PRODUCT DATASHEET

AVEVA LFM Server

Import 3D data and interface with all major CAD packages in one unified work process

At AVEVA LFM™ we have created a vision to deliver a 'Trusted Living Pointcloud' to track the evolution and growth of your assets.

AVEVA LFM Server sits at the core of this vision, allowing you to create and use projects of unlimited size, with a centralised data source that offers unlimited, concurrent access for your global workforce.

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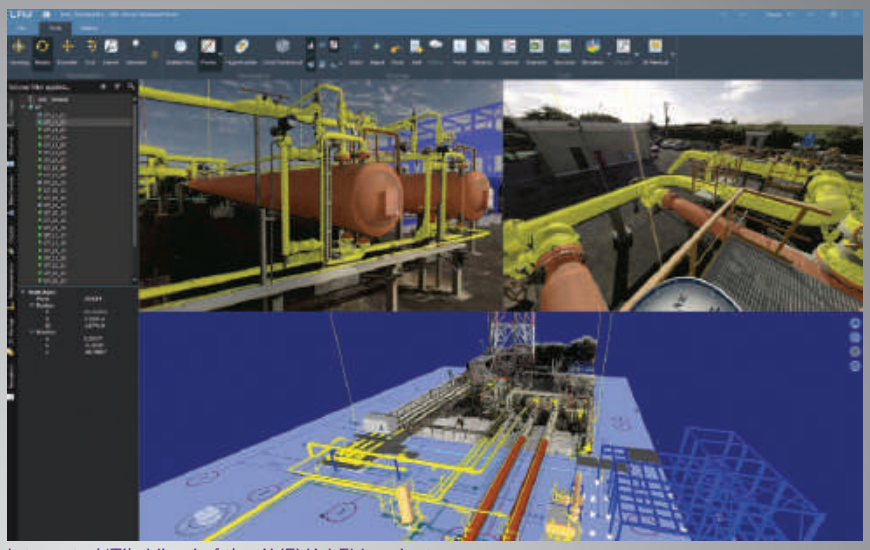
Simple to use and offering unrivalled performance and functionality, AVEVA LFM Server integrates seamlessly with 3D data capture hardware, third-party CAD packages, and within asset management applications, so you can build a reliable, up-to-date asset model using data from any source.



Integrated 'Tile View' of the AVEVA LFM project

Business Benefits

'A Trusted Living Pointcloud' for better decision making

Reduce expensive site and survey activities by maximising the 3D data you have already captured. Rather than starting from scratch at every step of an evolving asset's lifecycle, AVEVA LFM Server promotes the reuse of project resources when managing change. The 'Trusted Living Pointcloud' allows you to quickly and easily reflect current conditions on-site, to help make up-to-date, effective and informed decisions.

Open on the input. Open on the output

AVEVA LFM Server can read all recognised 3D data capture standards, including 'unstructured' data from mobile, aerial and hand-held devices, providing complete interoperability, and seamless integration with all leading 3D CAD packages.

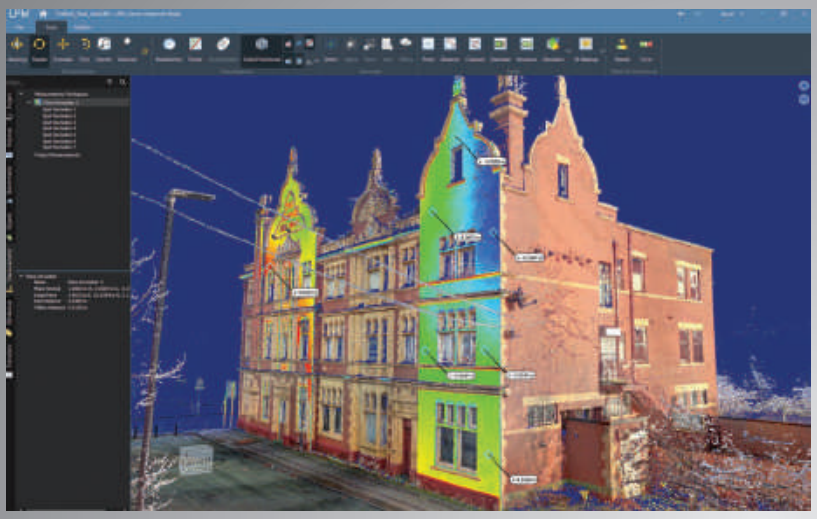
Increase productivity with unlimited datasets

Create project datasets of unlimited size with AVEVA LFM InfiniteCore™ technology. Datasets are stored centrally to offer quick access for unlimited, concurrent users. Working from one maintained dataset ensures that each user is always connected to one, single source of data that reflects the current on-site conditions of the asset.

