

AVEVA LFM NetView Upgrade Guide

LFM NetView Version: 4.2.2.1

Praveen Vankdoth

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aveva.com

Table of contents

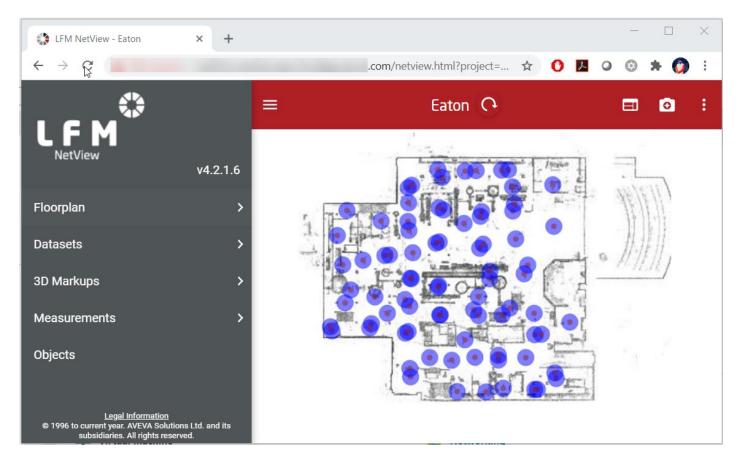
1. INTRODUCTION
2. PREPARATION PRIOR TO THE UPGRADE
2.1. BACK UP THE EXISTING CONFIGURATION
2.2. REMOVE THE OLD WINDOWS SERVICES
2.3. UNINSTALL THE OLD COMPONENTS
2.4. OBJECT SERVICE CONSIDERATIONS
2.5. PROJECT AUTHENTICATION OR SINGLE SIGN-ON7 2.5.1. Continue with Project Authentication72.5.2. Single Sign-On7
2.6. ACCOUNTING FOR SECURITY SOFTWARE
2.7. MODIFY THE STRUCTURE OF THE EXISTING LFM NETVIEW PROJECT (IF IT PREDATES LFM NETVIEW 4.2.0.0) 8
3. PREPARE THE SERVER FOR UPGRADE
3.1. OBTAIN THE REQUIRED UPGRADE SOFTWARE
3.2. PREPARE THE CHEF CLIENT
3.3. INSTALL THE LFM NETVIEW 4.2.2.1 CONFIG WIZARD
4. RUN THE LFM NETVIEW 4.2.2.1 CONFIG WIZARD – RETAINING PROJECT AUTHENTICATION
5. RUN THE LFM NETVIEW 4.2.2.1 CONFIG WIZARD – SWITCH FROM PROJECT AUTHENTICATION TO SINGLE SIGN-ON
5.1. PREPARATION FOR UPGRADING TO SINGLE SIGN-ON
5.2. RUNNING THE CONFIG WIZARD TO SWITCH TO SINGLE SIGN-ON
6. TEST THE UPGRADED LFM NETVIEW PROJECT
7. APPENDIX
7.1. ISSUES WHEN IMPLEMENTING ON A MACHINE CONTAINING CYLANCEPROTECT
8. LFM NETVIEW 4.2.2.0 RELEASE NOTES

1. Introduction

The intention of this guide is to provide the reader with an upgrade path from earlier versions of LFM NetView to version 4.2.2.1. This guide will use an LFM NetView 4.2.1.6 project being upgraded to LFM NetView 4.2.2.1 as an example.

2. Preparation Prior to the Upgrade

Before commencing with the upgrade, ensure that your existing implementation is functioning as designed, do this by accessing the LFM NetView project and successfully taking a point reading.



If this returns a valid position, the measurement will appear in the sidebar which indicates that the key components are in place and are functioning correctly. You can now proceed with the upgrade.

If you are unable to obtain a valid point reading this indicates that there is an issue with the existing deployment. Please contact your AVEVA LFM Value Added Reseller or *lfm.support@aveva.com* for help resolving any issues with the existing deployment **before beginning the upgrade**. Once any issues have been diagnosed and fixed, the upgrade can commence.

