AVEVA™ Unified Engineering on CONNECT

3.4.0.0

Contents

Welcome to Unified Engineering on CONNECT

Welcome to Unified Engineering on CONNECT documentation!

AVEVA Unified Engineering on CONNECT helps you control and accelerate the iterative design and engineering process within one integrated set of products.

AVEVA Unified Engineering on AVEVA CONNECT is created for customers who are investing in capital assets and who wants to maintain control and visibility of their digital asset. It ensures visibility to on-going engineering and design progress and deliverables.

- **Delivered on AVEVA CONNECT:** AVEVA Unified Engineering on CONNECT applications are securely accessible over the Internet via AVEVA CONNECT, integrated with the AWS WorkSpaces client for Windows, to deliver a streamed virtual desktop environment to end users.
- **Integrated AVEVA Unified Engineering virtual desktop:** AVEVA Unified Engineering on CONNECT includes a suite of the Windows desktop engineering and design authoring tools and simulation applications available from AVEVA along with any necessary Microsoft Office applications as an integrated virtual desktop solution. This enables users to collaborate on a centralized cloud-based digital asset.
- **Complete control over networking environment:** AVEVA Unified Engineering on CONNECT is provided to customers on a private instance basis, where each customer's environment is provisioned using dedicated cloud infrastructure that isolates their resources and data and restricts administrative access to AVEVA named team members.
- **Collaboration:** To support collaboration on a shared digital asset, highly resilient dedicated cloud infrastructure is used for the storage of application data on either AVEVA proprietary fileserver-based Dabacon storage or relational data in Microsoft SQL Server databases. AVEVA Unified Engineering on AVEVA CONNECT server applications running on virtualized server infrastructure enable the interoperability and data sharing between the Unified Engineering desktop applications.

What's new in AVEVA™ Unified Engineering on CONNECT

This release documentation describes the new and enhanced functionality available in Unified Engineering on CONNECT, providing an overview of the most significant changes.

Release Notes are available for the releases in the following years:

2024 Releases

2025 Releases

AVEVA™ Unified Engineering on CONNECT release notes are arranged in order from the most recent release, and explains the Enhancements, Product Upgrades, Fixed Issues, and Known Issues.

3.4.0.0

This document contains the release notes for the 3.4.0.0 release of AVEVA Unified Engineering on CONNECT.

The updates mentioned in this document are applicable only to AVEVA Unified Engineering on CONNECT and not to the individual products. For updates about the individual product releases, refer to the respective releases.

Product Upgrades

This version of AVEVA Unified Engineering on CONNECT provides the following AVEVA software versions.

AVEVA Software	**Version**
AVEVA™ Administration	2.1.2
AVEVA™ Diagrams	14.1.5.0
AVEVA™ E3D Design 2.x series OR AVEVA™ E3D Design 3.x series	2.1.0.35 - 3.1.8.1
MultiCAD	1.0.8.0
AVEVA Model Simplification (3 Series) AVEVA Model Simplification (2 Series)	1.3.1.0 1.2.0.1
AVEVA™ Electrical (SQL) &Integration service	12.2.6
AVEVA™ Engineering	15.7.3.1

AVEVA Software	Version
AVEVA™ Engineering Tag Management Register	15.7.3.1
AVEVA™ Integration Service	3.1.2
AVEVA™ Integration Service/Client	3.1.2
AVEVA™ Instrumentation (SQL) & Integration service	12.2.6
AVEVA™ P&ID (SQL) & Integration Components	12.2.3.1
AVEVA™ PRO/II Simulation(64-bit)	2024.0.1
AVEVA™ Process Simulation	2024.1
AVEVA™ Shared Services	4.1.0
AVEVA™ Gateway for Process Simulation	1.3.1.0
AVEVA™ NET Gateway Configuration Tool	5.0.11.5
AVEVA™ Gateway for Unified Engineering	1.8.0.0 32 & 64bit
AVEVA™ NET Gateway for P&ID	5.0.5.7
AVEVA™ Global	3.10.2
AVEVA™ Application Service 2.x series (Add-on) OR AVEVA™ Application Service 3.x series (Add-on)	2.6 - 3.1.3.3
AVEVA™ GCD Creator (Add-on)	4.1.3.1
AVEVA™ Engage (Add-on)	4.1.4
SEEDPROJECT	2.7.0
ACP and APS Sample Data 2.x series OR ACP and APS Sample Data 3.x series	2.1.0.35 - 3.1.8.0
Client Cache Service	2.0.1
Clash Manager	14.4
PDMS/VPRM Gateway	6.2

AVEVA Software	Version
Point Cloud Manager for E3D 2 Series	5.7.0.3
Point Cloud Manager for E3D 3 Series	5.7.0.4
AVEVA Cloud Storage (ACS) Client	0.0.56
Gateway Data Publisher (GDP)	1.2.0.1

Note: The Release Notes for the above products are available on the **Product Hub** section of the AVEVA Knowledge & Support Center website.

This version of AVEVA Unified Engineering on CONNECT provides the following 3rd-party program versions.

Third-party Software	Version
AutoCAD	2023
Microsoft Visio	2021 32-Bit C2R
FSLogix	2.9.8884.27471
Microsoft Excel	2021
Microsoft Access DB Engine (for AIS excel)	2010
Microsoft OneDrive Sync App	23.153.0724.0003
DirectX	1.6.0.4
.NET Framework	3.5/4.7.2/4.8
Microsoft OneDrive Desktop Sync App	24.050.0310.0001
Microsoft ASP .NET MVC	4
Notepad++	8.7.5
SQL CLR Types	2012,2014,2016
Shared Mgmt, Objects	2008,2012,2014,2016
VC++ x86 Redistributable	2010, 2012, 2013, 2015
VC++ x64 Redistributable	2010, 2012, 2013, 2015
Visual Studio Tools for Microsoft Office (VSTOR) Redistributable	2010
SQL Server x64	2022
PDF Reader - Sumatra 64bit	3.5.2

Enhancements

AVEVA Integration service on CONNECT (3.1.2)

Customers who want to use AVEVA Integration Service on CONNECT functionality should consult Professional Services for configuration. Refer AVEVA Integration Service Cloud documentation for self-service guidelines.

Integrates AVEVA Integration Service on CONNECT API into the Unified Engineering on CONNECT platform enabling direct access to AVEVA Integration Service on CONNECT API features from within the Unified Engineering on CONNECT.

This integration will streamline workflows and increase the functionality available to our users.

Following are the key functionality improvements:

- Read Data of Unified Engineering on CONNECT Products using AVEVA Integration Service on CONNECT API.
- Integrate SQL and Oracle Data outside Unified Engineering on CONNECT into AVEVA E3D/Engineering product.
- Ensure compatibility, security, and performance throughout the integration.

Fixed Issues

ID	Description
3391586	Map network drive of WebAdmin support does not work.
3598732	In PRO II simulation, **Install Aveva Excel Simulation** pop-up window is displayed incorrectly.

Known Issues

Note: This section lists issues specific to AVEVA Unified Engineering on CONNECT. For details of general issues relating to AVEVA products, refer to their respective product release notes.

ID	Description
1667362	For compliance and legal reasons in the public cloud, only the non-native license is available for model simplification.
	For customers using on premise version of AVEVA E3D Design, advanced rendering framework is supported on-premises, however this is not supported in AVEVA Unified Engineering on CONNECT.

ID	Description
3022540	Reduction in performance is observed for Rendering Views, Bubble View, and all the other Laser Operations for Single and Multi XGEOMS Performance of Point Cloud data from E3D 3.1.8.0 onwards is reduced when using a cloud dataset. As a workaround its recommended to use Open Bubble View from the available Bubble Views form rather than using Pick a Point to open a BubbleView. This is targeted for fix in E3D 3.1.9.0 with which will be incorporated into a future version of UEoC.
1861374	Two different types of cursors appear in 3D view window, In the 3D view window, rolling cursor appears when two Gensec or Panels are merged and rotation cursor appears when any structure is rotated.
3800280	Excel Export/Import is not operational for 'Instrument loops' within the P&ID application.
2881350	Unable to view Equipment's and cables in E3D compare update window when importing from AE and AI. This issue does not exist in E3D 3 series.
3431927	Unable to fetch the data when data sources are added via remote administrator using Project User authentication.
2881350	Unable to view equipment's and cables in E3D compare update window when trying to import from AE and AI.
3465454	Simplification output field is blank when Model Simplification 1.2.0.1 is run for the first time in E3D 2.1.0.35 in clean environment.
3598732	In PRO II simulation, **Install Aveva Excel Simulation** pop-up window is displayed incorrectly.
	Excel addin is missing in both the AVEVA Simulation products (Process simulation and ProII Process Simulation). This issue will be fixed in the upcoming 3.5 release.

ID	Description
	Unable to open exported Engineering list datasheet. **Work Around:** Use the web browser within the workspace to log in to Office 365 . Open the spreadsheet in excel 365 version and save this copy to a location which has access to it. The file should then open without any issues in the workspace version of excel without having to repair and retaining the formatting.
	Diagrams.exe throws unhandled error and crashes the application. Error in text alignment and changing line type in Diagrams. **Work Around:** These formatting issues arise from using the right-mouse-click icon pallet to format an object or group of objects. Instead use the right-mouse-click text menu, or application menu, or shortcut keys.
	A windows warning indicating that the NVIDIA Control Panel is not found is displayed to some of the users. This does not impact system performance, as modifying these settings does not provide significant graphical improvements. You can dismiss the notification and continue using your system as usual. This will be fixed in the future release.

Performance

The performance of AVEVA™ Engineering may be affected during the import of simulation data. To minimize performance issues within AVEVA™ Engineering, it is recommended that before the import of data, select only the required class and attribute mappings. Including all mappings by default will impact on performance.

Nominal Performance degradation could be observed on the WorkSpace client compared to the response time of an on-prem machine. This is due to the Network\CPU availability in cloud environment.

Performance of Dabacon-based products can be severely impaired if underlying Dabacon project files have been copied from other locations over the internet. This is due to a Windows security measure relating to file zone identifiers and the impact of this on normal file access (including file access by Virus Scanners). Please refer to the *Downloading and Uploading Files* section in the *Unified Engineering on Connect Desktop User Guide* for further details and resolution information.

Documentation

This release notes should be read in conjunction with the following documentation:

- AVEVA™ Unified Engineering on CONNECT Administrator Help
- AVEVA™ Unified Engineering on CONNECT Desktop Help
- AVEVA™ Unified Engineering on CONNECT Engage Add-on Help
- AVEVA™ Unified Engineering on CONNECT Global Services Add-on Help

Individual Product Documentation

The following table lists the products, their user guides and how to access them.

Product	User Guide Name	Location
AVEVA™ PRO/II Simulation	AVEVA PRO/II Simulation Online Help	Accessible by clicking **Help** > **Contents** on the application
AVEVA™ Process Simulation	AVEVA Process Simulation Online Help	Accessible by pressing F1 on the application
AVEVA™ Engineering	AVEVA Engineering User Guide	Accessible by pressing F1 on the application
AVEVA™ Administration	AVEVA Administration Help	Accessible by pressing F1 on the application
AVEVA™ Shared Services	AVEVA Shared Services Online Help	Available with the installation media
AVEVA Licensing System	AVEVA Licensing System User Guide	Accessible from the Start menu. Search for AVEVA License System Manuals
AVEVA™ E3D Design	AVEVA E3D User Guide	Accessible by pressing F1 on the application
AVEVA™ Diagrams	AVEVA Diagrams User Guide	Accessible by pressing F1 on the application
AVEVA™ P&ID	AVEVA P&ID User Guide	Accessible from the Start menu.
AVEVA™ Electrical	AVEVA Electrical User Guide	Accessible by pressing F1 on the application
AVEVA™ Instrumentation	AVEVA Instrumentation User Guide	Accessible by pressing F1 on the application

2024 Releases

AVEVA™ Unified Engineering on CONNECT release notes are arranged in order from the most recent release, and explains the Enhancements, Product Upgrades, Fixed Issues, and Known Issues.

3.3.1.0

This document contains the release notes for the 3.3.1.0 release of AVEVA Unified Engineering on CONNECT.

The updates mentioned in this document are applicable only to AVEVA Unified Engineering on CONNECT and not to the individual products. For updates about the individual product releases, refer to the respective releases.

Product Upgrades

This version of AVEVA Unified Engineering on CONNECT provides the following AVEVA software versions.

AVEVA Software	**Version**
AVEVA™ Administration	2.1.2
AVEVA™ Diagrams	14.1.5.0
AVEVA™ E3D Design 2.x series OR AVEVA™ E3D Design 3.x series	2.1.0.35 - 3.1.8.1
MultiCAD	1.0.8.0
AVEVA Model Simplification (3 Series) AVEVA Model Simplification (2 Series)	1.3.1.0 1.2.0.1
AVEVA™ Electrical (SQL) &Integration service	12.2.6
AVEVA™ Engineering	15.7.3.1
AVEVA™ Engineering Tag Management Register	15.7.3.1
AVEVA™ Integration Service/Client	3.1.1.0
AVEVA™ Instrumentation (SQL) & Integration service	12.2.6
AVEVA™ P&ID (SQL) & Integration Components	12.2.3.1
AVEVA™ PRO/II Simulation(64-bit)	2024.1
AVEVA™ Process Simulation	2024.1
AVEVA™ Shared Services	4.1.0
AVEVA™ Gateway for Process Simulation	1.3.1.0
AVEVA™ NET Gateway Configuration Tool	5.0.11.5
AVEVA™ Gateway for Unified Engineering	1.8.0.0 32 & 64bit

AVEVA Software	Version
AVEVA™ NET Gateway for P&ID	5.0.5.7
AVEVA™ Global	3.10.2
AVEVA™ Application Service 2.x series (Add-on) OR AVEVA™ Application Service 3.x series (Add-on)	2.6 - 3.1.3.3
AVEVA™ GCD Creator (Add-on)	4.1.3.1
AVEVA™ Engage (Add-on)	4.1.4
SEEDPROJECT	2.7.0
ACP and APS Sample Data 2.x series OR ACP and APS Sample Data 3.x series	2.1.0.35 - 3.1.8.1
Client Cache Service	2.0.1
Clash Manager	14.4
PDMS/VPRM Gateway	6.2
Point Cloud Manager for E3D 2 Series	5.7.0.3
Point Cloud Manager for E3D 3 Series	5.7.0.4
AVEVA Cloud Storage (ACS) Client	0.0.51
Gateway Data Publisher (GDP)	1.2.0.1

Note: The Release Notes for the above products are available on the **Product Hub** section of the AVEVA Knowledge & Support Center website.

This version of AVEVA Unified Engineering on CONNECT provides the following 3rd-party program versions.

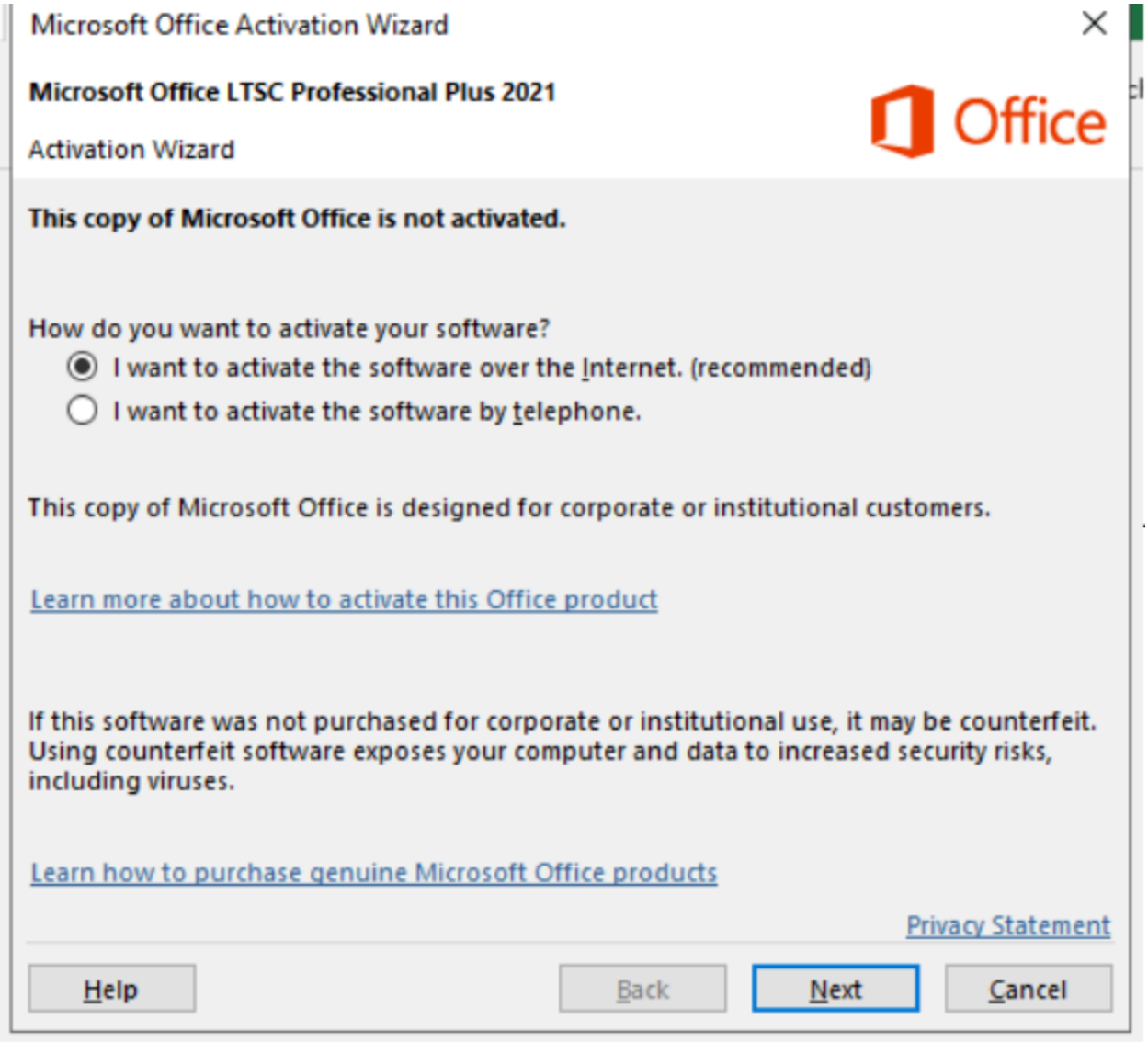
Third-party Software	Version
AutoCAD	2023
Microsoft Visio	2021 32-Bit C2R
FSLogix	2.9.8884.27471
Microsoft Excel	2021

Third-party Software	Version
Microsoft Access DB Engine (for AIS excel)	2010
Microsoft OneDrive Sync App	23.153.0724.0003
DirectX	1.6.0.4
.NET Framework	3.5/4.7.2/4.8.0/5.0.16/6.0.22
Microsoft OneDrive Desktop Sync App	24.050.0310.0001
Microsoft ASP .NET MVC	4
Notepad++	8.6.5
SQL CLR Types	2012,2014,2016
Shared Mgmt, Objects	2008,2012,2014,2016
VC++ x86 Redistributable	2010, 2012, 2013, 2015, 2022
VC++ x64 Redistributable	2010, 2012, 2013, 2015, 2022
Visual Studio Tools for Microsoft Office (VSTOR) Redistributable	2010
SQL Server x64	2022
PDF Reader - Sumatra 64bit	3.5.2

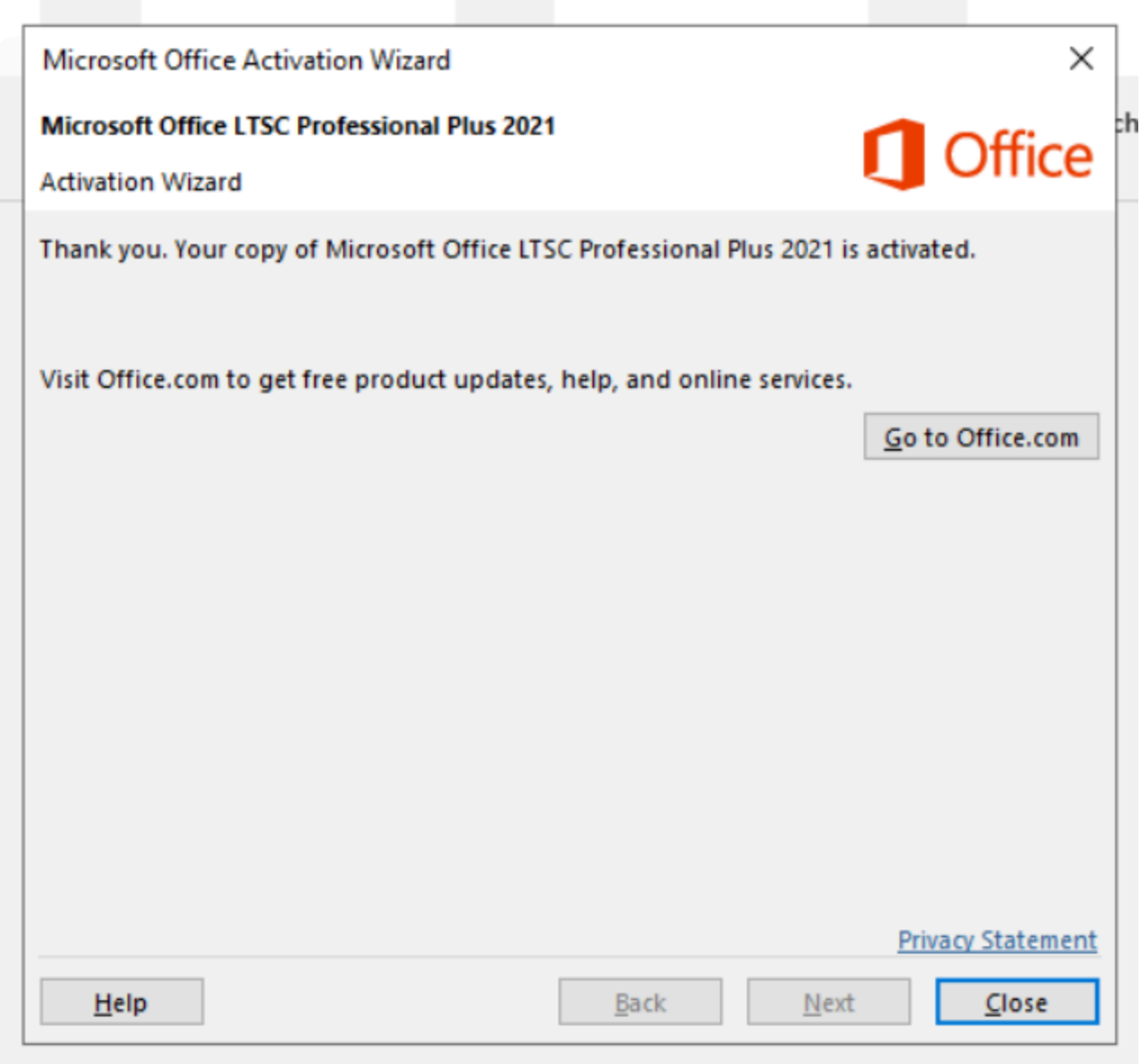
Enhancements

Microsoft Office and Visio activation

Unified Engineering on Connect is rolling out an alternate approach to activate Microsoft Office and Visio. While launching the Office application, the following window is displayed:



You can select **I want to activate software over the internet** option and Click **Next**.



Note: This is a one time setup which is required on newly provisioned workspaces.

Fixed Issues

ID	Description
2877409	Fatal error has been observed while launching engineering application in Workspace for the first time.

Known Issues

Note: This section lists issues specific to AVEVA Unified Engineering on CONNECT. For details of general issues relating to AVEVA products, refer to their respective product release notes.

ID	Description
1667362	For compliance and legal reasons in the public cloud, only the non-native license is available for model simplification.
	For customers using on premise version of AVEVA E3D Design, advanced rendering framework is supported on-premises, however this is not supported in AVEVA Unified Engineering on CONNECT.
2292924	ERM SaaS multi-consumer service stops polling for new integration messages when AVEVA Unified Engineering on CONNECT AIS is stopped and restarted (for example after weekly maintenance window server stack restarts). As a workaround, the ERM SaaS managed service will coordinate a multi-consumer service restart with AVEVA Unified Engineering on CONNECT AIS restarts. This will be fixed in ERM 18.1.0.0.
3022540	Reduction in performance is observed for Rendering Views, Bubble View, and all the other Laser Operations for Single and Multi XGEOMS Performance of Point Cloud data from E3D 3.1.8.0 onwards is reduced when using a cloud dataset. As a workaround its recommended to use Open Bubble View from the available Bubble Views form rather than using Pick a Point to open a BubbleView. This is targeted for fix in E3D 3.1.9.0 with which will be incorporated into a future version of UEoC.
1861374	Two different types of cursors appear in 3D view window, In the 3D view window, rolling cursor appears when two Gensec or Panels are merged and rotation cursor appears when any structure is rotated.
3391586	Map network drive of WebAdmin support does not work. This will be fixed in AIS 3.1.2.

ID	Description
2881350	Unable to view Equipment's and cables in E3D compare update window when importing from AE and AI. This issue does not exist in E3D 3 series.
3431927	Unable to fetch the data when data sources are added via remote administrator using Project User authentication.
2881350	Unable to view equipment's and cables in E3D compare update window when trying to import from AE and AI.
3465454	Simplification output field is blank when Model Simplification 1.2.0.1 is run for the first time in E3D 2.1.0.35 in clean environment.
3598732	In PRO II simulation, **Install Aveva Excel Simulation** pop-up window is displayed incorrectly.

Performance

The performance of AVEVA™ Engineering may be affected during the import of simulation data. To minimize performance issues within AVEVA™ Engineering, it is recommended that before the import of data, select only the required class and attribute mappings. Including all mappings by default will impact on performance.

Nominal Performance degradation could be observed on the WorkSpace client compared to the response time of an on-prem machine. This is due to the Network\CPU availability in cloud environment.

Performance of Dabacon-based products can be severely impaired if underlying Dabacon project files have been copied from other locations over the internet. This is due to a Windows security measure relating to file zone identifiers and the impact of this on normal file access (including file access by Virus Scanners). Please refer to the *Downloading and Uploading Files* section in the *Unified Engineering on Connect Desktop User Guide* for further details and resolution information.

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AVEVA™ P&ID	AVEVA P&ID User Guide	Accessible from the Start menu.
AVEVA™ Electrical	AVEVA Electrical User Guide	Accessible by pressing F1 on the application
AVEVA™ Instrumentation	AVEVA Instrumentation User Guide	Accessible by pressing F1 on the application

3.3.0.0

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Product Upgrades

This version of AVEVA Unified Engineering on CONNECT provides the following AVEVA software versions.

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AVEVA Model Simplification (3 Series) AVEVA Model Simplification (2 Series)	1.3.1.0 1.2.0.1
AVEVA™ Electrical (SQL) &Integration service	12.2.6
AVEVA™ Engineering	15.7.3
AVEVA™ Engineering Tag Management Register	15.7.3
AVEVA™ Integration Service/Client	3.1.0.0
AVEVA™ Instrumentation (SQL) & Integration service	12.2.6
AVEVA™ P&ID (SQL) & Integration Components	12.2.2.5
AVEVA™ PRO/II Simulation(64-bit)	2023.2
AVEVA™ Process Simulation	2024
AVEVA™ Shared Services	4.1.0
AVEVA™ Gateway for Process Simulation	1.3.1.0
AVEVA™ NET Gateway Configuration Tool	5.0.11.5
AVEVA™ Gateway for Unified Engineering	1.8.0.0 32 & 64bit
AVEVA™ NET Gateway for P&ID	5.0.5.7
AVEVA™ Global	3.10.2
AVEVA™ Application Service 2.x series (Add-on) OR AVEVA™ Application Service 3.x series (Add-on)	2.6 - 3.1.3.3
AVEVA™ GCD Creator (Add-on)	4.1.3.1
AVEVA™ Engage (Add-on)	4.1.4

AVEVA Software	Version
SEEDPROJECT	2.7.0
ACP and APS Sample Data 2.x series OR ACP and APS Sample Data 3.x series	2.1.0.35 - 3.1.8.0
Client Cache Service	2.0.1
Clash Manager	14.4
PDMS/VPRM Gateway	6.2
Point Cloud Manager for E3D 2 Series	5.7.0.3
Point Cloud Manager for E3D 3 Series	5.7.0.4
AVEVA Cloud Storage (ACS) Client	0.0.48
Gateway Data Publisher (GDP)	1.2.0.0

Note: The Release Notes for the above products are available on the **Product Hub** section of the AVEVA Knowledge & Support Center website.

This version of AVEVA Unified Engineering on CONNECT provides the following 3rd-party program versions.

Third-party Software	Version
AutoCAD	2023
Microsoft Visio	2021 32-Bit C2R
FSLogix	
Microsoft Excel	2021
Microsoft Access DB Engine (for AIS excel)	2010
Microsoft OneDrive Sync App	23.153.0724.0003
DirectX	1.6.0.4
.NET Framework	3.5/4.7.2/4.8.0/5.0.16/6.0.22
Microsoft OneDrive Desktop Sync App	24.050.0310.0001
Microsoft ASP .NET MVC	4
Notepad++	8.6.5

Third-party Software	Version
SQL CLR Types	2012,2014,2016
Shared Mgmt, Objects	2008,2012,2014,2016
VC++ x86 Redistributable	2010, 2012, 2013, 2015, 2022
VC++ x64 Redistributable	2010, 2012, 2013, 2015, 2022
Visual Studio Tools for Microsoft Office (VSTOR) Redistributable	2010
SQL Server x64	2022
PDF Reader - Sumatra 64bit	3.5.2

Enhancements

Existing customers upgrading to 3.3

As part of the upgrade process, users' existing Workspaces will be removed.
Post-upgrade, users should provision a new Workspace via Connect as documented in the Accessing Your AVEVA Unified Engineering Desktop section of the AVEVA™ Unified Engineering on Connect Desktop User Guide.

Data on users' workspaces is not preserved, for example files such as:

- User files: Stored on C: and D: drives.
- AVEVA application user-settings: Stored on D:\Users\<username>\Appdata\Local\Aveva\
- User profile settings, e.g. for Keyboard/Language are not preserved.

Therefore, users should carefully consider and if deemed necessary, arrange in advance of the upgrade to copy (backup) any required files from their workspaces.
Backed-up files can then be restored to newly provisioned workspaces post-upgrade.

Note: It is not mandatory to copy/restore AVEVA application user-settings for AVEVA Products to function, users may choose to start afresh with their new workspace redefining AVEVA application user-settings.

If users wish to backup files, the table below suggests options available to users.

