

IBM License Matric Tool 9.2 Installation and Configuration Guide

Contents

1 Befor	e Starting	3
1	Step-by-step installation of ILMT 9.2.0.2 on Windows 2008 R2 Server	4
2	Manual scan configuration	62
2.1	Activating the analyses	62
2.2	Installing the scanner	63
2.3	Initiating software scans	64
2.4	Uploading software scan results	65
2.5	Initiating the capacity scan on all endpoints	65
2.6	IBM Software Classification	66
1. Licer	ERROR : If Airgap tool returns Error: Error parsing seServerResponse XML document	69
2.	ERROR: Authentication – cannot be blank and is invalid	72
3.	ERROR : Specified Database was not found	74

Before Starting

These are ports involved during the installation for ILMT.

- 52311
- 52312
- 8083
- 50000
- 9081
- 1433
- 80
- 443
- 21

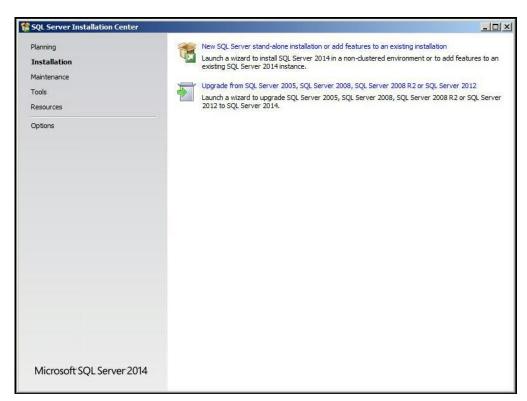
Sites involve when downloading files during installations:

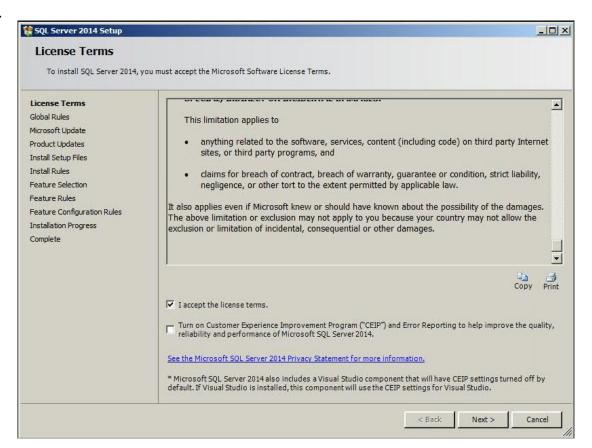
- http://www.bigfix.com
- https://gatherer.bigfix.com
- https://sync.bigfix.com
- https://software.bigfix.com
- https://esync.bigfix.com
- https://support.bigfix.com

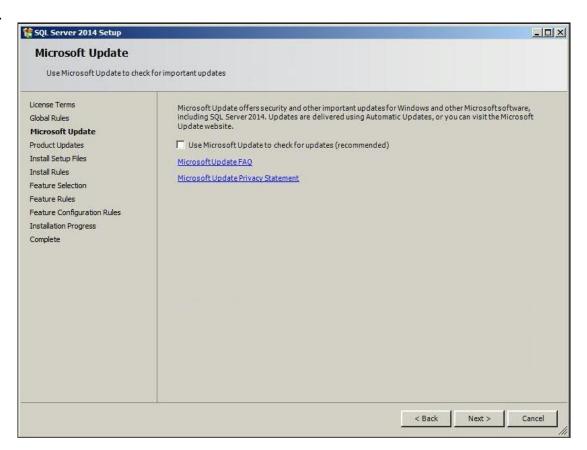
1 Step-by-step installation of ILMT 9.2.0.2 on Windows 2008 R2 Server

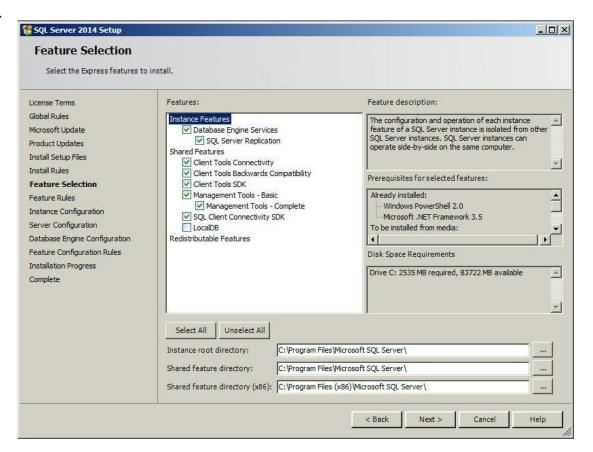
1. Double click the SQL Server installer.

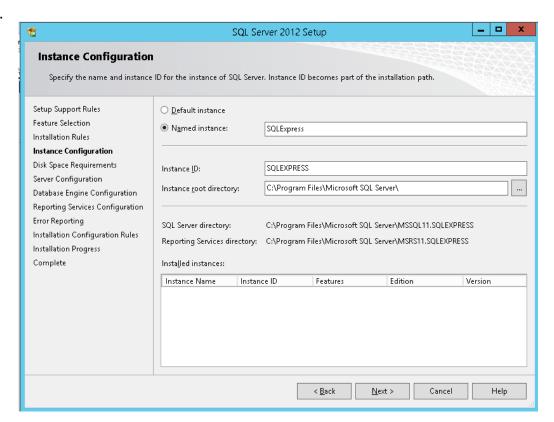


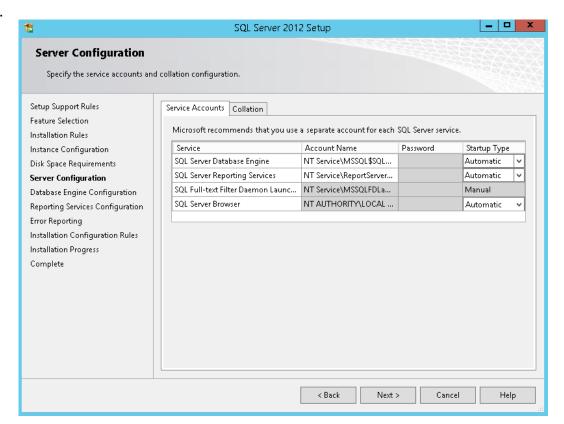


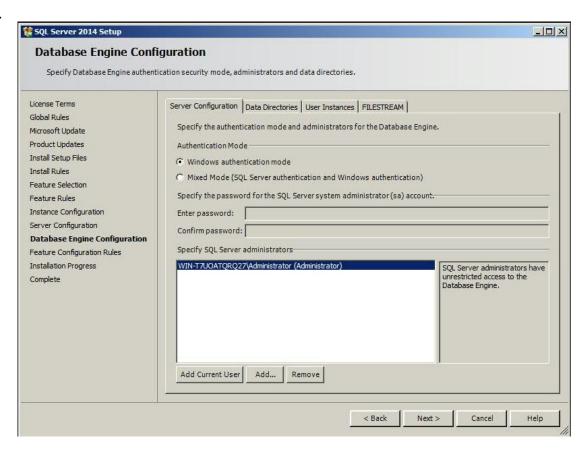


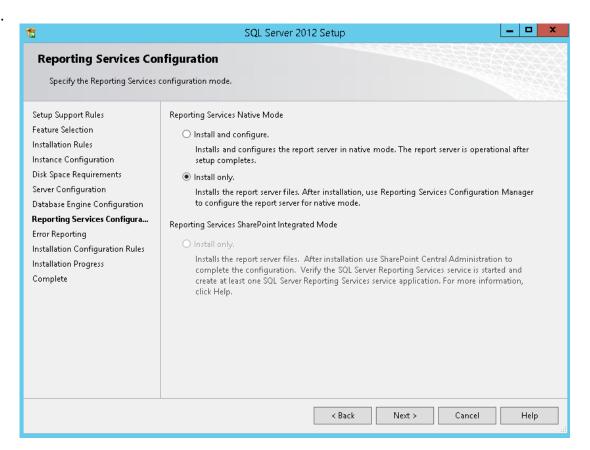


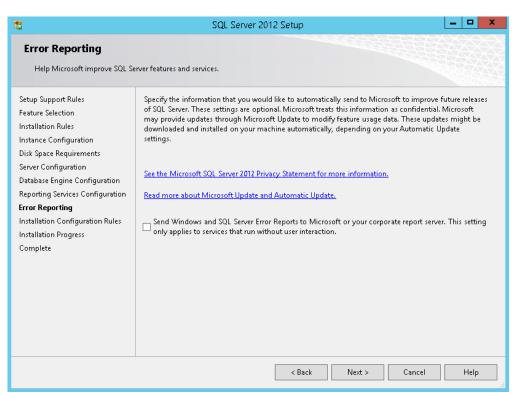


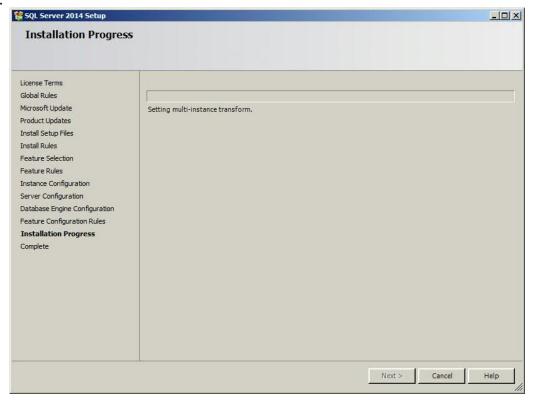


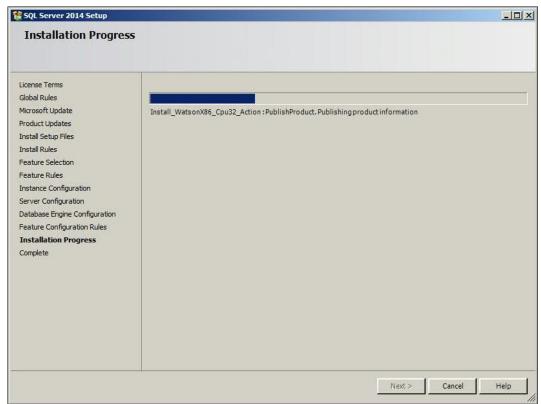


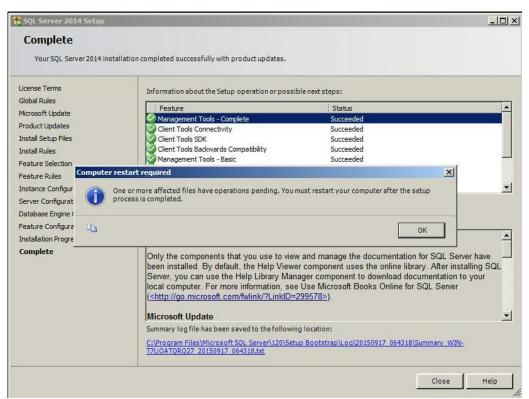




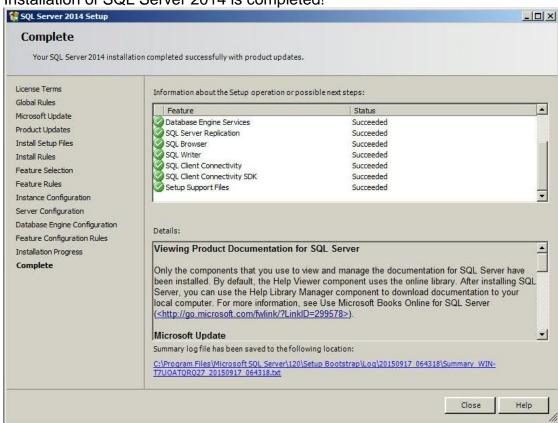






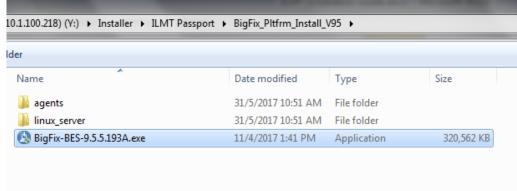


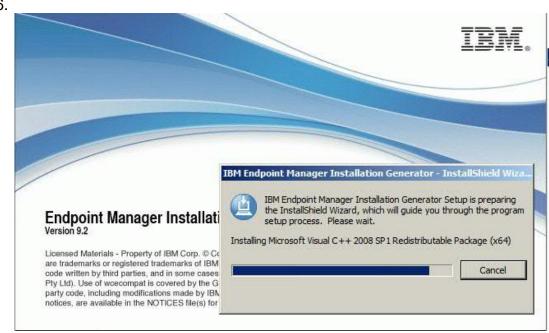
14. Installation of SQL Server 2014 is completed!