2.1. Back up the Existing Configuration

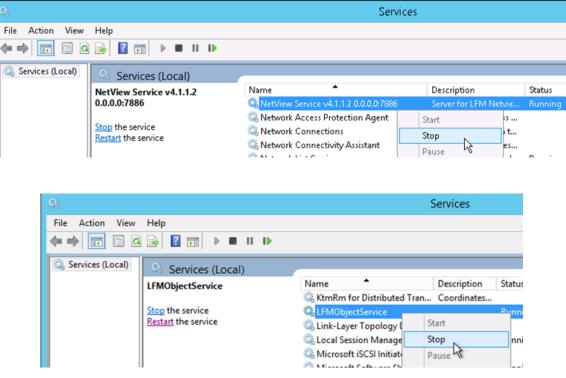
Log on to the LFM NetView server machine that you are going to upgrade using an administration account.

Take a backup of the LFM NetView Service **config.xml** file and the **1** file from *C*:*Program Files**LFM Software**LFM NetView Service (version)* folder, and store them in a safe location.

	▶ Upgrade Backup	۲	NV Upgrade
^	Name		•
	📄 1 📄 config.xml		

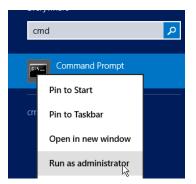
2.2. Remove the Old Windows Services

Run the Services application and stop the NetView Service and the LFM Object Service.



The above snapshots are for reference purposes only

Open a command prompt using Run as Administrator.



De-register the existing LFM NetView Service and LFM Object Service using the commands below.

Note: Your version/port numbers may differ.

Note: *Object Service* is avaiable in *LFM NetView 4.2.1.0 and prior versions*. If you are upgrading from LFM NetView 4.2.1.6 to 4.2.2.1, you will not find Object Service.

sc delete " NetView Service v4.2.1.6 0.0.0.8080"

and...

sc delete "LFM Object Service"



This snapshot is for reference purposes only

2.3. Uninstall the Old Components

From the Windows Control Panel select Programs and Features.





Uninstall the following:

- 1. LFM 4.x.x.x
- 2. LFM NetView 4.x.x.x
- 3. LFM Object Service
- 4. LFM NetView Service

For example (note your versions may differ):

LFM IIS Authentication Module
LFM IIS Encryption Handler
LFM NetView 4.2.1.6
LFM NetView Configuration Wizard
EFM NetView Service 4.2.1.6
EFM version 4.4.2.10

LFM Software Ltd LFM Software Ltd

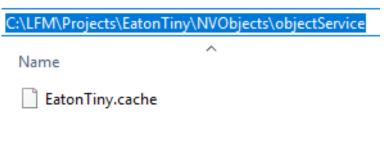
2.4. Object Service Considerations

Earlier versions of the LFM Object Service provided a facility to directly stream a 3D .zgl file to the LFM NetView BubbleViews. Later versions require the creation of additional deliverables to be placed into a cache folder. In order to create the new cache file please note that the process is detailed in the *LFM Server Home guide* that is delivered with the LFM Server product. However, the key steps are also available below...

Run the latest version of AVEVA LFM Server and open your LFM Server project. Select the *Objects* tab and right click on the .zgl model to show. Select the Preprocess for LFM NetView option from the .zgl right click menu.

LFM	Eaton.lfm - LFM: Server	Preprocess for AVEVA LFM NetView	n an an ann an ann a suite a suite fa an ann an an ann an ann an an an ann an a	?	×
File	Tools Utilities	Object File Object Cache Generator	D:\Eaton\eaton.zgl C:\Program Files\LFM Software\LFM_5301\LFMNetViewObjectCacheGenerator\NetViewObjectCacheGenerator.exe	Brow	_
	Rotate Translate Pick Extents Selected Bu Manipulation	AVEVA LFM NetView Project Locatio	n D:\Eaton\NetView_Publish	Brow	_
ă		Object Inclusion	Medium 🗡 Unselect All	Select A	AII
	Hide Show Context	PointCloud V Eaton V WORK, P	Number of BubbleViews Selected 54/54 54/54		
Volume	Clash Delete	> 🗹 WORK_P	35/35		
narks	Rename Reload file				
🗴 Benchmarks	Show in BubbleView Zoom to extents Preprocess for AVEVA LFM NetView		Process Object File	Car	ncel

This process should create the new .cache file for use with LFM NetView 4.2.2.1. The name of the .cache file should match the name of the LFM Server project.