OPTION	CONDITION(S)	PROCESS

Using Firefox browser and Corporate Cloud Storage (One Drive \ Google Drive etc)	None	• Access Pre-Upgrade Workspace
		  • Login to your cloud storage via Firefox browser
		  • Copy (backup) files to your cloud storage
		• Upgrade UEoC (removes

OPTION	CONDITION(S)	PROCESS

		Workspace)
		• Provision and Access New Workspace
		  • Login to your cloud storage via Firefox browser
		  • Restore files from your cloud storage

Using MS OneDrive Desktop Sync App	If user has MS OneDrive Desktop Sync App enabled on Workspace	• Access Pre-Upgrade Workspace
		  • Copy and Sync files to your OneDrive storage
		• Upgrade UEoC (removes Workspace)
		• Provision and Access New Workspace
		  • Configure OneDrive Desktop Sync App
		  • Sync and Copy files from your OneDrive storage

Cloud File Transfer

Effective version 3.3.0.0 of Unified Engineering on CONNECT, it no longer requires customers to supply a service access token to the cloud DevOps team to enable cloud file transfer service. This token is now programmatically created on your behalf. This process is automated for both new customers and those upgrading from an existing version.

Retrieving Data from Data Sources Using SQL Server (Aveva Instrumentation & Electrical and AVEVA P&ID)

The new DATA API in AVEVA Integration Service supports data retrieval from SQL Server-based data sources using Windows Authentication only. Authentication using Project or SQL is not supported by this Data API.

As a result, the Compare Update feature in AVEVA Engineering 15.7.3, AVEVA E3D Design 4.1, and later versions will require to get the Authentication done using Windows for SQL-based products.

Microsoft Visio access for AVEVA Diagrams user

Effective version 3.3.0.0 of Unified Engineering on CONNECT, the provision of Microsoft Visio in Workspaces is directly controlled via the Standard Drafting Diagrams Connect role.

Post-upgrade, those who require Microsoft Visio should be members of a Connect group associated with the

Standard Drafting Diagrams Connect role. For example, the default group AVEVA UE 2D Drafter (Diagrams).

Changes to Microsoft Office on workspace

Microsoft Office Professional 32-bit has changed from Office 2016 to Excel (only) 2021.

Microsoft Visio Standard 32-bit has changed from 2016 to 2021.

Fixed Issues

The following issues have been resolved as part of this release.

ID	Description
2880352	Unable to load Simulation attribute values in Engineering when the notification is imported in different case value (Max Case other than Base Case).
2877409	Error while launching engineering application in workspace for the first time On rare occasions, users may encounter an error upon launching AVEVA Engineering. This issue typically occurs only during the initial use of a new workspace. If you experience this problem, we recommend attempting to launch the application again as a temporary workaround.
	Simulation attributes are not being imported into SIMITE elements in Grids when using the tag property form for viewing. This issue will be resolved in AVEVA Engineering 15.7.3.
3283609	Unable to add deleted DataSource name to the Integration Settings editor When the DataSource is deleted from the Integration settings editor, it can not be added to DataSource again with the same name. This is fixed in AIS 3.1.1.
2878675	Security error while launching Pro II application Security Error occurred while launching Pro II application in Workspace for the first time.
2625569	Unable to import large laser data

Known Issues

Note: This section lists issues specific to AVEVA Unified Engineering on CONNECT. For details of general issues

relating to AVEVA products, refer to their respective product release notes.

ID	Description
1667362	For compliance and legal reasons in the public cloud, only the non-native license is available for model simplification.
	For customers using on premise version of AVEVA E3D Design, advanced rendering framework is supported on-premises, however this is not supported in AVEVA Unified Engineering on CONNECT.
2292924	ERM SaaS multi-consumer service stops polling for new integration messages when AVEVA Unified Engineering on CONNECT AIS is stopped and restarted (for example after weekly maintenance window server stack restarts). As a workaround, the ERM SaaS managed service will coordinate a multi-consumer service restart with AVEVA Unified Engineering on CONNECT AIS restarts. This will be fixed in ERM 18.1.0.0.
3022540	Reduction in performance is observed for Rendering Views, Bubble View, and all the other Laser Operations for Single and Multi XGEOMS Performance of Point Cloud data in E3D 3.1.8.0 is reduced when using a cloud dataset. As a workaround its recommended to use Open Bubble View from the available Bubble Views form rather than using Pick a Point to open a BubbleView. This will be fixed in a future version of E3D.
1861374	Two different types of cursors appear in 3D view window, In the 3D view window, rolling cursor appears when two Gensec or Panels are merged and rotation cursor appears when any structure is rotated.
3391586	Map network drive of WebAdmin support does not work. This will be fixed in AIS 3.1.2.
2877409	Fatal Error has been observed while launching engineering application in Workspace for the first time.
2881350	Unable to view Equipment's and cables in E3D

ID	Description
	compare update window when importing from AE and AI. This issue does not exist in E3D 3 series.
3431927	Unable to fetch the data when data sources are added via remote administrator using Project User authentication.

Performance

The performance of AVEVA™ Engineering may be affected during the import of simulation data. To minimize performance issues within AVEVA™ Engineering, it is recommended that before the import of data, select only the required class and attribute mappings. Including all mappings by default will impact on performance.

Nominal Performance degradation could be observed on the WorkSpace client compared to the response time of an on-prem machine. This is due to the Network\CPU availability in cloud environment.

Performance of Dabacon-based products can be severely impaired if underlying Dabacon project files have been copied from other locations over the internet. This is due to a Windows security measure relating to file zone identifiers and the impact of this on normal file access (including file access by Virus Scanners). Please refer to the *Downloading and Uploading Files* section in the *Unified Engineering on Connect Desktop User Guide* for further details and resolution information.

Documentation

This release notes should be read in conjunction with the following documentation:

- AVEVA™ Unified Engineering on CONNECT Administrator Help
- AVEVA™ Unified Engineering on CONNECT Desktop User Help
- AVEVA™ Unified Engineering on CONNECT Engage Add-on Help
- AVEVA™ Unified Engineering on CONNECT Global Services Add-on Help

Individual Product Documentation

The following table lists the products, their user guides and how to access them.

Product	User Guide Name	Location
AVEVA™ PRO/II Simulation	AVEVA PRO/II Simulation Online Help	Accessible by clicking **Help** > **Contents** on the application
AVEVA™ Process Simulation	AVEVA Process Simulation Online Help	Accessible by pressing F1 on the application
AVEVA™ Engineering	AVEVA Engineering User Guide	Accessible by pressing F1 on the application

Product	User Guide Name	Location
AVEVA™ Administration	AVEVA Administration Help	Accessible by pressing F1 on the application
AVEVA™ Shared Services	AVEVA Shared Services Online Help	Available with the installation media
AVEVA Licensing System	AVEVA Licensing System User Guide	Accessible from the Start menu. Search for AVEVA License System Manuals
AVEVA™ E3D Design	AVEVA E3D User Guide	Accessible by pressing F1 on the application
AVEVA™ Diagrams	AVEVA Diagrams User Guide	Accessible by pressing F1 on the application
AVEVA™ P&ID	AVEVA P&ID User Guide	Accessible from the Start menu.
AVEVA™ Electrical	AVEVA Electrical User Guide	Accessible by pressing F1 on the application
AVEVA™ Instrumentation	AVEVA Instrumentation User Guide	Accessible by pressing F1 on the application

3.2.3.0

This document contains the release notes for the 3.2.3.0 release of AVEVA Unified Engineering on CONNECT.

The updates mentioned in this document are applicable only to AVEVA Unified Engineering on CONNECT and not to the individual products. For updates about the individual product releases, refer to the respective releases.

Product Upgrades

This version of AVEVA Unified Engineering on CONNECT provides the following AVEVA software versions.

AVEVA Software	Version
AVEVA™ Administration	2.1.0.1
AVEVA™ Diagrams	14.1.4.5
AVEVA™ E3D Design 2.x series OR AVEVA™ E3D Design 3.x series	2.1.0.35 - 3.1.7.2
MultiCAD	1.0.7.0

AVEVA Software	Version
AVEVA Model Simplification (3 Series) AVEVA Model Simplification (2 Series)	1.3.1.0 1.2.0.1
AVEVA™ Electrical (SQL) &Integration service	12.2.6
AVEVA™ Engineering Tag Management Services	15.7.2
AVEVA™ Integration Service/Client	3.0.0.1
AVEVA™ Instrumentation (SQL) & Integration service	12.2.6
AVEVA™ P&ID (SQL) & Integration Components	12.2.2.5
AVEVA™ PRO/II Simulation(64-bit)	2023.1
AVEVA™ Process Simulation	2023.2.1
AVEVA™ Shared Services	4.0.0
AVEVA™ Gateway for Process Simulation	1.3.1.0
AVEVA™ NET Gateway Configuration Tool	5.0.11.5
AVEVA™ Gateway for Unified Engineering	1.6.1.0 32 & 64bit
AVEVA™ NET Gateway for P&ID	5.0.5.7
AVEVA™ Global	3.10
AVEVA™ Application Service 2.x series (Add-on) OR AVEVA™ Application Service 3.x series (Add-on)	2.6 - 3.1.3.2
AVEVA™ GCD Creator (Add-on)	4.1.3
AVEVA™ Engage (Add-on)	4.1.3
SEEDPROJECT	2.7.0
ACP and APS Sample Data 2.x series OR ACP and APS Sample Data 3.x series	2.1.0.35 - 3.1.7.0
Client Cache Service	2.0.1

AVEVA Software	Version
Clash Manager	14.3.0.3
PDMS/VPRM Gateway	6.1.0.0
Point Cloud Manager for E3D 2 Series	5.7.0.3
Point Cloud Manager for E3D 3 Series	5.7.0.4
AVEVA Cloud Storage (ACS) Client	0.0.46
Gateway Data Publisher (GDP)	1.2.0.0

Note: The Release Notes for the above products are available on the **Product Hub** section of the AVEVA Knowledge & Support Center website.

This version of AVEVA Unified Engineering on CONNECT provides the following 3rd-party program versions.

Third-party Software	Version
AutoCAD	2021.1.3 (24.0.172.0)
Microsoft Visio	2016 32-Bit
FSLogix	
Microsoft Access DB Engine (for AIS excel)	2010
Microsoft OneDrive Sync App	23.153.0724.0003
DirectX	1.6.0.4
.NET Framework	3.5/4.7.2/4.8.0/5.0.16/6.0.22
Microsoft OneDrive Desktop Sync App	23.153.0724.0003
Microsoft ASP .NET MVC	4
Notepad++	8.5.7
SQL CLR Types	2012,2014,2016
Shared Mgmt, Objects	2008,2012,2014,2016
VC++ x86 Redistributable	2010, 2012, 2013, 2015, 2022
VC++ x64 Redistributable	2010, 2012, 2013, 2015, 2022
Visual Studio Tools for Microsoft Office (VSTOR) Redistributable	2010
SQL Server x64	2016 Standard Edition

Third-party Software	Version
PDF Reader - Sumatra 64bit	3.4.6

Enhancements

Model simplification

Model simplification is now available for both E3D 2 and 3 series in UEoC 3.2.3.0

Whitespace optimiser

Whitespace optimiser is now available in E3D 3 series.

Laser storage

In version 3.2.3.0, Unified Engineering no longer provides storage for laser data within the environment (formerly L: drive). Customers should use the AVEVA PCM Cloud service for laser data.

Note: The AVEVA UE Engage Add-on does not support laser data in PCM, this will be introduced in a later version.

Fixed Issues

The following issues have been resolved as part of this release.

ID	Description
	Unable to delete the Pro/II data row in Integration settings editor in AIS 2.3.2. Following upgrade, the existing AVEVA Pro/II data sources shown in the Integration Settings Editor cannot be deleted.
	Subsequent data sources are not getting saved in Integration Settings Editor when a data source is corrupted.
2625569	Intermittent issue adding AVEVA Point Cloud Manager hosted point cloud data in to AVEVA E3D resulting in unresponsive E3D sessions

Known Issues

Note: This section lists issues specific to AVEVA Unified Engineering on CONNECT. For details of general issues

relating to AVEVA products, refer to their respective product release notes.

ID	Description
1667362	Model Simplification - Only the non-native license is available For compliance and legal reasons in the public cloud, only the non-native license is available for model simplification.
	Advanced Rendering Framework (ARF) Not Supported in AVEVA Unified Engineering on CONNECT. For customers using on premise version of AVEVA E3D Design, advanced rendering framework is supported on-premises, however this is not supported in AVEVA Unified Engineering on CONNECT.
2292924	ERM SaaS multi-consumer service stops polling for new integration messages when AVEVA Unified Engineering on CONNECT AIS is stopped and restarted (for example after weekly maintenance window server stack restarts). As a workaround, the ERM SaaS managed service will coordinate a multi-consumer service restart with AVEVA Unified Engineering on CONNECT AIS restarts. This will be fixed in ERM 18.1.0.0.
	Unable to fetch data from ERM SaaS 18.0.1.0. A workaround is to populate ERM Data extraction Query with at least one optional parameter as per the process below: 1. In ERM SaaS 12010 screen, find and select the query 2. Click edit query button. 3. In the new screen, click create parameter. 4. Create a dummy parameter that is not mandatory. 5. Save the parameter. 6. Execute the query. 7. Save the query. This will be fixed in AIS 3.0.0.0.
2877409	Error while launching engineering application in workspace for the first time On rare occasions, users may encounter an error upon

ID	Description
	launching AVEVA Engineering. This issue typically occurs only during the initial use of a new workspace. If you experience this problem, we recommend attempting to launch the application again as a temporary workaround.
2880352	Unable to load Simulation attribute values in Engineering when the notification is imported in different case value (Max Case other than Base Case)
	Simulation attributes are not being imported into SIMITE elements in Grids when using the tag property form for viewing. This issue will be resolved in AVEVA Engineering 15.7.3.

Performance

The performance of AVEVA™ Engineering may be affected during the import of simulation data. To minimize performance issues within AVEVA™ Engineering, it is recommended that before the import of data, select only the required class and attribute mappings. Including all mappings by default will impact on performance.

Nominal Performance degradation could be observed on the WorkSpace client compared to the response time of an on-prem machine. This is due to the Network\CPU availability in cloud environment.

Performance of Dabacon-based products can be severely impaired if underlying Dabacon project files have been copied from other locations over the internet. This is due to a Windows security measure relating to file zone identifiers and the impact of this on normal file access (including file access by Virus Scanners). Please refer to the *Downloading and Uploading Files* section in the *Unified Engineering on Connect Desktop User Guide* for further details and resolution information.

Documentation

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Desktop Help

The purpose of this document is to enable the users of AVEVA™ Unified Engineering on CONNECT (AVEVA™ Unified Engineering) to create a desktop on the AVEVA Cloud. This help describes the tasks to be performed to start the desktop.

Preface

This chapter introduces this guide and specifies the intended audience and provides the summary of chapters. The chapter also provides information about product training and how to contact technical support.

Audience

The guide is intended for the users of AVEVA Unified Engineering who have been granted access to create an AVEVA Unified Engineering desktop. This guide assumes that the user has received an email invitation to join AVEVA Cloud from an administrator.

Product Training Information

For information about product training courses, see the **Product Training** section of AVEVA's website, or contact the nearest AVEVA Regional Support Centre.

Technical Support

If you encounter software issues or have suggestions for software improvements, contact AVEVA Knowledge & Support Center, and register a support incident.

After you register a support incident, we will know your identity (from your customer ID) and the details of the incident. We will endeavor to fix the software issue or consider the software improvement suggestion as soon as possible, and notify you about the status of the incident.

If you are an accredited user of the AVEVA products, you are entitled to use AVEVA Knowledge & Support Center for which you should have valid login credentials. For any other queries, contact the nearest AVEVA Regional Support Centre.

AVEVA Unified Engineering Desktop

AVEVA uses Amazon WorkSpaces, a fully managed secure Windows Desktop-as-a-Service (DaaS) service in the AWS cloud, to provide each user of AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) with a personal virtual desktop that includes all the AVEVA Unified Engineering applications.

The following image shows the desktop for a typical user.

Note: The AVEVA™ E3D Design desktop icon will be either 2.x or 3.x series depending on the series agreed before the AVEVA Unified Engineering environment deployment stage.

The maintenance of this virtual desktop is managed partly by AVEVA and partly by your administrator. You can perform the tasks on this virtual desktop in the same way as a physical desktop but without having to worry about upgrades or patches.

Important: If you have not logged into the virtual desktop at least once in a calendar month, the workspace will be deleted on the last day of the month. Along with it, the data on the **D:** is also lost and cannot be restored. A new workspace is automatically created when you log in again. However, for the new workspace, the initial start-up takes around 20 minutes, and you will need to reconfigure any changes to default regional settings. For more information about workspaces, see Manage your AVEVA Unified Engineering Desktop.

Prerequisites and System Requirements

This section lists the prerequisites and system requirements for starting an AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) desktop.

Prerequisites for Accessing AVEVA Unified Engineering Desktop

Your administrator must have added you as a user to an CONNECT account that has access to AVEVA Unified Engineering and AVEVA's Licensing as a Service (LaaS). Thereafter, you will have received an email invitation to join AVEVA Cloud.

Create an AVEVA Unified Engineering Desktop

This section describes the procedure to create an AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) desktop.

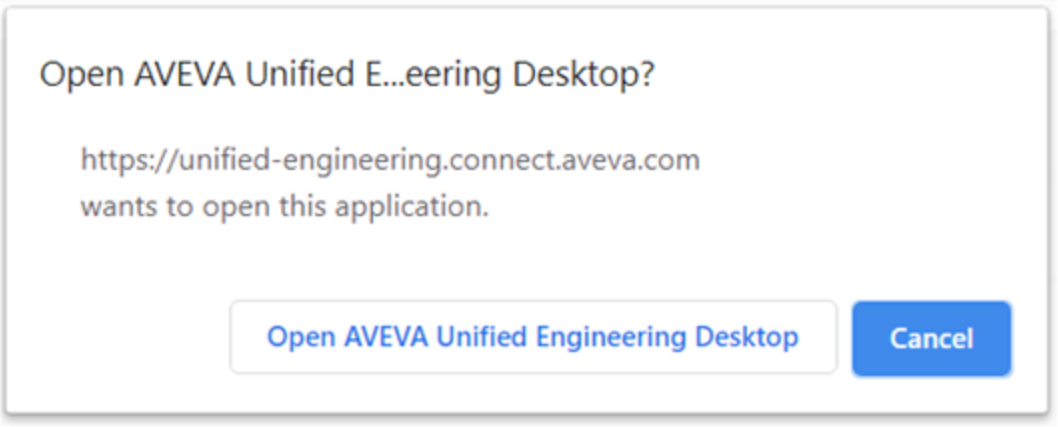
To create your AVEVA Unified Engineering desktop:

1. If you are already signed in, sign out from CONNECT.
2. Open the email with the invitation to the CONNECT account, and click **SIGN IN**. The CONNECT Sign-in page is displayed.

   Note: If you are a first-time user of CONNECT, the CONNECT Register page is displayed instead. In such cases, you must first register with CONNECT. For information on how to register with CONNECT, see Register with CONNECT.
3. If you are added to more than one account, select the account you are added to for accessing AVEVA Unified Engineering. After your credentials are validated, the CONNECT page with the **AVEVA Unified Engineering** tile is displayed.

   Note: The account you are added to is mentioned in the email. You do not need to provide the password.
4. Navigate to the desired CONNECT Folder in which the AVEVA Unified Engineering service has been enabled by your Administrator.
5. Click the **Unified Engineering** tile. The Welcome page is displayed.

   Note: If you do not see a tile when expected, it may be your Administrator has not assigned your user to the correct CONNECT Groups in CONNECT User Management.
6. Follow the instructions on the page:
   a. For Step 1, do the following:
      i. Click **Go to Amazon**. The **Amazon WorkSpaces Client Download** page is displayed.
      ii. Download and install Amazon WorkSpaces client for Windows. For more information, see Install Amazon WorkSpaces Client.
      iii. After installing Amazon WorkSpaces, return to the **CONNECT** page, and click **Next**.
   b. For Step 2, do the following:
      i. Click **Download** to download the AVEVA Unified Engineering desktop app.
      ii. After the download is complete, open the file to run it. For more information on how to install the AVEVA Unified Engineering desktop app, see Install the AVEVA Unified Engineering Desktop App.
      iii. After installing the AVEVA Unified Engineering desktop app, return to the **CONNECT** page.
   c. Click **Finish** to complete the steps.
7. After you complete the above steps, the process of creating the desktop begins. This process takes about 20 minutes. Do not close your web browser during this time. After the above process is complete, a message that your desktop is ready to be launched is displayed.
8. Click **Start**. The **Open AVEVA Unified Engineering Desktop?** dialog box is displayed.



9. Click **Open AVEVA Unified Engineering Desktop**. The Amazon WorkSpaces client with your AVEVA Unified Engineering desktop is displayed.

   Note: You can click **Cancel** on the **Open AVEVA Unified Engineering Desktop?** dialog box if you want to reinstall or repair the Amazon WorkSpaces client or the AVEVA Unified Engineering Desktop app. The page provides links for doing so.

If you change your computer, the Amazon WorkSpaces client application and the AVEVA Unified Engineering Desktop app need to be installed on that computer for you to be able to run the AVEVA Unified Engineering desktop. The webpage for starting the AVEVA Unified Engineering desktop provides the links for installing the same.

Register with CONNECT

If you are a first-time user of CONNECT, you must first register yourself with CONNECT for an AVEVA user ID. An AVEVA user ID is required before you can proceed with the other steps. The registration is a one-time process.

Note: If your organization has opted for Corporate Sign-in or has delegated the authentication of users to a third-party, the registration process is not applicable.

To register with CONNECT:

1. Select **Sign in** on the invitation email, the **Register** dialog box is displayed.

   Note: You can access the CONNECT sign-in page directly by following the https://connect.aveva.com/#/ URL and selecting the **Sign in** option. Then select **Register** to register.
2. In the **Email** box, type your official email address.
3. In the **Password** and **Confirm password** boxes, type a password.
4. In the **First name** and **Last name** boxes, provide your first and last names.
5. Select **Next** to go to the **Company information** page.
6. In the **Company name** box, type your company name.
7. In the **Local office address 1** and **Local office address 2** boxes, provide your local office address.

   Note: Local office address 2 is optional.
8. In the **Postal code** box, type the postal code of your local office.
9. From the **Country** list, select your country.

10. From the **State/Region** list, select your region.
11. Select the **Terms and Conditions** link to read the terms and conditions.
12. Read the terms and conditions carefully and then select **I Agree** to accept the terms and conditions.
13. Select **Register**. Your request is submitted and an email with a verification link is sent to your official email address.
14. Select the link to verify your email address. An CONNECT **Sign in** page is displayed.
15. Type your password and select **Sign in**.

    Your password must be at least eight characters long and must contain at least three of the following four types of characters: a lowercase letter, an uppercase letter, a number, and a special character. Note that the user account is locked after 10 failed login attempts from the same IP address. You do not need to provide a password if you are using your organization's single sign on.
16. If your AVEVA user ID is approved by AVEVA's corporate compliance check, you are signed in to the account you are assigned to.

    Note: If your AVEVA user ID is pending approval, contact your account manager or your local AVEVA representative.

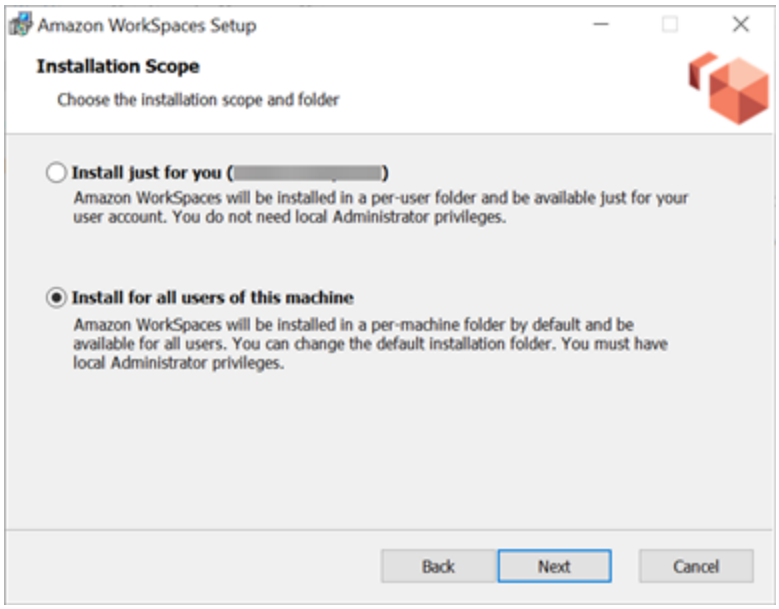
The data you have provided at the time of registering is saved as your profile information which can be updated from time to time. For details on how to update your profile, see Update Profile Information.

Install Amazon WorkSpaces Client

Amazon WorkSpaces client must be installed on the computer from which you want to access your AVEVA Unified Engineering desktop.

To install Amazon WorkSpaces:

1. On the **Amazon WorkSpaces Client Download** page, point to Windows and click **Download**.
2. After the download is complete, double click the file to start the installation. The **Amazon WorkSpaces Setup** wizard is displayed.
3. Click **Next**.
4. On the **Installation Scope** page, select the type of installation you want, and click **Next**.



5. On the **Destination Folder**, click **Next** to accept the default folder location or click **Change** and specify a folder location of your choice.
6. On the **Ready to Install Amazon WorkSpaces** page, click **Install**. The installation process begins.
7. After the installation is complete, click **Finish** to exit the wizard.

System Requirements for AVEVA Unified Engineering Desktop

The hardware and software requirements for starting an AVEVA Unified Engineering desktop are as follows:

- A computer running Microsoft Windows 7, Windows 8, or Windows 10.

  Note: Even though the Amazon WorkSpaces client application is available for multiple operating systems, the AVEVA Unified Engineering desktop supports only the Windows version.
- The computer must have a broadband internet connection providing at least 1.0 MbPS of download bandwidth for power users at least 3.0 MbPS of download bandwidth for graphics users.
- The network that the computer is connected to, and any firewall on it, must have the following ports available and open: TCP 443, TCP 4172, and UDP 4172.

  For detailed port requirements, refer to AWS documentation.
- The round-trip time (RTT) from the computer's network to the region where the AVEVA Unified Engineering desktop is located must be less than 150ms. For accessing AVEVA 3D applications, the RTT recommended to be less than 120ms. If the RTT is between 150ms and 250ms, you can access the desktop but with degraded performance.
- If you want to access your desktop through a virtual private network (VPN), the connection must support a maximum transmission unit (MTU) of at least 1200 bytes.
- Minimum screen resolution of 1280x1024 (1920x1080 or above recommended).
- Google Chrome or Microsoft Edge

  Note: The AVEVA Unified Engineering desktop has been verified on Google Chrome and Microsoft Edge. Other versions and web browsers may also be supported.

Additional Requirements from Amazon WorkSpaces

In addition to the above requirements, your network, and any firewall on it, must meet the IP address and port requirements of Amazon WorkSpaces. These include opening certain ports to certain IP addresses, adding certain domains to the Allow list, and enabling your network's firewall to allow outbound traffic to certain IP addresses. These requirements are described in detail in the IP Address and Port Requirements for Amazon WorkSpaces page in the Amazon WorkSpaces documentation. For smooth functioning of AVEVA Unified Engineering desktop, all the requirements mentioned in the page must be met.

In summary, your network must have the following open, whitelisted or added to the Allow list:

- Ports for client applications
- IP ranges for the PCoIP gateway servers for the region
- IP addresses for the PCoIP Health Check Servers for the region
- Other domains, hostnames and IP addresses that are listed on the page

For more information, refer to the IP Address and Port Requirements for Amazon WorkSpaces page in the Amazon WorkSpaces documentation.

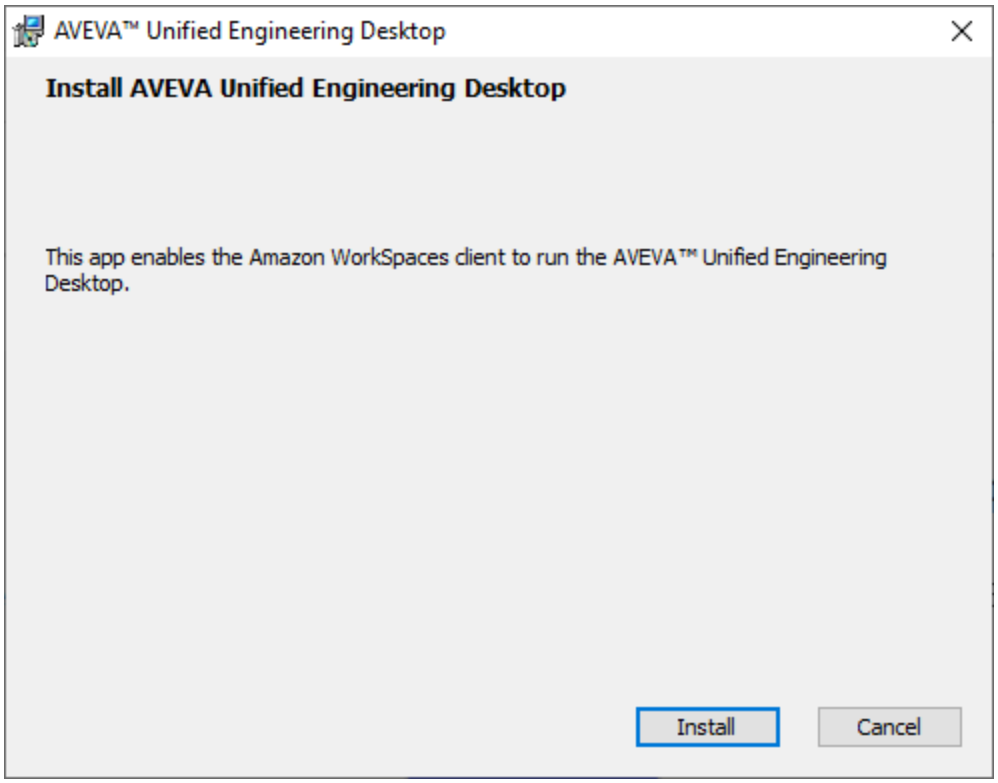
Install the AVEVA Unified Engineering Desktop App

To create the AVEVA Unified Engineering desktop, you must install the AVEVA Unified Engineering desktop app.

Note: You need to be an administrator on the computer to perform this task. If you are not an administrator, contact your administrator to perform this task for you.

To install the AVEVA Unified Engineering desktop app:

1. Download the file.
2. Double-click the file to run it. The **AVEVA Unified Engineering Desktop** wizard is displayed.



3. Click **Install** to install the AVEVA Unified Engineering desktop app.
4. After the installation is complete, click **Finish** to exit the wizard.