Let's continue with the installation of IEM 9.2. After you copy and extract the content of the 2 packages I mentioned above, run the IEM setup.

15. Find the BigFix-BES installer.







18.



19.

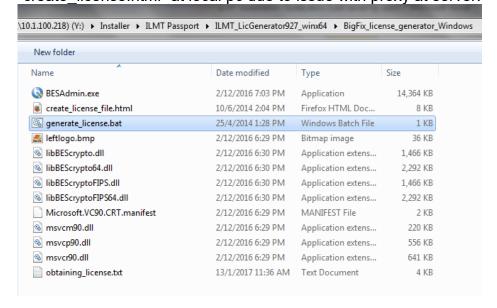
From this step, you have 2 possibilities. Either choose the first option and create the authorization file directly in the IEM installer or choose the second option (I want to install with a product license I already have) and in this case you need to use the license generator package (CN4HDML) and create the license separately, then add it to the installer.

Either ways, you need to have the

LicenseAuthorization_XXXXXXXXXXXXXXXXCreate.BESLiceseAuthorizati on file, that can be downloaded from BigFix website after you open and fill in the 'create_license_file.html' from the IEM License generator package.



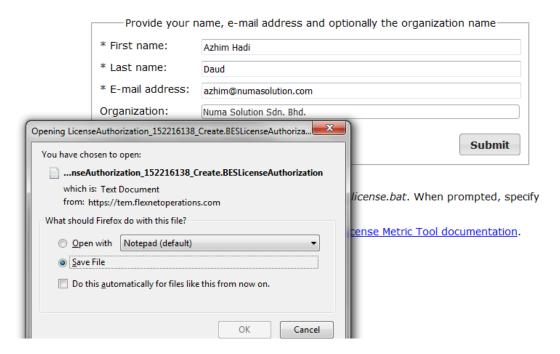
20. For this go to folder below to generate the license. Open the "create_license.html" at local pc due to issue with proxy at server.



IBM License Metric Tool

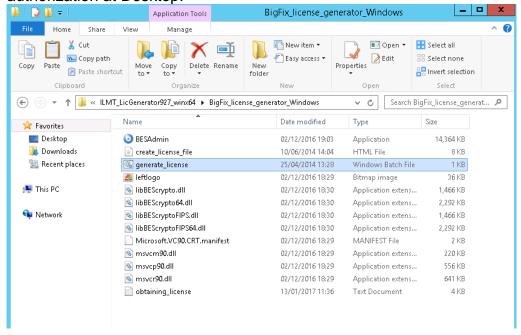
To complete the All-in-One installation that combines the deployment of IBM Endpoint Manager, IBM License Metric Tool, and IBM DB2, you must create a license file that will be used to authorize the installation of one of the components - IBM Endpoint Manager.

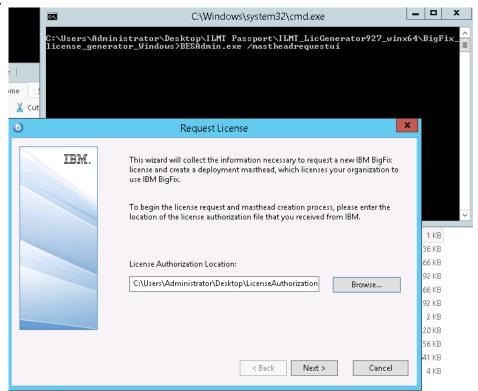
To create the license file, enter your details in the following form and then click Submit.

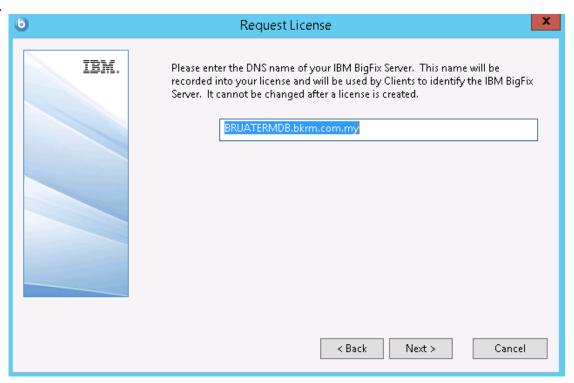


Copy the file generated and paste it at Server desktop

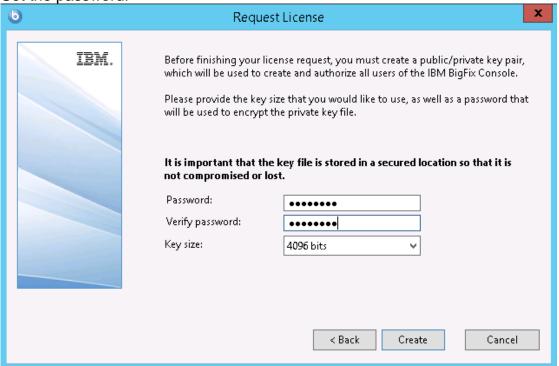
22. Double click "generate_license.bat". Browse to the generated license authorization at Desktop.



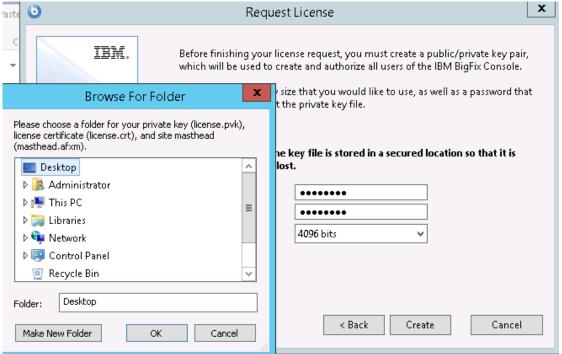




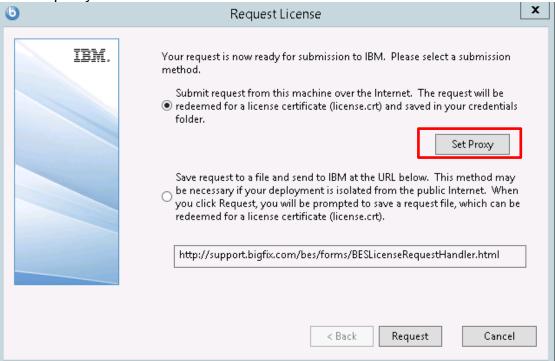
25. Set the password.



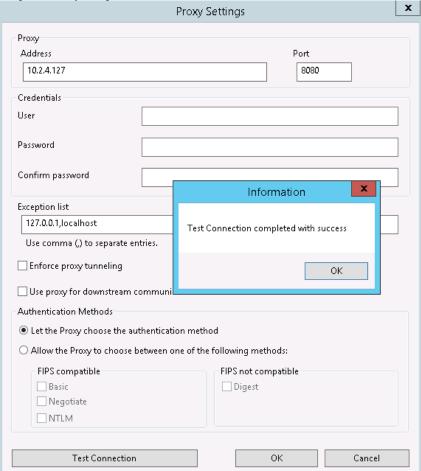
26. Set the location for all the license related details.



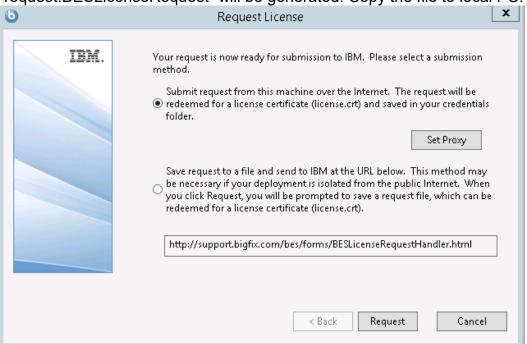
27. Set the proxy.



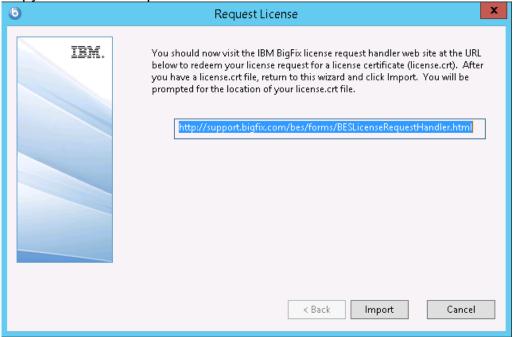
28. Key in the proxy detail and test the connection.



29. Select the 2nd option and click Request button. A "request.BESLicenseRequest" will be generated. Copy the file to local PC.



30. Copy the URL and open it at local PC.



31. Browse the "request.BESLicenseRequest" file. Submit.





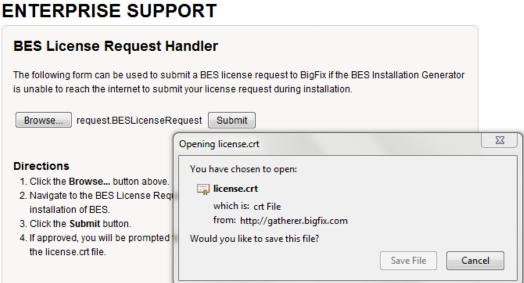
4. If approved, you will be prompted to save your public key file (license.crt). Click the Save button to save

32.

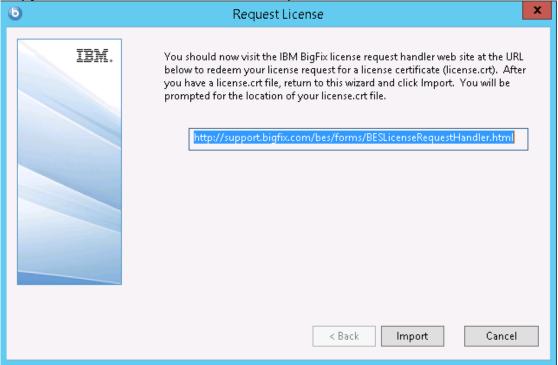


3. Click the Submit button.

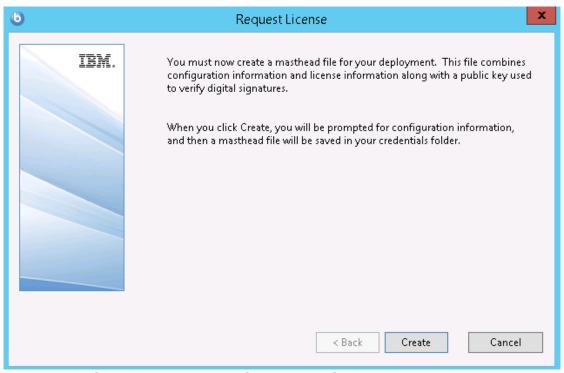
the license.crt file.



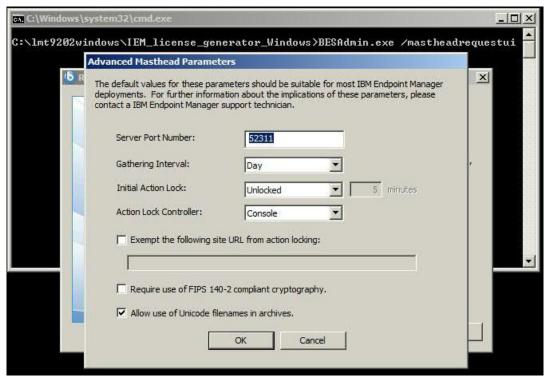
33. Copy the "license.crt" to Server. Click Import. Browse to the cert file.



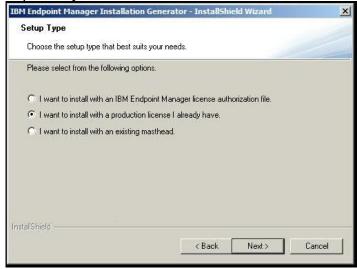
34.



"masthead.afxm" will be created after clicking OK.

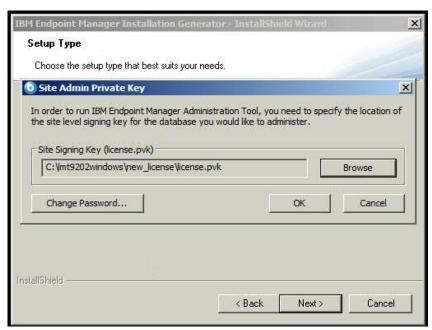


36. *This is the option you use if you created the license authorization file separately.