The above image is for reference purposes only

2.5. Project Authentication or Single Sign-On

LFM NetView 4.2.1.0 onwards supports Single Sign-On to control access to the LFM NetView project. If you are switching from using the existing Project Authentication to Single Sign-On, there are several steps which must be in place first. The options to continue with Project Authentication or to swtich to Single Sign-On are discussed below.

2.5.1. Continue with Project Authentication

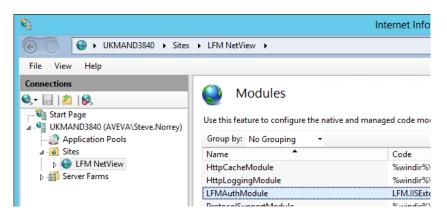
Project Authentication utilises the user accounts created inside the LFM Server project. Each user will have their own username and password which is not linked to Active Directory. Using this method, each user will be required to log in each time they want to access a project. This process is controlled using an IIS Module called *LFMAuthModule*.

If you wish to continue using Project Authentication, ensure that you select the *Project Authentication* option when you run the LFM NetView 4.2.2.1 Config Wizard during the upgrade. If you wish to switch to Single Sign-On please follow the instructions below instead.

2.5.2. Single Sign-On

Single sign-on (SSO) is a session and user authentication service that permits a user to use one set of login credentials (username and password) to access multiple applications. The user is asked to login on first connection to LFM NetView and is then given an authentication token for a certain period of time (this period of time is defined during deployment in the LFM NetView Config Wizard). Whilst the authentication token is still valid the user does not need to enter their credentials again in order to access further authrorised LFM NetView projects. When the token expires, the user will be asked for their credentials again which will re-new the authentication token. If you decide to switch from *Project Authentication* to *Single Sign-On* you will need to have several things in place before you start the upgrade as mentioned below. These items are discussed in more detail in section *6.1. Preparation for Upgrading to Single Sign-On*.

- You will need to have a Windows Authentication Security group created for each of the projects that you host on your LFM NetView Server. You will be asked for the group prefix when using the *Config Wizard*.
- You will need to add the users to each of the groups, so that they can gain access to the project.
- You will need to know what duration to apply to the access tokens that will be used to permit subsequent access. A range between 1 and 12 hours can be permitted.
- You will need to manually remove the *LFMAuthModule* module in order to avoid any conflict between the two authentication methods. Running the LFM NetView 4.2.2.1 Config Wizard and selecting *Single Sign-On* will automatically implement a replacement module in IIS.



• Finally, the Single Sign-On Authentication method defaults to https and it is recommended that this protocol is used.

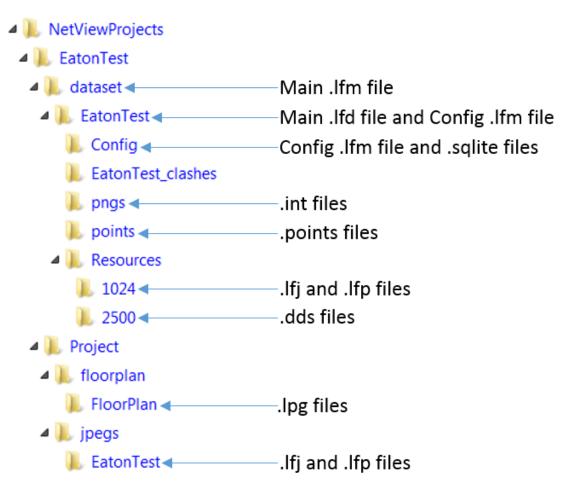
2.6. Accounting for Security Software

If your server has security software installed, it is possible that this could conflict with the running of the PowerShell scripts used for the upgrade. <u>Please check prior to commencing the upgrade if your Server has any such software</u> <u>installed.</u> If you have such software in place it should be disarmed for the duration of the upgrade. If you have Cylance installed, please see the section on *Accounting for Cylance* in the appendix.

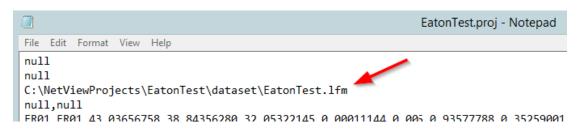
2.7. Modify the Structure of the Existing LFM NetView Project (if it predates LFM NetView 4.2.0.0)

LFM NetView versions 4.2.0.0 and later have been designed to support projects containing multiple datasets. Therefore, if your dataset predates this version, it is necessary to modify the project data structure and edit the .proj file to reference the .lfm rather than the .lfd file. This is covered in the steps below. If your dataset does not predate LFM NetView 4.2.0.0 please proceed to the next section.