Manage your AVEVA Unified Engineering Desktop

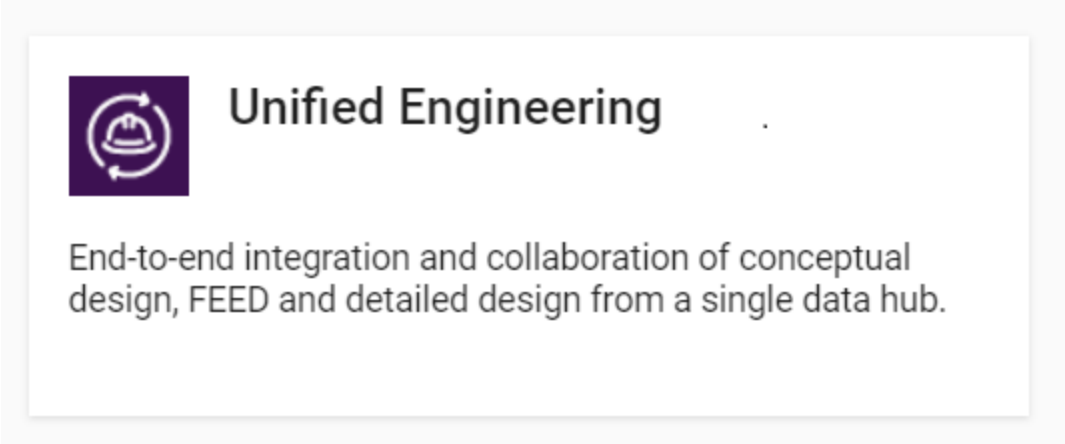
This section contains information that will help you maintain your AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) desktop.

Access your AVEVA Unified Engineering Desktop

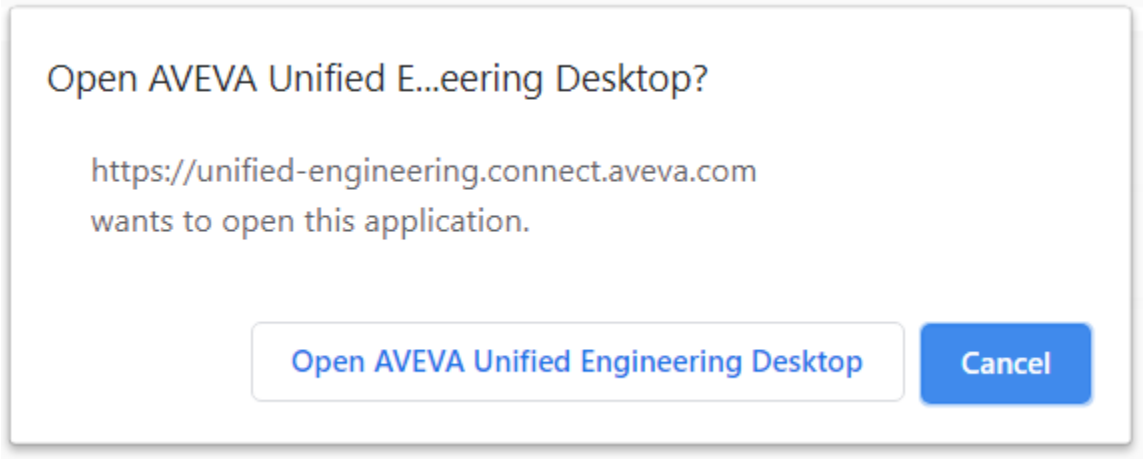
After registering with CONNECT and creating your AVEVA Unified Engineering desktop, you can access it from CONNECT.

To access your desktop from CONNECT:

1. Open the CONNECT URL. The CONNECT home page is displayed.
2. Sign in with your credentials.
3. If you are added to more than one account, select the account you are added to for accessing AVEVA Unified Engineering.
4. Navigate to the desired CONNECT Folder in which the AVEVA Unified Engineering service has been enabled by your Administrator.
5. Click the **Unified Engineering** tile.



6. Click **Start**. The **Open AVEVA Unified Engineering Desktop?** dialog box is displayed.



7. Click **Open AVEVA Unified Engineering Desktop**. The Amazon WorkSpaces client with your AVEVA Unified Engineering desktop is displayed.

Note: After you finish working with your AVEVA Unified Engineering desktop, you must shut down your desktop to conserve resources. But before that, you must save your work and close all AVEVA applications so that the applications can be started without problems the next time. You can shut down the desktop from the **Start** menu.

Understand your AVEVA Unified Engineering Desktop

Your AVEVA Unified Engineering desktop contains all the AVEVA Unified Engineering desktop applications installed out of the box. The desktop allocated to you is personal to you and cannot be accessed by other users. You can personalize the desktop according to your preferences. For example, you can add or remove shortcut icons.

Your AVEVA Unified Engineering desktop contains the following drives:

Drive	Description
`C:\`	Local storage for Windows and other software installations

D:	Local storage for user data such as user profiles, desktop icons, Downloads, My Documents etc. **Important:** This drive must not be used for storing critical data as the data will be lost if the workspace is deleted.
P:	Shared storage for project data
T:	Transfer drive mapped to **T:\GeneralTransfers** folder within workspace **Note:** See **Cloud File Transfer Service** below for more information.

The data you save to the **D:\, P:** and **T:** drives is available to you when you sign in again. See the note below for an exception to **D:** drive data retention.

Important: During official upgrades, the data on **C:** drive is completely replaced. Therefore, you **must not** save anything to the **C:** drive. Additionally, the data stored on the **D:** drive **will be lost** if the workspace is deleted for any reason. If a workspace is unused during a calendar month, it will be deleted on the last day of that month. A new workspace will automatically be created when a user next logs in. The initial start-up will take around 20 minutes, and any changes to default regional settings will need to be configured by the user again. For more information about upgrades and other maintenance, see Prepare for upgrades and other maintenance activities.

Cloud File Transfer Service

Cloud file transfer service provides you with a secure method to synchronize project data between your Unified Engineering environment and designated on-premises network destinations, ensuring reliable and protected data transfer.

Starting from version 3.2.1.0, AVEVA Unified Engineering on Connect enables users to access a General Transfer folder from Workspaces, mapped as **T:\GeneralTransfers** folder.

The General Transfer folder serves as a centralized location where you can place engineering deliverables, files, and documents for synchronization between your Unified Engineering environment and an on-premises environments.

The General Transfer folder is primarily designed to facilitate the efficient transfer of files in and out of your environment. It is not intended as a collaborative working area. For optimal organization and long term storage, we recommend that you, after the synchronization process is complete, promptly move these files to a dedicated permanent folder on the P drive within the workspace or into specific folders within the on-premises setup. This approach ensures better file management and accessibility for future reference and avoids files being overwritten.

Your Administrator must perform certain preparation activities for the Cloud File Transfer Service to function.

Refer to the AVEVA Unified Engineering on CONNECT Administrator Guide for more information.

Third-party Products in Your AVEVA Unified Engineering Desktop

Some AVEVA products in your AVEVA Unified Engineering desktop require third-party products for operation.

The following list summarizes the third-party products with important licensing & availability details:

- Autodesk AutoCAD (for AVEVA P&ID, AVEVA Instrumentation & AVEVA Electrical)

  AVEVA Unified Engineering desktop comes with AutoCAD installed without licenses.

  You must purchase Stand-alone\Single-user AutoCAD licenses directly from Autodesk (this is a compliance requirement from Autodesk. Network licenses are not permitted.)

  Within your Unified Engineering desktop, provide your Autodesk account details so that your license can be validated.
- Microsoft Excel.

  AVEVA Unified Engineering desktop comes with Microsoft Excel installed with licenses.
- Microsoft OneDrive Sync App

  For Windows File Explorer synchronization of folders & files between your Unified Engineering and on-premises Desktops.
- Microsoft Visio (for AVEVA Diagrams – Diagrams Module)

  Microsoft Visio is provided on users' Workspaces for those users who are members of a Connect group associated with the Standard Drafting Diagrams Connect role.

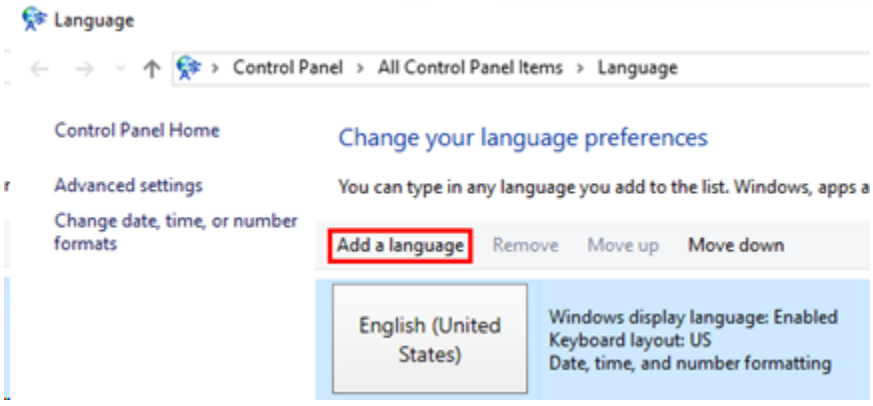
  When provided, AVEVA Unified Engineering desktop comes with Microsoft Visio installed with licenses.

Where available in AVEVA Unified Engineering desktop, the third-party products are for specific use with AVEVA products. The third-party products will be upgraded only when required by AVEVA products (as part of the standard release cadence). There is no guarantee that the third-party product add-ins\tools not required by AVEVA products will persist from one release of AVEVA Unified Engineering to the next.

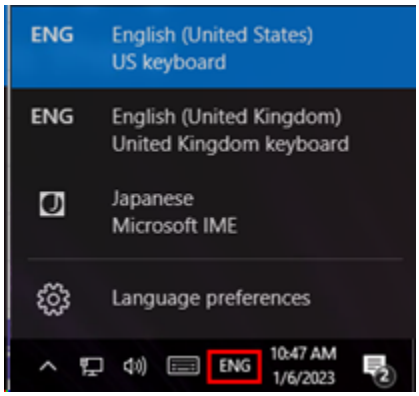
Understand your Access Privileges

Please note the following about your AVEVA Unified Engineering desktop:

- The password used for logging in to your desktop is automatically generated and never visible to you. If you are prompted for credentials to log into the desktop, just close the desktop and re-start from the AVEVA Unified Engineering web page.
- You are a standard user on your desktop and do not have administrator rights. Therefore, you can perform only the tasks that a standard Windows user can perform on a Windows computer.
- The Windows Display Language, keyboard, date, time and number formatting settings on your Unified Engineering desktop are set to English (United States) US by default. If needed, you can change these by adding new languages in the Windows Language Control Panel:



Then, switching to the new language from the Unified Engineering desktop task bar:



Prepare for upgrades and other maintenance activities

As part of managed services, AVEVA performs maintenance activities on the desktops to upgrade the software installed on your **C:** drive. You will be informed about the maintenance time in advance. During this time, you must not access the desktop.

Microsoft Updates are applied automatically to your desktop in the background. Some updates (in particular those after Microsoft Patch Tuesday, the second Tuesday of each month) require a system reboot after being downloaded and applied. When you start (or reboot) your desktop in this scenario, the desktop may not be accessible for as long as 30 minutes while the post-reboot updates are applied. Note that the post-reboot updates take significantly more time on a virtual desktop compared to a physical computer. Therefore, on such occasions, it is recommended that you wait and then try to launch the desktop after 10-minute intervals. If you are unable to launch the desktop even after considerable time, contact your AVEVA representative.

The same symptoms occur on newly provisioned workspaces (built from images that may have been created many weeks in the past) where multiple Microsoft updates are downloaded and applied during first-login.

If you have not logged into the virtual desktop at least once in a calendar month, the workspace will be deleted on the last day of the month. Along with it, the data on the **D:** is also lost and cannot be restored. A new workspace is automatically created when you log in again. However, for the new workspace, the initial start-up takes around 20 minutes, and you will need to reconfigure any changes to default regional settings.

Download and upload files from local computers

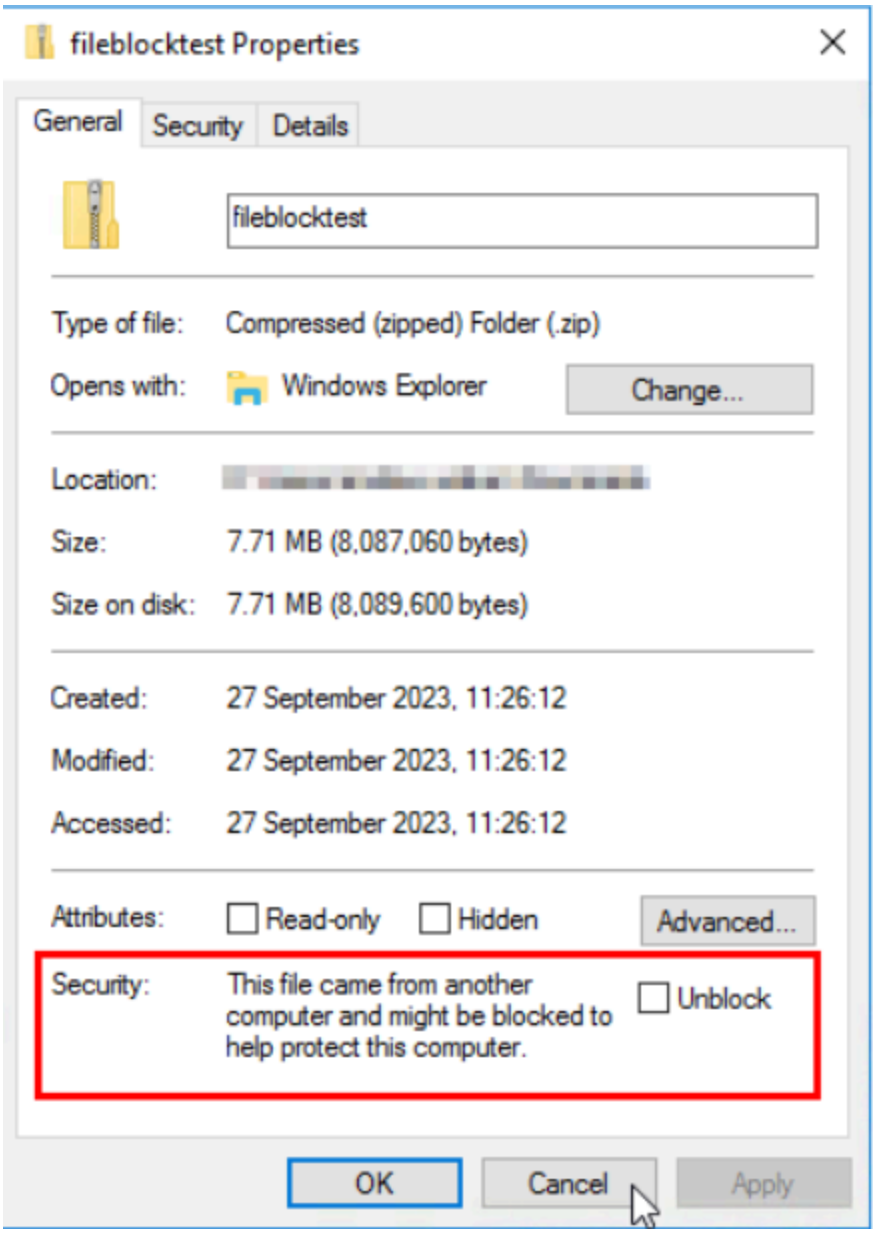
If you want to download or upload files from your local computer, you can do so using third-party cloud storage tools such as Microsoft OneDrive and Dropbox, using the web browser on your desktop.

Microsoft OneDrive Sync App is included on AVEVA Unified Engineering for Windows File Explorer synchronization of folders and files between your AVEVA Unified Engineering and on-premises Desktops.

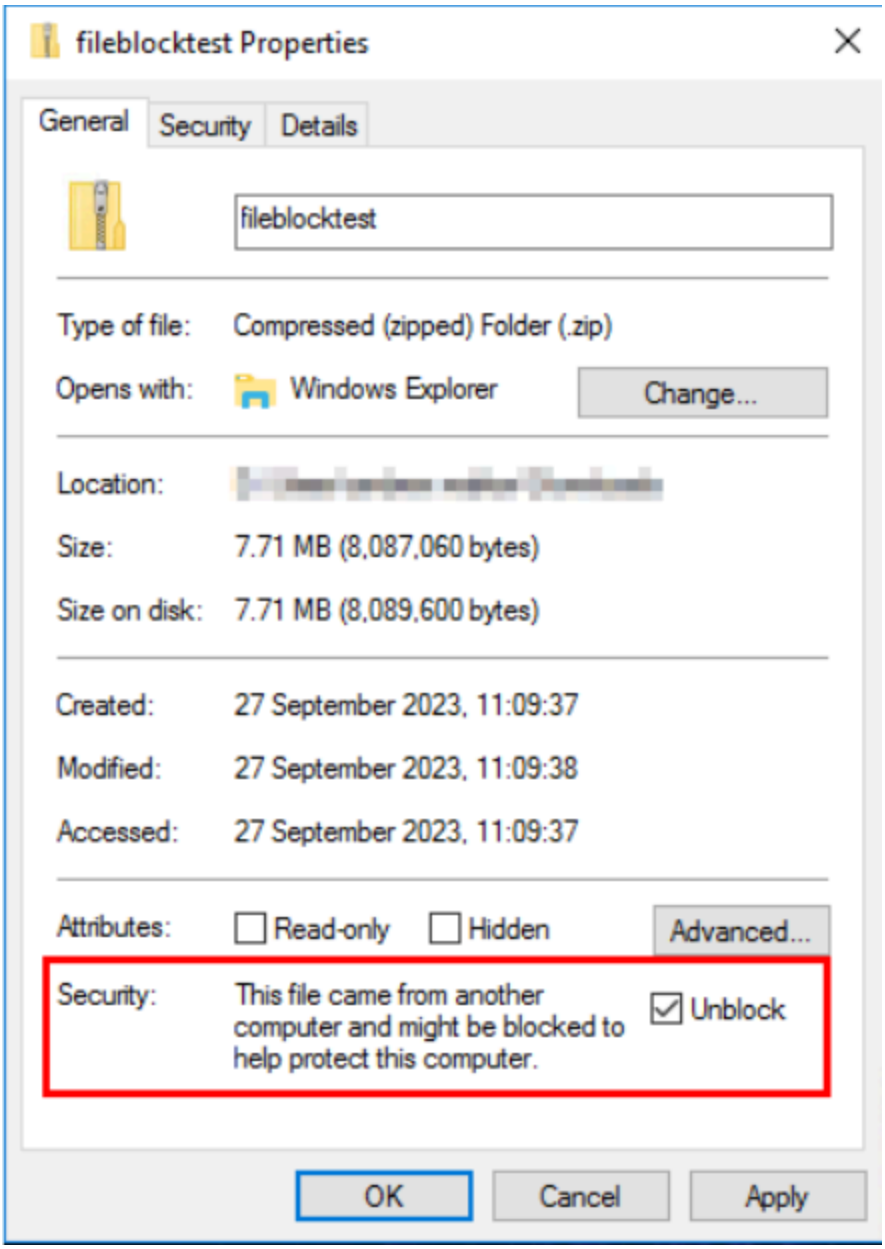
To use this feature, your administrator must communicate corporate OneDrive end-point address to AVEVA so they can be whitelisted as a trusted site.

Important: If files are downloaded from another source over the internet, it is possible that these files are marked with a blocking property, which can impair performance on file access. The blocking mechanism is a protection measure for files downloaded from the internet.

You can determine if this blocking property has been enabled by checking the file properties.



To unblock the file, select the **Unblock** checkbox and click **Apply**.



For a downloaded zip file (for example, containing Dabacon project folders and files) if you unblock the zip before unzipping then all the unzipped files will be unblocked.

As an alternative to unblocking from the file properties dialog, you can unblock a file with the following command (from a command window): **powershell -Command "& {dir 'FullPathToFileWithFileExtension' |Unblock-File}"**

For example, **powershell -Command "& {dir 'D:\Users\freda.bloggs\Downloads\fileblocktest.zip' |Unblock-File}"**

If you already have a folder containing multiple files that need unblocking (that is, you already unzipped the files before unblocking the zip file), you can unblock all files in a folder (and sub-folders) with the following command (from a command window): **powershell -Command "& {dir 'FullPathToFolder' -Recurse|Unblock-File}"**

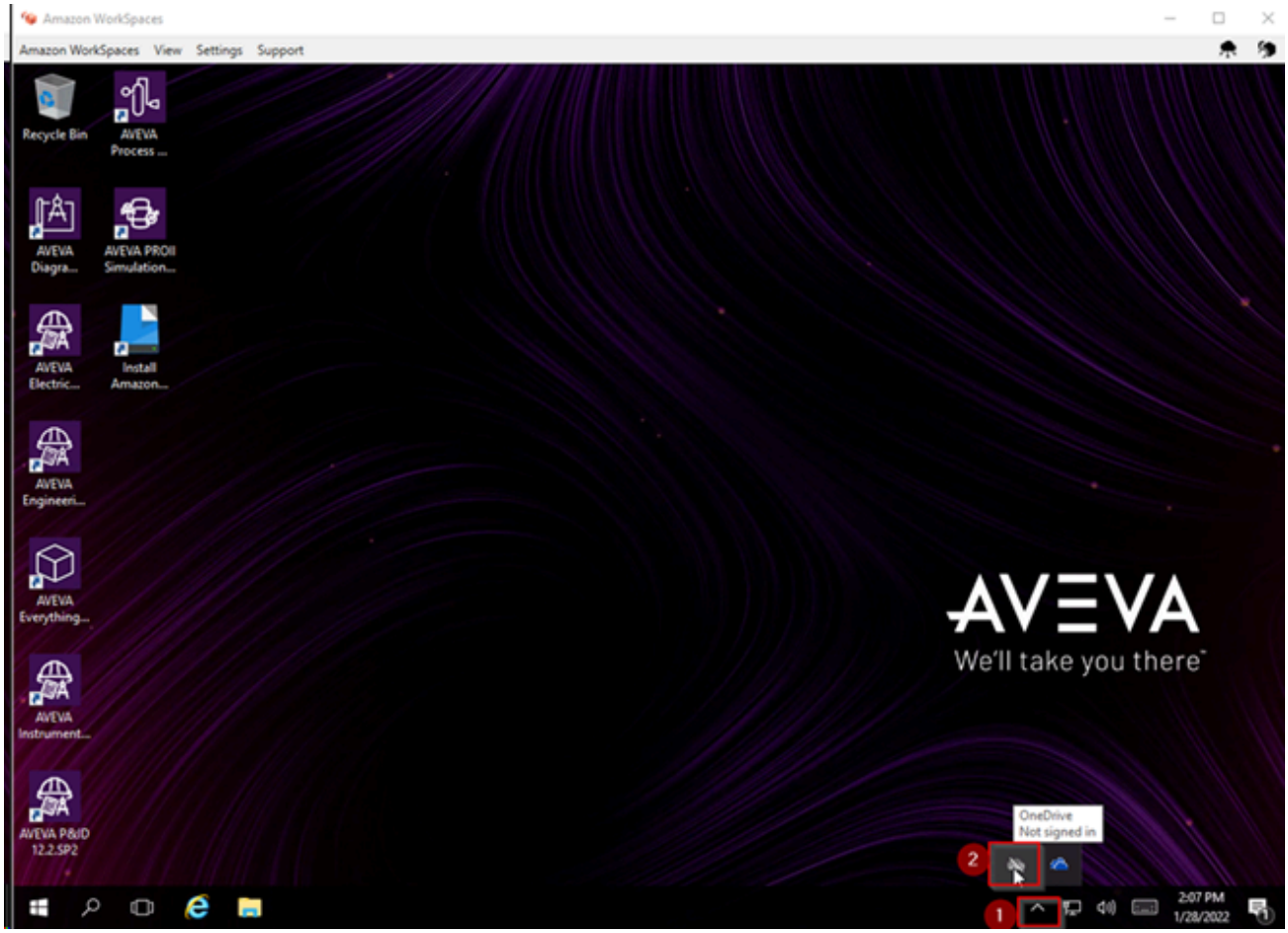
For example, **powershell -Command "& {dir 'P:\AVEVAFiles\Engineering\AAA' -Recurse|Unblock-File}"**

Note: This is not applicable for files transferred using the file transfer service.

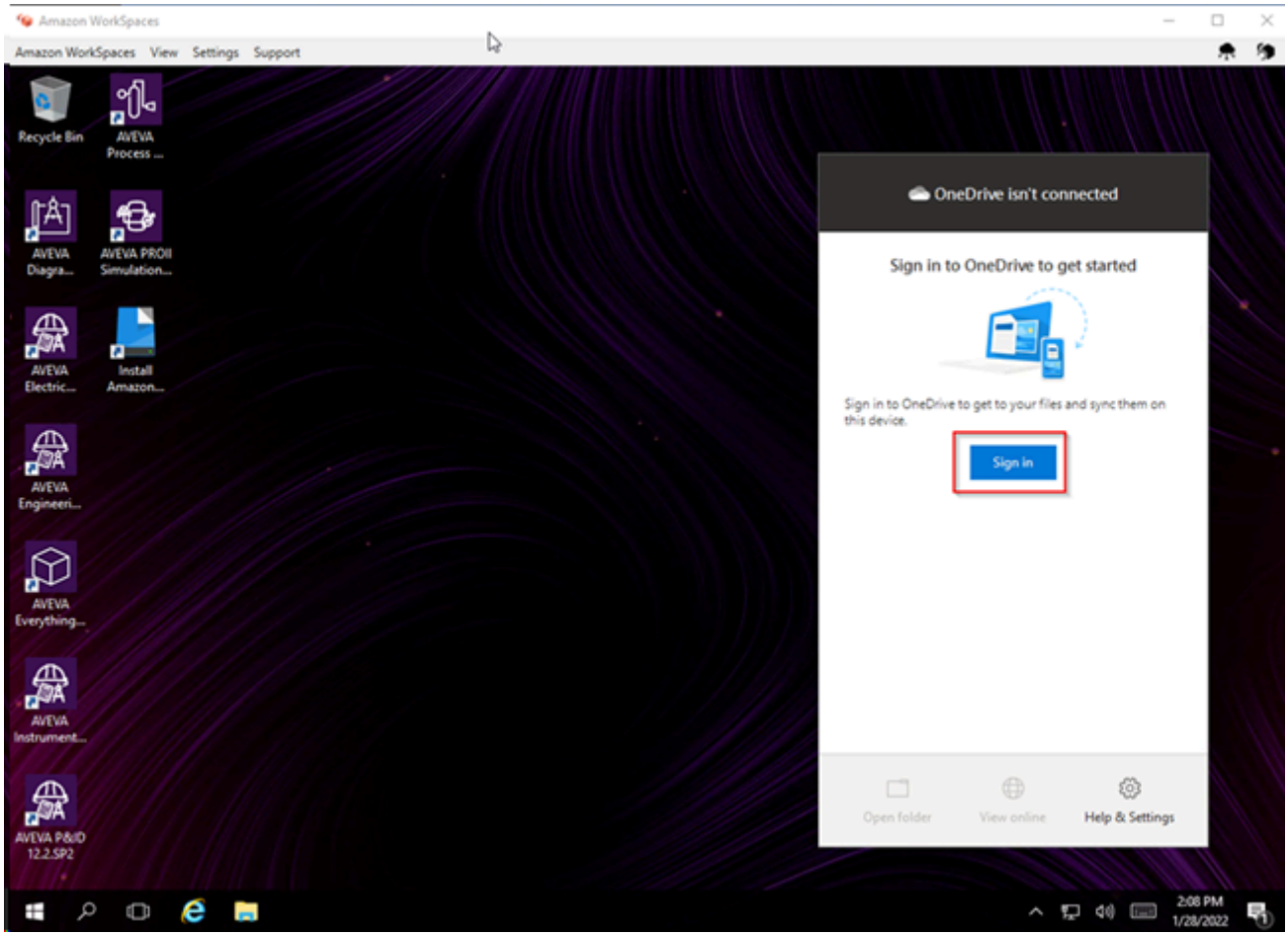
Enable OneDrive on your Unified Engineering workspace

To enable Microsoft OneDrive on your AVEVA Unified Engineering workspace:

1. In the Windows status bar, select the up arrow and click the OneDrive Icon.



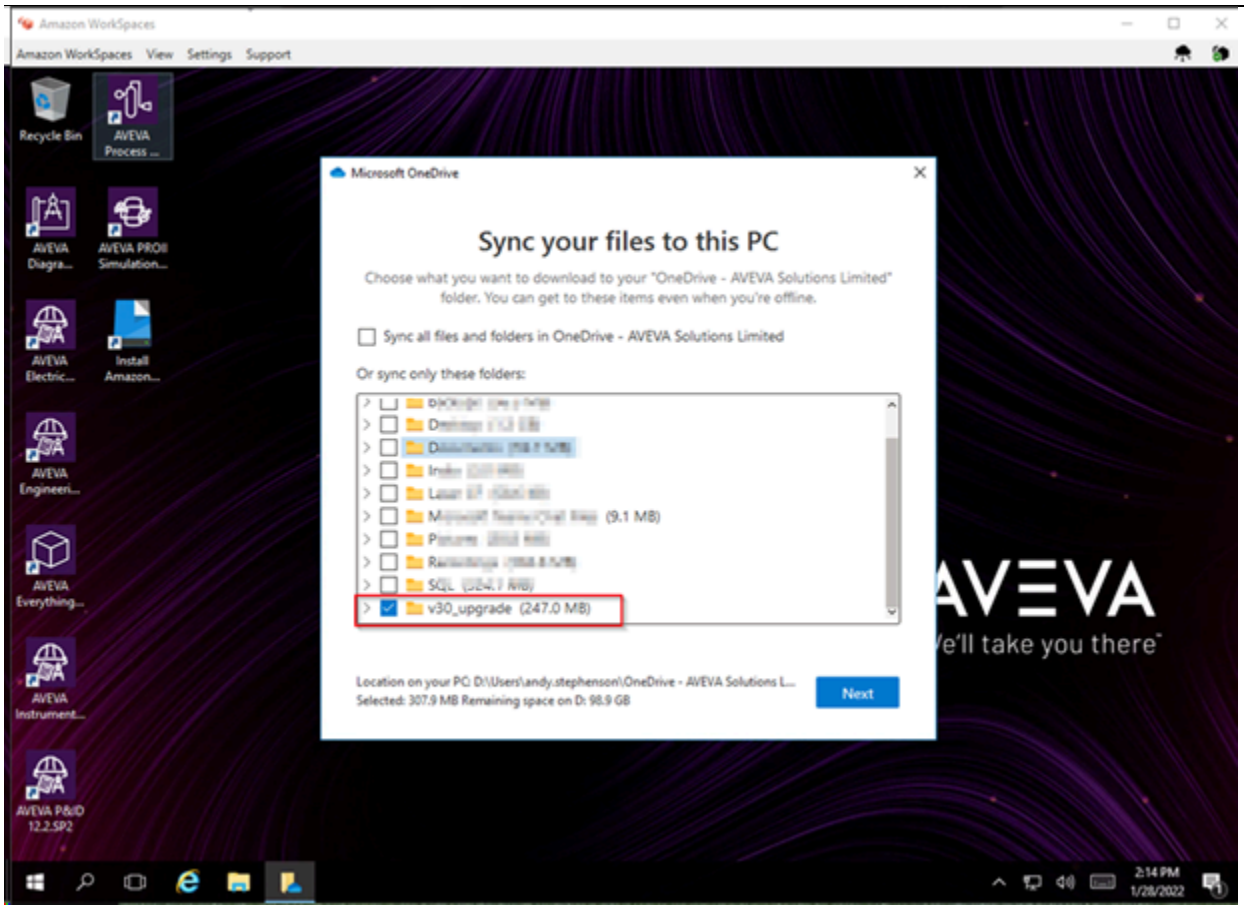
2. Click **Sign In** to sign into OneDrive.