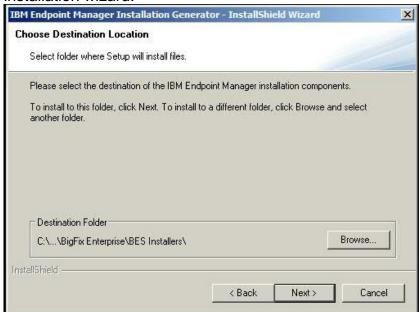


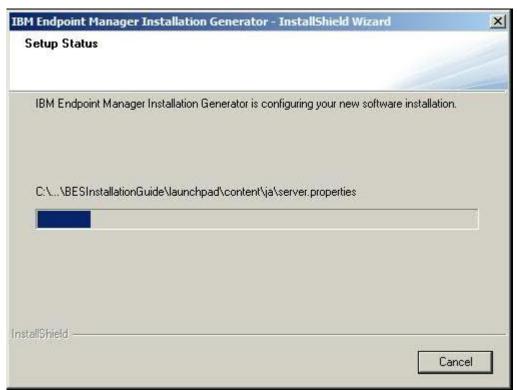
37. Just browse for the new created license.





39. If the license process completes successfully, you can continue the installation wizard.



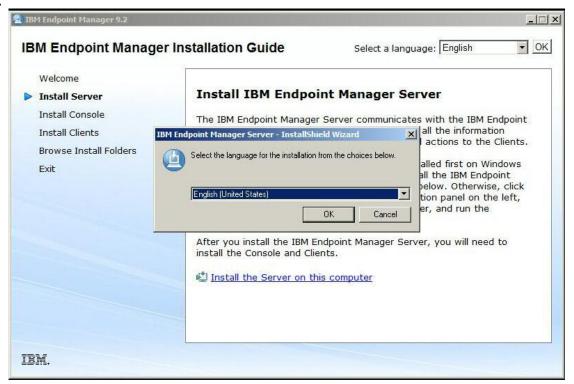


41. Now the IEM install wizard is completed!

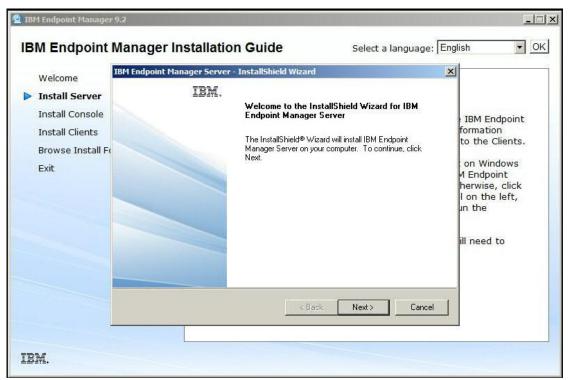


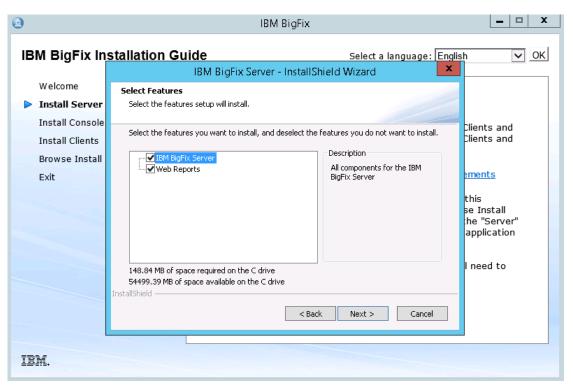
42. Let's deploy the IEM Server

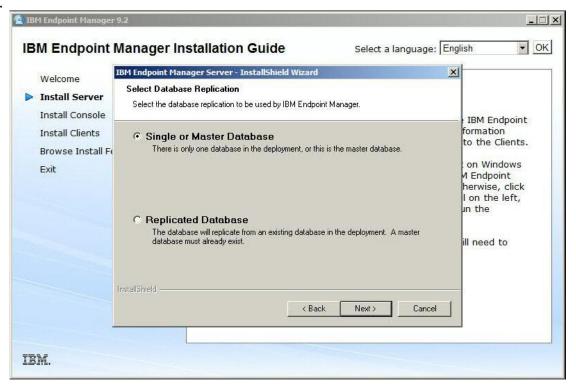


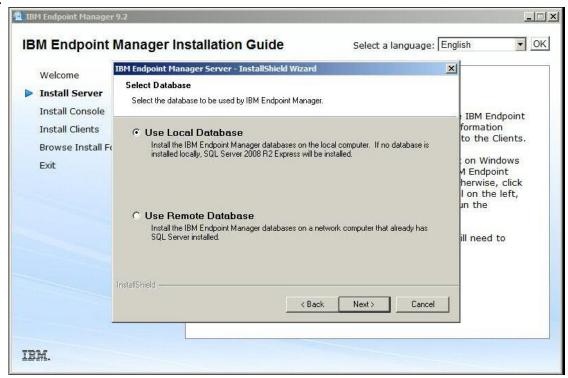




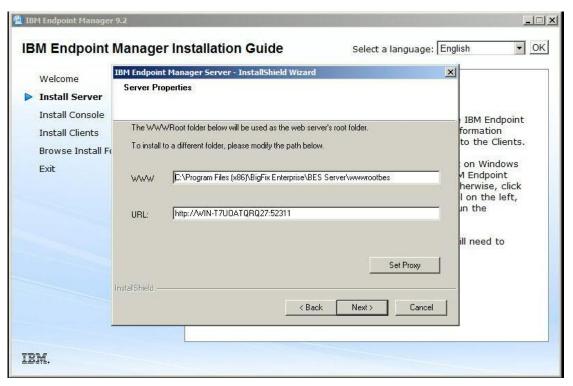


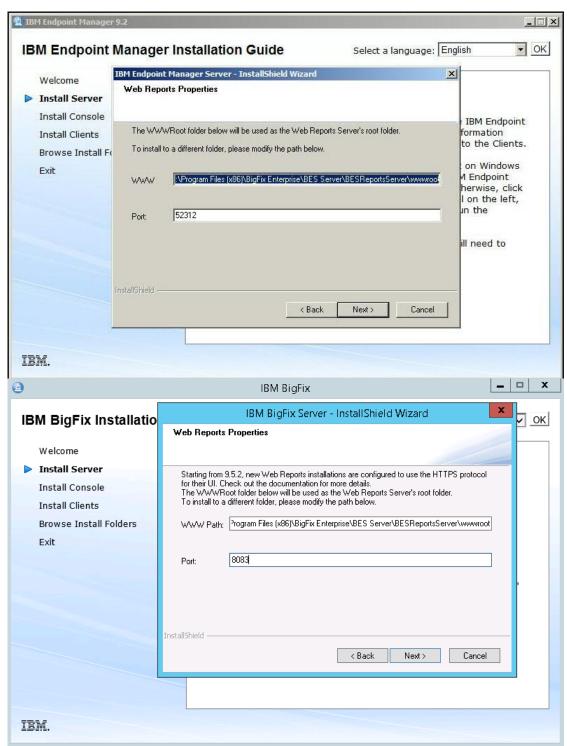




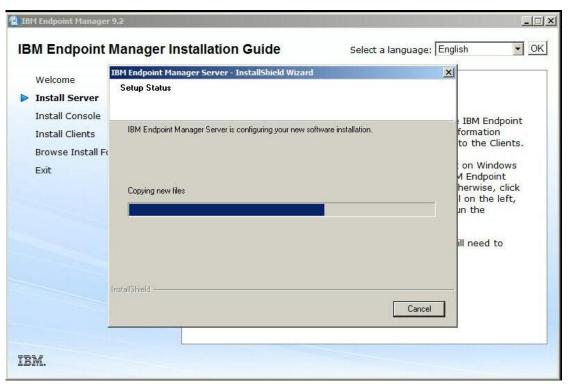


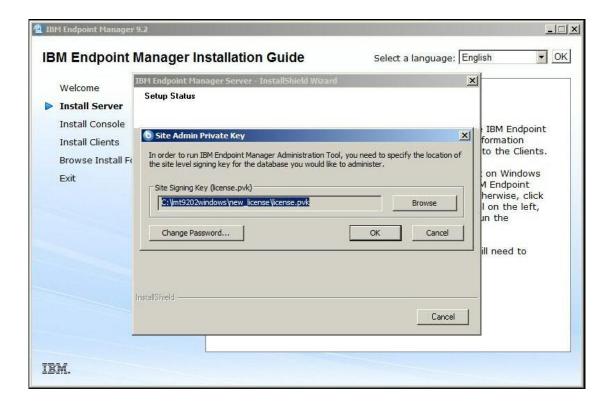


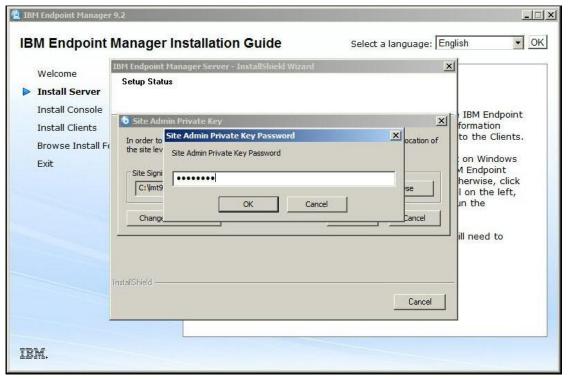




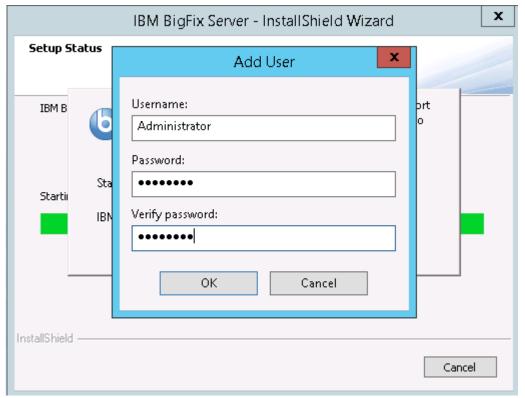










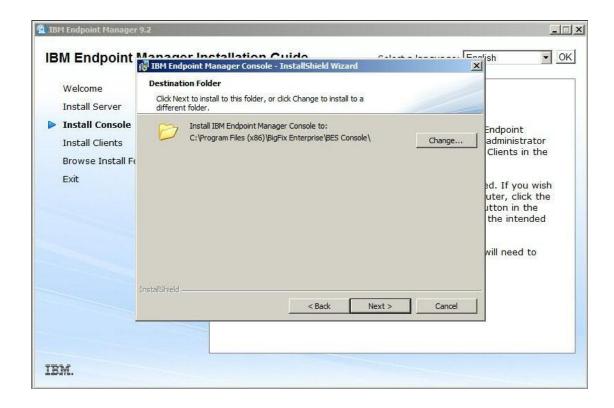


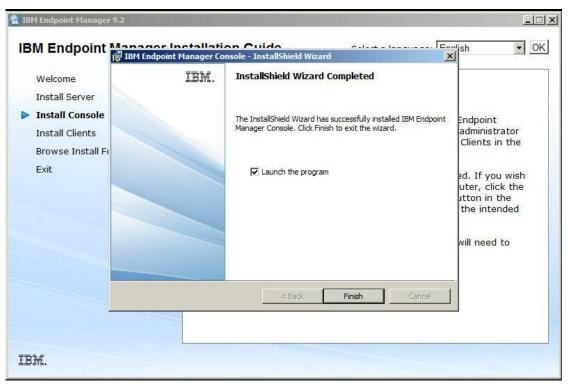
58. IEM Server Installation is complete!



