Product Release Summary
AVEVA LFM NetView 4.2.1.6

Release Date: 16/07/2018

This document outlines all changes made in the above release of AVEVA LFM NetView software.

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Superseded Software Version: LFM Server 4.2.1.0

1. AVEVA LFM Version Numbers

AVEVA LFM version numbers take the format X.X.X.X.

- First version field denotes general software series number.
- Second version field is incremented to track major new feature implementation.
- Third version field is incremented to track minor new feature implementation.
- Final (fourth) version field is incremented to track error fixes.

2. Enhancements for this release: 4.2.1.0

2.1. Client Improvements

2.1.1. Single Sign-On (SSO)

Currently, LFM NetView 4 users are able to manage and control access to their projects using LFM NetView 4's in-built User Control functionality. In this newest version of LFM NetView 4, users will have an optional route to access their projects – On-Premise Single Sign-on. This allows users access to LFM NetView 4 projects using their Windows Credentials as setup by their company's IT departments. Once their credentials have been entered, an access token is created allowing them to continually login to a project without the need to re-enter their credentials - access then persists as long as the token is valid. IT Administrators can assign access to projects by defining groups – any user who is part of a specific group, can access LFM NetView 4 projects associated with that group.

This allows greater management and control of access to LFM NetView 4 projects, complimenting organizations' existing IT security procedures. LFM NetView 4 Administrators can more easily provide and revoke access to projects, whilst Users experience a more fluid login process.

2.1.2. Google Maps Landing Support

Geographic Information Systems (GIS) are becoming more important in our increasingly digital world. With vast amounts of information at our disposal, GIS systems are a fantastic way of presenting data to users in an easy-to-navigate, graphical way. LFM NetView 4 users are familiar with accessing their many projects through project landing pages – now with Google Maps support, users can access their projects through this. Users simply access their GIS landing page where they can visually see their assets distributed across the globe, represented by pins on the map showing the asset's exact geographical location. Combined with LFM NetView 4's new Single Single-On (SSO) capabilities, users will only see the assets that are relevant to them, further improving efficiency navigating project and controlling access.

2.1.3. Scanner Meta-Data

LFM users are familiar with the wealth of information the Trusted Living Pointcloud provides them. Improving on this information, LFM NetView 4 now displays laser scan meta-data retrieved during the scan import process in LFM Server: Gateway Mode. Meta-data such as time and data of the scan, as well as the scanner model and manufacturer, will now be displayed in LFM NetView 4. In LFM NetView 4, users can also filter on the scan date and time, allowing them to isolate specific scans within a range – hiding scans that fall outside this range. This gives users greater control over the scans they want to see in a project, increasing their efficiency when navigating complex projects day-to-day.

2.2. Server-side Improvements

2.2.1. Concurrent Object Service

Displaying CAD models (objects) in LFM NetView 4 has been a core feature since the product was initially launched and has been a constant area of improvement throughout the life of the product. This version again improves on the way objects are handled in LFM NetView 4, providing increased performance and functionality. Users can now expect to experience:

- Faster loading times
- Support for one CAD model per LFM NetView 4 project
  - Previously LFM NetView 4 only supported one CAD model per server
- Improved performance and stability
- Lower memory footprint
- Faster response times for concurrent users

When users access a BubbleView, LFM NetView 4 will automatically download the CAD model components that are appropriate for the viewpoint. Through the use of caching (calculated in LFM Server) and intelligent requests, LFM NetView 4 will only download what it needs to show on-screen. When a user rotates a BubbleView, or opens a new BubbleView, LFM NetView 4 will respond by downloading the additional CAD model components it can now see. These improvements will give users a much cleaner, fast and efficient experience when working with CAD model overlays in LFM NetView 4.

2.2.2. AVEVA NET Improvements

In this latest version of LFM NetView 4, improvements on the integration between AVEVA NET and LFM NetView 4 have been a critical focus. Users will now be able to harness the integration between the two products by connecting one AVEVA NET project to multiple LFM NetView 4 projects. This is very important for users who are looking to consolidate all their asset information in one AVEVA NET server, whilst retaining independence of their laser data through several LFM NetView 4 projects.

3. Documentation for this release: 4.2.1.6

The deployment guide for LFM NetView 4.2.1.6 can be found here.

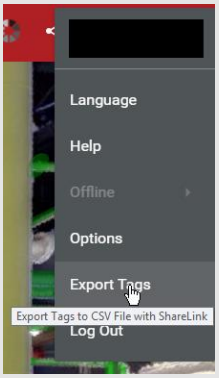
The upgrade guide for LFM NetView 4.2.1.6 can be found here.

4. Known issues for this release: 4.2.1.6

INTERNAL REFERENCE	DESCRIPTION
LFMNV-1266	Unable to create offline session in Internet Explorer when using Windows 7.
LFMNV-1235	Offline session doesn't work without internet connection for projects with self signed certificates. Please use the workaround below to get around this issue if you are using Chrome: 1. Create a shortcut to Chrome or use an existing one. 2. Right-click and click on properties. 3. In the target field add '--ignore-certificate-errors' 4. e.g "C:\Program Files (x86)\Google\Chrome\Application" --ignore-certificate-errors For Internet Explorer you will need to install the self signed certificate onto the client machine. Guidance on how to do this can be found here - https://blogs.technet.microsoft.com/sbs/2008/05/08/installing-a-self-signed-certificate-as-a-trusted-root-ca-in-windows-vista/