- In the dataset folder which contains the .lfd file, create a folder with the name of the dataset and put everything **except the .lfm file** in the newly created folder.
- In the jpegs folder within the project folder, also create a folder with the name of the dataset and put everything in it.
- The following diagram, shows the main file types found in each folder.



• Navigate to and open the existing .proj file. Edit this so it refers to the .lfm file rather than the .lfd

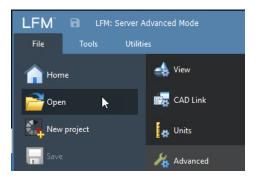


The .lfm file must be in the **dataset** (original location) folder. As the location of the .lfd file has changed you will need to open LFM Server to relocate the .lfd file as described below.

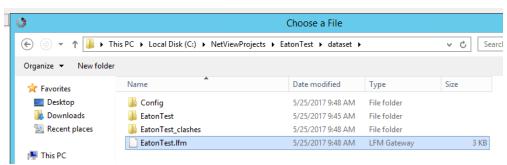
• Run LFM Server.



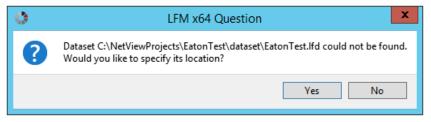
• Select Open.



Select the .lfm file.



• The dataset will be unable to locate the .Ifd file so select Yes on the dialog box shown below.



• Navigate to and select the **.lfd** file.

0	Choose a file						
🔄 🍥 👻 🕆 🌗 🕇	🛞 💿 👻 🕆 🌗 > This PC > Local Disk (C:) > NetViewProjects > EatonTest > dataset > EatonTest > 🗸 🖒 Search Eaton						
Organize 🔻 New folde	r						
☆ Favorites	Name	Date modified	Туре	Size			
Desktop	퉬 Config	3/9/2017 5:23 PM	File folder				
〕 Downloads	퉬 EatonTest_clashes	3/9/2017 3:26 PM	File folder				
📃 Recent places	퉬 pngs	3/9/2017 1:05 PM	File folder				
	퉬 points	3/9/2017 1:54 PM	File folder				
🖳 This PC	Resources	3/9/2017 5:15 PM	File folder				
🖵 C on UKMANL5427	EatonTest.lfd	3/8/2017 5:45 PM	LFM Gateway	1,442 KB			
Desktop							

• Exit LFM Server.

3. Prepare the Server for Upgrade

3.1. Obtain the Required Upgrade Software

Obtain the installers for the following components and copy them to the LFM NetView server that you wish to upgrade.

LFM NetView 4.2.2.1	https://www.aveva.com/en/Services_and_Support/AVEVA_Product_Support/
Chef Client 12.21.26 (Windows)	https://downloads.chef.io/chef/stable/12.21.26

Once these installers are present on the LFM NetView server machine, follow the steps below.

3.2. Prepare the Chef Client

Log on to the LFM NetView Server machine that you are going to upgrade using an administration account.

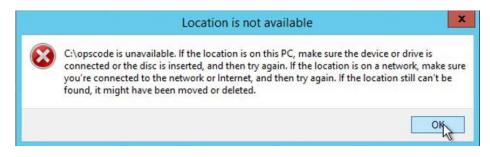
LFM NetView 4.2.1.6 and later versions are designed to be installed using Chef Client 12.21.26, therefore the Chef Client will need to be upgraded first if it using older versions.

3.2.1. Update your Current Chef Client

In the Windows Add/Remove Programs dialog, right click on the Chef Client and select Uninstall.

Organize 🕶 Uninstall Change	Repair
Name 📩	Publisher
Schef Client v12.12.15	Uninstall
Phillipping Provide House	Change
B protocol in	Repair ftv
TEM IS Authentication Module	LEM Softy

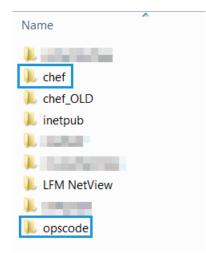
If you see the message shown below, simply click OK on this dialog.