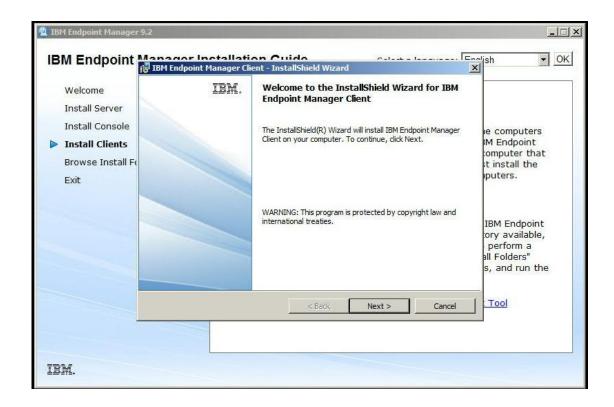
59. Installing the IEM Console







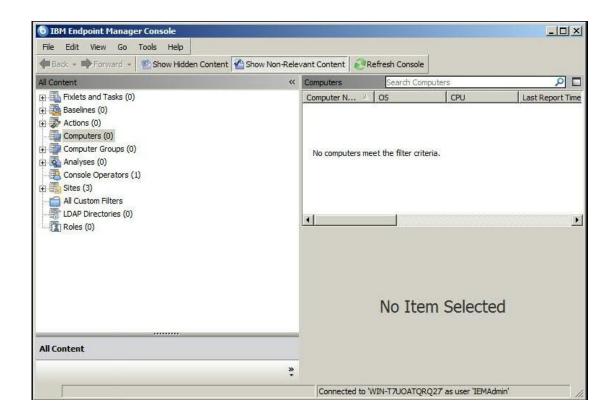
62. Installing the BESClient

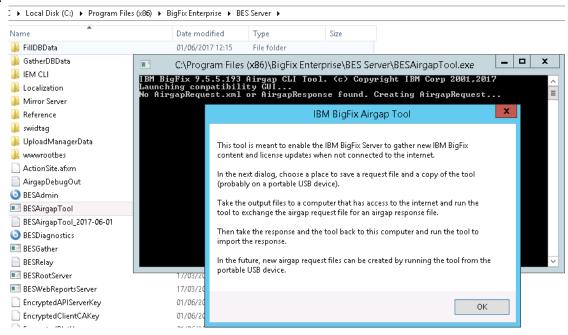


63. Starting the IEM Console

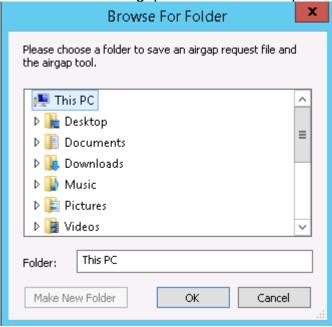


64. IEM Server running for the first time

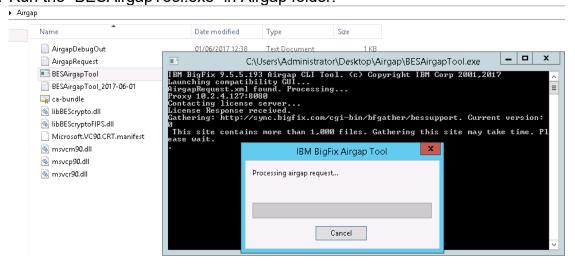




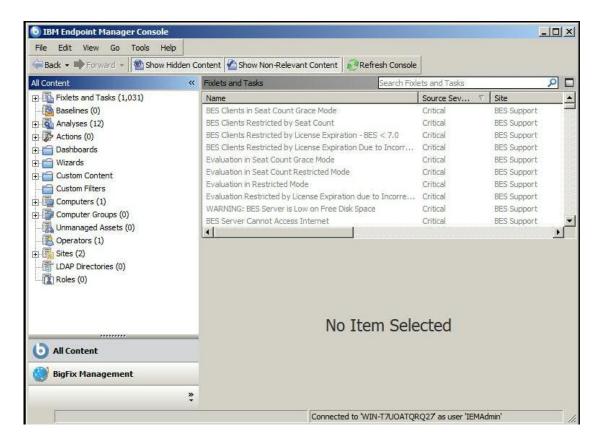
66. Create a folder "Airgap" at Server Desktop



67. Run the "BESAirgapTool.exe" in Airgap folder.



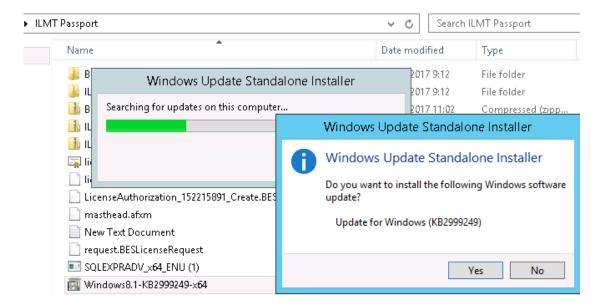
68. After few minutes, the BigFix Management site appears



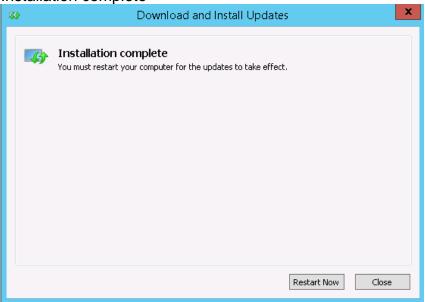


Restart the server after complete.

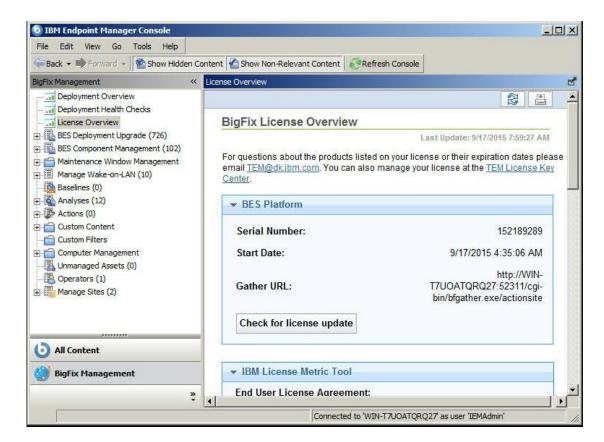
70. Install windows update.



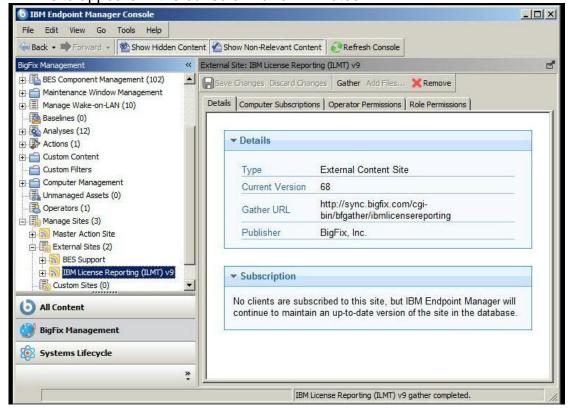
71. Installation complete



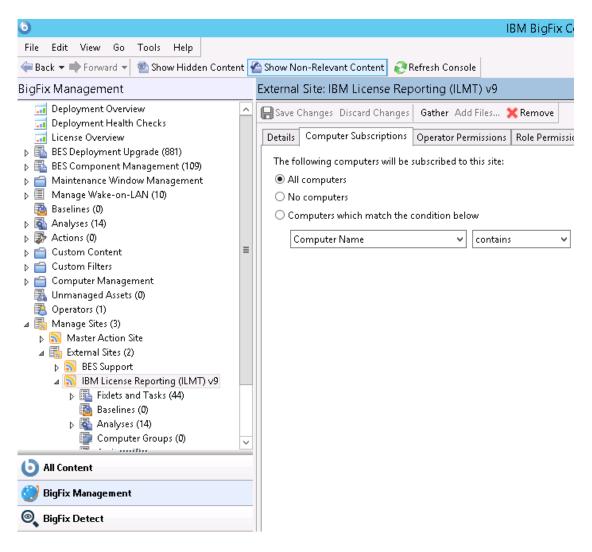
72. From License Overview, we enable the ILMT site



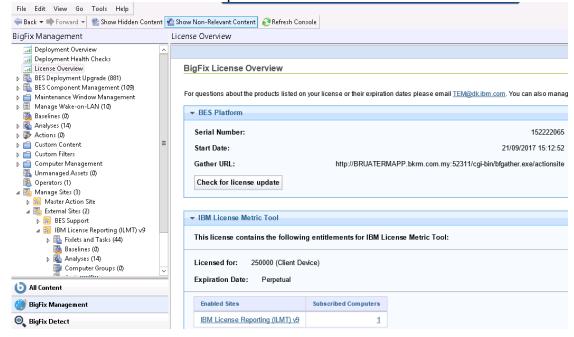
73. ILMT site appears in the console in a few minutes



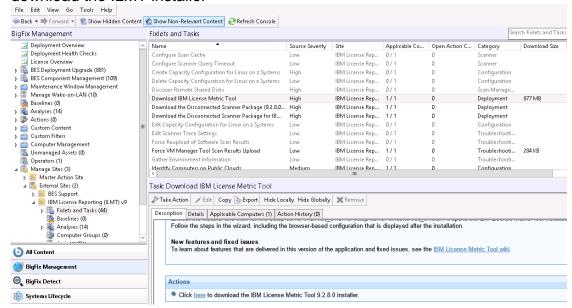
74. Subscribe the computer to all. Save.



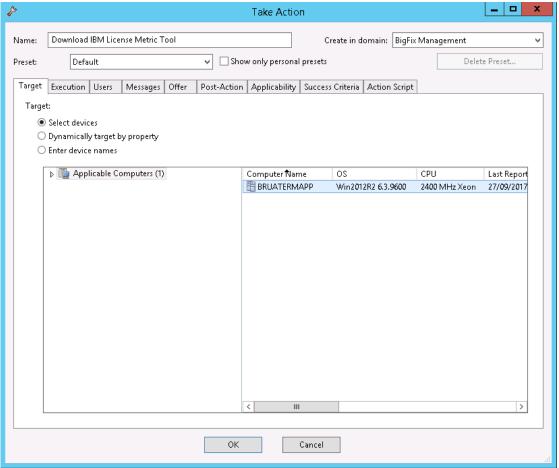
75. Ensure there is subscribe computer in License Overview



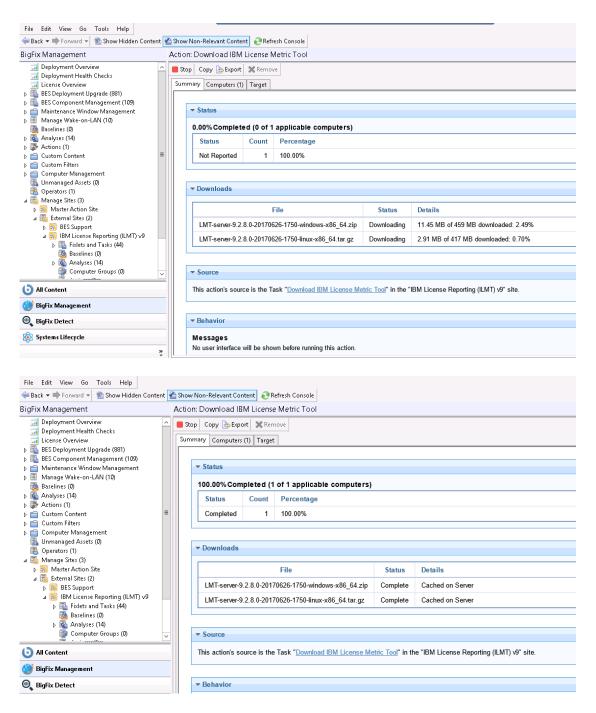
76. Go to Fixlets "Download IBM License Metric Tools and click 'here' to download the ILMT installer



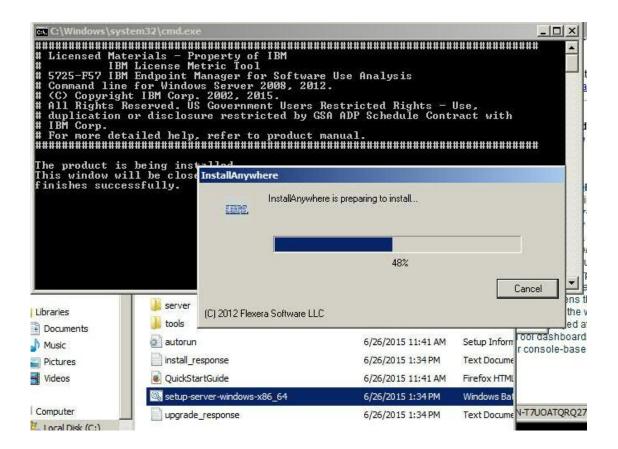
77. Select the device. Click OK.



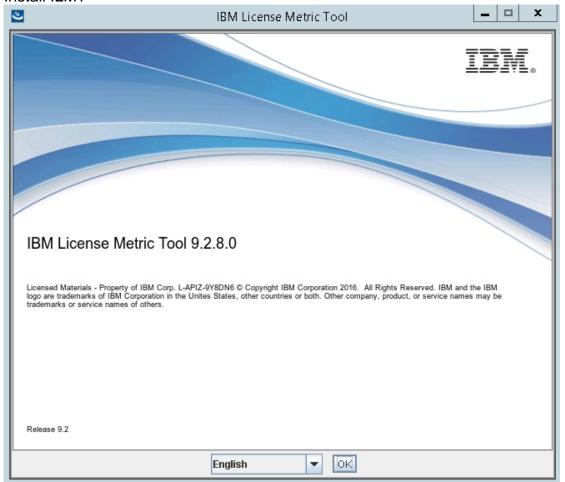
78. Wait till the installation is complete.