Reduce rework with clash-free design

Accurate, detailed and up-to-date information minimises the business risks of revamp projects. The typical rework rate of 3-5% is reduced to **less than 1%** by running AVEVA's automated process to avoid clashes.

Overview



Point cloud rendering advancements have introduced new ways to work with the data. Evaluation of surface variance for condition monitoring and highlighting gradient is now possible.

Delivering interoperability

Due to the recent, rapid evolution of 3D data capture technologies, where data capture is now routinely performed using various sources, there is a greater ability to capture a much wider range of real-world environments than ever before.

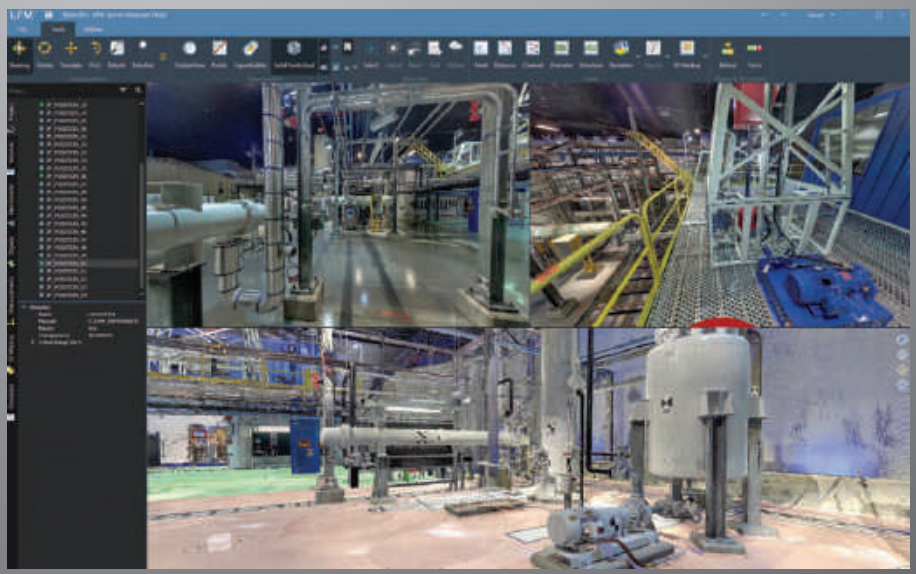
In response to industry and technology trends, AVEVA has developed the Solid Point Cloud (SPC). The SPC is a new way of rendering any as-built data in an extremely visual, solid and natural way, free of distracting visual objects. The SPC supports visualisation of high volumes of data, covering large workspaces on both a plant and global scale. This allows users to load full assets regardless of size, then proceed to “dive down” into the data as and when required.

Unrivalled CAD connectivity

Interface seamlessly with 3D modelling solutions provided by AVEVA, Autodesk™, Hexagon PPM™, and Bentley™. Easily switch between CAD and AVEVA LFM Server environments for advanced visualisation and design productivity that will transform your design process. Interact with the ‘as-operated’ site conditions by immersing the CAD drawing inside the captured data to make decisions based on highly accurate surveys. Then validate the completed design using the comprehensive clash analysis tools.

Full immersion in point cloud data

The intuitive 360˚ BubbleView™ makes it easy to verify clashes, review 3D data captured, or simply become familiar with the site. It provides you with a seamless integrated view, with a full dataset in the background, all contained on a single screen.



Integrated BubbleView and Solid Point Cloud

Visual walkthrough of a proposed design in the HyperBubble

The built-in HyperBubble™ feature can be used simultaneously with the BubbleView and point cloud viewing modes and is an advanced-rendering technique that provides a truly immersive visualisation of point cloud data.