Remove or rename the C:/chef folder and install version 12.21.26 of the Chef Client.



The *opscode* and *chef* folders are now reinstated.



3.3. Install the LFM NetView 4.2.2.1 Config Wizard

When installing the Config Wizard it will overwrite the previous version of this component.

Name	Date mod		
JE LEM	7/3/2017		
🍌 LFM NetView Configuration Wizard	12/20/20	•	
LFM NetView Service	7/3/2017	Name	Date
LFM NetView Service 4.2,0.0	7/3/2017		12/20
📕 LFMLite	4/12/201	💭 ConfigWizard.exe	8/11/
J Sentinel	12/20/20	QtCore4.dll	8/8/2
🖟 vc_redist_x64.exe	8/26/2010		
🛃 vc_redist_x86.exe	8/26/2011	🚳 QtGui4.dll	8/8/2
vcredist_x64.exe	2/27/201	QtNetwork4.dll	8/8/2
vcredist_x86.exe	2/27/201	QtXml4.dll	10/29

4. Run the LFM NetView 4.2.2.1 Config Wizard – Retaining Project Authentication

In this example, the Config Wizard will be executed on a project that is currently using Project Authentication which will continue to use Project Authentication after the upgrade. If you wish to switch from Project Authentication to Single Sign On, please see section 5 - Run the LFM NetView 4.2.2.1 Config Wizard – switch from Project Authentication to Single Sign-On

Before implementing the new components, make sure that *Chef v12.21.26 has been installed* and *any requirements regarding security software* have been applied. Failure to do so is likely to result in the PowerShell Scripts failing.

Please note the information provided to the Config Wizard is that of the project that has already been implemented on the LFM NetView server machine.

• Run the Config Wizard.

a) 🐴	LFM NetView Se	avico Configura	ation Wizara		?	x
2 👐	LEINI INELVIEW SE	Ivice Conligura				
Licen	ce Agreement					
covere	M NetView Configuration d by the following Lice continuing.					:
	RTANT NOTICE: PLEAS RE INSTALLING THE SC		JSER LICENCE A	GREEMENT CARE	FULLY	^
and LF	ence agreement ("Lice M Software Limited o s software product ("S	r based on where yo	ou live, one of ou	ur affiliates ("LFN	4" or [‡] we	
●Ia	cept the agreement					
ΟId	o not accept the agree	ment				
			[Next	Cano	el

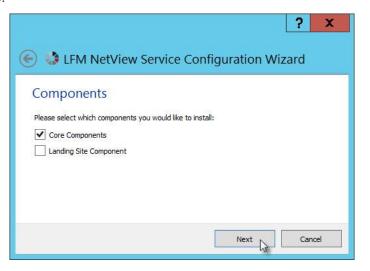
• Select New.

	?	x
) 📀 👶 LFM NetView Service Configuration Wizard		
Load Configuration Load an existing wizard configuration from a file or start with a new configuration. New Start with a new, empty configuration.		
Load from File Load an existing configuration.		
Next	Can	cel

• Select Normal Configuration.

? X
EFM NetView Service Configuration Wizard
Introduction
Please choose which LFM NetView Service configuration route you wish to follow:
Normal configuration
O Multiplex configuration
Change Destination
Change Chef Location
Next Cancel

• Select Core Components.



• Provide the details of the existing project and select *Project Authentication*.

		? ×
← 🛟 LFM NetView	Service Configuration Wizard	
Configure the w	ebserver	
Enter the host-address and	port you wish to use for the LFM NetView	webserver
Protocol:	HTTP Secure (HTTPS)	•
Address:		
Port:	443 .	
Project Name:		
Select Project:	G: \WVPublish \Project	Browse
Select Authentication Type:	C Single Sign-On Pr	oject Authentication
	Next	Cancel

• Provide the *passwords.pwd* location.

? x
C 🚯 LFM NetView Service Configuration Wizard
Project Authentication
Please configure the settings for project authentication
Password File: C:\WVProjects\AVALON\Project\passwords.pwd Browse
Next Cancel

• Select Listen on *any address*.

	? ×
⋲ 👶 LF	M NetView Service Configuration Wizard
Config	ure networking for LFM NetView Service
Choose th	e address and port you wish LFM NetView Service to listen for requests on:
🔿 Listen	on a specified address
Listen	on any address
Address:	avalonnv1
Port:	8080 Cannot bind to this port
	Next 💦 Cancel

• Leave the default valules and select *Next*.

