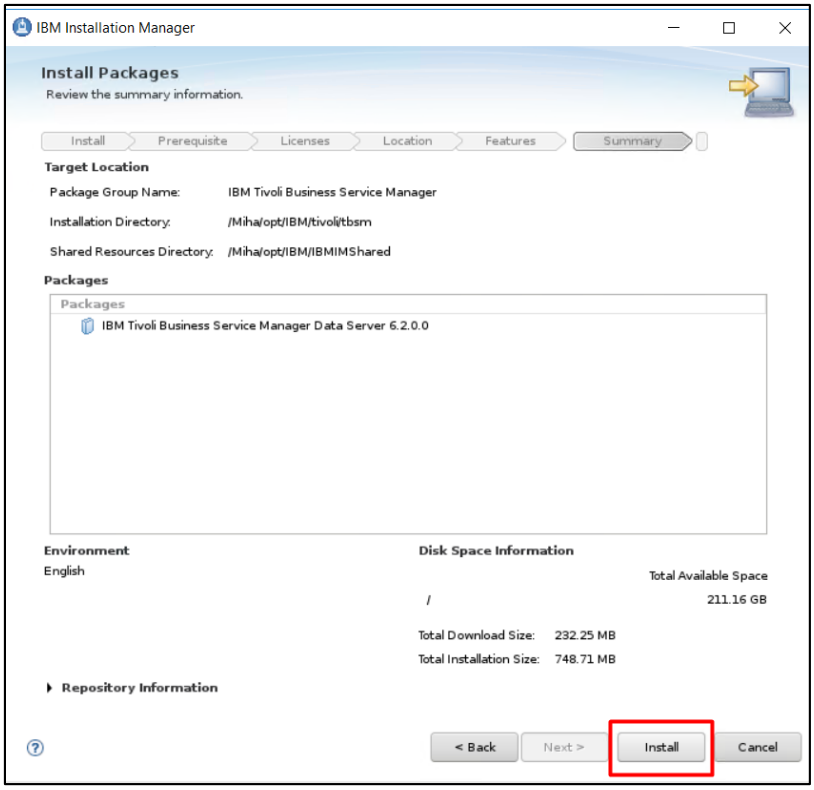
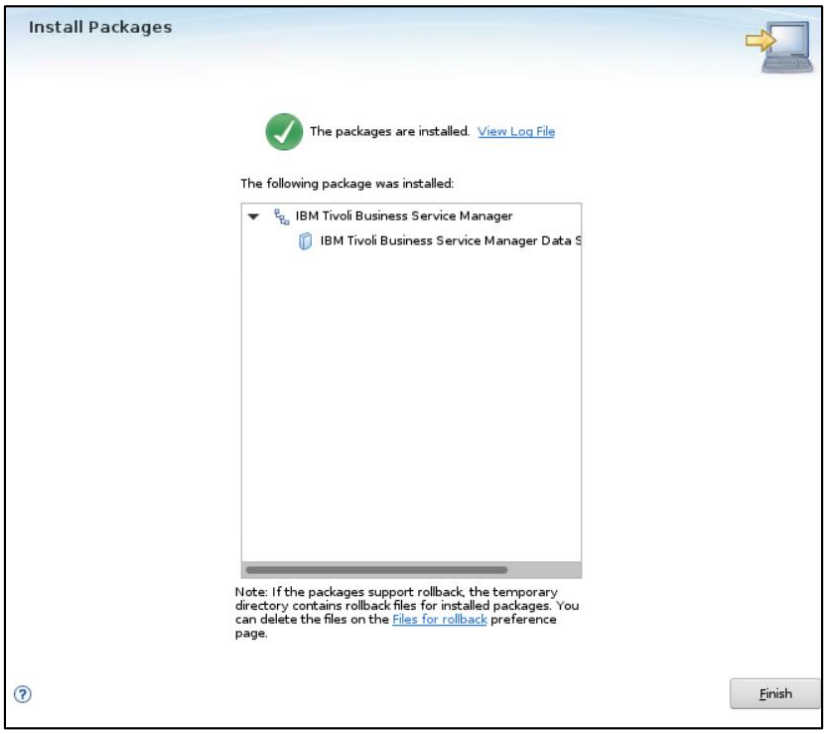
TBSM DataServer User Regist
Jazz for SM Server Details
DataServer Data Source and I
TADDM Connectivity Configur
TADDM Database Configuratic
Discovery Library Book Import
Discovery Library Book Export
Common Configurations
Discovery Library Book Export Configuration
Configuration of the Discovery Library book export file system. This is the direct
the toolkit will write to. This can be the same directory that the toolkit reads bool
Directory Name:
/Miha/opt/IBM/tivoli/tbsm/discovery/dlbooks
Restore Default
The following information will be contained in the Discovery Library book optiona
generated by TBSM. This information may be used by other products to launch-i
context back to TBSM.
If a load balancer has been used in conjuction with multiple dashboard servers, s
the load balancer. If a Host Name is specified, it must be a fully qualified Host Na
Enter a Dashboard Server Host Name or IP Address:
botfly1.castle.fyre.ibn
Enter a Dashboard Server Port:
16311
< Back
Next >
Install
Cancel