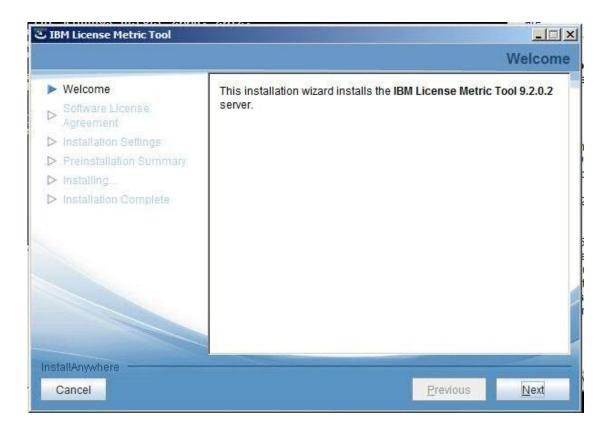


- 79. After the installer download completed, go to folder ILMT_installer at C:\Program Files (x86)\BigFix Enterprise\BES Installers
- 80. Go to C:\Program Files (x86)\BigFix Enterprise\BES Installers. Execute the ILMT installer

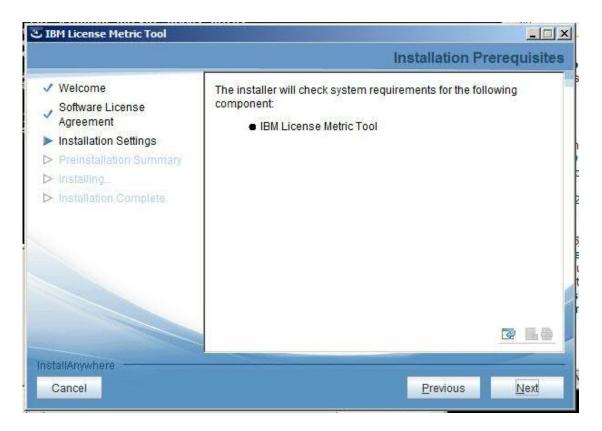


81. Install ILMT

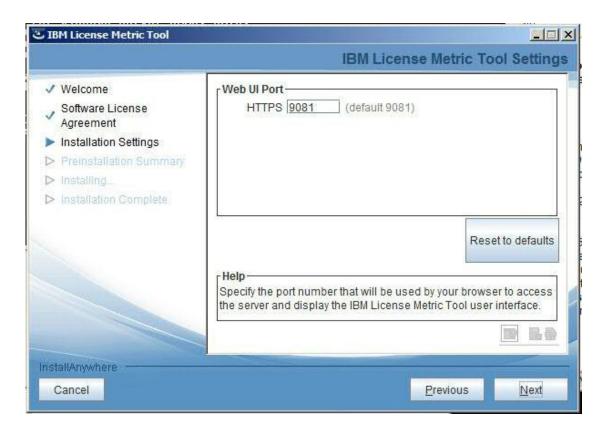




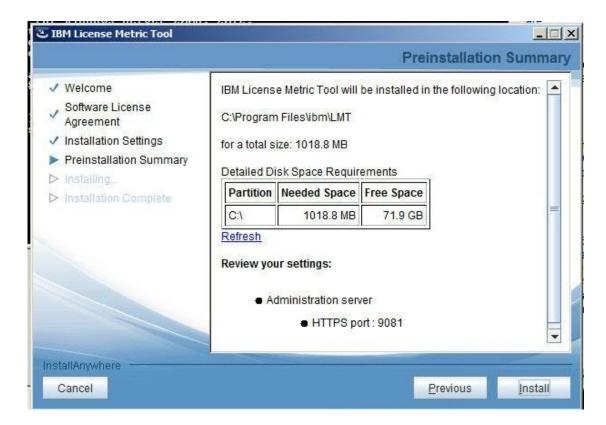




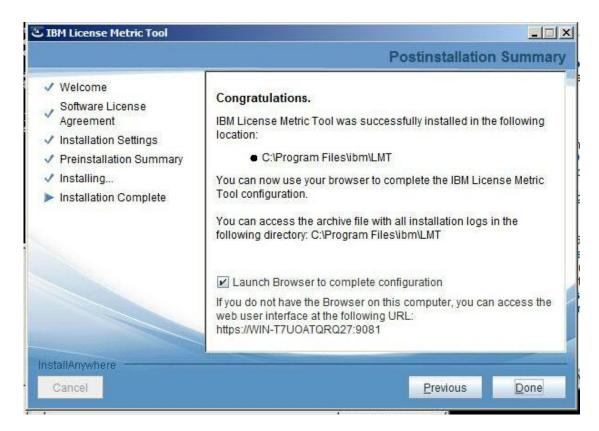




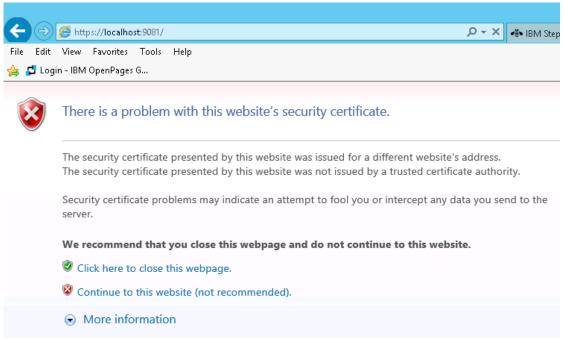




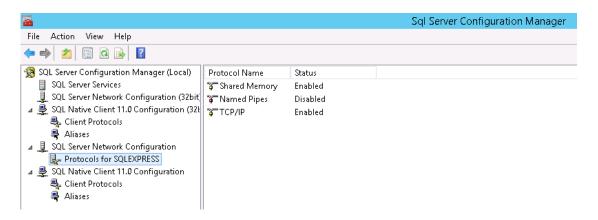




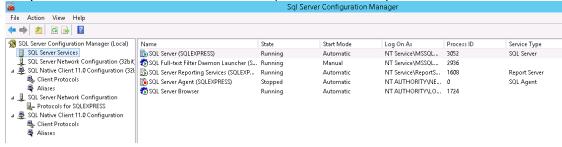
91. Go to https://cservername>:9081/ Continue to this website.



92. Go to SQL Server Configuration Manager. Enable all TCP/IP listed.



93. Stop and restart back the SQL Server(SQLEXPRESS)



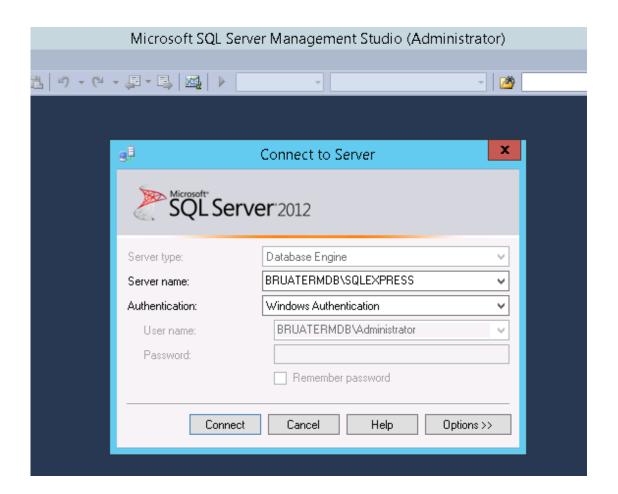
94. Configuring ILMT UI



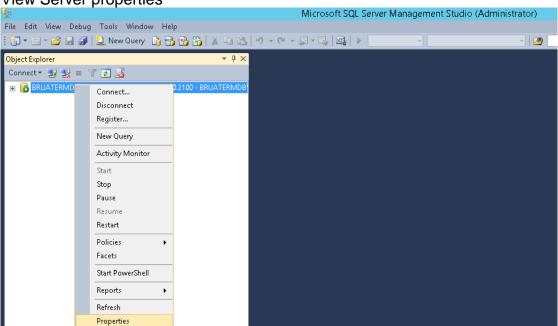
Create and configure the application database

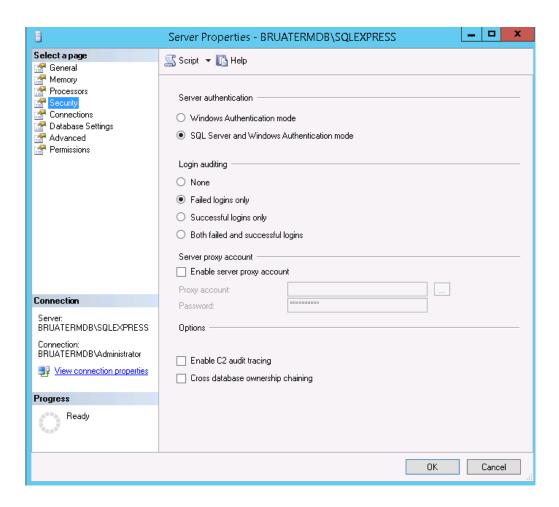


95. Open Microsoft SQL Server to configure the authentication.

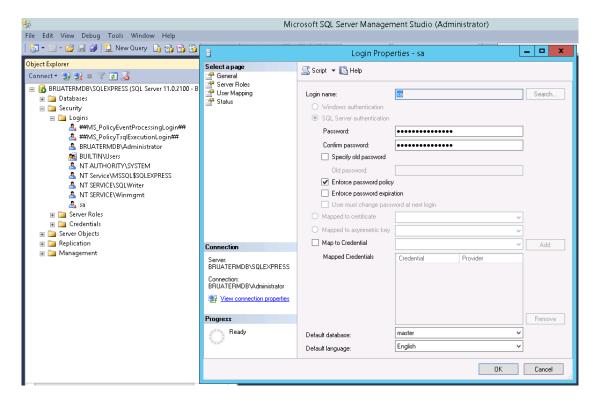


96. View Server properties

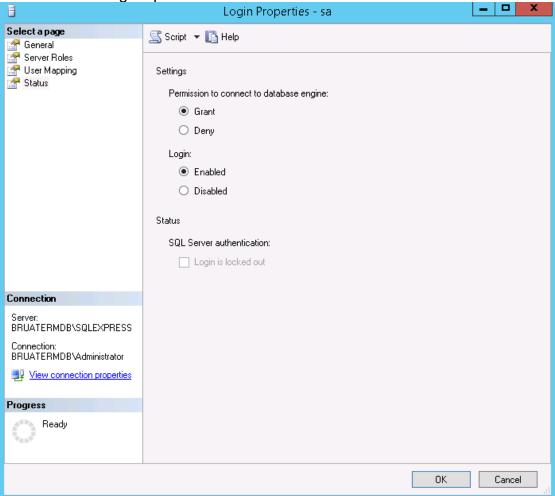




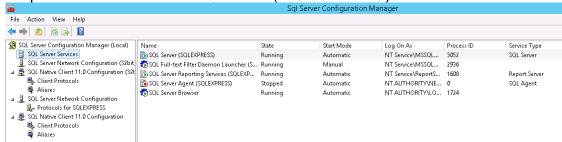
97. Update the password for "sa" user.



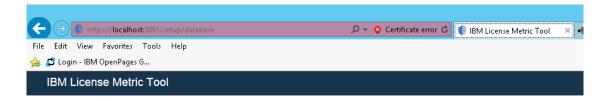
98. Ensure the setting as pic.



99. Stop and restart back the SQL Server(SQLEXPRESS)



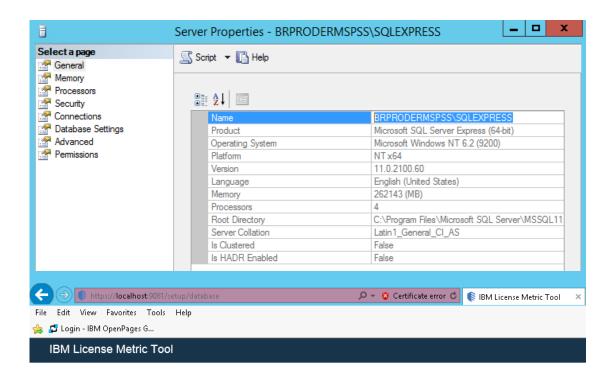
100. At ILMT webpage, select SQL Server Authentication. Key-in the authentication.



Create and configure the application database



Host: Copy the name from SQL Management Studio. Right-click on server > Properties > Copy from the Name field.