	?	x
) 😸 🚯 LFM NetView Service Configuration Wizard		
Configure LFM Server connection for LFM NetView Servic	е	
Port Range: \$130 - 6135		~ >
Connection timeout: 15 minutes		*
Next	Can	icel

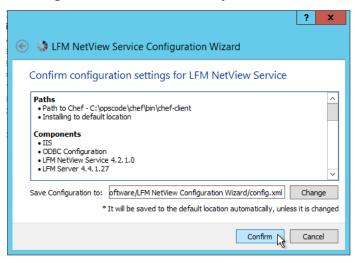
• Specify where the license file is held. If this is on the same machine you are using enter *localhost*.

	?	x	
📀 🤹 LFM NetView Service Configuration Wizard			
Configure the licence server for use by LFM Server			
Specify licence server? Licence server:			1
Next	Can	cel	

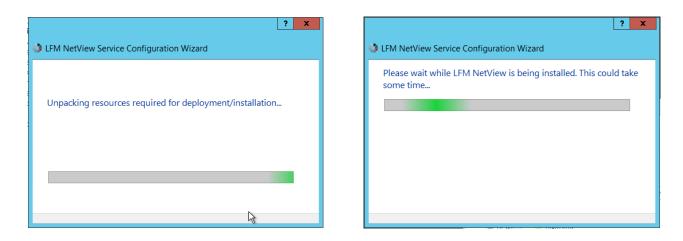
• Provide the SQL DB credentials.

) 🔄 👶 LFM NetView Ser	vice Configuration Wizard
J	se connections used by LFM NetView Service d credentials for the database you wish LFM NetView Service to SQLEXPRESS
	Next Cancel

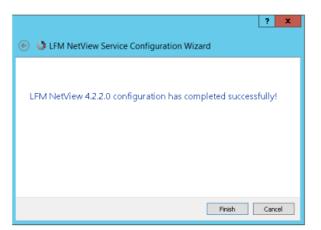
• Select the folder to save the configuration file to and click *Confirm*.



• The upgrade will now begin.



• The upgrade is now complete.



This should complete the upgrade and project should now be tested. See *Test the Upgraded LFM NetView Project*.

Run the LFM NetView 4.2.2.1 Config Wizard – switch from Project Authentication to Single Sign-On

5.1. Preparation for Upgrading to Single Sign-On

Prior to upgrading an existing project using Project Authentication to one that supports Single Sign-On (SSO) ensure that the following are in place:

- In order to implement LFM NetView with the Single Sign-On feature, it is advised that the LFM NetView project uses the HTTPS protocol. Ensure that an SSL certificate has been added (check the bindings) or alternately you can add a self-signed one for testing purposes (at the Server level).
- Create a Security group in Windows Authentication and add the users that you wish to access the project. Note, the name of the Security group should be made up of the GroupPrefix and the name of the LFM NetView .proj file (GroupPrefix+ProjectID). For example, a Security group called Lon.Eaton could be used for a group containing London based personnel (Lon.) who require access to a project called Eaton. Individual users requiring access to the LFM NetView project should be added to the newly created security group.
- When switching to SSO, the Config Wizard will present the **Token Lifetime** and the **Group Prefix** as entries to complete. The Token Lifetime can be set from 1 12 hours. This means that the users will provide their login credentials once and will not be required to supply them again until the Token expires.
- When using SSO a new Module is implemented in IIS and is used to grant or deny access. Failure to comply will result in rejection and you will not be able to access the LFM NetView project.
- When switching to Single Sign-On Authentication you should remove the existing LFMAuthModule from IIS. This
 was used to support LFM NetView using Project Authentication and will conflict with the module that supports
 SSO.