- make sure everything completed successfully:



Install TBSM Dashboard Server

TBSM 6.2 package should be extracted on server 3 as well where WAS, JazzSM and webgui are installed. On this server TBSM Dash Server should be installed.

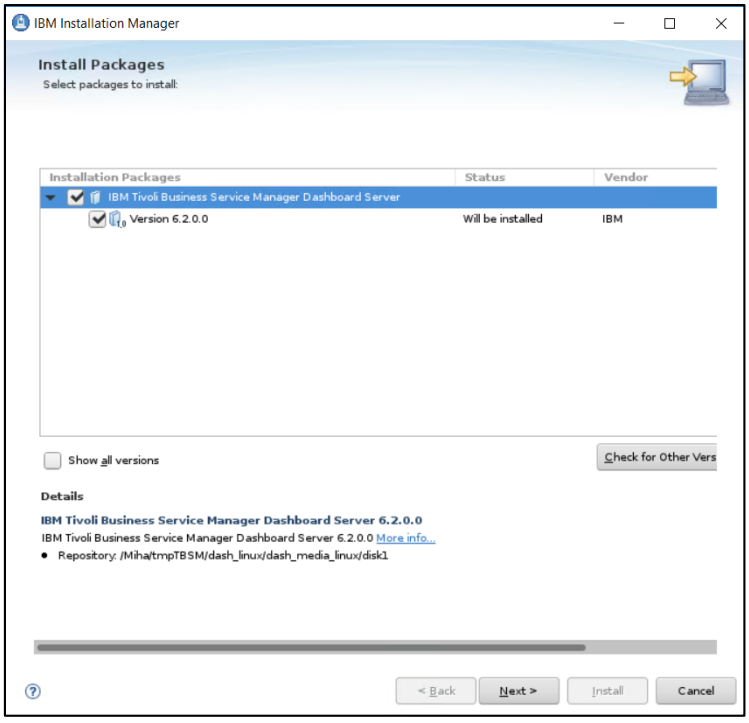
Make sure webgui is up and running.

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

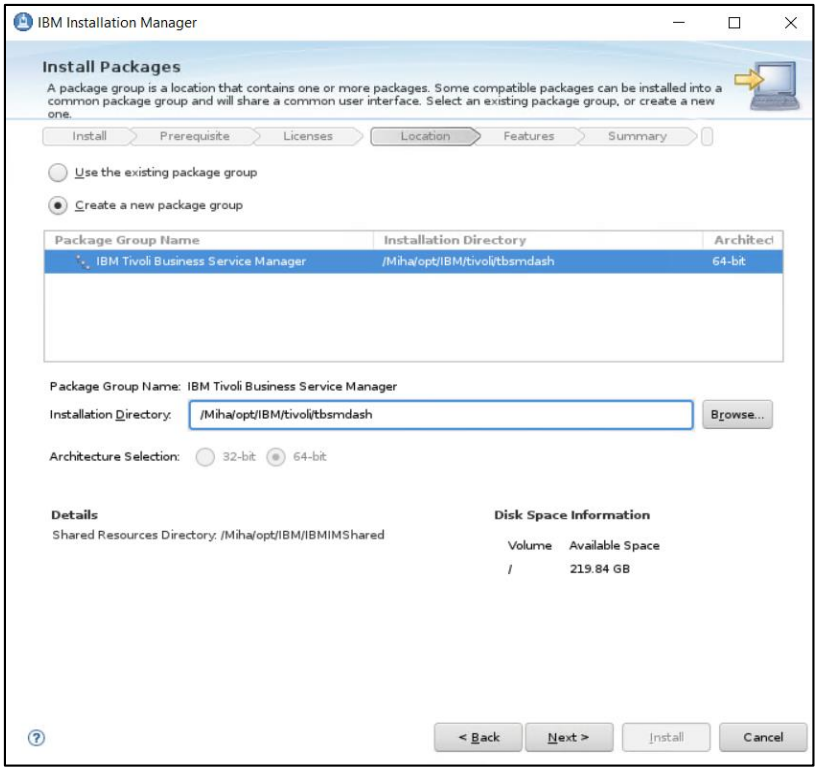
./install_gui_dash.sh

```
[root@yobs1 tmptbsm]# cd dash_linux/
[root@yobs1 dash_linux]#
[root@yobs1 dash_linux]#
[root@yobs1 dash_linux]# ./install_gui_dash.sh
```