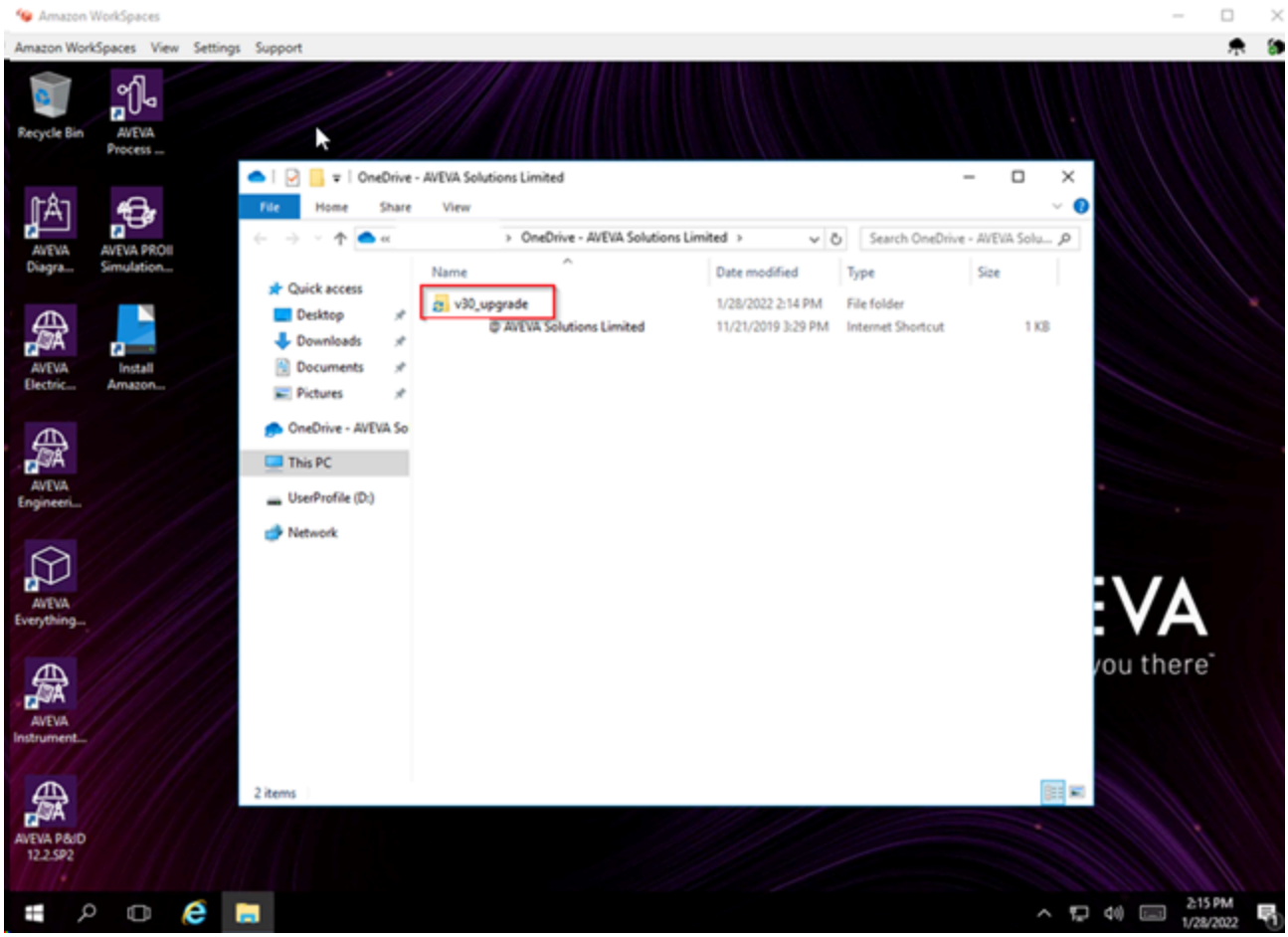
3. Enter your credentials for the OneDrive account you wish to enable.

   Note: If your organization has enabled multi factor authentication, complete the authentication as required by your organization.

4. After successful authentication, choose the files you wish to sync using the check box.



After the completion of the sync process, you will be able to see the selected folder(s) in the OneDrive folder.

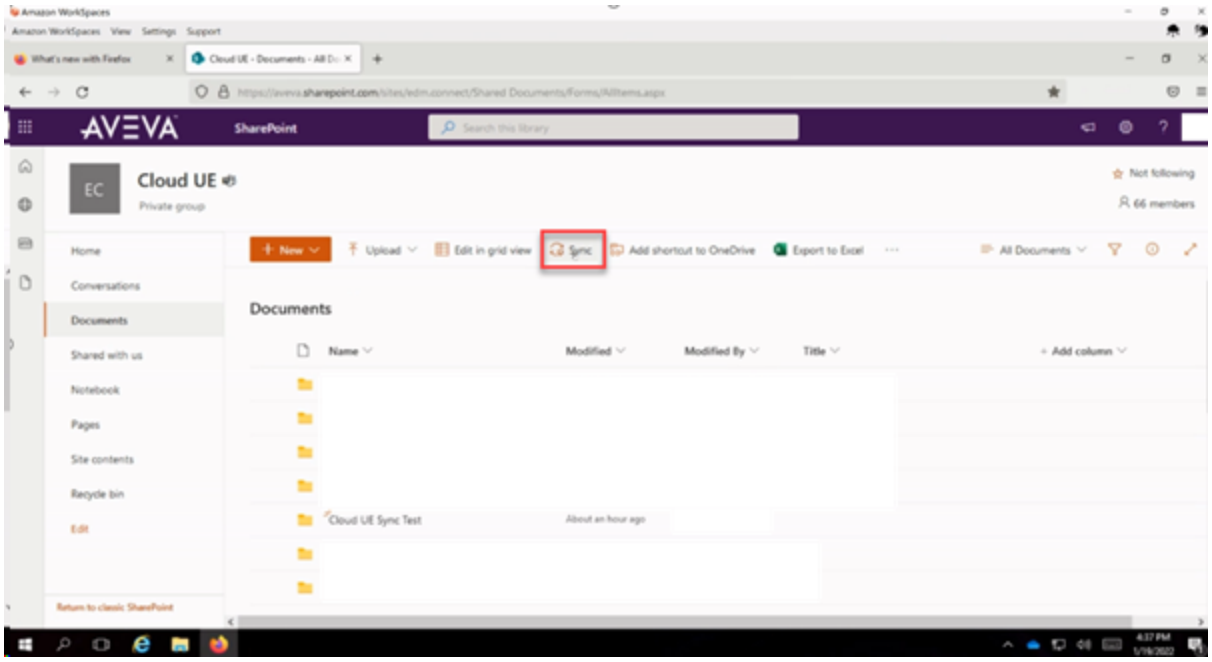


Synchronize files using Microsoft OneDrive

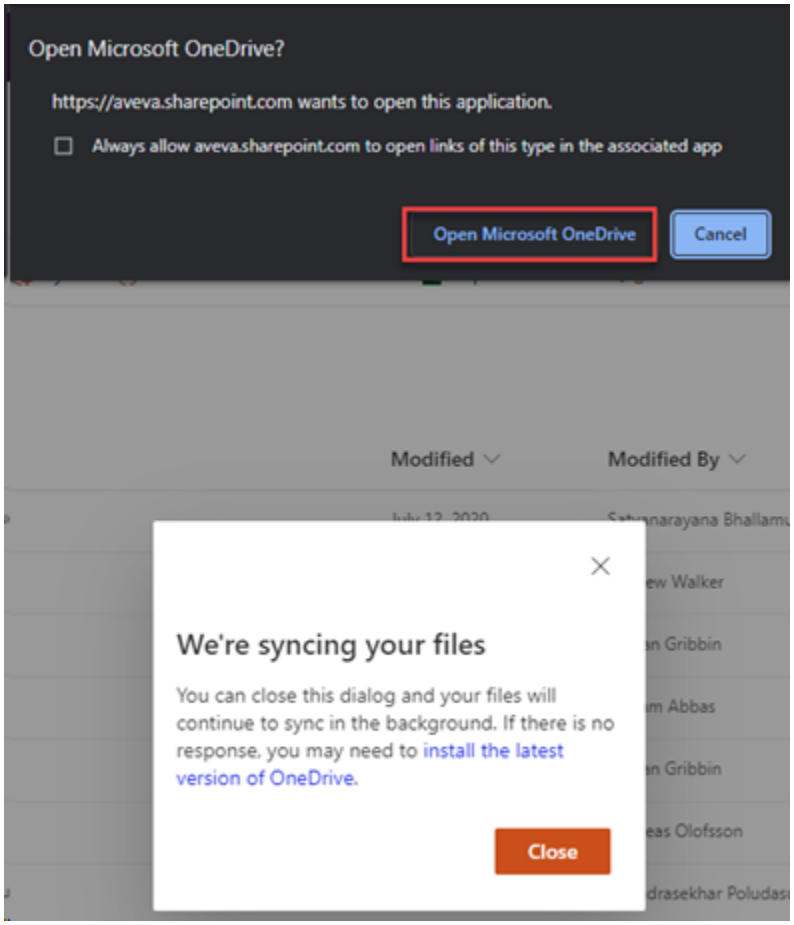
Microsoft OneDrive can be used for synchronizing AVEVA Unified Engineering files with your corporate SharePoint library.

To sync your Unified Engineering files with your corporate SharePoint library:

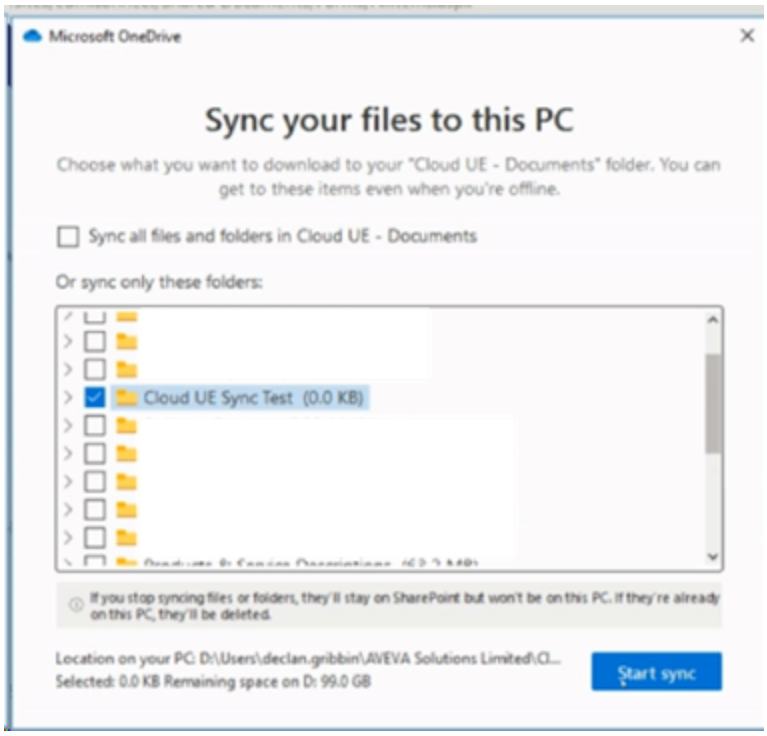
1. Navigate to your corporate SharePoint location and folder you wish to sync.
2. Click **Sync**.



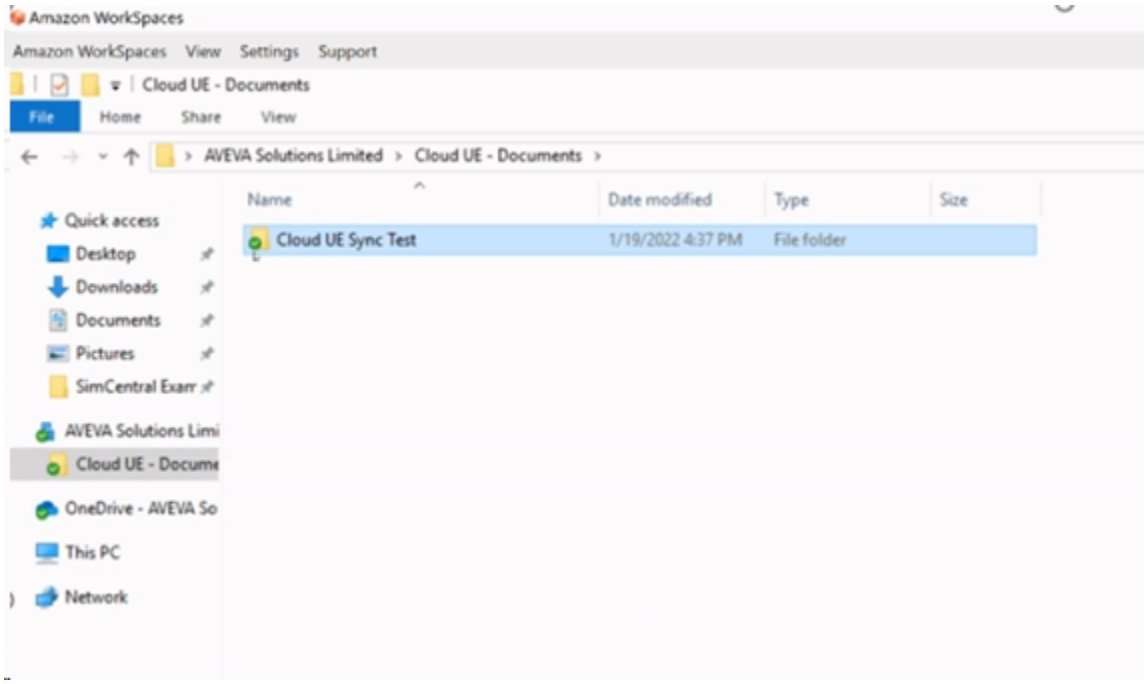
3. On the **Open Microsoft OneDrive?** dialog box, click **Open Microsoft OneDrive**.



4. Choose the files/folders you wish to sync using the corresponding check boxes, and then click **Start sync**.



The files/folders are now synchronized.



Note: Creating a file / folder in the OneDrive directory is bi-directional. The file / folder created in the OneDrive directory will be synced back to the corporate SharePoint location.

Restrictions and limitations in synchronization

It is not possible to sync network drives or mapped drives. For more information, see https://support.microsoft.com/en-us/office/restrictions-and-limitations-in-onedrive-and-sharepoint-64883a5d-228e-48f5-b3d2-eb39e07630fa?ui=en-us&rs=en-us&ad=us#networkmappeddrives

SharePoint Shortcuts within OneDrive

The Cloud UE workspace has a limit of 100GB of storage. We would recommend consideration of this prior to syncing shortcuts to your corporate SharePoint folders.

Administration Help

The purpose of this document is to enable the account administrators of AVEVA™ Unified Engineering on CONNECT (AVEVA™ Unified Engineering) to set up the users and manage the AVEVA Unified Engineering environments for their organization. The guide describes the tasks to be performed to create users, assign them to groups and roles, create and manage multiple environments and manage the upgrades. This guide is also intended for internal AVEVA users who perform maintenance and upgrade tasks and make sure that customer environments are up to date and running.

Preface

This chapter introduces this guide, specifies the intended audience.

Audience

The guide is intended for customer administrators who are responsible for helping and overseeing the setup and management of AVEVA Unified Engineering environments in their organizations. The guide assumes that the customer administrators are well versed with the requirements of their organization and have full rights to managing the users and environments.

This guide is also intended for internal AVEVA users who perform maintenance and upgrade tasks on the AVEVA Unified Engineering environments for the customers.

About AVEVA™ Unified Engineering on CONNECT

AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) provides a digital environment that unifies the process engineering and asset engineering model and plant model lifecycles, from concept to detailed design.

AVEVA Unified Engineering helps you control and accelerate the iterative design and engineering process within one integrated set of products. AVEVA Unified Engineering has been created for customers who are investing in capital assets and wish to maintain control and visibility of their digital asset, ensure visibility to on-going engineering and design progress and deliverable.

- **Accessible via CONNECT:** AVEVA Unified Engineering on CONNECT applications are securely accessible over the Internet via CONNECT, integrated with the Windows WorkSpaces client, to deliver a streamed virtual desktop environment to end users.
- **Virtual desktop:** AVEVA Unified Engineering on CONNECT includes the suite of AVEVA's engineering, design authoring tools and simulation applications along with the 3rd-party applications required by some AVEVA products for operation. This enables users to collaborate on a centralized cloud-based digital asset.

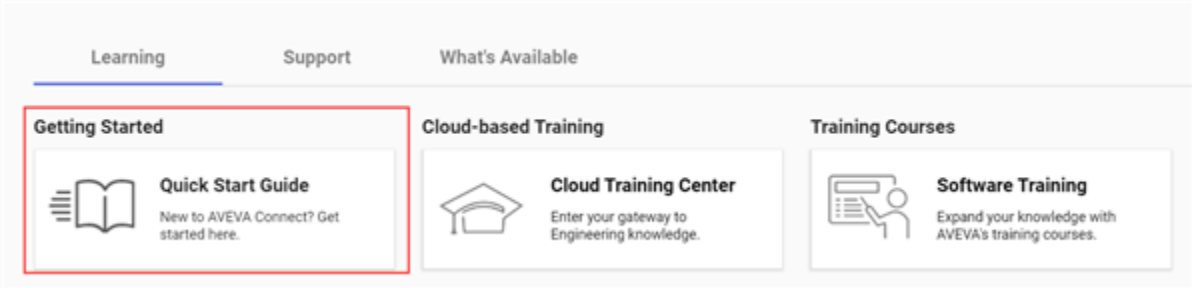
  The AVEVA™ E3D Design version will be either 2.x or 3.x series depending on the series agreed before the AVEVA Unified Engineering environment deployment stage.
- **Complete control over networking environment:** AVEVA Unified Engineering on CONNECT is provided to

customers on a private instance basis, where each customer's environment is provisioned using dedicated cloud infrastructure that isolates their resources and restricts administrative access to AVEVA named team members.

- **Collaboration:** To support collaboration on a shared digital asset, highly resilient dedicated cloud infrastructure is used for the storage of application data on AVEVA proprietary fileserver based Dabacon storage and relational data in Microsoft SQL Server databases. Virtual server instances and AVEVA Unified Engineering server applications enable the interoperability and data sharing between the Unified Engineering applications.

Get started with AVEVA Unified Engineering

One of prerequisites to getting started with AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) is to have a clear understanding of your organization's requirements, your users and their profiles, and how to organize your AVEVA Unified Engineering environments. This information is crucial in understanding how many environments your organization needs and creating a folder structure accordingly. After you gather this information, you can proceed with creating folders, adding users, adding them to groups and assigning roles. For information on how to perform these tasks, refer to the *CONNECT documentation*.



As an administrator, you must perform the following tasks to enable users to start working on AVEVA Unified Engineering. For information on how to perform these tasks, refer to the *CONNECT Quick Start Guide* and the remaining section in this guide.

1. Create CONNECT folder(s).
2. Enable the Unified Engineering service on the folder(s).
3. Contact AVEVA Support to link the Unified Engineering service infrastructure to your CONNECT folder(s). This is currently a manual process that may be automated in a future release.
4. Add users.
5. (Optional) Add custom groups.

   For each Unified Engineering service, AVEVA provides a default set of groups out of the box. You can create your own custom groups, add to the default groups, remove the default groups, or substitute the groups as you see fit. For information about the default groups, see Default groups and assigned roles for AVEVA Unified Engineering.
6. Add users to groups.
7. Assign desktops.

Service Overview

The AVEVA Unified Engineering on CONNECT managed service provides access to geographically dispersed users, often including multiple collaborating EPCs, with an on-demand desktop which is optimized for design and engineering authoring tasks using AVEVA Unified Engineering on CONNECT applications all operating on a shared digital asset.

AVEVA Unified Engineering on CONNECT is made up of three components:

1. **Standard Platform Services**

   When AVEVA Unified Engineering on CONNECT service is enabled in the customer CONNECT account, one standard environment (or instance) is deployed by default. This environment is set to a chosen region data center; for more information, see *Regional Cloud Availability*.

   In addition, this default service includes integration of the AVEVA Unified Engineering on CONNECT application and management of project data flow for user collaboration with a 500 GB storage space. This project storage can be extended to 2 TB without any further cost via a customer support request. See the *Add-On Services* bullet in this section for incremental additions to the environment and project data.

   Included as part of the standard platform service is the file transfer service, which enables customers to transfer files between AVEVA Unified Engineering on CONNECT and a synchronized on-premises file location. This functionality requires customers to be on the latest available version of AVEVA Unified Engineering on CONNECT, and initial setup needs to be requested through an AVEVA support case.

   For more information, see Service Limitations.

2. **User Services**

   AVEVA Unified Engineering on CONNECT users are added to groups in CONNECT to enable access to AVEVA Unified Engineering on CONNECT. CONNECT roles assigned to groups dictate file system folder access (See Default Groups and Assigned Roles for AVEVA Unified Engineering) and flex credit charge rates for one of four services (See Understand credits consumption).

Services ->	1D	2D	Simulation	3D
	AVEVA Engineering	1D application + AVEVA Electrical, AVEVA Instrumentation, AVEVA P&ID, AVEVA Diagrams	1D, 2D applications + AVEVA PRO/II, AVEVA Process Simulation	All + AVEVA E3D

3. **Add-On Services**

   Add-on services are optional and include:

   - Incremental AVEVA Unified Engineering on CONNECT environments.
     - An additional AVEVA Unified Engineering on CONNECT environment may be added for users in a new region. For example, if your default base is in Europe, but your projects and teams are in APAC, then a second environment can be provisioned in APAC to ensure optimal performance for local users.
   - Global Services
     - Hybrid use case, enabling synchronization of 3D project data between on-premises and cloud.
     - Cross-regional-peering use case, enabling synchronization of 3D project data across AVEVA cloud

regions.

For more information, see the documentation *AVEVA Unified Engineering Global Add-on Service Guide*.

- Additional project data storage of 2TB

To ensure correct AVEVA Unified Engineering on CONNECT configuration for a customer, the initial setup and ongoing management of the project configuration can be coordinated through the AVEVA service delivery teams. For more information, see Additional Services.

Default groups and assigned roles for AVEVA Unified Engineering

The following table lists the default groups provided out of the box and the roles assigned. The default group names are prefixed “AVEVA UE” to help differentiate from any custom groups you may choose to create.

Note: AVEVA recommends a naming convention for the groups when using CONNECT folders. To clearly distinguish between groups of various folders, the group names must be suffixed with your account folder name if your AVEVA Unified Engineering environment is enabled at folder level. If enabled at your CONNECT account level, then the group names need not be suffixed with anything. For example, if your AVEVA Unified Engineering environment is enabled at the folder ASSET A, then the recommended group names are AVEVA UE Catalogue Administrator (ASSET A), AVEVA UE 2D Drafter (PID) (ASSET A) and so on.

Group (if UE enabled at account level)	Group (if UE enabled at folder level)	Roles Assigned
AVEVA UE Superuser	AVEVA UE Superuser (AC Folder)	Admin Superuser
AVEVA UE Catalogue Administrator	AVEVA UE Catalogue Administrator (AC Folder)	Standard Customer, Standard Design
AVEVA UE 2D Drafter (PID)	AVEVA UE 2D Drafter (PID) (AC Folder)	Standard Customer, Standard Drafting PID
AVEVA UE 2D Drafter (Diagrams)	AVEVA UE 2D Drafter (Diagrams) (AC Folder)	Standard Customer, Standard Drafting Diagrams
AVEVA UE 3D Designer	AVEVA UE 3D Designer (AC Folder)	Standard Customer, Standard Design
AVEVA UE Civil Designer	AVEVA UE Civil Designer (AC Folder)	Standard Customer, Standard Civil Design
AVEVA UE Electrical Designer	AVEVA UE Electrical Designer (AC Folder)	Standard Customer, Standard Electrical Design
AVEVA UE Instrumentation Designer	AVEVA UE Instrumentation Designer (AC Folder)	Standard Customer, Standard I&C Design
AVEVA UE Mechanical Engineer	AVEVA UE Mechanical Engineer (AC Folder)	Standard Customer, Standard Mechanical

Group (if UE enabled at account level)	Group (if UE enabled at folder level)	Roles Assigned
AVEVA UE Process Engineer	AVEVA UE Process Engineer (AC Folder)	Standard Customer, Standard Process
AVEVA UE Project Controls	AVEVA UE Project Controls (AC Folder)	Standard Customer, Standard Project Controls
AVEVA UE Project Management	AVEVA UE Project Management (AC Folder)	Standard Customer, Standard Project Management
AVEVA UE Simulations Engineer	AVEVA UE Simulations Engineer (AC Folder)	Standard Customer, Standard Simulations
AVEVA UE Desktop Graphics User	AVEVA UE Desktop Graphics User (AC Folder)	Desktop Graphics User; Use to assign a Graphics desktop to a user
AVEVA UE Desktop Standard User	AVEVA UE Desktop Standard User (AC Folder)	Desktop Standard User; Use to assign a Standard desktop to a user

The following table lists the access privileges of the roles and their purpose.

Role	Access Rights	Purpose
Admin Superuser	RW on AVEVAFiles\Miscellaneous\GPO\AI-AE RW on AVEVAFiles\Miscellaneous\GPO\PID RW on AVEVAFiles\Miscellaneous\GDP	The Admin Superuser CONNECT role (for a specific UE Service\Folder) grants: • Write permissions on “master” *pid.prjs* from workspaces. • Write permissions on “master” *inst.ini* from workspaces. • Write permissions on Gateway Data Publisher configuration files from workspaces. • Access to the Cloud File Transfer webpage in CONNECT. • Access to the batch management webpage in CONNECT.
Standard Customer	Drive P (R on Projects Share) **Access Mode 1** • R on AVEVAFiles* • R on ProjectFiles*	Assigned to all customer users. Varies depending on File System Folders Access mode in place. See File system folders in AVEVA Unified Engineering for details.

Role	Access Rights	Purpose
	Access Mode 2 • None on AVEVAFiles\ElecInst* • None on AVEVAFiles\ Engineering* • None on AVEVAFiles\PID* • None on AVEVAFiles\ Simulations* • R on AVEVAFiles\ Miscellaneous* • None on ProjectFiles* **File Transfer Service** • RW on T:\GeneralTransfers	
Standard Civil Design	RW on AVEVAFiles\Engineering RW on ProjectFiles\Civil	For Structural/Civil users.
Standard Design	RW on AVEVAFiles\Engineering RW on ErmFiles Share RW on ErmFiles\FromERM RW on ProjectFiles\Design RW on ErmFiles\ToERM	For E3D Users.
Standard Drafting PID	RW on AVEVAFiles\PID RW on ProjectFiles\Drafting	For P&ID users.
Standard Drafting Diagrams	RW on AVEVAFiles\Engineering RW on ProjectFiles\Drafting	For Diagrams users. Provisions Microsoft Visio on users' Workspaces.
Standard Electrical Design	RW on AVEVAFiles\ElecInst RW on ProjectFiles\Electrical	For Electrical designers.
Standard I&C Design	RW on AVEVAFiles\ElecInst RW on ProjectFiles\InstControls	For Instrumentation designers.
Standard Mechanical	RW on AVEVAFiles\Engineering RW on ProjectFiles\Mechanical Access to TMR Service from AVEVA	For AVEVA Engineering users. Normally, both roles may need to be assigned.

Role	Access Rights	Purpose
	Engineering	
Standard Process	RW on AVEVAFiles\Engineering RW on ProjectFiles\Process Access to TMR Service from AVEVA Engineering	
Standard Project Controls	RW on ProjectFiles\ProjectControls	For users requiring access to Project Controls Folders.
Standard Project Management	RW on ProjectFiles\ ProjectManagement	For management requiring access to Project Management Folders.
Standard Simulations	RW on AVEVAFiles\Simulations RW on ProjectFiles\Simulations	For Process engineering requiring access to simulations

An option is available to apply File System Folder Access Control to Project related folders. See File system folders in AVEVA Unified Engineering for details.

Custom groups

AVEVA Unified Engineering comes with default groups provided out of the box prefixed “AVEVA UE” to help differentiate from any custom groups you may choose to create.

To create custom groups, assign roles and add users to groups, please refer to the *CONNECT documentation*.

Note: Adding roles directly to users is currently not supported for AVEVA Unified Engineering. Users only inherit the roles through the groups they are members of and must not be assigned any individual roles. If you are using multiple environments, it is recommended to suffix the group name with the folder name to keep with the naming convention and to avoid confusion. For more information, see Manage multiple environments.

Assign a Desktop

The following types of desktops are available for AVEVA Unified Engineering:

- **Power:** Suitable for users who work with non-graphic applications, such as AVEVA Engineering
- **Graphics:** Suitable for users who work with graphic-intensive applications, such as AVEVA E3D Design

Each user must be added to at least one AVEVA Unified Engineering functional group **PLUS** a group corresponding to the type of desktop you want to assign - AVEVA UE Desktop Graphics User or AVEVA UE Desktop Standard User.

The following scenarios provide examples for adding users to groups:

- A 2D designer working on P&ID drafting would be added to the AVEVA UE 2D Drafter (PID) and AVEVA UE Desktop Standard User groups. By adding to the AVEVA UE 2D Drafter (PID) group, you can provide the required access privileges, and by adding to the AVEVA UE Desktop Standard User group, you can create a

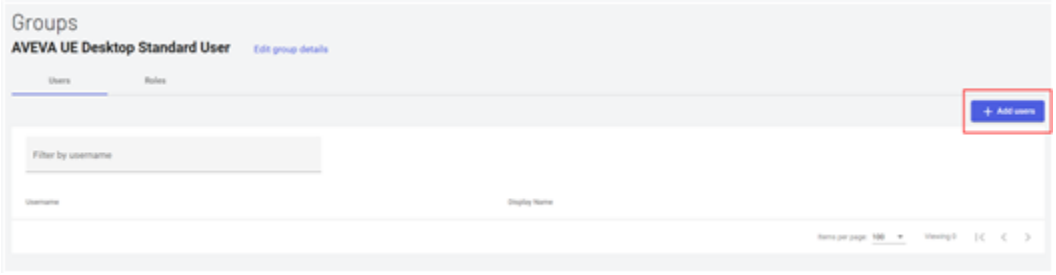
Standard desktop for the user.