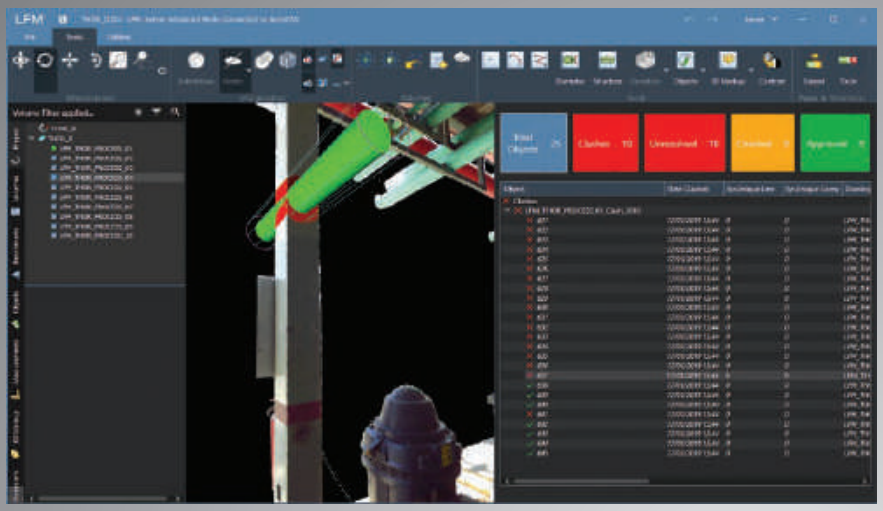
Step out of a BubbleView into flight mode to move freely around a project and be able to 'park' a BubbleView position when the highest level of detail is required – ensuring increased accuracy for project delivery.

Easily select and manage volumes

Retrieve high-resolution volumes of scan coordinates using a simple and intuitive dynamic stretching box that enables you to quickly define multiple volumes. Select these in any of the viewing modes, example the BubbleView, and store volumes for easy retrieval later.

Easily demolish stored volumes from the project in areas of change, and replace with volumes that represent the current conditions of the asset. Demolition is not permanent deletion and can be reviewed and restored on demand.

Focus on specific regions of interest using the volume selection & management tools



Design verification using the automated clash evaluation tools

Detect clashes automatically

Automatically check clashes against the whole site, defined volumes, or individual objects. Powerful, efficient and reliable clash detection displays every interference between a proposed 3D design and the 'as-built' laser scan data, and can be viewed in any of the viewing modes.

Increase quality assurance

Help ensure quality assurance by using a structured dashboard to review and report on each issue. Issues can then be formally approved or reworked, as appropriate.

Add searchable intelligence directly to your laser scan

Add information derived from project drawings or 3D CAD models to objects within your assets using the 'locate and tag' functionality. Input URLs (links to data, websites, or documents) and attributes within multiple entries, and quickly filter or search through this information on demand.

Read objects from third party CAD systems

Review 3D models created in leading CAD systems directly in the AVEVA LFM Server environment by importing and saving CAD objects into an AVEVA LFM Server project.

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Operating Modes

AVEVA LFM solutions manage data from multiple disciplines and industry verticals, reducing the total cost of ownership of data.

AVEVA LFM's product portfolio has evolved with a range of products, now unified on one platform to deliver even greater capabilities. The AVEVA LFM Operating Modes can be used individually in a stand-alone fashion or as a combination to enable a fully integrated workflow.

Mode	Capability
AVEVA LFM Gateway Mode™	Import and export data in open, industry standard formats including FARO, Z+F, Leica Geosystems, Mantis, DotProduct, Riegl and Trimble. ASTM-E57 transfer format is supported.
AVEVA LFM Register™	Optional module for positioning and QA checking unregistered laser data prior to dataset generation.
AVEVA LFM Server Generator™	Create datasets for use in AVEVA LFM Server and AVEVA Everything3D™.
AVEVA LFM NetView Creator™	Create and organise AVEVA LFM NetView™ projects for self-hosting or uploading to the AVEVA Connect platform.

Specifications

Component	Capability
Processor	Intel Core i7 Processor. 8MB cache 4/8 Cores
Operating System	Windows 10 Pro x64
Memory	DDR3 1600 MHz 8GB RAM 1600 MHz
Graphics	NVidia Quadro K2200 with 4GB of GPU memory
Data Storage	500GB SSD (Operating System & local project storage – if required)