Create and configure the application database



Create a user name and password for the administrator account.



102. Confgure the Data Source

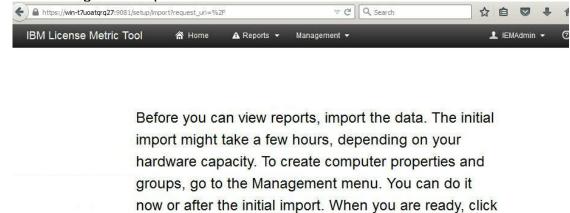
Provide the connection parameters to the databases and the IBM BigFix server

The application connects to the IBM BigFix server database to regularly import scan data. It connects to the IBM BigFix server to run remote operations that automate the infrastructure management. The application can also connect to the Web Reports database to enable Web Reports users to access the application (optional).

The information that you provide on this panel is used to create a data source. You can configure additional data sources at a later time.

	_	
Name* Data Source		
✓ Enable default scan schedule for this data source		
thousand computers. For larger environments, you ma		server. This option is advised for environments with up to a few up the scan schedule to avoid a performance issue. For more information oups for improved performance, see the <u>Scalability Guide</u> .
Database for the IBM BigFix Server*	IBM BigFix Server*	Web Reports Database
Database Type* SQL Server Host* BRUATERMDB\SQLEXF	Authentication (Console Operator) User Name* administrator Password*	Database Type* SQL Server Host*
Database Name* BFEnterprise	□ Disable automatic address lookup	Database Name*
Authentication		Authentication
 Windows Authentication 		 Windows Authentication
SQL Server Authentication		SQL Server Authentication
Creating		

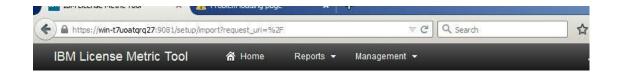
103. Running initial import



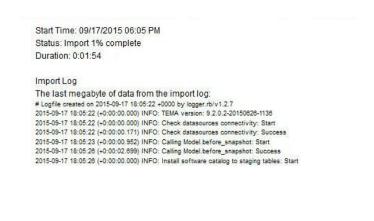
Import Now.

Import Now

104. Running the initial import may take 4-5 hours, but once this is completed; you have a brand new ILMT User Interface ready to work!



The initial import is in progress. Reports will be available when the import is complete.



105. If the import failed. Manually upload software catalog.

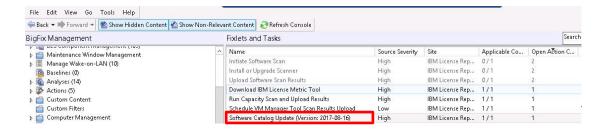
```
The last megabyte of data from the import log
# Logfile created on 2017-09-27 08:13:19 +0000 by logger.rb/v1.2.7
2017-09-27 08:13:19 (+0:00:00.000) INFO: ILMT version: 9.2.8.0-20170628-1750
2017-09-27 08:13:19 (+0:00:00.00) INFO: All times in log are in UTC time zone!
2017-09-27 08:13:19 (+0:00:00.000) INFO: All times in log are in UTC): 2017-09-27 08:13:19 UTC
2017-09-27 06:13:19 (+0:00:00 000) INFO: Import type: complete
2017-09-27 06:13:19 (+0:00:00 000) INFO: Import type: complete
2017-09-27 06:13:19 (+0:00:00 000) INFO: Local server timezone: CurrentTimeZone=480 (UTC+08:00) DaylightBias=-60
2017-09-27 06:13:19 (+0:00:00 27) INFO: Check datasources connectivity: Start
2017-09-27 06:13:19 (+0:00:00 250) INFO: Data Source, Bigfix Server Version: 9.5.5.193 with schema: 9.44, DB Version: 11.0.2100.60 RTM Express Edition (64-bit)
 2017-09-27 06:13:19 (+0:00:00 000) INFO: Check datasources connectivity: Success
2017-09-27 00:13:20 (+0:00:00:00) INFO: Calling Model before_snapshot: Start 2017-09-27 06:13:25 (+0:00:00:00) INFO: Calling Model before_snapshot: Success 2017-09-27 06:13:25 (+0:00:00:00) INFO: Install software catalog to staging tables: Start
2017-09-27 06:13:25 (+0:00:00:001) INFC: Detected change in file name config files
2017-09-27 06:13:25 (+0:00:00:011) INFC: Detected change in file name config files
2017-09-27 06:13:25 (+0:00:00:011) WARN: Catalog update could not be applied. Error was No catalog data imported. Please upload catalog and run import again.
2017-09-27 06:13:25 (+0:00:00:000) INFC: Install software catalog to staping tables: Failed
2017-09-27 06:13:26 (+0:00:00:000) ERROR: RuntimeError. No catalog data imported. Please upload catalog and run import again.
C:/Program Files/bm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/domains/sam/app/models/sam/oatalog rb:97:in 'stage'
          C:/Program Files/lbm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/domains/sam/domain.rb:808:in 'Domain org/jruby/RubyProc.java:281:in 'call'
           C:/Program Files/ibm/LMT/wlp/usr/servers/server1/apps/tema.war/WEB-INF/lib/etl/task.rb:11:in 'rur
          C:/Program Files/ilbm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/ilbleti/tasks.rb.38:in `run_task`
C:/Program Files/ilbm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/ilbleti/tasks.rb.51:in `run_no_txn
org/jruby/RubyArray.java:1613.in `each`
           C:/Program Files/ibm/LMT/wlp/usr/servers/server1/apps/tema.war/WEB-INF/lib/etl/tasks.rb:50:in `run_no_txn
          C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/eti/tasks.rb.20:in 'run'
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/eti/tasks.rb.20:in 'run'
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/eti/runner.rb.07:in 'run'
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/eti/runner.rb.07:in 'run'
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/eti/runner.rb.07:in 'run'
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/igems/gems/sequel-4.24.0.8389d34f70988ff5e2d4489b876d1cc303accdo8/lib/sequel/connection_pool/threaded.rb:114.in 'hold'
           C:/Program Files/ibm/LMT/wlp/usr/servers/server1/apps/tema.war/WEB-INF/gems/gems/sequel-4.24.0.6389d34f70988ff5e2d4489b876d1cc303accdc9/lib/sequel/connection_pool/threaded.rb:112:in 'hold'
          C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.warr/WEB-INF/lib/sequel/extensions/date_utils.rb:17:in 'freeze_date'

C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.warr/WEB-INF/lib/sequel/extensions/date_utils.rb:17:in 'freeze_date'

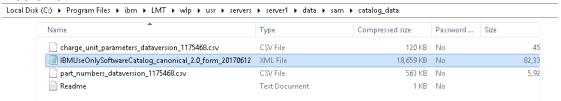
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.warr/WEB-INF/lib/sequel/extensions/date_utils.rb:17:in 'freeze_date'

C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.warr/WEB-INF/lib/sequel/extensions/date_utils.rb:17:in 'freeze_date'
           C:/Program Files/ibm/LMT/wlp/usr/servers/server1/apps/tema.war/WEB-INF/lib/etl/runner.rb:182:in 'within import'
          C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/dss/logger.rb:22:in 'log_to'
C:/Program Files/ibm/LMT/wip/usr/servers/server1/apps/tema.war/WEB-INF/lib/etl/runner.rb:153:in 'within_import
           org/jruby/RubyKernel.java:1858:in 'tap'
          C:/Program Files/lbm/LMT/vilp/usr/servers/server1/apps/tema.war/WEB-INF/lib/etl/runner.rb:144:in 'within_import' C:/Program Files/lbm/LMT/vilp/usr/servers/server1/apps/tema.war/WEB-INF/lib/etl/runner.rb:38:in 'run'
```

106. Log in to the BigFix console. In the navigation tree, click Sites > External Sites > IBM License Reporting (ILMT) > Fixlets and Tasks and select Software Catalog Update.

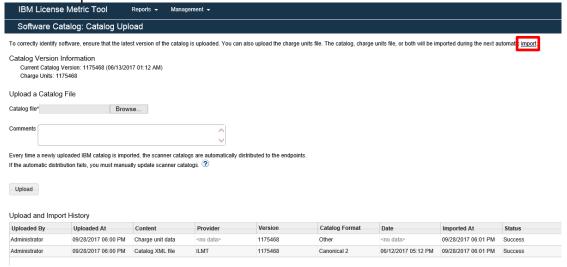


- 107. Click Take Action. Wait until finish download.
- Go to folder where the software catalog is downloaded. Check if the files exist.



https://www.ibm.com/support/knowledgecenter/en/SS8JFY_9.0.0/com.ibm .lmt.doc_9.0/com.ibm.license.mgmt.doc/planinconf/t_download_sw_catalog_tem_conf.html

- 109. Upload the catalog to the IBM License Metric Tool server. Log in to IBM License Metric Tool and go to Management > Catalog Upload.
- 110. Click Browse and locate the catalog file that you downloaded.
- 111. To upload the file, click Upload. During the next import, the file is processed and scanner catalogs that are used to discover software are created.
- 112. Start Import.

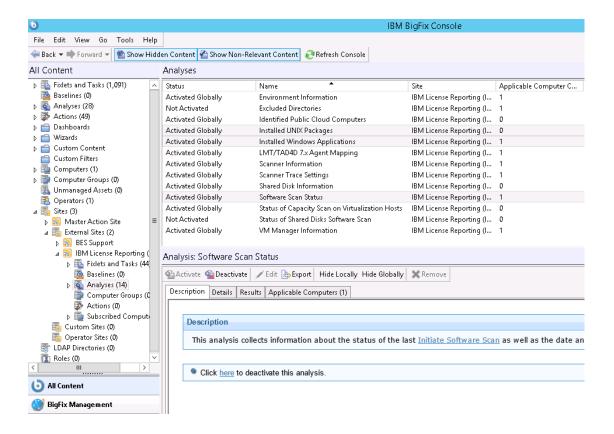


2 Manual scan configuration

2.1 Activating the analyses

- 1. Log in to the BigFix console.
- 2. In the navigation tree, click Sites > External Sites > IBM License Reporting (ILMT) > Analyses.
- 3. To activate an analysis, right-click it, and click Activate.

 To ensure that the installed software is properly detected, activate the following analyses on all computers in your infrastructure:
 - Installed UNIX Packages
 - Installed Windows Applications
 - Software Scan Status

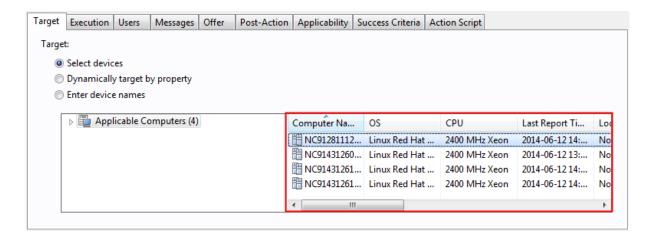


2.2 Installing the scanner

- 4. Log in to the BigFix console.
- In the navigation bar, click Sites > External Sites > IBM License Reporting (ILMT) > Fixlets and Tasks.
- 6. In the upper right pane, select Install or Upgrade Scanner.
- 7. Select the installation directory. You can choose the default directory, or an alternative one. In the latter case, the scanner is installed in the same path as the BigFix client.



Click Take Action.



Tip:

To ensure that the action is applied on all computers that are added in the future, select Dynamically target by property.

2.3 Initiating software scans

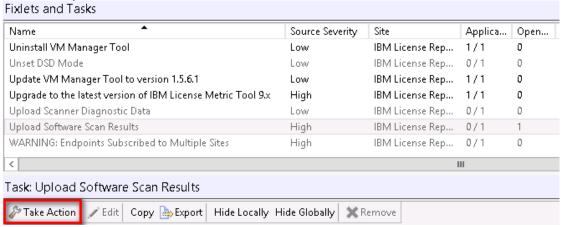
- 1. Log in to the BigFix console.
- 2. In the navigation tree, click Sites > External Sites > IBM License Reporting (ILMT) > Fixlets and Tasks.
- 3. Select Initiate Software Scan.
- 4. In the lower pane, select the types of scans that you want to initiate. Different types of scans search for different types of information to determine whether the software is installed. Generally, all types of scans should be run regularly. However, you can choose to run different types of scans at different times or distribute the scan schedule over the computers in your environment to improve the performance of the import.
- 5. Optional: To limit the amount of processor resources that the scanner consumes, select Initiate the software scan with CPU threshold. Specify the consumption limit that is in the range 5 100. The higher value you specify, the higher is the consumption limit. For example, if you specify 75, scanner processes use up to 75% of the processing power of the target computer.