- A 3D Designer, who specializes in creating 3D designs, would be added to the AVEVA UE 3D Designer and AVEVA UE Desktop Graphics User groups.

The procedure for assigning a desktop to a user is similar to adding users to groups (refer to the *CONNECT Quick Start Guide*). The only difference is that, for assigning a desktop, you must add the user to one of the AVEVA UE Desktop Standard User or AVEVA UE Desktop Graphics User groups.

To assign a desktop for a user:

1. On the CONNECT home page, click the menu icon and select **User Management**. The User Management page is displayed.
2. Click the **Groups** tab.
3. Click the required group (AVEVA UE Desktop Standard User or AVEVA UE Desktop Graphics User) to add users to this group. The list of users assigned this group are displayed on the **Users** tab.



4. Click **Add users** to add users to this group. Add the required users to this group for whom you want to assign the desktop.

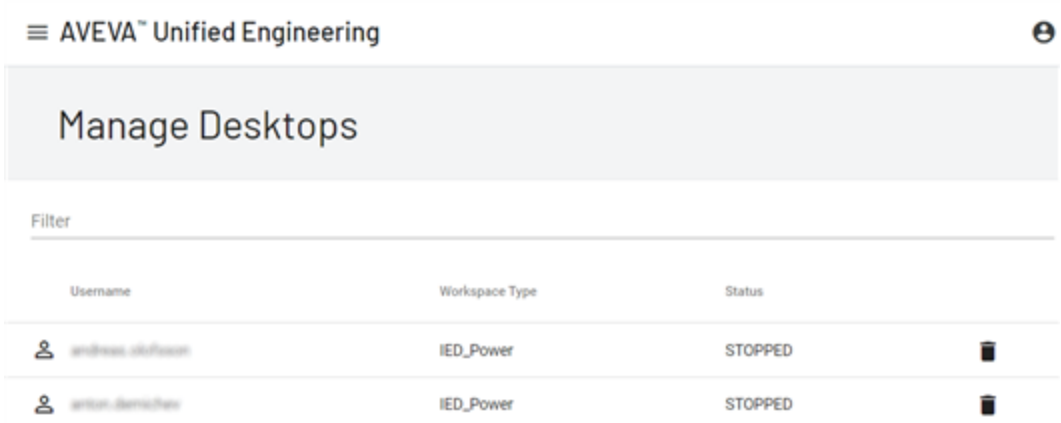
Note: After assigning a type of desktop to a user, if you want to change it, you can do so by changing the user's group. Further, to allow to user to create the desired type of desktop, you must delete the existing desktop. For information about how to delete an existing desktop, see Delete a Desktop.

If a user has not logged into the desktop at least once in a calendar month, the desktop will be deleted on the last day of the month. Along with it, the data on the D:\ is also lost and cannot be restored. A new workspace is automatically created when the user logs in again. However, for the new workspace, the initial start-up takes around 20 minutes, and the user will need to reconfigure any changes to default regional settings.

Delete a Desktop

To delete a desktop for a user:

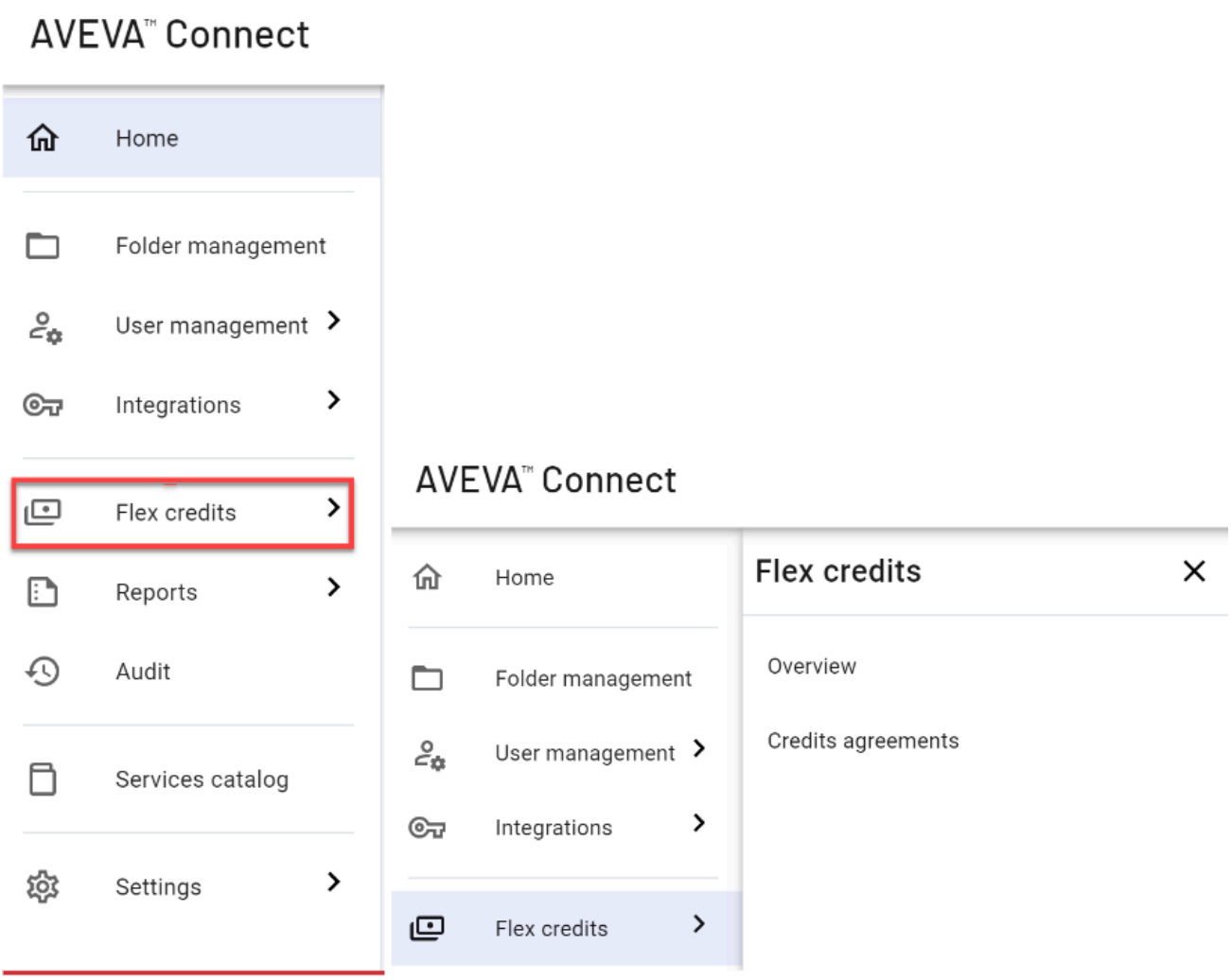
1. On the CONNECT home page, click the **Unified Engineering** tile. The Welcome page is displayed.
2. From the menu icon, select **Admin**. The **Manage Desktops** page displayed. This page lists all existing desktops, the user who it belongs to, the type of the desktop, (Standard or Graphics), and its status.
3. Delete the desktop for the required user by clicking the corresponding trashcan icon.



After a desktop has been deleted, all the user data in the **D:** drive is deleted. Therefore, before deleting a desktop, you must make sure that all the required data is backed up. For information on how to upload data from the desktop, refer to the *AVEVA Unified Engineering Desktop User Guide*.

Understand credits consumption

AVEVA Unified Engineering deducts credits from your CONNECT account based on the rate plan outlined in your Credits Agreement. You can access your credits agreement, review your credit usage history (itemized by service), and check your consumption forecast by navigating to the **Flex Credits**' menu option.



For more information about credits agreement and how to use it, refer to the CONNECT documentation.

AVEVA Unified Engineering has two ways of charging credits: Fixed charge and Usage Charge

Fixed charge

A fixed number of credits is consumed from the CONNECT account balance per month. The charge will continue to apply for as long as it is present in an active CONNECT Credits Agreement and is made regardless of any usage.

Two types of services fall into this charging category: The Standard Platform Service and the Add-On Services.

Standard Platform Service

The Standard Platform Service includes:

- Unlimited number of users added.
- Project data collaboration across AVEVA Unified Engineering products.
- One single AVEVA Unified Engineering environment per CONNECT account.
- Includes storage up to 2TB for project data.

Add-On Services

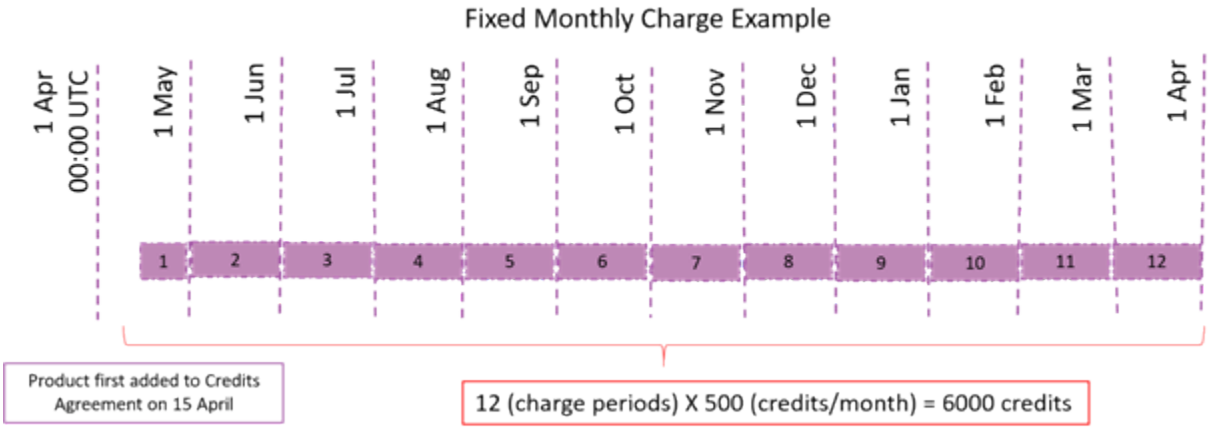
The following table lists the additional add-on services to AVEVA Unified Engineering. The charge for each add-on service is added on top of the Standard Platform Service Plan as a fixed credit rate for each month.

No	Code	Description
1	FLEX-UENG-###	Incremental AVEVA Unified Engineering environment, that is, addition of a new region.
2	FLEX-UENG-###	Each SAT (works with Global Services)
3	FLEX-UENG-###	Each HUB (works with Global Services)
4	FLEX-UENG-###	Additional project data storage of 2TB

Note: The codes listed in the table are just an example for each add-on service. The "###" must be replaced by the actual codes from the CONNECT Credits Agreement.

Example For Fixed Charge

The following image describes an example for a monthly fixed charge. The charge rate in the image (500 credits/month) is only an example. The actual rate depends on the CONNECT Credits Agreement.



A 'Monthly Fixed Charge' is applied when the product and rate plan is first assigned to a Credits agreement and then on the 1st of each Month (UTC time zone) thereafter. The charge continues to apply until the end of the contract, or the product is removed from the customer's rate plan.

Usage Charge

A set number of credits will be consumed based on number of active users per month. Active user charges are applied even if the user uses the product for 1 second in the charge period.

For AVEVA Unified Engineering, the credit rate plan is based on the type of user. Depending on the type of AVEVA Unified Engineering user, different rates are credited according to the table below.

Product	Software	Cloud UE Roles	Code	Recommended Workspace*	Credit Rate	
AVEVA Unified Engineering on Connect – 1D User	AVEVA Engineering	Standard Mechanical, Standard Process, Standard Project Controls, Standard Project Management	FLEX-UENG-##	Power	Low	Per Day/ Per user Up to Monthly cap
AVEVA Unified Engineering on Connect – 2D User	AVEVA P&ID AVEVA Instrumentation AVEVA Electrical AVEVA Diagrams	Standard Drafting PID, Standard I&C Design, Standard Electrical Engineering, Standard Drafting Diagrams	FLEX-UENG-##	Power	Medium	Per Day/ Per user Up to Monthly cap
AVEVA Unified Engineering on Connect – Simulation	Pro II Simulation 64bit Process Simulation (SimCentral)	Standard Simulations	FLEX-UENG-##	Power	High	Per Day/ Per user Up to Monthly cap
AVEVA Unified Engineering on Connect – 3D User	AVEVA E3D	Standard Design Standard Civil Design	FLEX-UENG-##	Graphics	Highest	Per Day/ Per user Up to Monthly cap

**If a customer Connect Admin decides that specific non E3D users need a Desktop Graphics to carry out their job, they can assign the user the Graphics Desktop Role. This will have the effect of charging them at the highest tier product (3D User) to reflect the more expensive Graphics Workspace.*

The highest tier product is AVEVA Unified Engineering on Connect – 3D User, which entitles users to access all the products in the lower tiers. For this to work with folder access privileges, the appropriate role(s) will need to be added to the AVEVA UE 3D Designer group.

Note: You will only consume credits for the highest rate.

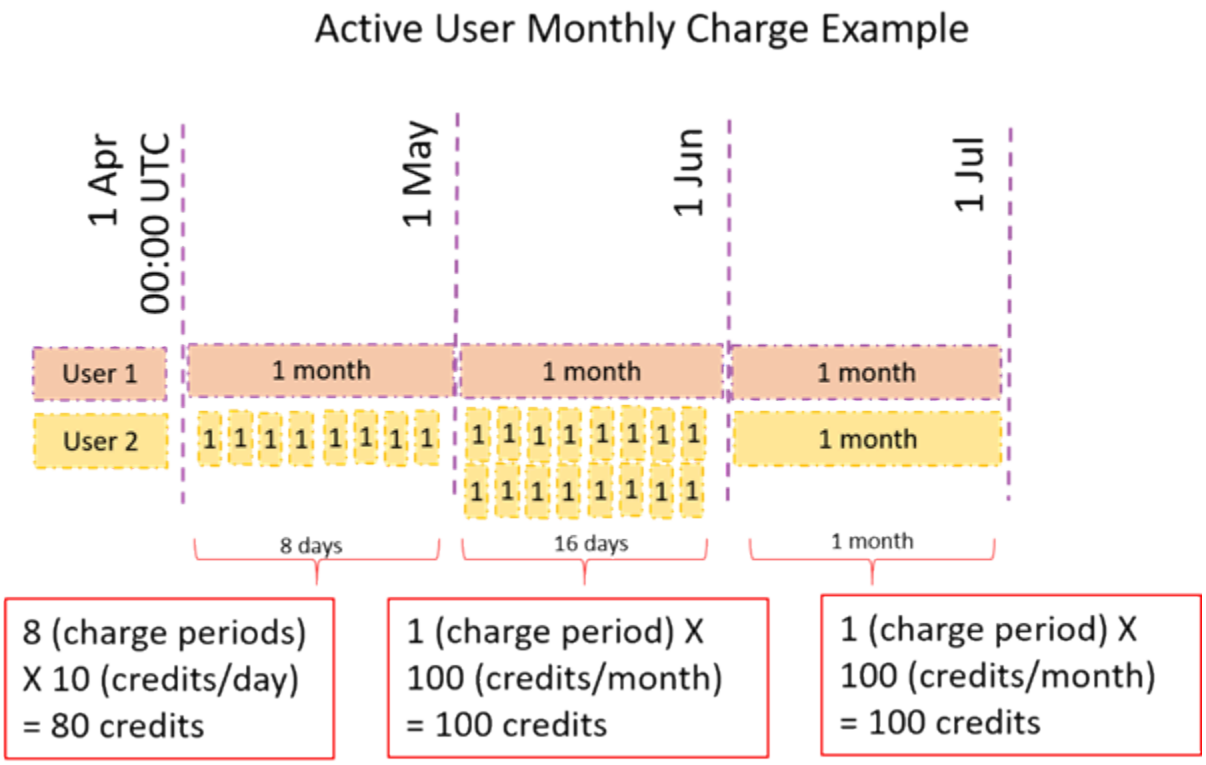
Users are billed daily when they start using the workspace, and this daily billing continues until they reach the

monthly credit rate limit. If a user accesses the workspace infrequently and doesn't reach the monthly limit, they will only be charged for the days they used, up to that limit.

For example the daily charge rate is applicable for the initial 10 days of each month, after which the monthly rate is applied.

Example for Usage Charge

The following image illustrates an example of how usage charges are calculated monthly per user.



Note: The codes listed in the table are just an example for each user type. The code numbers must be replaced by the actual code from the CONNECT Credits Agreement.

The user type is derived in the assigned role for the user in CONNECT. For more information about the roles for AVEVA Unified Engineering, see Default groups and assigned roles for AVEVA Unified Engineering.

Note: The charging algorithm runs at the top of the hour UTC; therefore, the charge may take up to an hour after adding to the credit's agreement.

The following table explains how the credit consumption is optimized in this scenario. The charge rate in the table (100 credits/month and 10 credits/day) is only an example. The actual rate depends on the CONNECT Credits Agreement.

User	Start Date	End Date	Actual Usage	No. of Charge Periods	Charge rate	Credits Consumed
User 1	1/Apr/20	30/Jun/20	3 months	3 months	100 credits/ month	300 credits
User 2	1/Apr/20	30/Apr/20	8 days	8 days	10 credits/day	80 credits

	1/May/20	31/May/20	16 days	1 month	100 credits/ month	100 credits
	1/Jun/20	30/Jul/20	1 month	1 month	100 credits/ month	100 credits

The following points must be noted about how credits are consumed in some special scenarios:

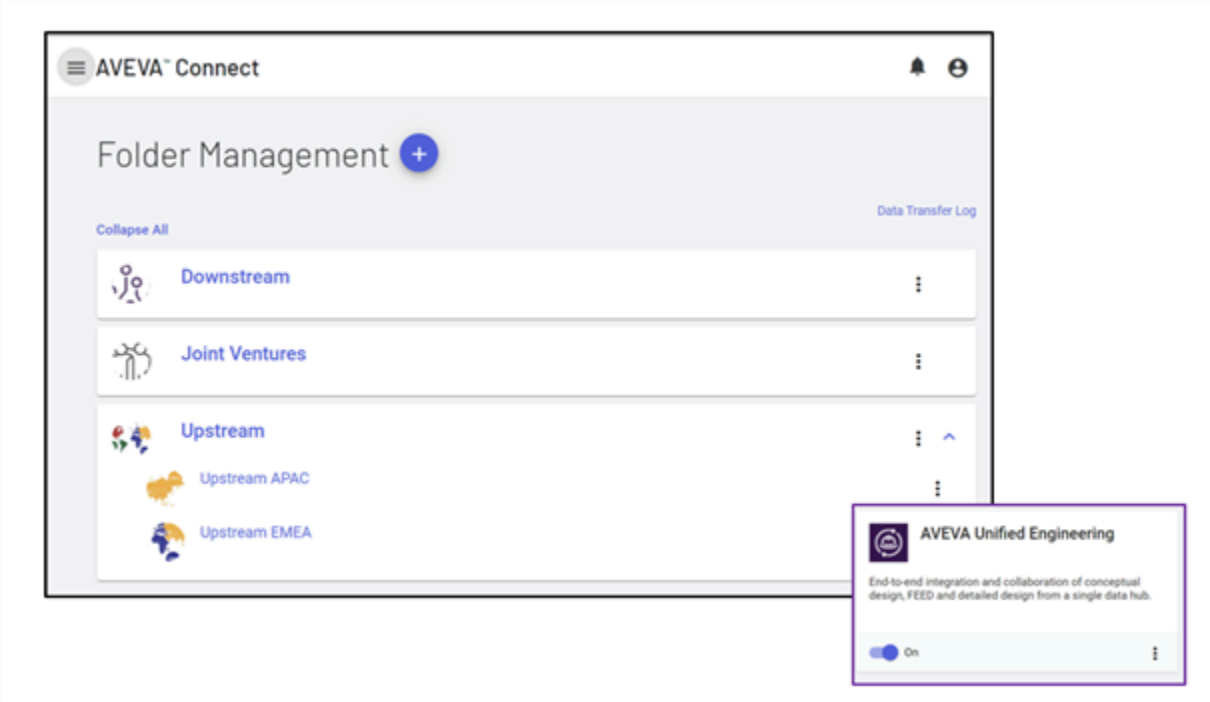
- If a user is switched to a new role in the day, credits are consumed for both roles for the day charge period. For example, if an active user who had been assigned the Standard Drafting PID role is switched to the Standard Simulations role in the day, credits are consumed for both roles.
- If a desktop for a user has been removed and then added back for any reason, a new charge period begins for the new desktop.
- If a user is assigned multiple roles, credits are consumed according to the rate plan of the highest role.

Manage multiple environments

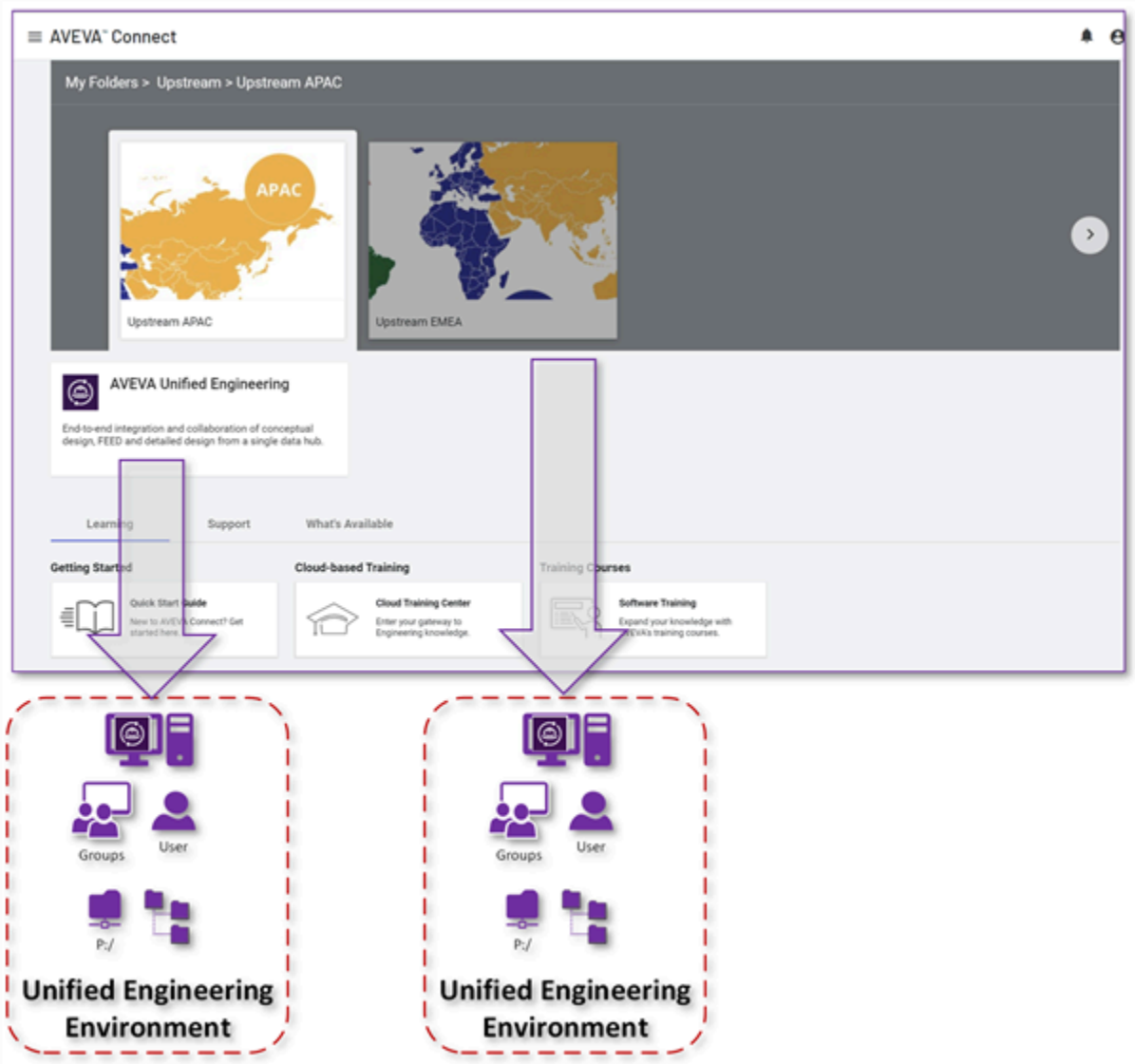
For an organizations' CONNECT account, it is possible to enable multiple environments of AVEVA Unified Engineering on CONNECT (AVEVA Unified Engineering) and manage them through CONNECT.

Use CONNECT folders to support multiple environments

Folders in CONNECT can be used to support the use of multiple AVEVA Unified Engineering environments for your organization. The Folder Management functionality of CONNECT can be used to represent your business units or asset hierarchy.



For example, when a customer has projects and users located in different regions in the world, they can create folders and enable the AVEVA Unified Engineering service on these folders. As illustrated above, a customer may choose to have separate environments for their Upstream projects in APAC and EMEA. This approach enables separate AVEVA Unified Engineering environments to be provisioned in a single CONNECT account with Folders enabling access to be provided by the customer Connect administrator to specific users in the environment closest to them. This ensures users of the AVEVA Unified Engineering authoring tools are provided with the best performance and user experience, while allowing users with less demanding needs (for example, reporting), to easily move between all folders and environments.



To action a multi-environment set-up, the Customer Administrator must raise a support ticket via the AVEVA Knowledge & Support Center (https://softwaresupport.aveva.com).

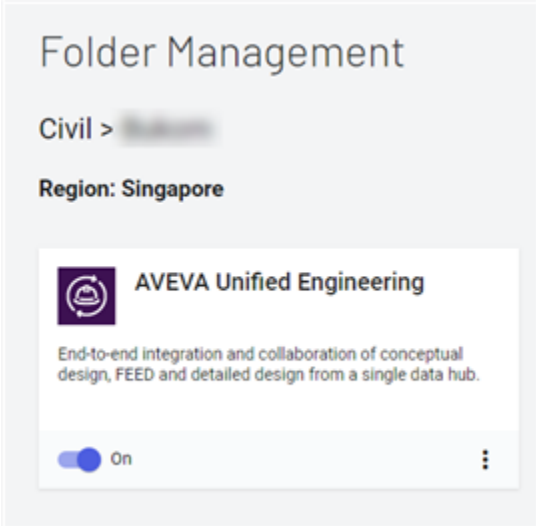
For information about how to create a folder and add sub folders, refer to the *CONNECT Quick Start Guide*, and for information on the default groups and the roles, see Default groups and assigned roles for AVEVA Unified Engineering.

Suspending an AVEVA Unified Engineering Environment

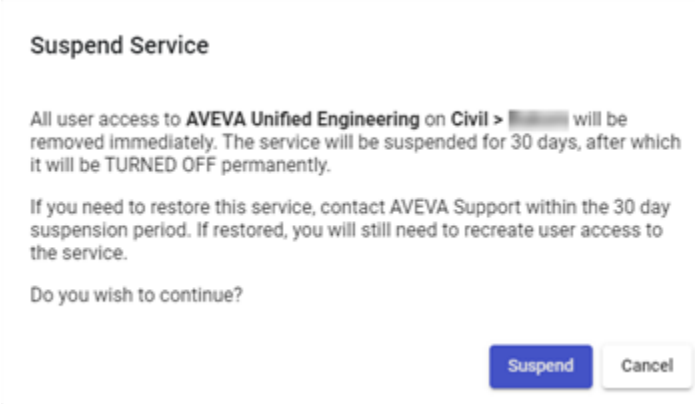
CONNECT enables customer administrators to suspend an AVEVA Unified Engineering environment. However, to restore it, you must contact AVEVA.

To suspend an AVEVA Unified Engineering environment:

1. On the CONNECT home page, click the menu icon and select **Folder Management**.
2. Select the folder for which you want to disable the AVEVA Unified Engineering environment.



3. On the folder page, move the **On** slider to the left to suspend the environment. A message requesting your confirmation is displayed.



4. Read the message carefully.
5. If you are sure to continue with suspending the environment, click **Suspend**. The environment is suspended.

Note: If you suspend an environment, all the group-role assignments for the environment are deleted. If you want to restore it, the group-role assignments must be recreated. Also, the suspended service will be permanently terminated after 30 days.

Run Custom PML Macros from users' workspaces

Users do not have admin access on their WorkSpaces and therefore do not have write permissions to protected folders. The standard PML macros shipped with E3D are placed in the following protected folder:

`C:\Program Files (x86)\AVEVA\Everything3D2.10\PMLLIB` (for 2 series)

`C:\Program Files (x86)\AVEVA\Everything3D3.10\PMLLIB(` for 3 series)

Therefore, it is not possible to add custom macros to this folder or to rebuild the PML index for this folder.

To make custom PML Macros available to E3D sessions (GUI or TTY) for all projects:

1. Place the PML macros in the P:\ProjectFiles\Design\PMLLIB\ folder. For the first-time, the PMLLIB folder will need to be created.
2. Add an entry to P:\AVEVAFiles\Engineering\custom_evars.bat

   set PMLLIB=P:\ProjectFiles\Design\PMLLIB\;%PMLLIB%

   To make custom PML Macros available to E3D sessions (GUI or TTY) for a specific <PROJECT> only, customers should:
3. Place the PML macros in the `P:\ProjectFiles\Design\<>PROJECT>\PMLLIB\` folder

   For the first-time, the PMLLIB folder will need to be created.
4. Add an entry to `P:\AVEVAFiles\Engineering\custom_evars.bat`

   `set PMLLIB=P:\ProjectFiles\Design\<PROJECT\>PMLLIB\;%PMLLIB%`

Performance can be affected if a PML file stored on P:\ is accessed by the application a significant number of times.

Performance can be improved by using the PML STATISTICS command in the application and a buffering directive in the PML file:

- The PML STATISTIC command identifies those PML files performing a significant number of reads.
- The PML buffering directive forces retention of the file in memory indefinitely once it has been read a specified number of times.

For each high-read-rate PML file, insert a buffering directive (a dash and a number directly after the three-digit encryption algorithm ID) in the PML file header line (the first line in the file).

Example:

--<000-1>-- Published PML 1.1 >--

Where the "000" is the three-digit encryption algorithm ID and the "-1" implies to read the file once and thereafter retain in memory for further reads.

Full details can be found in the "Buffering" section of the "PML Publisher User Guide" (https://softwaresupportsp.aveva.com/#/producthub?q=pmlencrypt&selectedTab=Documents)

Cloud File Transfer Service

Cloud file transfer service provides you with a secure method to synchronize project data between your Unified Engineering environment and designated on-premises network destinations, ensuring reliable and protected

data transfer.

Starting from version 3.2.1.0, AVEVA Unified Engineering on Connect enables users to access a General Transfers folder from Workspaces, mapped as **T:\GeneralTransfers** folder.