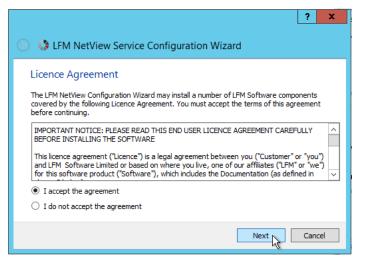
Modules Use this feature to configure the native ar Group by: No Grouping •	nd managed code modules that proces
ProtocolSupportModule RequestFilteringModule RewriteModule ServiceModel StaticCompressionModule View C	Code %windir%\System32\inetsr %ProgramFiles%\IIS\Applic %windir%\System32\inetsr %windir%\System32\inetsr %windir%\System32\inetsr %windir%\System32\inetsr %windir%\System32\inetsr %windir%\System32\inetsr %windir%\System32\inetsr 1.EAUISE-transion Authenti Managed Module Authenti gure Native Modules 32\inetsr stem32\ del.Activ 32\inetsr 32\inetsr 32\inetsr 32\inetsr
	Use this feature to configure the native ar Group by: No Grouping Name AnonymousAuthenticationModule ApplicationRequestRouting ConfigurationValidationModule CustomErrorModule DefaultDocumentModule DirectoryListingModule HttpLoggingModule HttpLoggingModule LFMAuthModule LFMTokenAuth ProtocolSupportModule RequestFilteringModule RewriteModule StaticCompressionModule StaticFileModule View O

5.2. Running the Config Wizard to Switch to Single Sign-On

In this example, the Config Wizard will be run on a project that is currently using Project Authentication and, following the upgrade, will be switched to SSO. Before implementing new components, ensure that *Chef has been upgraded* and any *requirements regarding security software* have been applied. Failure to do so is likely to result in the Chef Scripts failing.

Before commencing, please ensure you have read an implemented the preparation steps in section 5.1 – *Preparation for Upgrading to Single Sign-On*.

• Run the Config Wizard as an administrator.



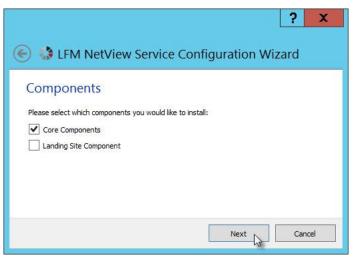
• Select New.

? X
📀 LFM NetView Service Configuration Wizard
Load Configuration
Load an existing wizard configuration from a file or start with a new configuration.
New Start with a new, empty configuration.
Load from File Load an existing configuration.
Next Cancel

• Select Normal Configuration.

? X
📀 🔹 LFM NetView Service Configuration Wizard
Introduction
Please choose which LFM NetView Service configuration route you wish to follow:
Normal configuration
Multiplex configuration
Change Destination
Change Chef Location
Next Cancel

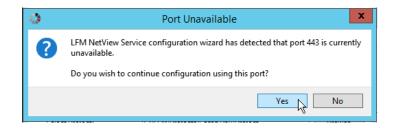
• Select the Core Components.



• Add the details and select *Single Sign-On*.

📀 🤑 LFM NetView S	ervice Configuration Wizard	? X
Configure the web	Server	
Protocol: Address: Port: Project Name: Select Project: Select Authentication Type	HTTP Secure (HTTPS) HTTP Secure (HTTPS) HTTP Secure (HTTPS) EatonTiny EatonTiny C:\LFM\Projects\EatonTiny\Project Single Sign-On Project Authene	Browse
	Next	Cancel

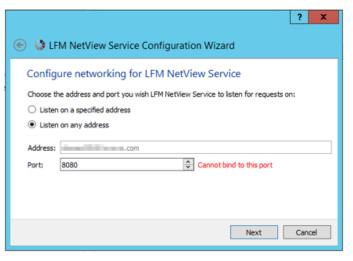
Click Yes.



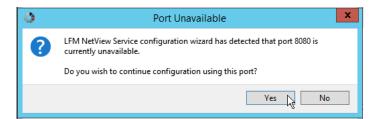
• Provide the Token time and Group Prefix.

? ×
📀 🤹 LFM NetView Service Configuration Wizard
Single Sign-On
о о
Please configure the settings for Single Sign-On Token Lifetime: 2
Token Lifetime: 2 🗘 hours
Group Prefix: Hyd.
Next 💦 Cancel

• Provide the information for the LFM NetView Service.



• Press Yes.



• Provide further details for the LFM NetView Service.