5. New Features/Improvements for this release: 4.2.1.6

Internal reference	Description
LFMNV-1109	More granular permissions in Single Sign On. It has been improved to have the ability to control guest and admin users through Single Sign On.
LFMNV-1167	When the user installs LFM NetView using the Config Wizard the user will no longer have to configure an Object Service (there will be no component and tab page present). IIS now acts as the object service. The Config Wizard will configure IIS to recognize *.cache* extensions as a valid file format treating them as binary (application/octetstream mime type). Previously the user would specify a directory of where the object files would live for all projects (during setup in the Config Wizard) and this directory would contain a set of *.cache* files with the names being the same as the LFM NetView project of interest. Instead the user will now have to create a directory called "objects" inside each LFM NetView project directory (next to the "floorplan" and "jpegs" directory) and place their *.cache* files in there. The file still needs to have the same name as the project with the *.cache* extension.
LFMNV-1180	The browser URL should now change based on where the user is in the BubbleView navigation. The user is now able to navigate through LFM NetView using the forward and backward browser history buttons. The browser URL is also now added to the browsing history.
LFMNV-1186	The Export Entities option for Offline session is now disabled as the user won't be able to use the sharelinks exported as it is offline. Also, you won't be able to take objects offline and hence having the sharelinks taken offline isn't desirable.

LFMNV-1230	Guest user login information is saved in the form of encryption for the URL's generated when exporting entities.
LFMNV-1239	Option to auto-login to the project is now available when exporting entities (Markup, BubbleView etc.,). This is available for the guest user in project authentication only.
LFMNV-1156	Export tags sharelink URLs into a csv file format. The workflow for this is: 1. Select the *Export Tags* option in the Options dropdown menu in LFM NetView. 2. Select which Tags you would like to export. 3. Enter your password and download the file (if there are no markups/scans/objects in the export nothing will be downloaded). 4. Use the link in the exported .csv file which will bring you to the entity you want. 5. A "Fetching Data" dialog will pop up until the entity type you have selected has been loaded. 6. The relevant BubbleView will be opened and the entity will be selected (just the BubbleView will open if you have selected a scan in the csv file).  This works with both Project Authentication and Single Sign On deployments.

6. Error fixes for this release: 4.2.1.6

INTERNAL REFERENCE	DESCRIPTION	SOLUTION
LFMNV-1137	Movement in the BubbleView is extremely slow for projects containing a deep hierarchy of objects or Markups.	Fixed – The user is now able to open and rotate BubbleView smoothly when the project contains a deep hierarchy of objects or Markups.
LFMNV-1141	The initial object selected from the objects list is displayed in BubbleView is 180 degrees out, when viewing the LFM NetView project inside AVEVA NET.	Fixed – The object is displayed in the correct orientation when the user selects from the objects dropdown list.
LFMNV-1121	Descriptions/Labels on Markups stops LFM NetView from loading Markups.	Fixed – The descriptions/Labels no longer prevent Markups from loading and are displayed in the tooltip for the Markup underneath the Markup name in LFM NetView.
LFMNV-1134	In LFM NetView – Google Maps Landing Site, the *Open Project* dialogue is overridden by dataset grouping for projects which are located at the same place geographically.	Fixed – The *Open Project* dialogues are displayed correctly in the Landing Site even when they are located at the same geographical location.
LFMNV-1133	In LFM NetView – Google Maps Landing Site, when clicking on a demo project initially, any projects that aren't in the first area of the map, will be navigated to with either inappropriate extents or incorrect locations.	Fixed – The view now navigates to the location where the project is when the project is first clicked inside the Landing Site.
LFMNV-1103	In LFM NetView – Google Maps Landing Site, it is sometimes observed that black scan markers are displayed for a project when the user switches from one dataset to another.	Fixed – The issue was with the color coding. The scan markers were getting the right colors but the default color was black which is now changed to blue.
LFMNV-1102	In LFM NetView – Google Maps Landing Site, when the user zooms to a project, the view jumps back to previously selected project in map.	Fixed – The user can now navigate to different datasets available in the map, without the view shifting to the previously selected project.
LFMNV-1110	When the Object Service fails after a connection is acquired or if there are no objects in the project, the sync icon will keep spinning.	Fixed – The sync icon stops spinning after LFM NetView finishes loading the objects or if there are no objects.
LFMNV-1107	When the Landing Site and LFM Netview projects are hosted on different domains, the LFM NetView project does not log in automatically when accessed from the Landing Site.	Fixed – The user can now auto-login to the LFM NetView project when accessing via Landing Site which is on a different domain.
LFMNV-1123	Markup editing state persits in the BubbleView after cancelling it from the sidebar.	Fixed – The user can now exit Markup editing in the BubbleView by clicking on the ‘X’ button of the Markup. Clicking on the *Cancel* button beside the *Submit* button will only cancel the tag editing.

7. Product QA cycle:

The development philosophy used to produce AVEVA LFM NetView applies AGILE principles to ensure a high-quality product which evolves to match customer requirements. Throughout the development cycle, test and evaluation is used to guide the process and minimise the final test overhead.

The final test process has three stages, and this document has been prepared after these have been completed. These stages are outlined below.

7.1. Individual Function Test

All LFM NetView functionality is examined for correct responses. Functions called from the project components browser, PowerWheel and BubbleView are tested in turn. This ensures that the functionality matches the design intent, and previously recorded errors have been fixed.

7.2. Destructive Test

This section of the test schedule is aimed at investigating to see if a software product exhibits proper behaviour when subjected to improper usage, or improper input. The tests are applied to different data samples, machines, and in a random manner to try to replicate 'real world' variations in user conditions.

7.3. Software Acceptance Tests

AVEVA concludes the LFM NetView test cycle with a series of controlled examples aimed at simulating real life use situations. The finished models are QA checked against calibrated historical data, to ensure that the product maintains the previous output standard.