The General Transfer folder serves as a centralized location where you can place engineering deliverables, files, and documents for synchronization between your Unified Engineering environment and an on-premises environments.

The General Transfer folder is primarily designed to facilitate the efficient transfer of files in and out of your environment. It is not intended as a collaborative working area. For optimal organization and long-term storage, we recommend that you, after the synchronization process is complete, promptly move these files to a dedicated permanent folder on the P drive within the workspace or into specific folders within the on-premises setup. This approach ensures better file management and accessibility for future reference and avoids files being overwritten.

How to Setup Cloud File Transfer

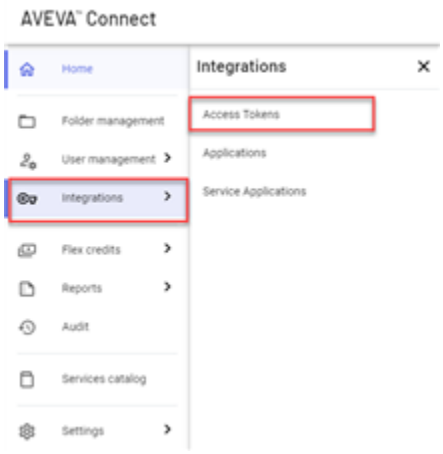
The following steps must be followed for setting up the Cloud File Transfer service.

Create a Service Access Token for the on-prem AVEVA Cloud Storage Controller windows service

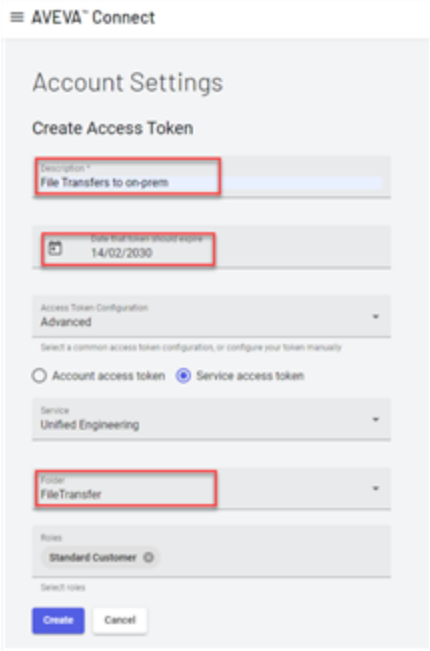
A Service Access Token must be created by the Customer CONNECT Administrator, this is subsequently applied to the on-prem AVEVA Cloud Storage Controller windows service to ensure secure connection to CONNECT services.

As a CONNECT Account Administrator perform the following steps to create Service Access Token.

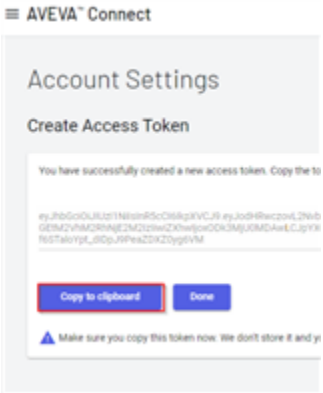
1. Login to CONNECT as administrator in the account. From the main menu, select **Integrations** > **Access Tokens**.



2. Select **Create an access token**.
3. Add the highlighted fields with your information making sure you apply it to the correct folder.



4. Select **Create.**
5. After the service access token is generated, copy it to your clipboard or securely store it in a password manager.



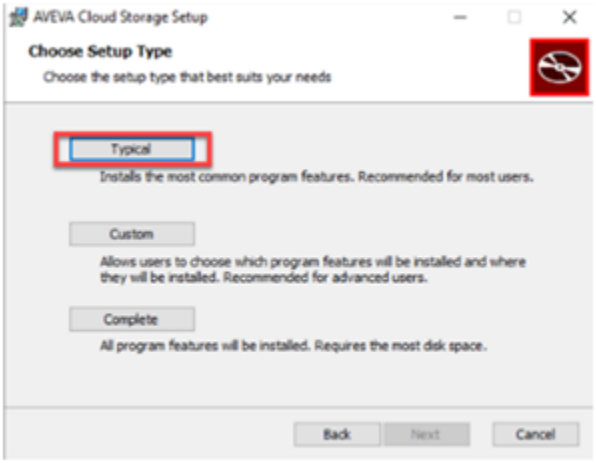
Download the AVEVA Cloud Storage Controller windows service application:

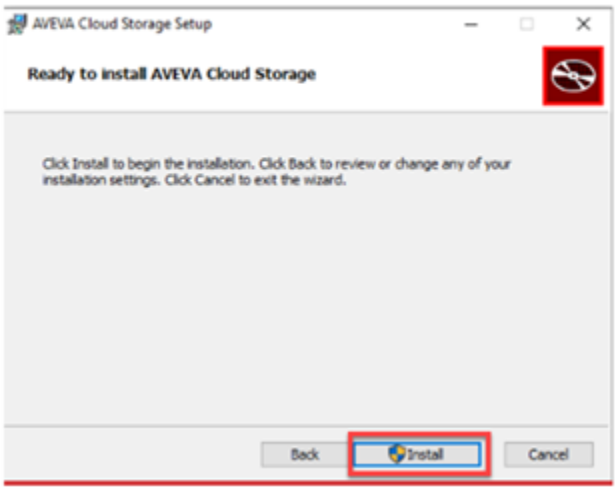
1. Log in to AVEVA Unified Engineering as an Admin Superuser and select the **Manage file transfer** icon in the main menu.

2. Download the software (**AVEVA.Cloud.Storage.Setup.msi**) and copy to the shared file server you intend to run the AVEVA Cloud Storage Controller windows service from

Install the AVEVA Cloud Storage Controller windows service application

1. It is recommended to install the AVEVA Cloud Storage Controller windows service on a shared file server.
2. Double-click the **AVEVA.Cloud.Storage.Setup.msi** installer.
3. Choose **Typical** installation option and click **Next.**
4. Click **Install**



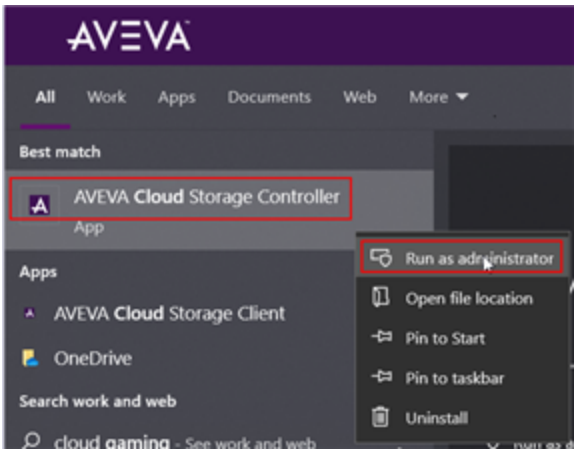


Note: Installing the service on an on-premises network server is recommended as this will allow everyone within your local network to access it.

Configure the AVEVA Cloud Storage Controller windows service application:

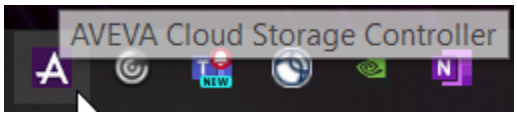
1. Launch the AVEVA Cloud Storage Controller app in administrator mode.

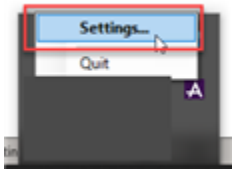
Note: This is the **Controller** application, not the **Client** application.



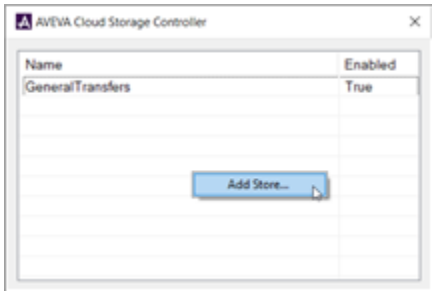
Note: The application splash screen is displayed in brief and then it is minimized to the bottom right tray.

2. Open the bottom tray and right click on the AVEVA icon and select the **Settings** option.

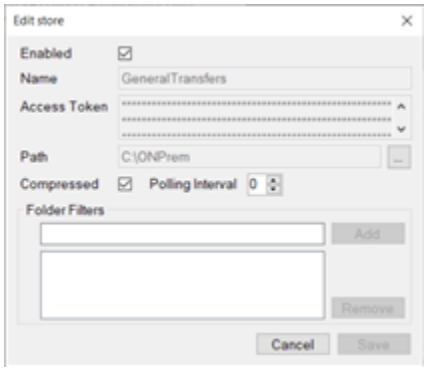




3. On the **AVEVA Cloud Storage Controller** dialog box, right-click and select **Add Store**.



4. On the **Add Store** dialog box, make sure of the following:



- The **Enabled** check box must be checked.
- For the **Name** box, enter the store name (exactly) as **GeneralTransfers**, as using any other name will not

work.

- For the **Access token** box, paste the Service Access Token you created earlier. The Service access token must have been created for the correct solution.
- For the **Path** box, select your on-prem Sync folder.

Note: This Path should be accessible to relevant Project users. Controller runs as a Windows service and the service account needs read/write permission to the folder location.

- Ensure the **Compressed** checkbox is checked On to minimize data transfer
- Ensure the **Polling Interval** is set to 0 minutes, indicating that continuous live synchronization will occur.

5. Click **Save**.

Batch job service

The Batch Job Service introduces customers to an intuitive web-based user interface within Connect, enabling remote configuration and execution of PML macros on a scheduled basis.

This feature serves as a pivotal tool for both maintenance and generation of design deliverable outputs from AVEVA E3D, AVEVA Engineering and AVEVA Administration Dabacon products.

Clients can now elevate their operational efficiency by automating critical scheduled batch processes. These processes stand as integral components within customers on-premises workflows. These unsupervised automated activities can be set to run overnight or during non-standard working hours, to curtail disruptions to live projects.

- Enhanced Deliverable Export Streamlining: Seamlessly export an array of deliverables, encompassing 3D model review files and engineering drawings.
- Optimal User Management: Exercise precise control over user management, proficiently removing users and perpetuating system performance.
- Database Integrity Checks: Ensure the integrity of your databases using automated dice check macros for more accurate and reliable data.

Granting Access to the 'Manage Batch Jobs' Page

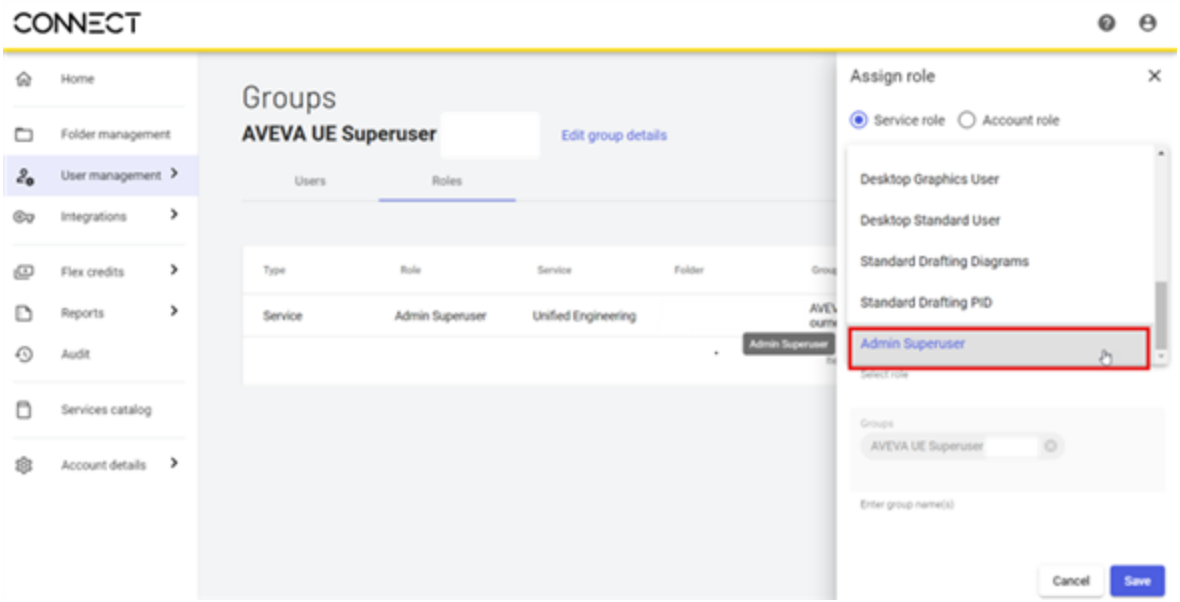
Default Access

By default, the CONNECT account administrator has access to the **Manage Batch Jobs** page.

Granting Access to Additional Users

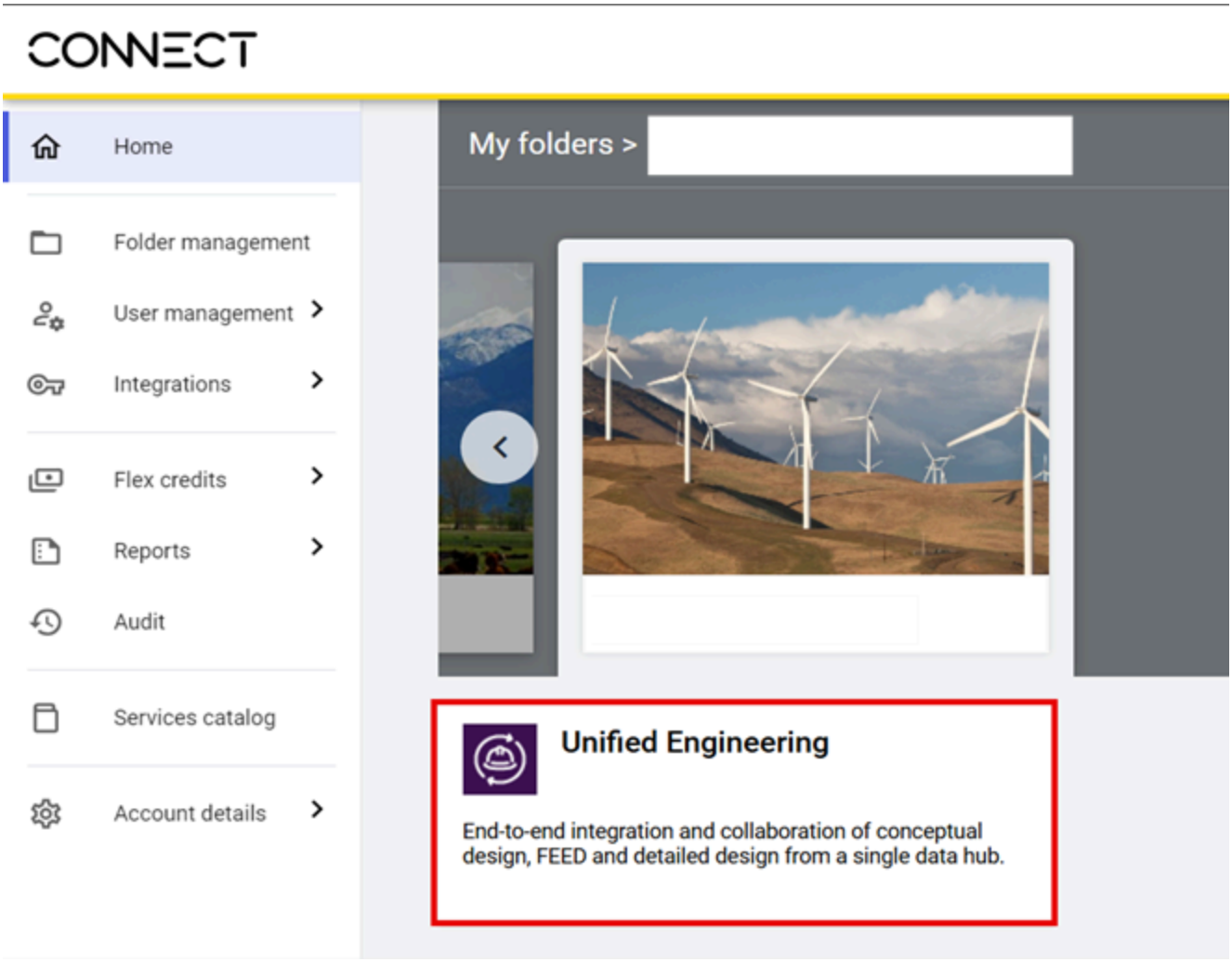
To extend this access to other users, the CONNECT account administrator needs to assign the Admin Superuser service role to a specific group.

Any user added to this group for the relevant folder will subsequently gain access to the Manage Batch Jobs page.

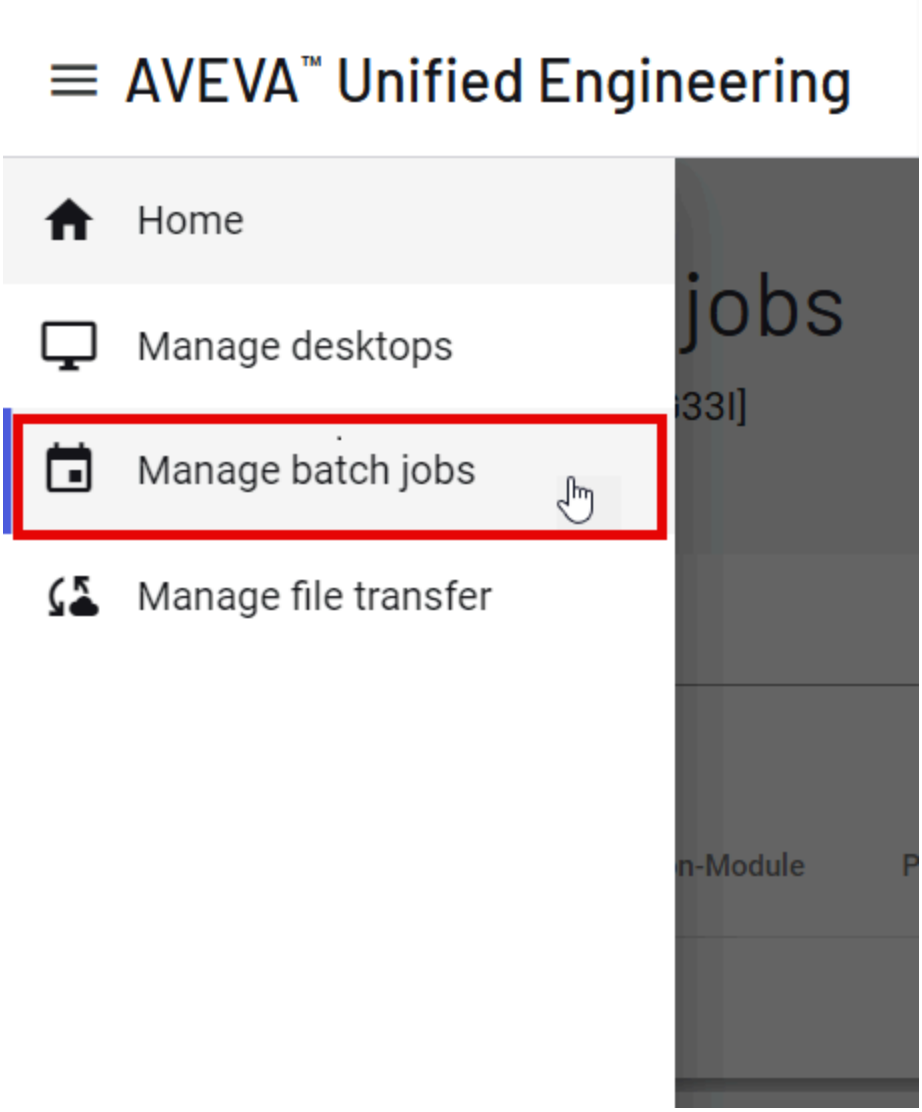


Manage Batch Jobs Page

On entering your CONNECT account, enter the Unified engineering tile for your chosen folder in which you want to manage batch jobs for.



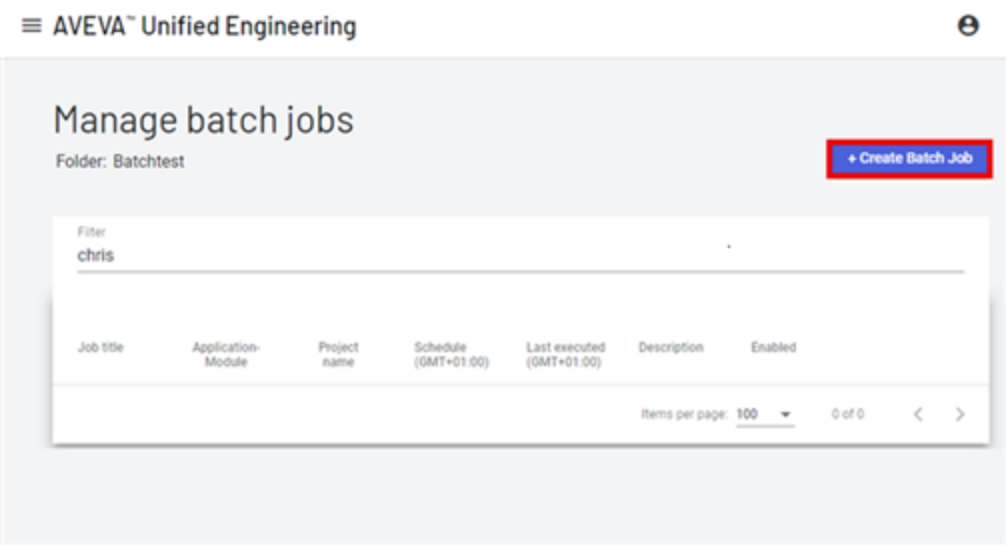
On the hamburger menu the Manage batch jobs option should be visible (providing that user is a CONNECT Administrator or Admin Superuser).



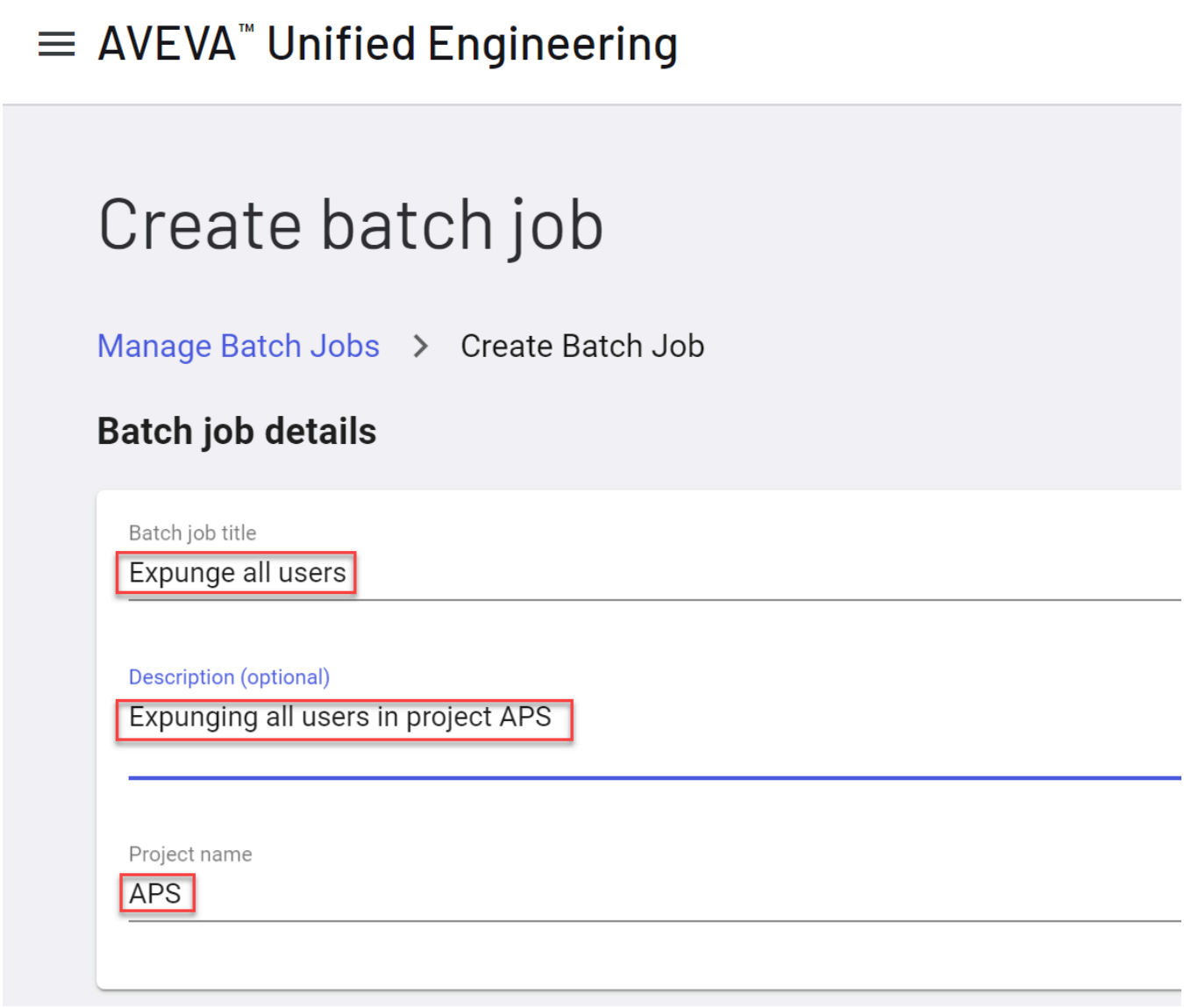
Creating a Batch Job

Click on Manage batch jobs to open the Manage batch jobs page.

To Create a Batch Job, Click Create Batch Job.



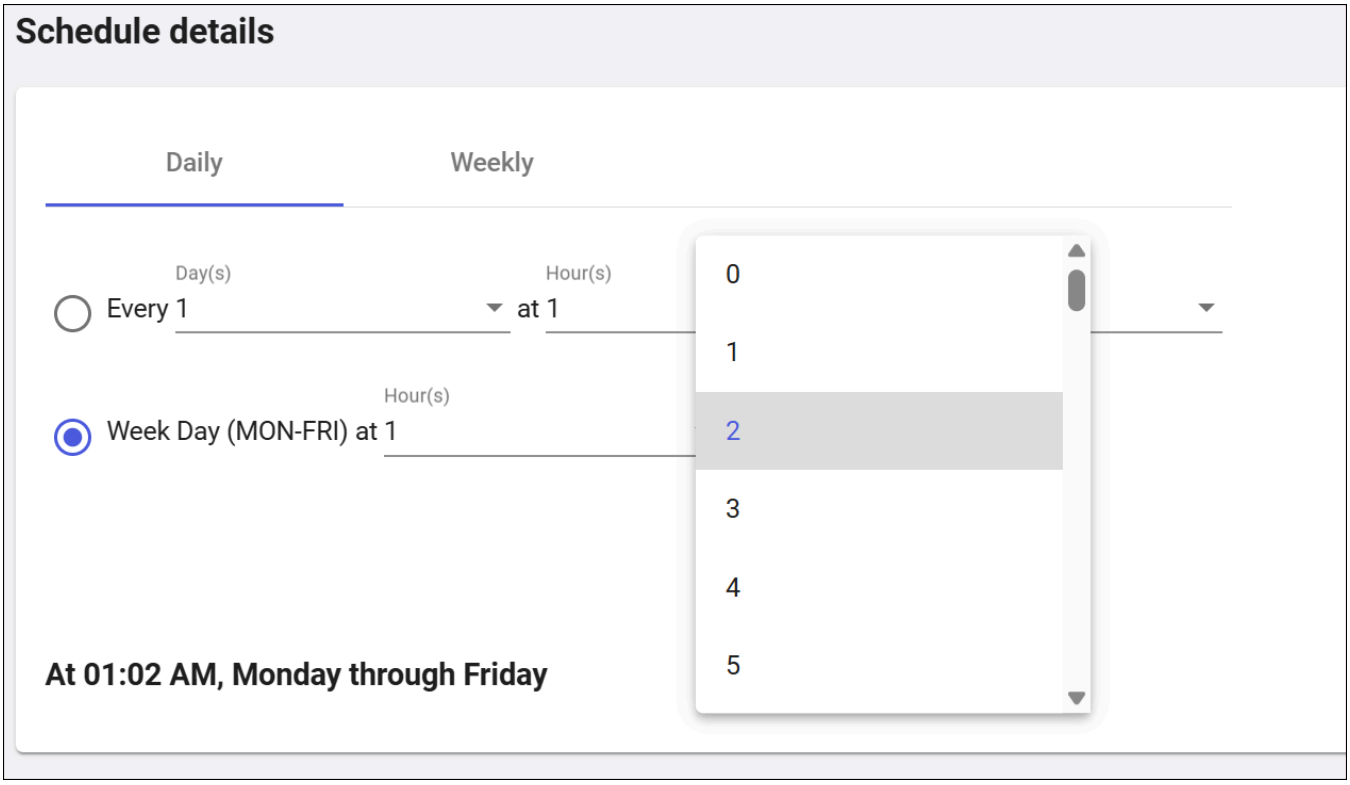
The Batch Job Details section enables you to input the job title, description (optional) and enter the Project name, which is a unique 3-digit project identifier, as demonstrated here: **APS**.