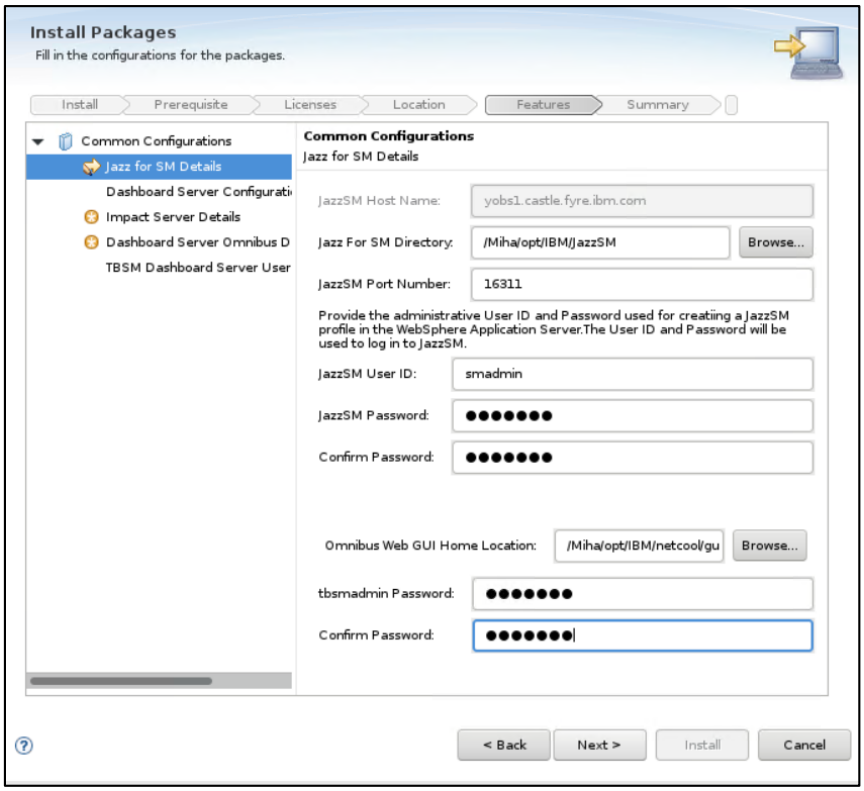
- select TBSM 6.2 Dashboard component to be installed:



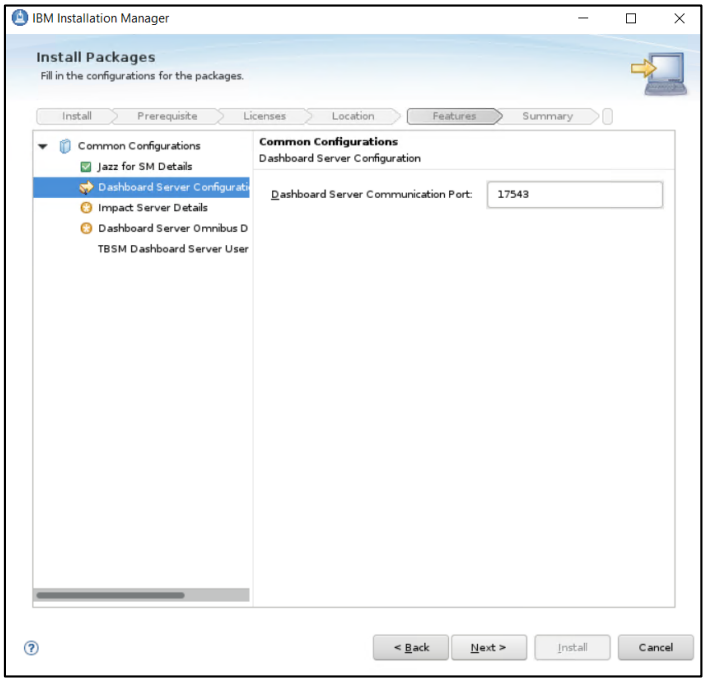
- enter installation directory for TBSM Dashboard server