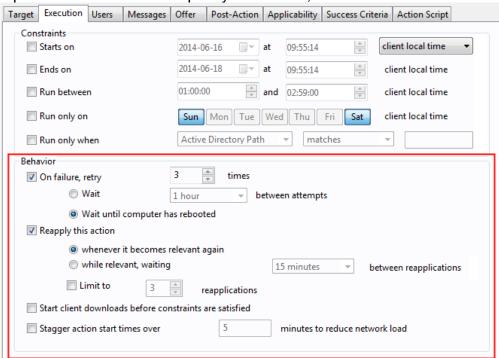
- 6. Select the computers on which you want to initiate the scans.
- 7. If you want to specify the dates and frequency of the scans, open the Execution tab. Specify the details, and click OK.

2.4 Uploading software scan results

- Log in to the BigFix console.
- 2. In the navigation tree, click Sites > External Sites > IBM License Reporting (ILMT) > Fixlets and Tasks.
- 3. In the upper right pane, select Upload Software Scan Results, and then in the lower pane, click Take Action.



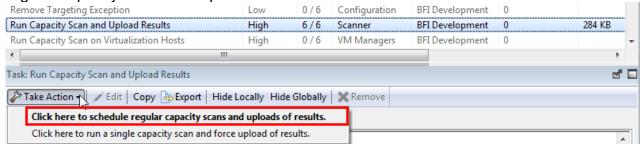
- 4. Select computers from which you want to upload software scan results.
- 5. Open the Execution tab. Specify the details, and click OK.



2.5 Initiating the capacity scan on all endpoints

1. Log in to the BigFix console.

- In the navigation tree, click Sites > External Sites > IBM License Reporting (ILMT) > Fixlets and Tasks and select Run Capacity Scan and Upload Results.
- 3. In the lower pane, click Take Action, and choose Click here to schedule regular capacity scans and uploads of results.



- 4. Open the Target tab and select the computers that you want to scan.
- 5. When the scan completes successfully, scan results are automatically uploaded to the BigFix server.

https://www.ibm.com/support/knowledgecenter/SS8JFY_9.2.0/com.ibm.lmt.doc/Inventory/planinconf/c_manual_scan_configuration.html

2.6 IBM Software Classification

IBM Software Classification

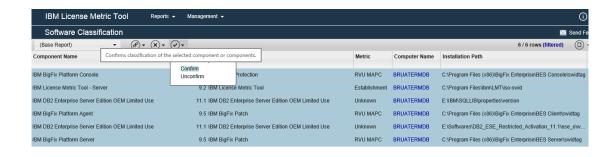


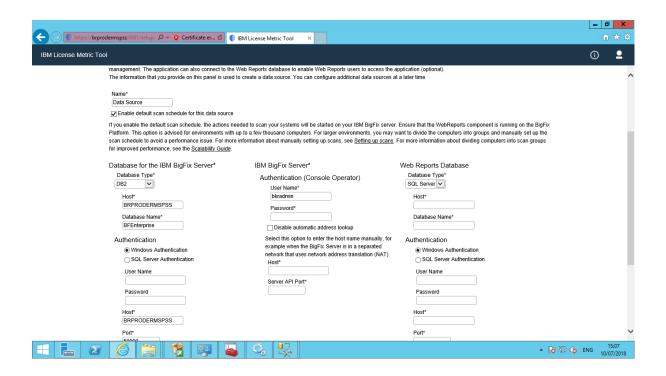
Go to Software Classification

The part numbers file for computer group All Computers has not been imported yet.

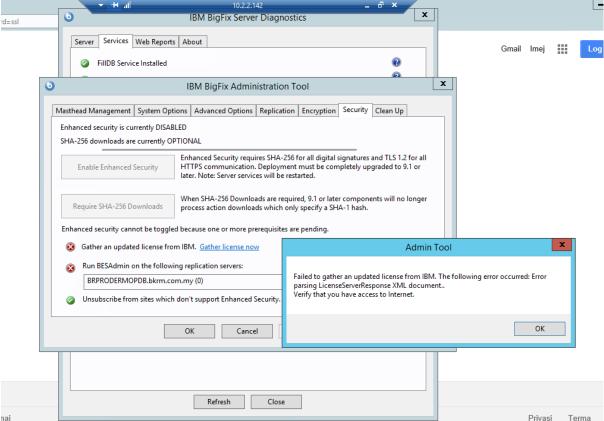
If a new part numbers file is available, upload this file.

- 1. Log in to the ILMT. Click Pending link.
- 2. Select all the component and confirm it.





1. ERROR: If Airgap tool returns Error: Error parsing LicenseServerResponse XML document.



This will affect the BigFix management site from showing on BigFix console. Solution:

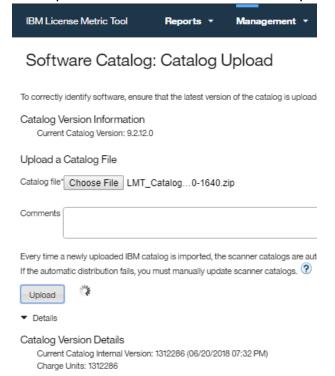
- i) Open BES Admin at C:\Program Files (x86)\BigFix Enterprise\BES Server > Security tab. Check whether the license has been gathered. If there are warning as picture, try clicking on the link <u>Gather license now</u>. If there is popup indicating the error, it means the license and the files cannot be downloaded. Check the proxy and ports opened for the server.
- ii) If the BES Admin doesn't shows such warnings and AirGap tool still returns the same error. Check GatherDB at log C:\Program Files (x86)\BigFix Enterprise\BES Server\GatherDBData. See the log and check the problem. If the error shown as below, the proxy is blocking the files to be downloaded. Check the proxy and ports opened for the server.

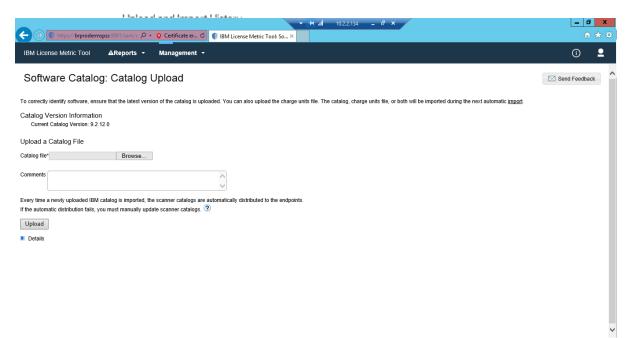
```
Wed, 11 Jul 2018 19:14:57 +0800 -- Invalid file: BaselineSynchronizationDashboard
Wed, 11 Jul 2018 19:14:58 +0800 -- Unexpected exception during gather of site BES Support: class GatheredFilesNotVerified
```

Note: IBM License Metric Tool is not compatible with Internet Explorer. There are some button and functions might not functioned properly. Thus, ensure to install Google Chrome and use Google Chrome as browser to run IBM License Metric Tool.

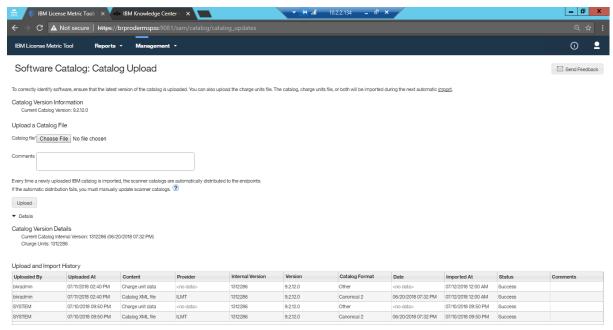
le:

- i) The Details link cannot be expands and the Upload and Import History not shown.
- ii) The Upload button doesn't indicate the uploading process.



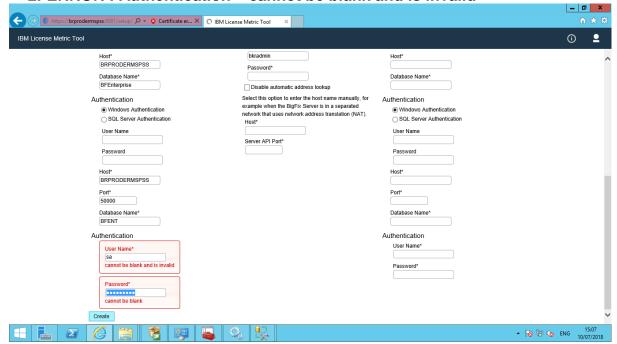


Catalog Upload page on Internet Explorer



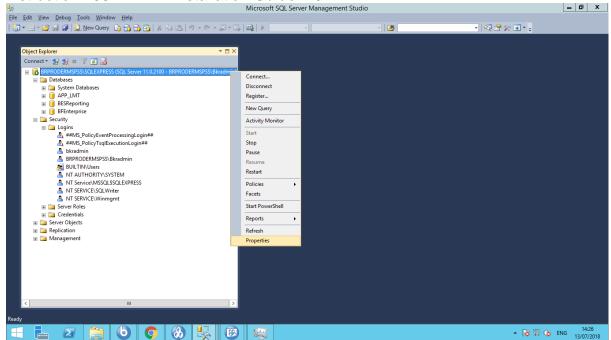
Catalog Upload page on Google Chrome

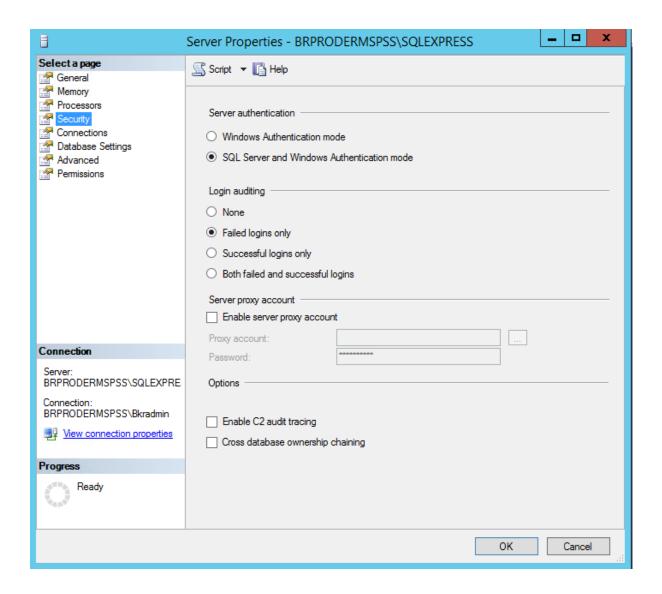
2. ERROR: Authentication - cannot be blank and is invalid



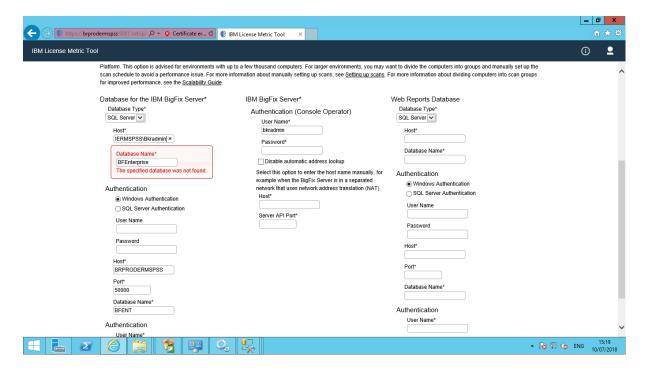
When filling the form to build the database, the Authentication doesn't need to be filled as it is signing in as Windows Authentication. However, despite of choosing Windows Authentication, if the error is still coming out, check again the Security status of the database in SQL Management Studio.