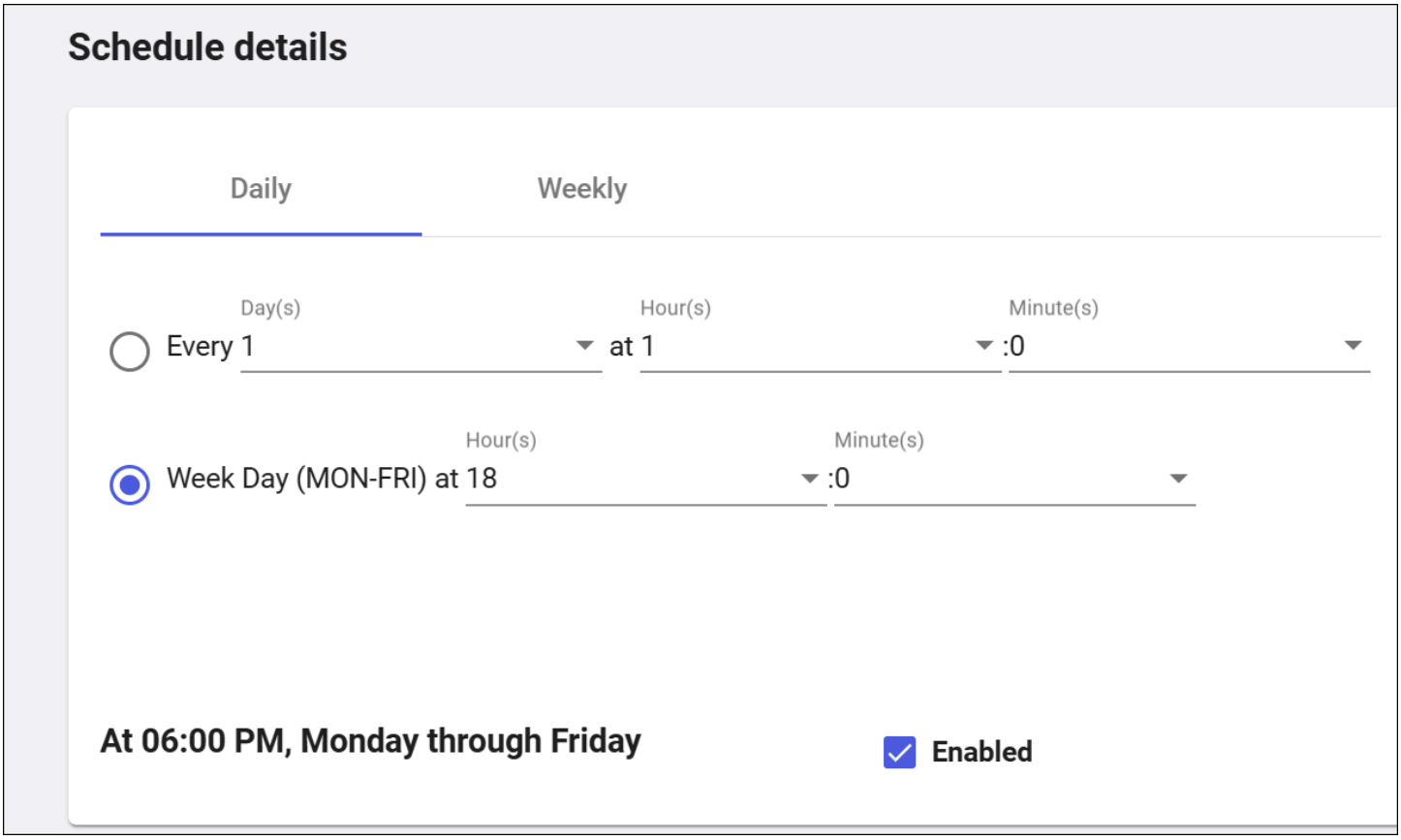
Setting a Schedule

The Schedule Details section enables users to establish a daily or weekly schedule for their batch job. At the end of each field, a user-friendly drop-down menu is provided for selecting the desired input.

Note: This can be inputted in the local regional time of the user, conversions will be done automatically

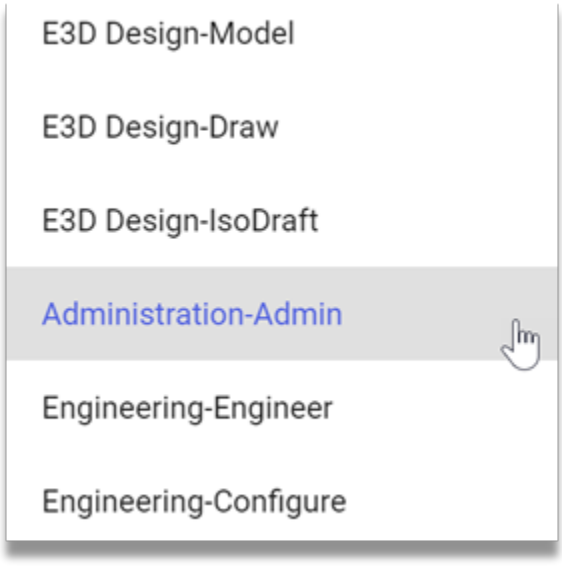


In the example below, you can see a schedule set to execute every weekday from Monday to Friday at 6 PM. After configuring your desired schedule, please select the **'Enabled'** checkbox to activate it. Alternatively, if you want to keep it inactive, clear the **'Enabled'** checkbox.



Batch Job Parameters

The Batch Job Parameters section enables you to select the application module where you intend to run your PML macro and upload your 'pmlmac' and '.mac' credential files.

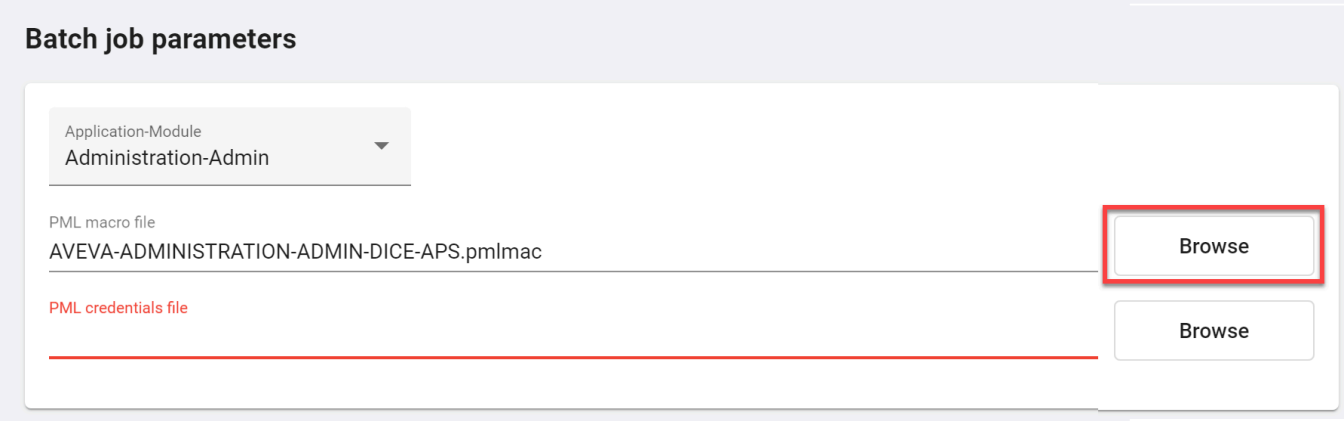


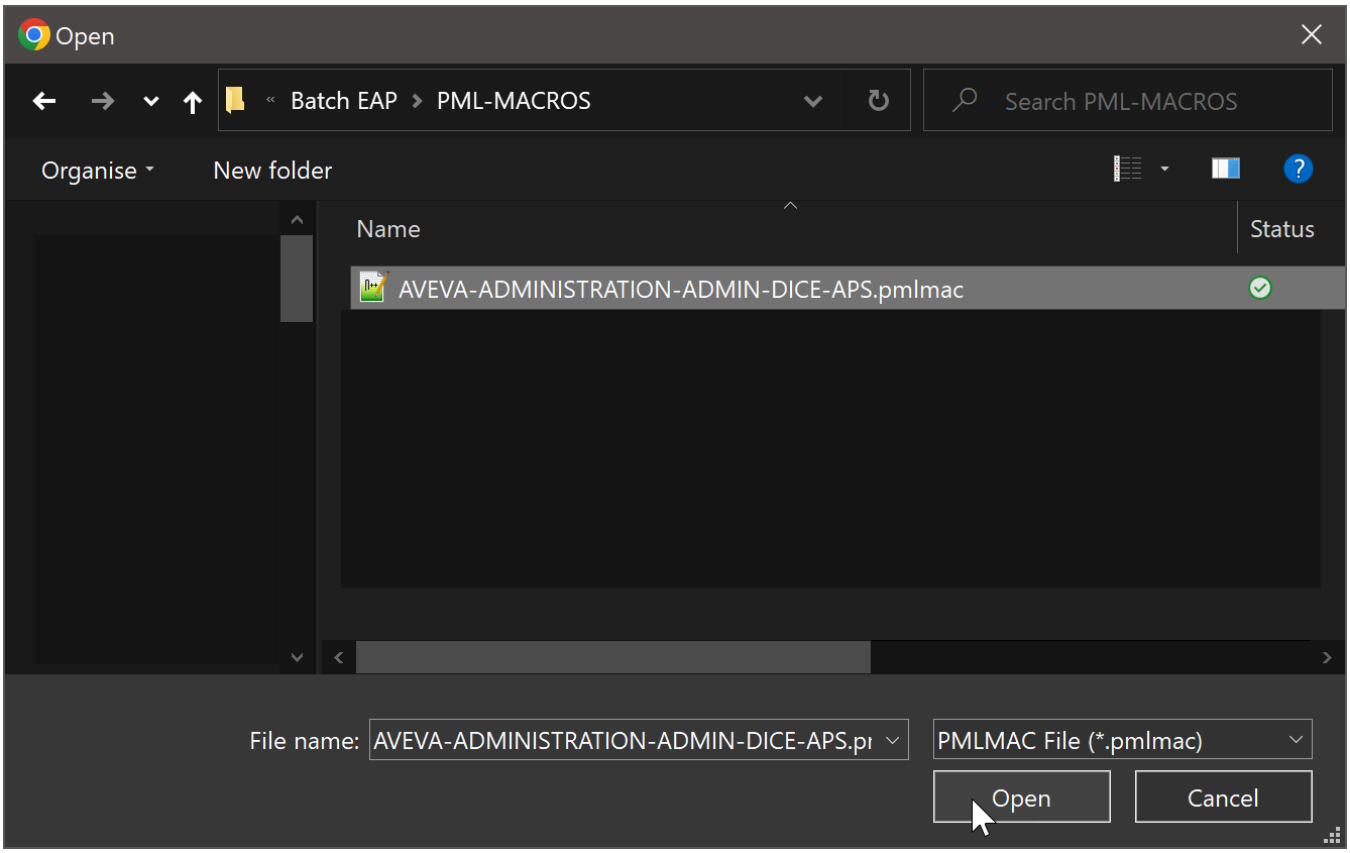
Note: The list of applications and modules shown in drop down menu above represents the exclusive set officially supported by our service. We do offer support for switching between modules, which allows for flexibility in customization. However, we strongly discourage switching the primary application, as it may result in

inaccurate execution statuses.

PML Macro file

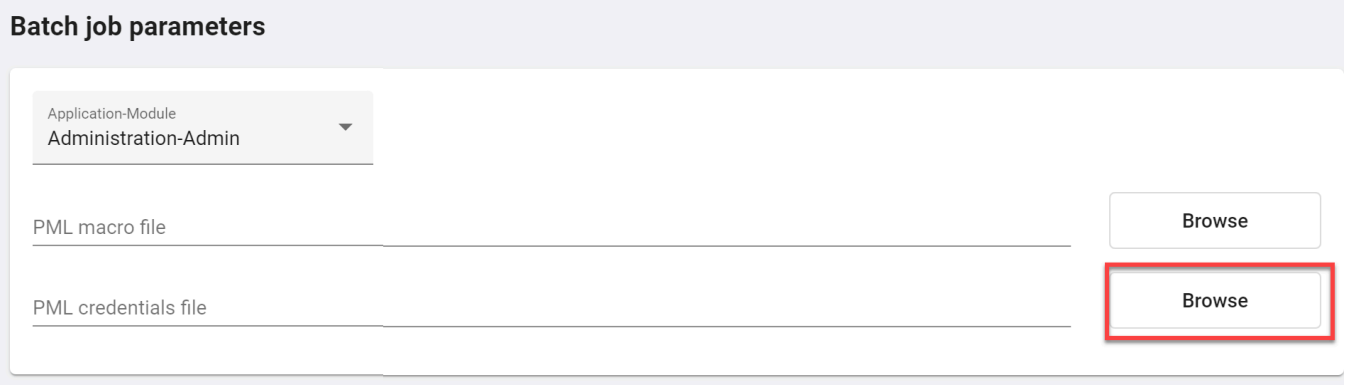
Selecting the browse button adjacent to the PML Macro field enables users to navigate to a folder location to find the desired macro to be upload (This needs to be in .pmlmac format)





PML Credential file

Selecting the browse button adjacent to the PML credentials file field enables users to navigate to a folder location to find the entry script to be upload (This needs to be in .mac format)



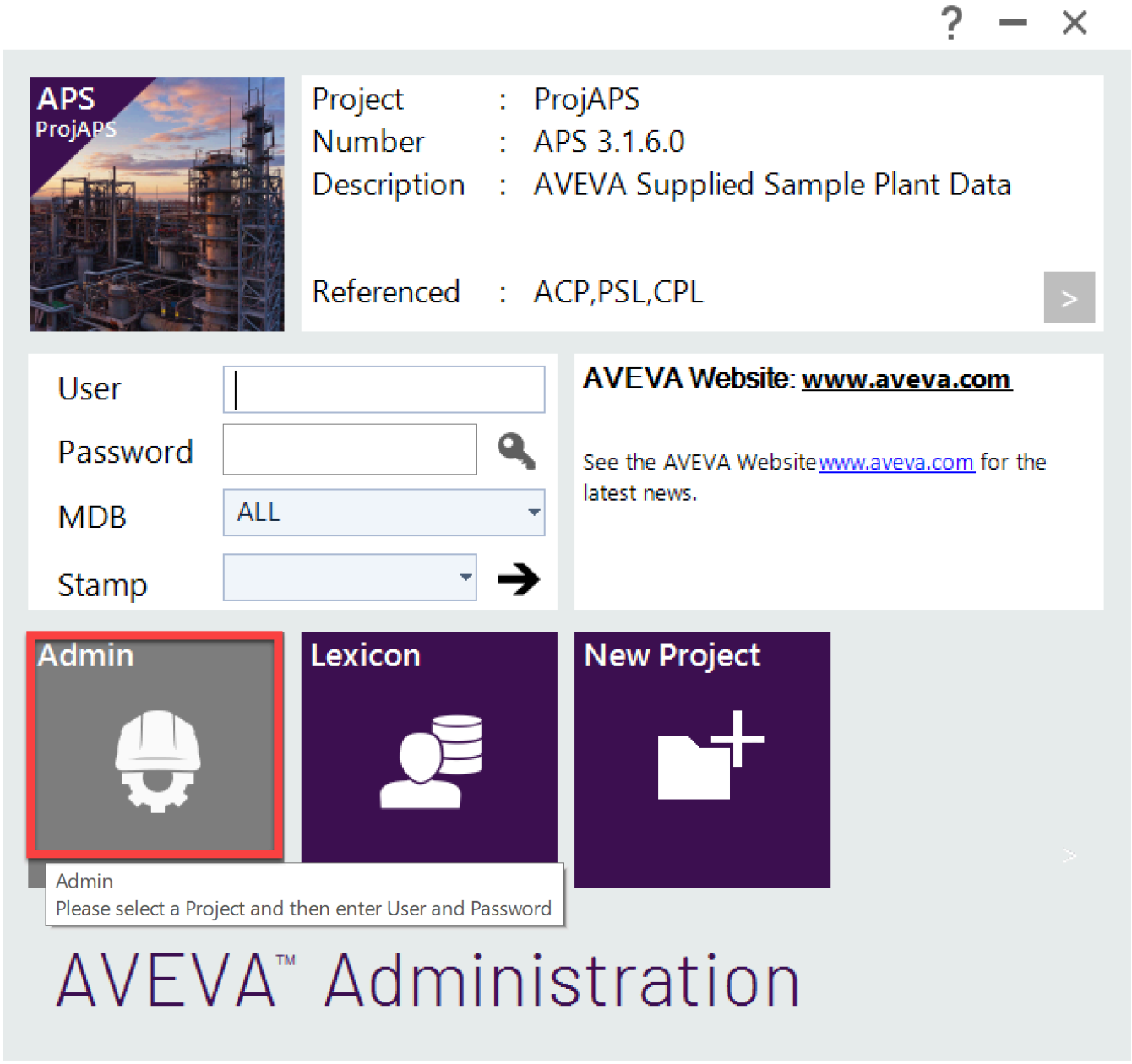
Credential Files (Product Entry Scripts)

AVEVA Administration provides the capability to generate an encrypted script designed for accessing an AVEVA product with specified parameters: a Project, a User, and an MDB to execute upon session initiation. These 'Entry Scripts' macros encompass essential details necessary for entering a project in a module.

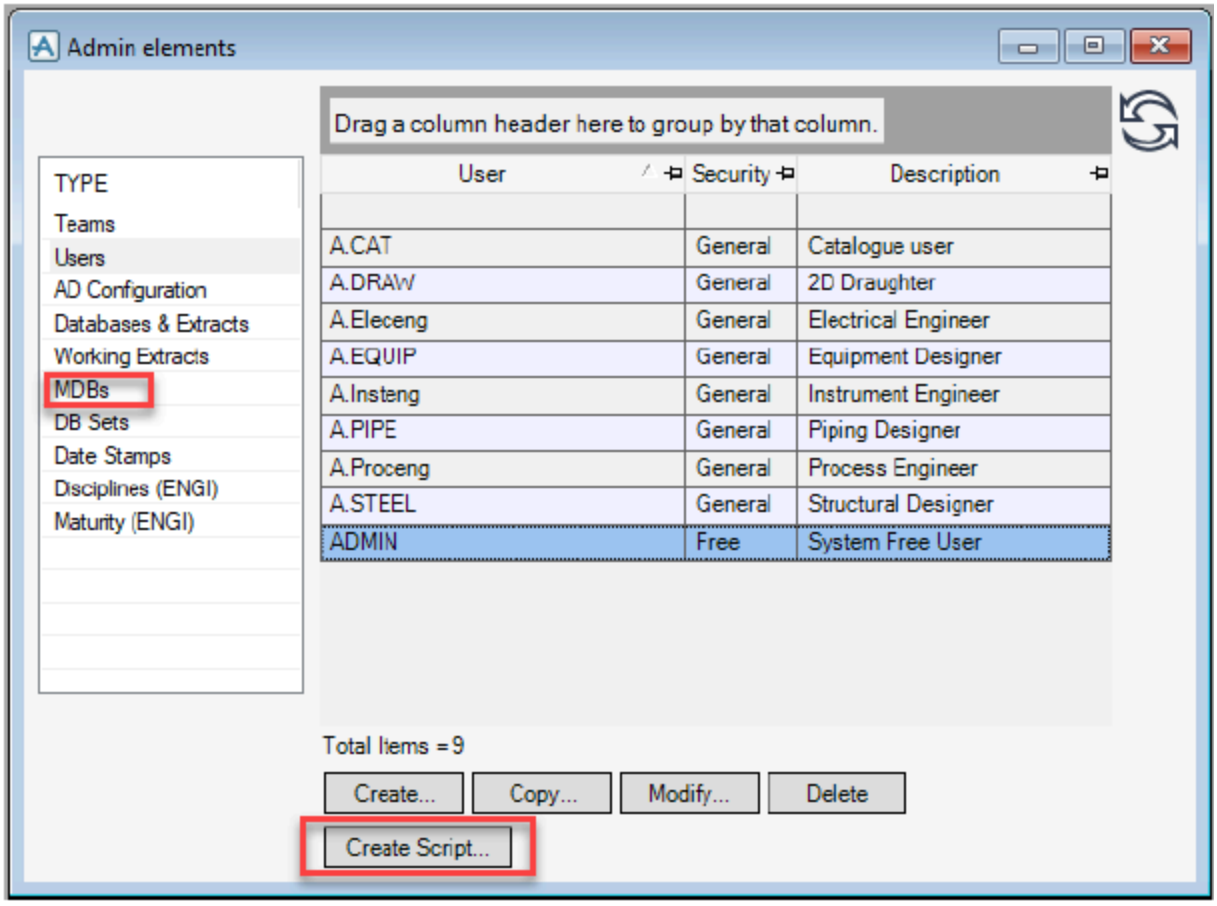
For further details on entry scripts please see AVEVA Administration System Administration guides and manuals.

The use of macros referencing other macros using $m adds complexity and is not supported where possible please directly calling arguments and variables within the sole macro.

Enter the desired project in AVEVA Administration

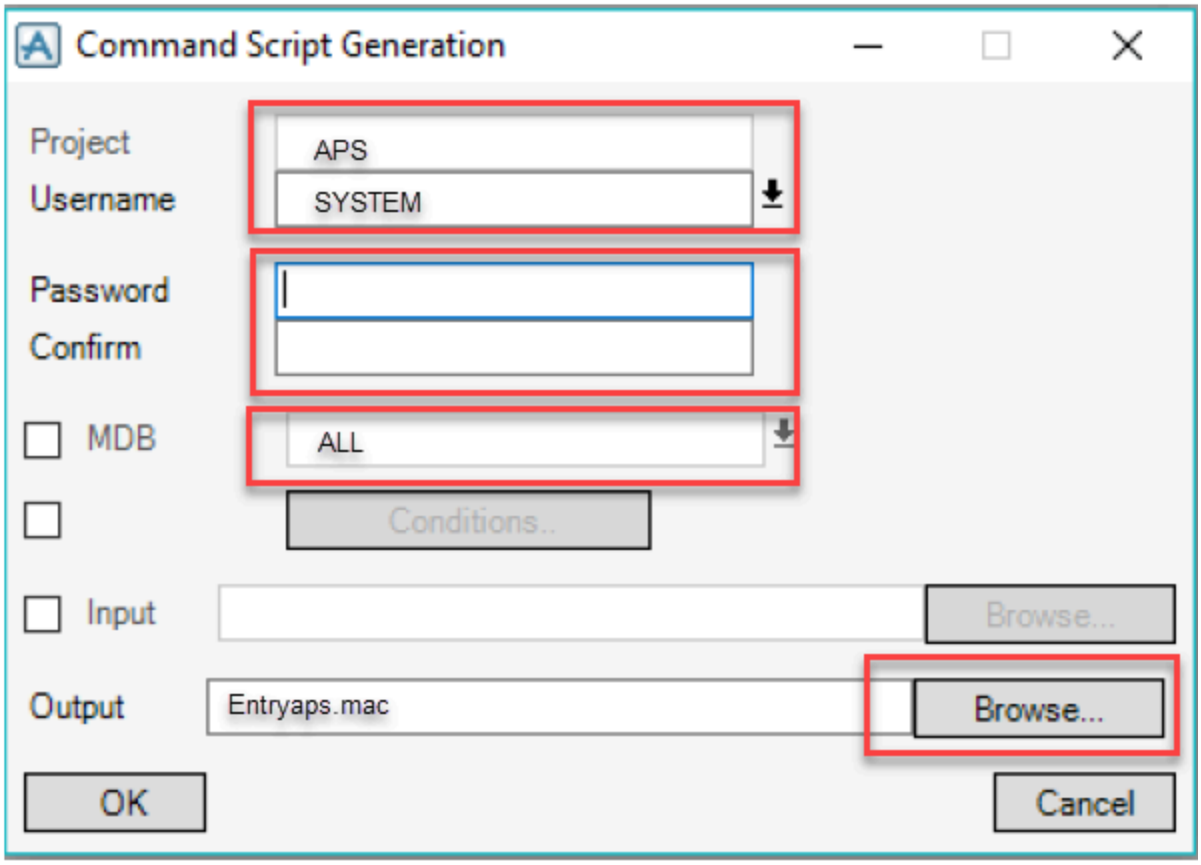


Navigate to the "Admin Elements" section and choose the "MDB" type in the left-hand box. Then, proceed by clicking the **Create Script** button, initiating the command script generation form.



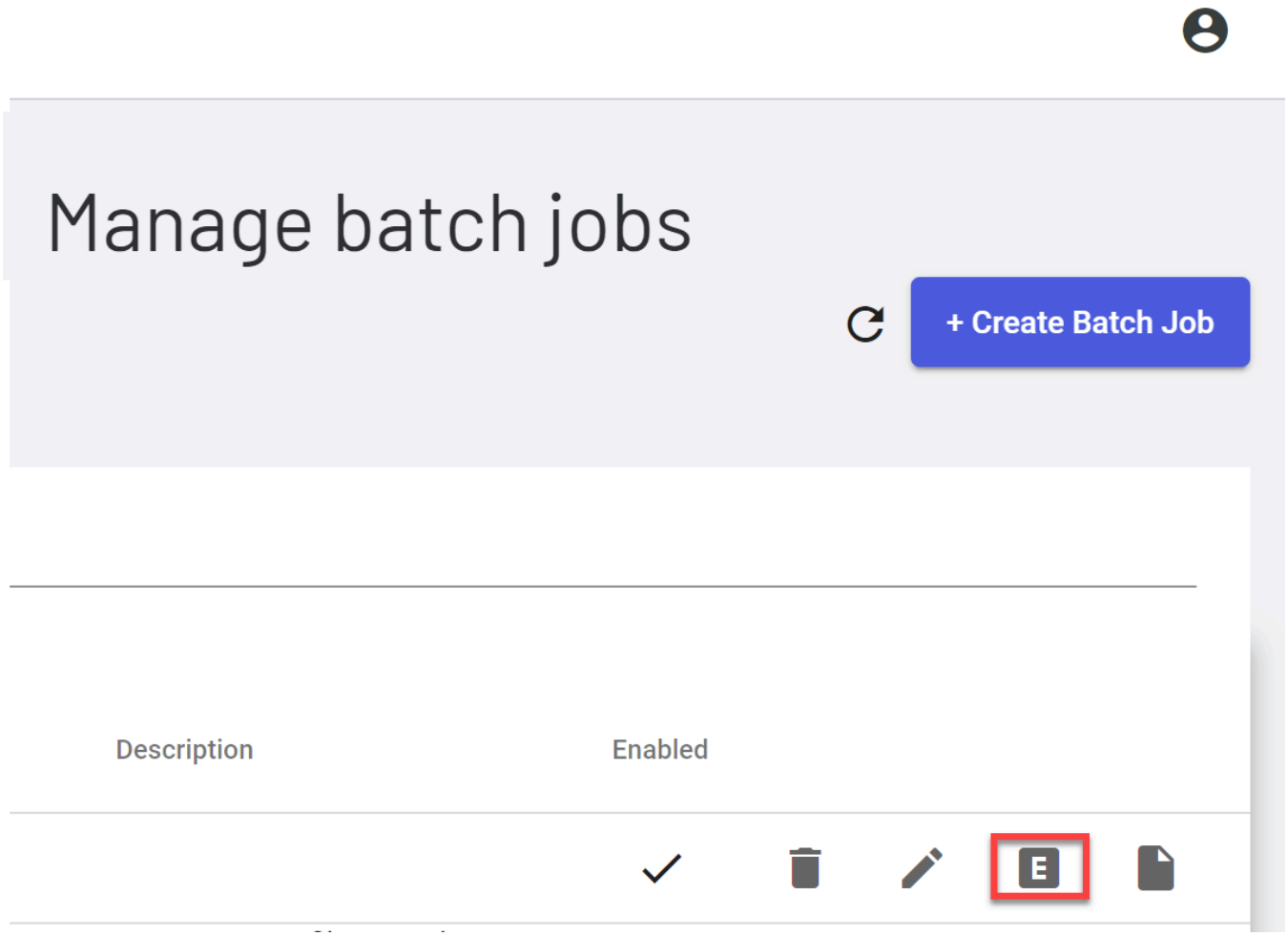
Please complete the following steps:

1. Fill in the project details.
2. Enter your username and password.
3. Choose the desired MDB from the dropdown menu where you want to execute the job within the selected project.
4. To save the .mac file, simply follow these steps:
5. Click on the **'Browse'** button to choose a suitable location.



Using Execute Now

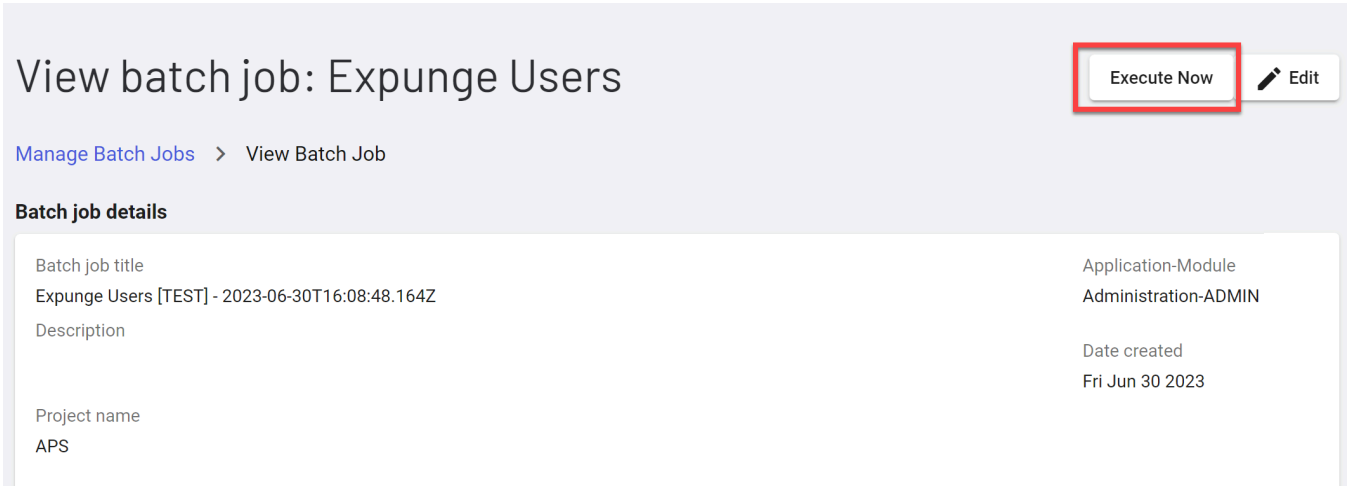
To execute batch jobs and conduct ad hoc testing, an "Execute Now" can be function is used. The function will initiate batch jobs on demand, bypassing the predefined scheduling.



To initiate and execute the process, simply click the 'E' icon located on the main page for managing batch jobs. Upon doing so, an information form appears, notifying you that the process has been initiated.

To proceed, click **OK** to close the form.

Another option for triggering an immediate execution is available on the "View Batch Job" page. Simply click **Execute Now** in the top right corner to initiate the process.