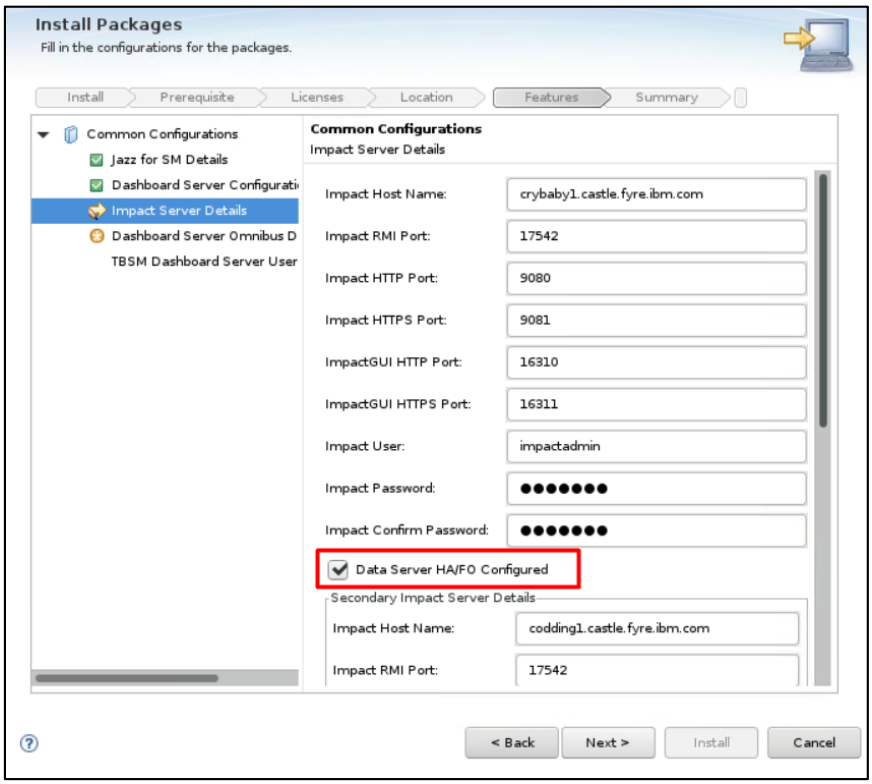
- enter Jazz SM and WebGUI details (make sure you entered the correct installation paths, JazzSM port, smadmin and tbsmadmin password).



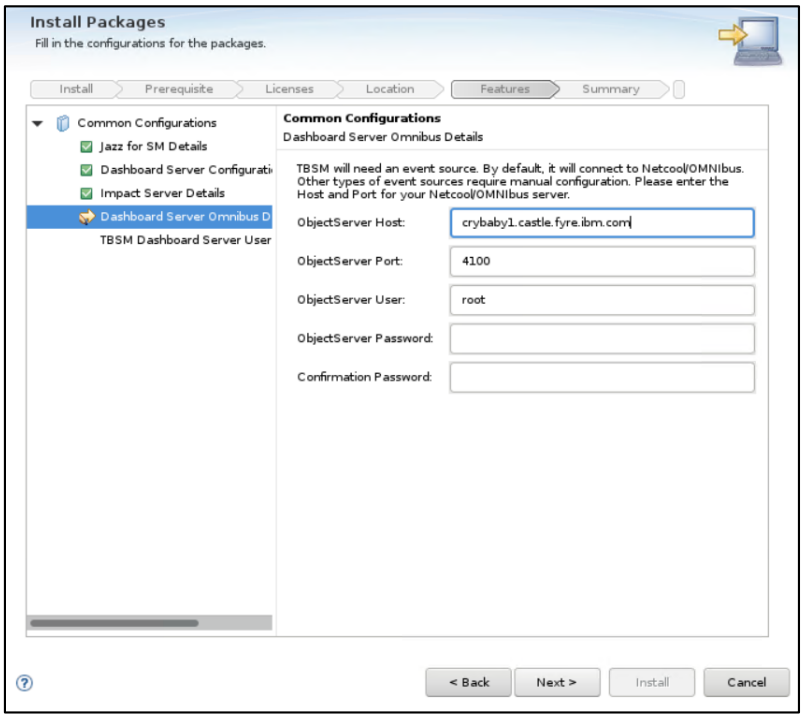
- enter dashboard communication port, by default this is 17543:



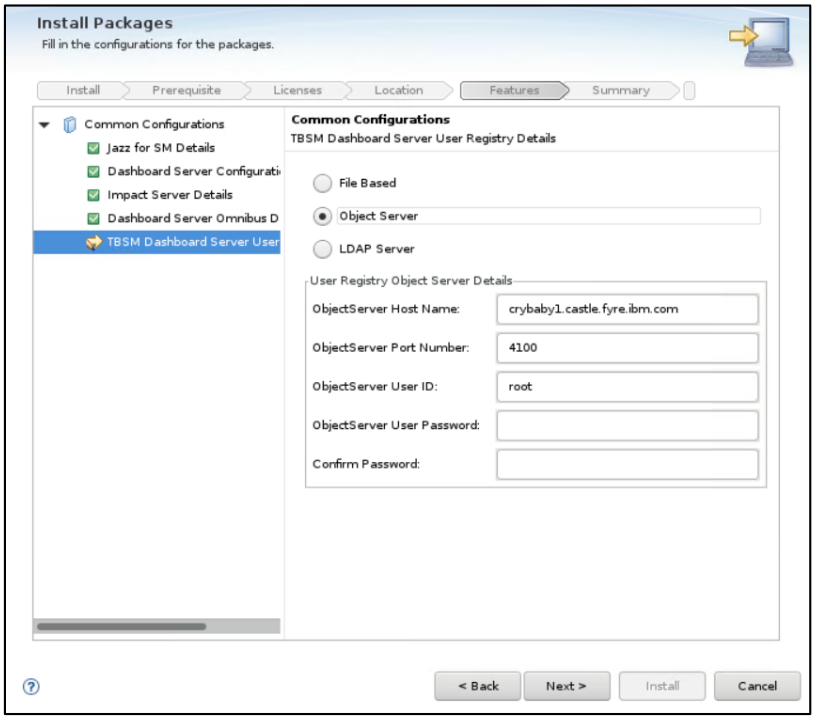
- enter impact primary server details as you have installed it on server1, select "Data Server HA/FO Configured" option and enter the secondary impact server details as well:



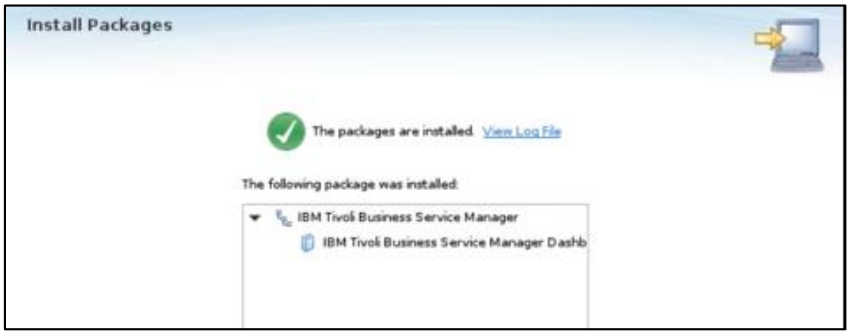
- enter object server details – these should be the same as the ones configured for impact and webgui:



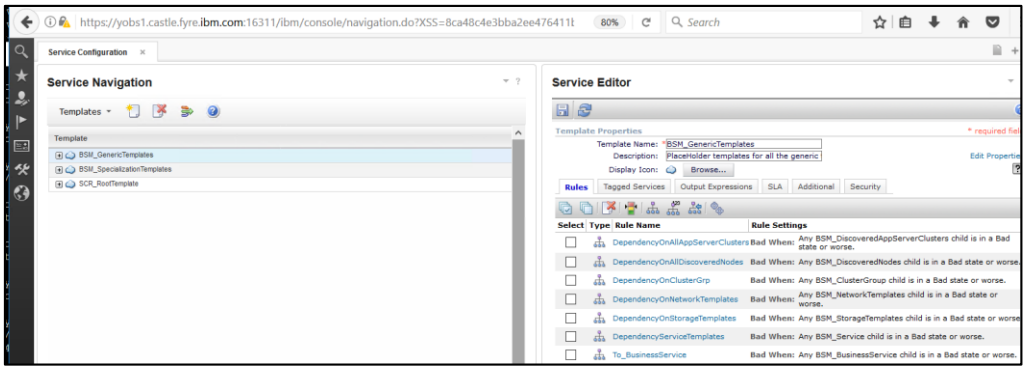
- enter user registry details – these should be the same as the ones configured for impact and webgui, in this example omnibus was user as user repository



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



Further you can test TBSM 6.2 features and failover capabilities.



Hope you'll find this useful for your TBSM 6.2 failover configuration!