	?	x
📀 👶 LFM NetV	iew Service Configuration Wizard	
Configure LFM	Server connection for LFM NetView Service	
Port Range:	β130 ÷ 6135	^
Connection timeout:	15 minutes	*
	Next 💦 Cance	I

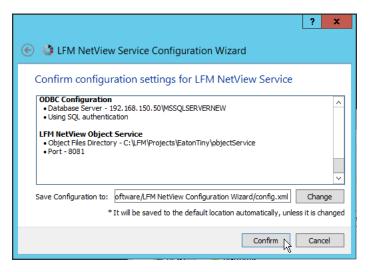
• Specify where the license file is held. If this is on the same machine you are using enter *localhost*.

?	x
📀 🤩 LFM NetView Service Configuration Wizard	
Configure the licence server for use by LFM Server	
Licence server: localhost	
	_
Next Cance	!

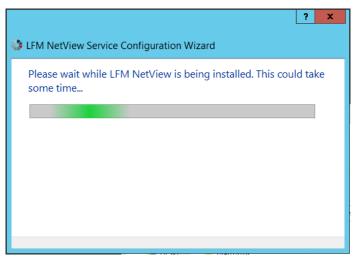
• Provide the SQL Database details.

🛞 👶 LFM NetView Ser	? ×
5	se connections used by LFM NetView Service
connect to: Database Server:	192. 168. 150. 50 (MSSQLSERVERNEW)
Use Windows Authentication: Database Username:	sa
Database Password: Confirm Password:	······
	Next Cancel

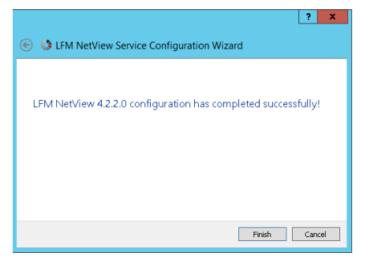
• Select the folder to save the configuration file to and click *Confirm*.



• The upgrade will now begin.



• The upgrade is now complete.



6. Test the Upgraded LFM NetView Project

The upgrade process in now complete. Before testing the new version of LFM NetView, please ensure that the cache of the browser on the client machine has been cleared. Also ensure that any *precautions that were taken regarding security software* and the operation of the Chef Client are returned to their default settings.

It should now be possible to run the LFM NetView project, Note that the URL takes the following form: https://DomainName/netview.html

If logging in to a project using *Project Authentication* you will be required to provide the familiar twin authentication components when presented with the two login forms. You will also need to supply your Project name (the complete path to the project file or .proj is not required).

If you are logging into a project that has switched to the *Single Sign-On* method of authentication, you will just need to supply your Project name (once again the complete path to the project file or *.proj* is not required), followed by your corporate username (the short form is all that is required – *my.name* rather than *my.name@company.com*) and your corporate password.

AVEVA LFM ~ v4.2.2.0	
LOG IN	
Project file path	

Observe the version numbers that are presented in the LFM NetView interface, if old version numbers are presented, it is likely that the browser cache requires clearing. When the version looks correct and you are able to successfully take a point measurement, it will confirm that the upgrade has been completed successfully.

If you have problems with accessing the project, it is helpful to select **F12** on your browser and select the **Network** tab. This can help you to solve issues when trying to access the LFM NetView project.

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	AVEVA LFM	Network > • 6 6 ‡ ; X > > ? ? ? ? ? ? ? > ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? <t< th=""></t<>
	V4.2.2.0	
	Project file path	Recording network activity Perform a request or Int Ctrl + R to record the reload. <u>Learn more</u>

7. Appendix

7.1. Issues when Implementing on a Machine Containing CylanceProtect

When implementing or upgrading onto a machine that is using CylanceProtect it is necessary to make some temporary changes to the Environment Variables in order to accommodate CylanceProtect.

Make a note of the current values for the User and System, *TEMP* and *TMP* variables. Then edit these variables to point to a folder called *scripts* on the Desktop. Once this change is made restart the server.

	Value
TEMP	C:\Users\\Desktop\scripts
TMP	C: \Users
vstem variables	New Edit Delete
Variable	Value
Variable TEMP	Value C:\Users\users\users
TEMP	C: \Users \

Remember to change these variables back to their previous values once the upgrade is complete.

8. LFM NetView 4.2.2.1 Release Notes

The product release notes can be obtained from the following location: https://lfmproducts.blob.core.windows.net/lfmtemporaryaccessinstaller/AVEVA%20LFM%20NetView%20Release%2 0Notes%20-%20v4.2.2.1.pdf