Solution: Right click on the server > Properties > Security > Follow the instruction #98 in ILMT Installation Guide 2.0





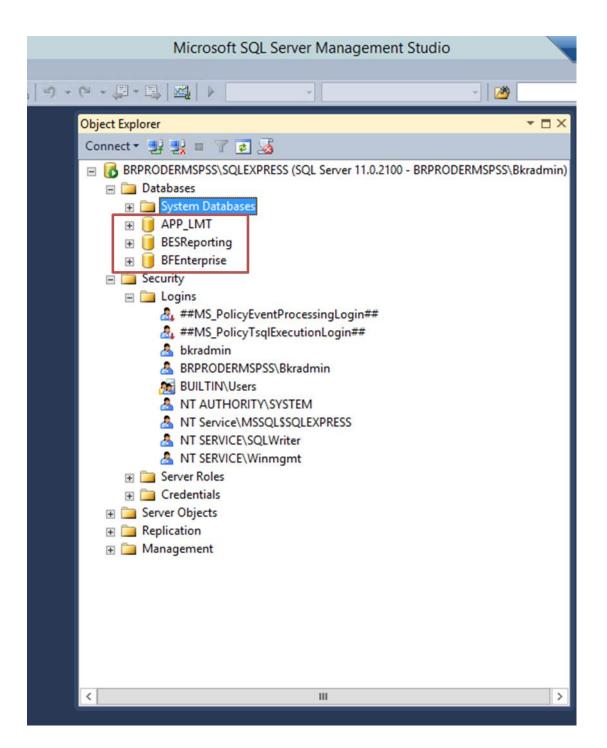
3. ERROR: Specified Database was not found

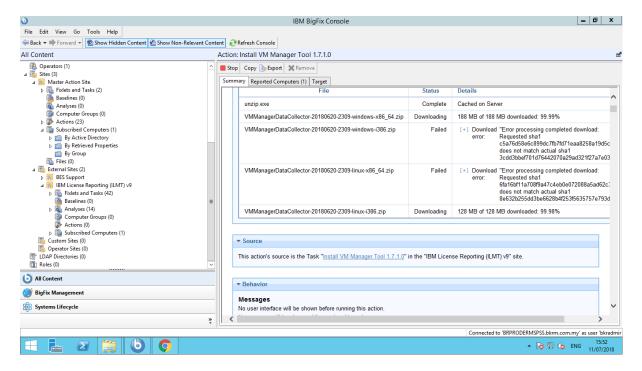


This error appears indicating there are errors during BigFix installation. The databases were already exists before the installation finished. This happens when the installed BigFix is re-installed but the databases were not deleted before the installation. Thus, when the reinstallation of BigFix is running, the database cannot be created (as there is database with the same name existed). As a result, the database cannot be detected by the server.

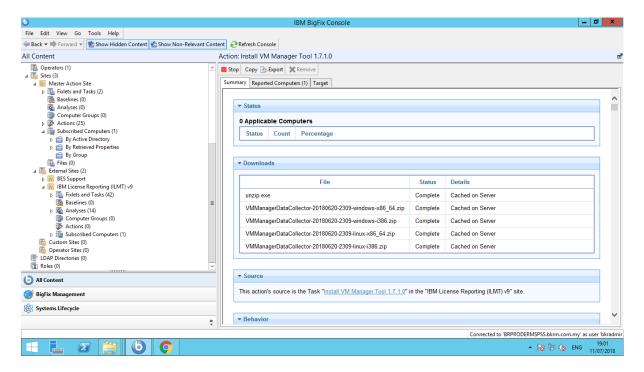
Solution:

Uninstall all BigFix > Delete all the databases > Re-install the BigFix Notes: Ensure all databases are deleted before re-install the BigFix. To delete, right click on the selected database, and click delete.

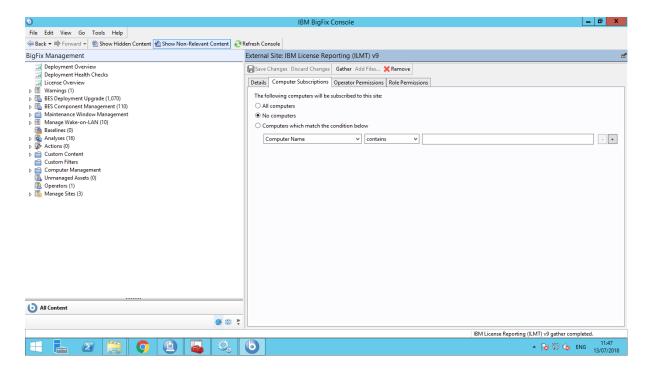




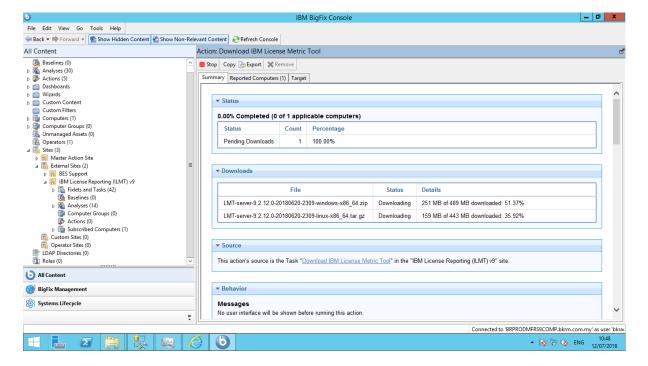
In a case of file cannot be downloaded, check whether the proxy or your internet connection has no restrictions to access to http://www.bigfix.com. To check, click the [+] Download error button, and copy the URL indicated. Paste on the browser and see if any file is downloading or not. If the file cannot be downloaded, this shows that there are restrictions on the proxy ports and internet connections.

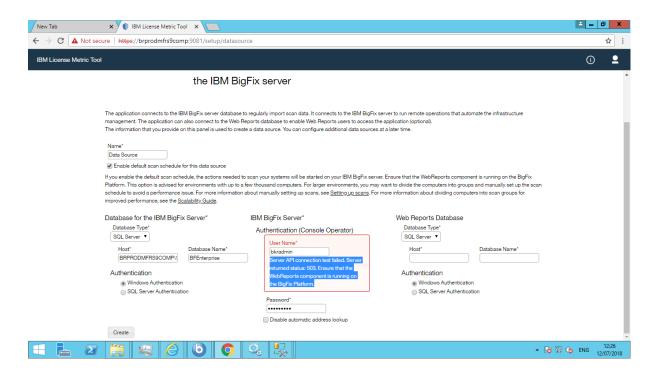


Ensure all the files are successfully downloaded. Indicator: Cached on server. And the status will turn Status: Completed



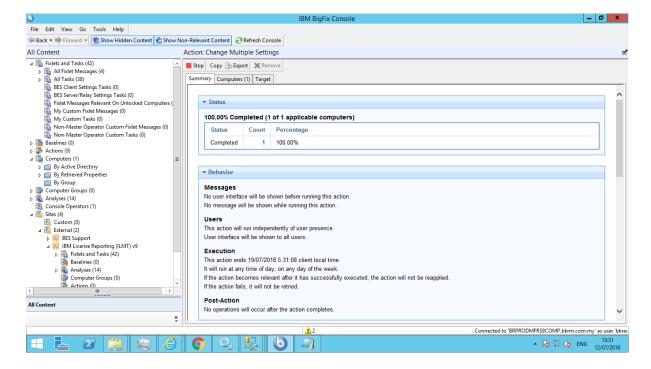
After enabling ILMT site, there are few minutes of waiting time before IBM License Metric tool fixlet can be downloaded. On Computer Subscriptions tab, all buttons for computer subscriptions is disabled by default. After the waiting time passed, the button will be enable for you to change the setting.

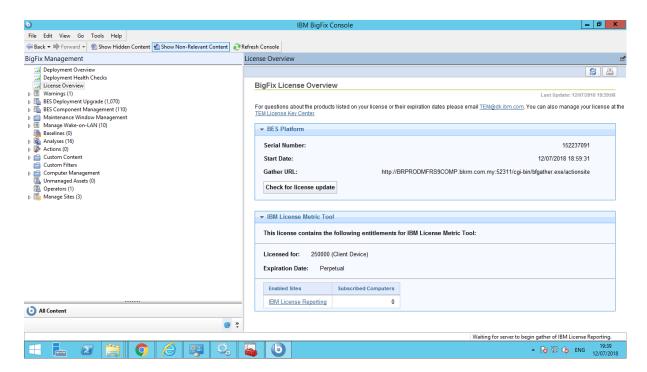




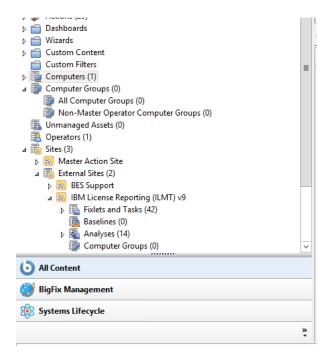
This error would appear if the database of SQL Server is not in the same drive as BigFix server installation folders. Hence, always ensure both installation path are inside C:/ Drive. Installing both inside D: Drive might causing the database cannot be connected with BigFix server as some files on SQL Server installation would need to installed in C: drive for it to be working properly.

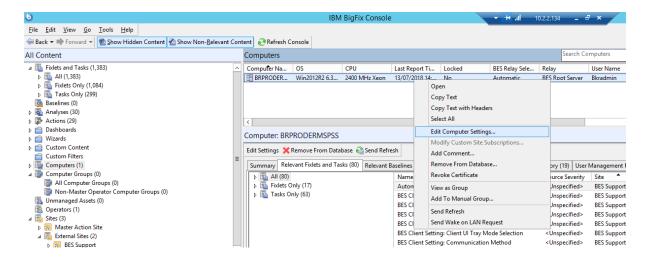
Reference: https://www.mcbsys.com/blog/2017/07/install-sql-2016-with-data-on-a-separate-drive/



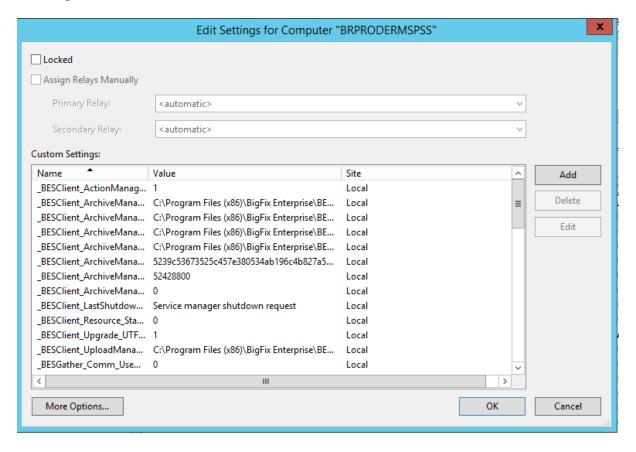


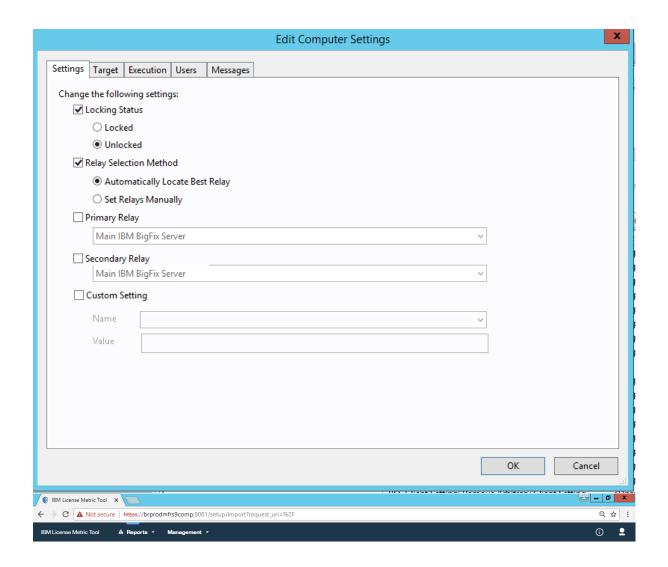
Subscribed computers should turns 1 for all fixlets are installed properly. Usually, it will turn 1 once the ILMT is finished installing. However, in a case when it doesn't turn 1, a computer setting should be changed.





On All content, click on Computers on navigation panel. Right-click on your current computer, choose Edit Computer Settings > More Options > Enable Locking Status > Unlocked > OK.

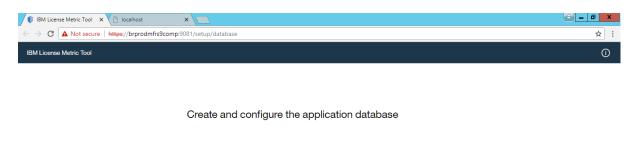




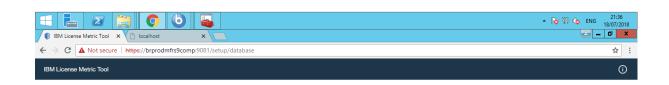
The initial import is in progress. Reports will be available when the import is complete.

Waiting for import data...*









Create and configure the application database





Reference:

Sites information:

http://www-01.ibm.com/support/docview.wss?uid=swg22010333

Ports information:

https://www.ibm.com/support/knowledgecenter/en/SS8JFY_9.2.0/com.ibm.lmt.doc/Inventory/planinconf/r_port_requirements.html

https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli+Endpoint+Manager/page/Network+Traffic+Guide