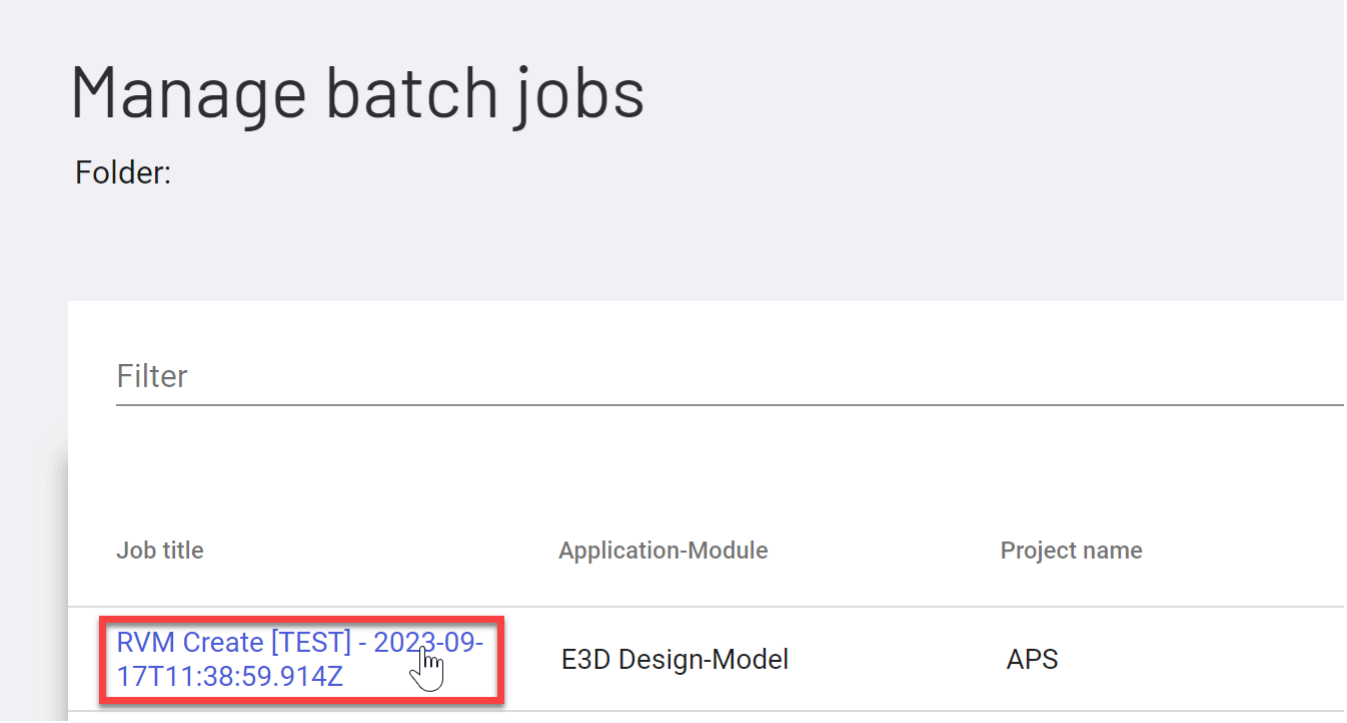


Troubleshooting & Log Files

To facilitate auditing and monitor execution status, you can easily access log files. These log files can be found by following these steps:

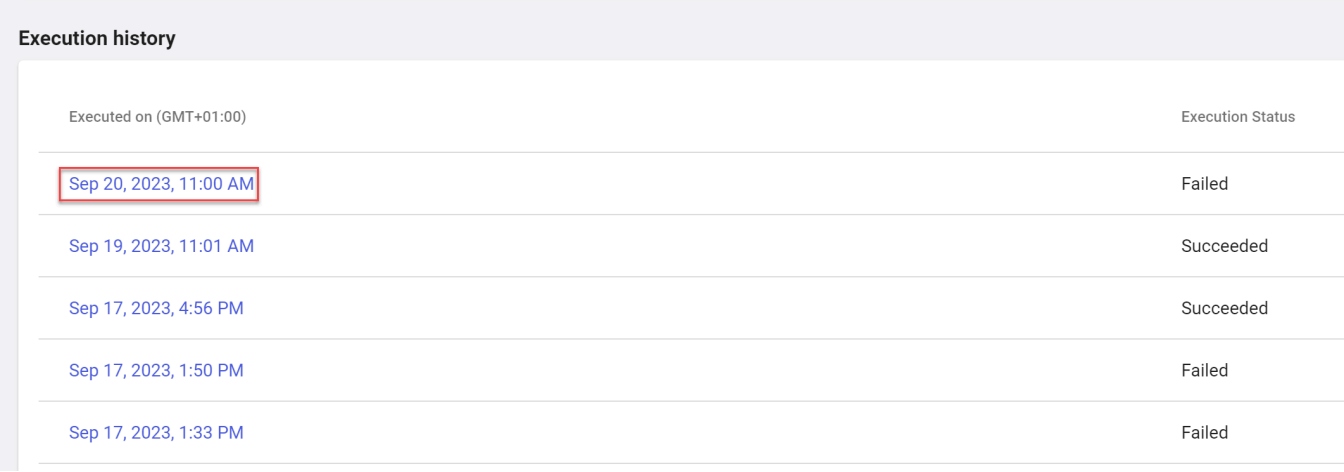
Go to the 'View Batch Job' page.

Access the 'View Batch Job' page by clicking the blue label link on the Job tile, as depicted in the below screenshot.

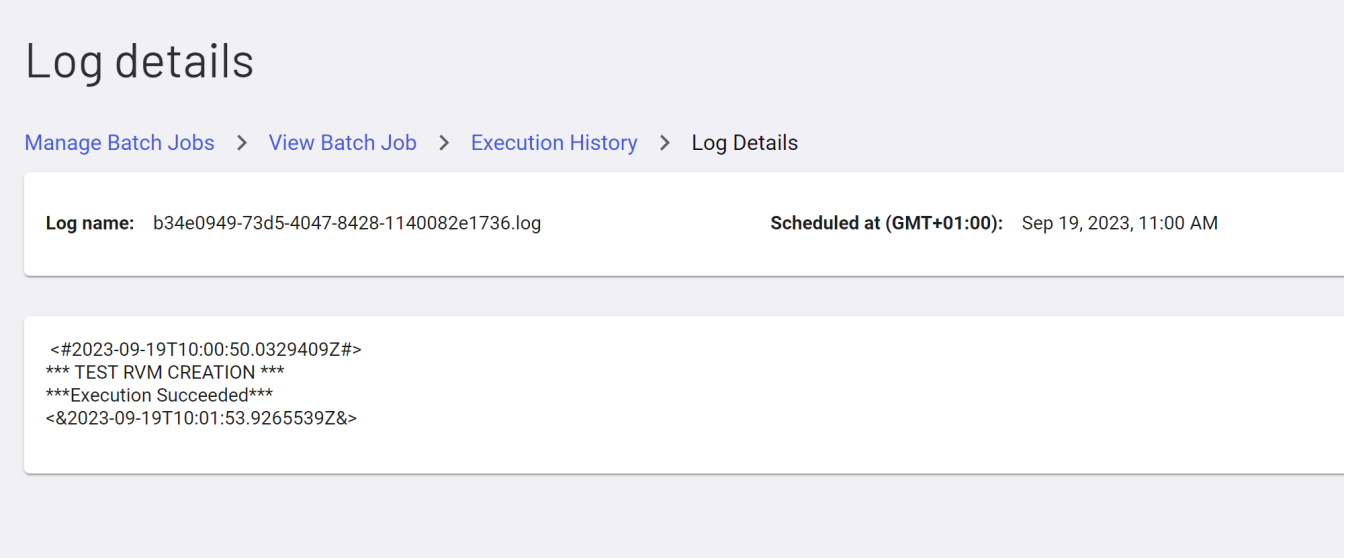


In the batch job details page you can view execution history and execution status of the selected job.

To view and troubleshoot jobs you can select the blue label link on the left-hand side.



Below is an example of a Successful job.



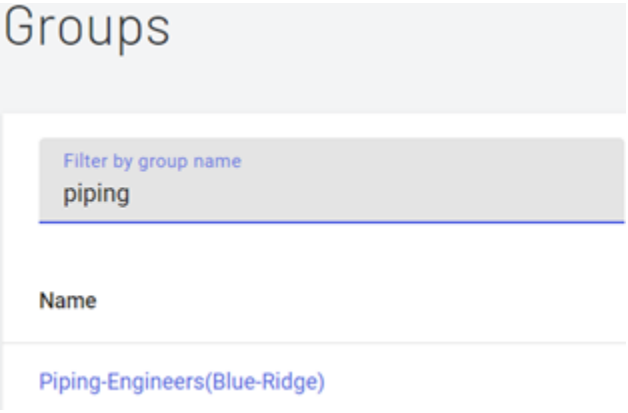
Migrating on-premises macros

While migrating on-premises macros, recommendations are to:

- Remove commands that launch another application or module within the macro.
- FINISH commands in macros should be removed as job parameters handle completion.
- Do not reference other macros. Instead, consider directly calling arguments and variables within the scheduled job macro.
- Since the service operates headless on a server, the Batch Job service does not support automation with PML procedures that require Device Graphic (DEV GRA) mode.

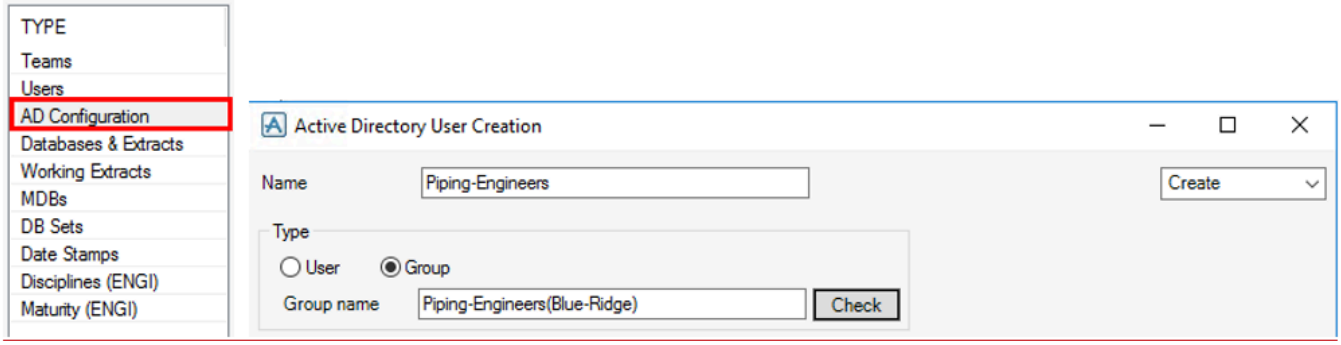
Debacon project active directory authentication in Unified Engineering

For Dabacon projects with Active Directory Authentication enabled, it is possible to define project User (Group) Membership Authentication based on Connect Group membership.



With this approach, Connect Group and user memberships are synchronized to a corresponding Active Directory

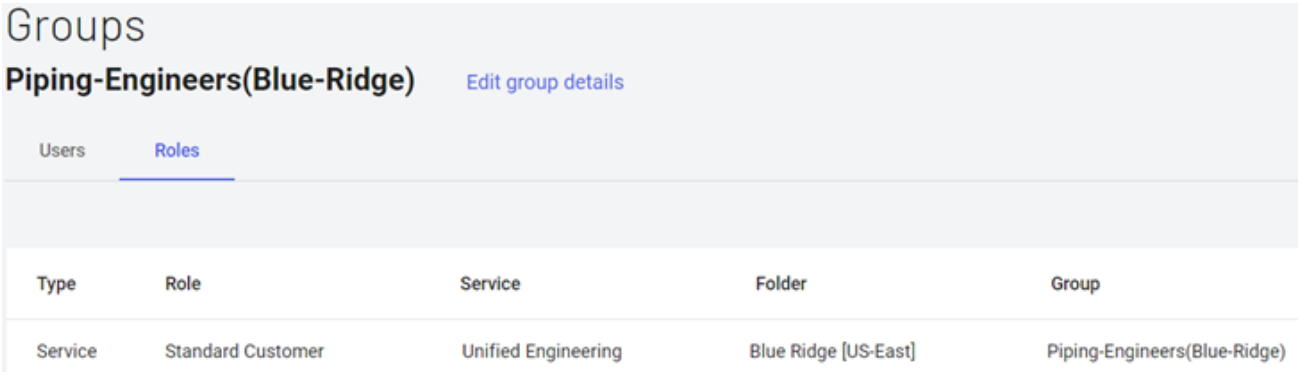
Group in the Unified Engineering environment. This can be specified to manage access in the Active Directory User Creation form which is in AD Configuration of AVEVA Administration.



In some cases, the synchronization process between Connect and Unified Engineering Active Directory can result in group name mis-matches which adversely affects Group name checking in the form and user access.

If you want to use of this feature, following are the prerequisites:

- Assign the Standard Customer Connect Role for the respective Unified Engineering Service to the Connect Group. This will ensure the Connect Group (and membership) is synchronized to the Unified Engineering environments' Active Directory.



- Connect group Naming convention requirements:
  - Should not be longer than 20 characters in length
  - Should not contain any "_" (underscores)
  - Should not contain any " " (spaces)
- Use "-" (hyphen) as separator in Connect Groups names.

To create Connect Groups for Active Directory Authentication that do not adhere to the points above, note that:

- The synchronization affects the resulting Active Directory group names:
  - Curtails the Connect group name to 20 characters long (tail removed)
  - Replaces "_" (underscores) and " " (spaces) with "-" (hyphen)
- The **Check** button in the Active Directory User Creation form will return a **Could not find group** for the modified Active Directory group. However, the authentication control works.

How sample projects are upgraded

This section describes what happens to AVEVA sample projects installed on the customer environment, whenever an upgrade is in place for them. In summary:

- ACP and APS projects (E3D) get backed up and replaced with new versions.
- ASP (SEED) and ATP projects will NOT be upgraded.

Please refer to the details below for more information.

Background

Currently, when a new Unified Engineering environment is deployed, the following (latest & compatible) Sample projects are included:

- AVEVA Plant Sample, incorporating:
  - ACP - the AVEVA Catalogue Project containing typical piping components & specifications, structural steelwork, drawings backing sheets and symbols and so on.
  - APS - a sample project with typical project data referencing ACP for catalogue data.
- AVEVA Engineering SEED Sample, incorporating:
  - ASP - the AVEVA Engineering "starter" SEED project that customers update with their own data.
  - ATP - a sample project designed to demonstrate a single example of each key functionality within AVEVA Engineering.

The recommended standard practices for using the AVEVA Plant Sample and AVEVA Engineering SEED Sample projects are fundamentally different.

The sections below describe assumed standard practices and how Sample projects are processed when an AVEVA Unified Engineering environment is upgraded.
Please take careful consideration of this information as certain actions may be required post-upgrade.

AVEVA Plant Sample Catalogue Project (ACP)

The recommended (and assumed) standard practice for new AVEVA Plant customer projects is to reference (foreign) multiple catalogue projects that may or may not include ACP.

In either case, ACP should remain untouched by the customer.

When an AVEVA Unified Engineering environment is upgraded, the existing ACP project is always replaced with the latest compatible version.
Following the recommended standard practice for using ACP means that when an AVEVA Unified Engineering environment is upgraded, the AVEVA catalogue is automatically extended without affecting customer catalogue data.

However, there may be a situation where the standard practice is not followed. Replacing the existing ACP on upgrade would result in the loss of customer catalogue data.

As a safeguard measure, the following occurs when an AVEVA Unified Engineering environment is upgraded to allow the customer to manually move the catalogue data if required:

- The existing ACP project folder contents are moved to a new folder (**P:\AVEVAFiles\Engineering\UpgradedSampleProjectsBackup\YYYYMMDDHHMI\ACP**)

  In the UpgradedSampleProjectsBackup folder, we retain copies from only the latest three upgrades, to manage disk space usage.

  Note: Copies older than the latest three are automatically deleted.

- The new ACP project is installed to the existing (and empty) ACP folder

We encourage all customers to follow the recommended standard approach for using AVEVA Plant Sample Catalogue Project (ACP) to avoid the need for manual changes.

AVEVA Plant Sample Project (APS)

When an AVEVA Unified Engineering environment is upgraded, the existing APS project is always replaced with the latest compatible version.

Normally replacing any changes in the APS project is not an issue, as the APS is a Sample project only.

An edge-case exception occurs when the APS project is globalized. The globalized APS project will be replaced with a non-globalized APS project. In this scenario, the sole option is to copy the globalized APS project from the latest back-up.

As a safeguard measure, the following occurs when an AVEVA Unified Engineering environment is upgraded to allow the customer to manually reinstate or manipulate sample project data if required:

- The existing APS project folder contents are moved to a new folder (**P:\AVEVAFiles\Engineering\UpgradedSampleProjectsBackup\YYYYMMDDHHMI\APS)**
- In the UpgradedSampleProjectsBackup folder, we retain copies from only the latest three upgrades, to manage disk space usage.

  Note: Copies older than the latest three are automatically deleted.

- The new APS project is installed to the existing (and empty) APS folder

AVEVA Engineering Sample SEED Project (ASP)

The recommended (and assumed) standard practice for new AVEVA Engineering customer projects is to use ASP as a starter project that customers then update with their own data.

Therefore, ASP will remain untouched by the AVEVA Unified Engineering upgrade process.

Contrary to the approach for ACP, on upgrade of AVEVA Unified Engineering, the existing ASP project is never replaced with a newer version.

When we upgrade the AVEVA Engineering software on an AVEVA Unified Engineering environment to a newer version, customers have the choice to leave ASP as is or to manually apply the updates documented in the AVEVA Engineering release letter to incorporate new objects.

AVEVA Engineering Sample Project (ATP)

When an AVEVA Unified Engineering environment is upgraded, the existing ATP project is never replaced with a newer version.

This is to ensure feature alignment with the originally deployed AVEVA Engineering Sample SEED Project.

If the AVEVA Engineering Sample SEED Project has been manually upgraded by the customer and they wish to use the ATP project to demonstrate new object functionality, then a request can be made to AVEVA to copy the respective ATP project.

File system folders in AVEVA Unified Engineering

Standard Pre-created File System Folders

When an AVEVA Unified Engineering environment is deployed, a standard structure of folders and files is created on the shared storage file system (**P:**) that must be adhered to.

Prescribing the system folder structure enables AVEVA to retrospectively:

- Extend AVEVA Unified Engineering managed service with new products, features and functionalities without affecting existing project data and folders.
- Implement self-service administration features in CONNECT with the AVEVA Unified Engineering environment by knowing exactly where project data and folders reside
- Effectively recover data and files as part of the managed service by knowing exactly where project data and folders reside
- Change the file system folder access mode
- Apply file system folder project access control

The table below illustrates the standard folder structure and their purpose.

Folder	Storage Purpose(s)
AVEVAFiles	AVEVA software related folders (Dabacon databases, Projects and configurations)
AVEVAFiles\Engineering	AVEVA Dabacon Databases organized by project Option <PROJECT> folder access control (see section below)
AVEVAFiles\Engineering\<PROJECT>	
AVEVAFiles\Simulations	AVEVA Simulation folders
AVEVAFiles\Simulations\PROII	AVEVA PRO/II Simulation files (default storage location configured in PRO/II)
AVEVAFiles\Simulations\PROII\AIS	AVEVA PRO/II Integration related folders
AVEVAFiles\Simulations\PROII\AIS\Input	Files generated as part of PRO/II publish simulation to AVEVA Engineering
AVEVAFiles\Simulations\PROII\AIS\Output	SVG files generated during PRO/II integration with AVEVA Engineering
AVEVAFiles\Simulations\SimCentral	AVEVA Process Simulation folders
AVEVAFiles\Simulations\SimCentral\AIS	AVEVA Process Simulation Integration related folders

Folder	Storage Purpose(s)
AVEVAFiles\Simulations\SimCentral\AIS\Input	SIMX files copied during Export to AVEVA Engineering process
AVEVAFiles\Simulations\SimCentral\AIS\Output	SVG files generated during Process Simulation integration with AVEVA Engineering
AVEVAFiles\Miscellaneous	Miscellaneous folders
AVEVAFiles\Miscellaneous\AIS	AIS SQLite database for datasources
AVEVAFiles\Miscellaneous\GDP	Gateway Data Publisher related folders. (Created when optional GDP component is enabled. See AVEVA Gateway Data Publisher in AVEVA Unified Engineering in this guide.)
AVEVAFiles\Miscellaneous\GDP\Configurations	Default configurations folder for Gateway Data Publisher
AVEVAFiles\Miscellaneous\GDP\Logs	Default logs folder for Gateway Data Publisher (Created when optional GDP component is enabled. See AVEVA Gateway Data Publisher in AVEVA Unified Engineering in this guide.)
AVEVAFiles\Miscellaneous\GPO	Group Policy Object (GPO) Related folders
AVEVAFiles\Miscellaneous\GPO\AI-AE	GPO files for AVEVA Electrical\Instrumentation Master `inst.ini` propagated to users' workspaces by GPO. This should be updated with AI\AE project list changes.
AVEVAFiles\Miscellaneous\GPO\PID	GPO files for AVEVA™ P&ID. Master `pid.prjs` file propagated to users' workspaces by GPO. This should be updated with P&ID project list changes.
AVEVAFiles\Miscellaneous\GPO\SimCentral	GPO files for AVEVA™ Process Simulation. `licenseinfo.ini` file propagated to users' workspaces by GPO.
AVEVAFiles\Miscellaneous\GPO\Win10StartFix	GPO file used by .User - Win10StartFix
AVEVAFiles\Miscellaneous\SharedServices	Shared Services notify project (dabacon)
AVEVAFiles\Miscellaneous\TMR	
AVEVAFiles\ElecInst	AVEVA Electrical & Instrumentation project folders organized by project

Folder	Storage Purpose(s)
AVEVAFiles\ElecInst\<PROJECT>	Option for <PROJECT> folder access control (see section below).
AVEVAFiles\PID	AVEVA™ P&ID project folders organized by project Option for <PROJECT> folder access control (see section below).
AVEVAFiles\PID\<PROJECT>	
ProjectFiles	Working project files for AVEVA products organized by discipline and project. Option for <PROJECT> folder access control (see section below).
ProjectFiles\Civil	
ProjectFiles\Civil\<PROJECT>	
ProjectFiles\Design	
ProjectFiles\Design\<PROJECT>	
ProjectFiles\Drafting	
ProjectFiles\Drafting\<PROJECT>	
ProjectFiles\Electrical	
ProjectFiles\Electrical\<PROJECT>	
ProjectFiles\Instrumentation and Controls	
ProjectFiles\Instrumentation and Controls\<PROJECT>	
ProjectFiles\Mechanical	
ProjectFiles\Mechanical\<PROJECT>	
ProjectFiles\Process	
ProjectFiles\Process\<PROJECT>	
ProjectFiles\Project Controls	
ProjectFiles\Project Controls\<PROJECT>	
ProjectFiles\Project Management	
ProjectFiles\Project Management\<PROJECT>	

Important: Do not remove the standard structure folders, as this has a detrimental effect on the automated upgrade process.

Creating New File System Folders

It is acceptable to create new file system folders on the shared storage (**P:**) under the pre-created standard file system folders. That is, under **P:\AVEVAFiles** or **P:\ProjectFiles** (or any sub-folders) but not at the root (**P:**) level.

When you create a new system folder under a pre-created system folder, it will automatically inherit the same permissions as the pre-created system folder.

For example, if the pre-created system folder was only writable to by CONNECT users in a particular CONNECT Group (by virtue of roles being attached), then the new system folder will only be writable to by these users as well. Consider carefully before creating folders so you can use the existing discipline-based roles to control access. Refer to the section below on further details relating to **File System Access Controls**.

If you create new system folders and alter permissions using folder security (not recommended), please ensure that the **AWS Delegated FSx Administrators Group** is retained so that the Unified Engineering automated upgrade process has access.

File System Folder Access Controls Prerequisites

For File System Folder Access Controls to be supported, it is important that the standard file system folder structures have been implemented and adhered to.

That is:

AVEVA Product Projects\Project Definition Files are located under **P:\AVEVAFiles\<Engineering or PID** or **ElecInst>**

One **<Project>** sub-folder for each Project

P:\AVEVAFiles\Engineering \XYZ

Working project files organized by **<Discipline>** are located under **P:\ProjectFiles\<Discipline>**

One **<Project>** sub-folder for each Project

P:\ProjectFiles\Design\XYZ

If standard project-related folder structures have not been implemented and File System Folder Access Controls are required, the projects should be reorganized accordingly with the assistance of AVEVA Cloud Dev Ops and Professional Services.

File System Folder Access Control Introduction

Unified Engineering offers access control modes for the following standard file system folders and <Project>-related folders:

Standard File System Folders	**Folder**	**Purpose**
Engineering (i.e. Dabacon) AVEVA Product Projects		
	P:\AVEVAFiles\Engineering**<Project>**	Dabacon **<Project>**s location
	P:\ProjectFiles\Civil**<Project>**	Structural/Civil discipline users

Standard File System Folders	Folder	Purpose
	P:\ProjectFiles\Design**<Project>**	E3D Design discipline users
	P:\ProjectFiles\Drafting**<Project>**	P&ID discipline users if Diagrams used as drafting tool
	P:\ProjectFiles\Process**<Project>**	Engineering Process discipline users
	P:\ProjectFiles\ Mechanical**<Project>**	Engineering Mechanical discipline users
AVEVA P&ID Projects		
	P:\AVEVAFiles\PID**<Project>**	P&ID **<Project>**s definition location
	P:\ProjectFiles\Drafting**<Project>**	P&ID discipline users if P&ID used as drafting tool
AVEVA Electrical & Instrumentation Projects\<Project>		
	P:\AVEVAFiles\ElecInst**<Project>**	ElecInst **<Project>**s definition location
	P:\ProjectFiles\Electrical**<Project>**	Electrical discipline users
	P:\ProjectFiles\Instrumentation and Controls**<Project>**	Instrumentation discipline users

File System Folder access controls are independent of access controls embedded in AVEVA Products.

AVEVA Product access is generally dependent of File system folder access. Revoking access to file system folders implies access via the product is not possible.

With read file system folder permissions, different products react differently. For example, Engineering (Dabacon) based products will not login to a project if none or read file system folder permissions are applied (this is because these products always require write access to certain database files to function). However, Electrical, Instrumentation and P&ID users with read access will be able to launch the product and potentially update data depending on their permissions in the SQL database (data is stored in SQL).

File System Folder access controls comprise a switchable UE environment-wide access control mode with (optional) project folder access control as described below.

The following access control modes are available in Unified Engineering:

- Access Mode 1 (Default). Read as standard \ Discipline Role-based write
  - All users have **read** permissions on all standard file system folders and **<Project>**-related sub-folders.
  - Assigning CONNECT discipline-based roles to groups and users to these groups grants **write** permissions to the standard file system folders and **<Project>**-related sub-folders (see the “access privileges of the roles and their purpose” table in Default groups and assigned roles for AVEVA Unified Engineering for details).
  - Typical Use Cases: Single stakeholder multi-discipline-user, demonstration, PoC, trial environments.
- Access Mode 2. None as standard \ Discipline Role-based write

- All users have **no access** permissions to standard file system folders and **<Project>**-related sub-folders.
- Assigning CONNECT discipline-based roles to groups and users to these groups grants **write** permissions to the standard file system folders and **<Project>**-related sub-folders.
- Typical Use Cases: Multi stakeholder\partners single-discipline-user environments

Project Folder Access Control

Access Modes above can be extended to support Project Folder Access Control.

- Project Folder Access Control
  - Overrides the two access control mode discipline-based access control at **<Project> related folder** level
  - Assigning AVEVA users to groups, grants specific permissions to **<Project>**-related folders
  - Supports No, Read and Read-Write access permissions.
  - Can be implemented for one or more **<Project>**s
  - Other non-project access controlled projects continue to follow the standard Access Mode permissions.

The combination of Access Mode and Project Access Controls have subtle differences in relation to access control.

The following table summarizes these differences:

UNIFIED ENGINEERING FILE SYSTEM FOLDER ACCESS CONTROL	**CONNECT ROLE(S) \GROUPS(s) ASSIGNED TO USER**		**PROJECTFILES \<DISCIPLINE > FOLDER ACCESS**	**AVEVAFILES\ FOLDER ACCESS**	**<Project>-RELATED FOLDERS ACCESS**	
Discipline (*1)	**PROJECT (*2)**	**NON-PROJECT ACCESS CONTROLLED**	**PROJECT ACCESS CONTROLLED**			
Mode 1 (Default) Read as standard \ Discipline-based write	N	N	Read	Read	Read	No Access
	Y	N	Write	Write	Write	No Access
	Y	Y	Write	Write	Write	Write
	N	Y	Read	Read	Read	Write
Mode 2 None as standard \ Discipline-based write	N	N	No Access	No Access	No Access	No Access
	Y	N	Write	Write	Write	No Access
	Y	Y	Write	Write	Write	Write
	N	Y	No Access	No Access	No Access	No Access

(*1) Discipline-based Roles prefixed “Standard”. Design, Drafting PID, Drafting Diagrams, Electrical Design, I&C

Design, Mechanical, Process, Project Controls, Project Management, Simulation
(*2) Project Access groups (with write permission) created by Customer Admin and linked by AVEVA Cloud DevOps.

Project Folder Access Control in this release of Unified Engineering, can be described as a “Partial” self-service model in that an initial request to CloudDevops is required to setup read or read-write permissions on a project linked to a specific CONNECT Group created by the customer administrator, thereafter customer administrators can assign users to the Group in CONNECT, controlling access, without any further AVEVA involvement. This is described in more detail below.

Project Access Control is managed by adding CONNECT users to CONNECT groups created by the customer administrator. These CONNECT groups align with Active Directory security groups in the Unified Engineering environment granting Read or Read\Write permissions on all **<Project>**-related folders. For this to work, AVEVA Cloud DevOps must link the CONNECT Group with Active Directory Security Groups as a one-off action, thereafter customer administrators can assign users to groups in CONNECT in a self-service manner.

With Project Folder Access Control applied to a **<Project>**, by default all users have no access to the **<Project>**-related folders unless added to appropriate CONNECT groups.

Switching Access Modes

The following sections describe the Modes in more detail including how to implement them.

Access Mode 1. Read as standard \ Discipline Role-based write (Default)

This Access Mode is implemented by default on all newly provisioned UE environments.

No action is required to implement this Access Mode, unless you wish to switch back to this from Access Mode 2, in which case see below.

Access Mode 2. None as standard \ Discipline Role-based write

This Access Mode can be implemented on request (or switched back to Access Mode 1 if required).

To switch between Access Modes 1 & 2, raise a support case via the *AVEVA Knowledge & Support Center* with the following details:

- **Request to switch Unified Engineering standard file system folders access**

  This should be in the description of the support case

  - From “Access Mode 1. Read as standard \ Discipline-based write” to “Access Mode 2. None as standard \ Discipline-based write”
  - Or vice-versa
- **CONNECT Account**

  This is the name of the account from the profile icon in CONNECT
- **CONNECT folder in which the Unified Engineering Environment is deployed**

  This is the name of the CONNECT folder in which Unified Engineering has been enabled

Implementing Project Access Control

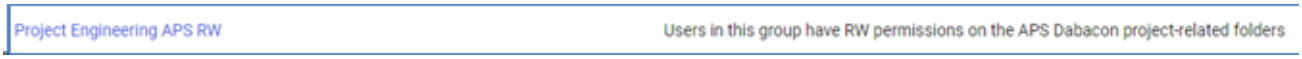
To enable read or read-write Project Folder Access Control for a **<Project>**:

- Create a new group in CONNECT to control access to **<Project>**-related folders.

A recommended format is to Prefix with "**Project**" and include Project Name, Project Type and Permissions, for clarity and differentiation with other groups. Suffix with the CONNECT folder name in brackets if the project relates to an AVEVA Unified Engineering on CONNECT environment in a CONNECT folder (if at account level, no suffix is required).

- Note that "Engineering" Project Type represents any Dabacon-based project (E3D, Engineering, Diagrams etc)

  E.g. **Project Engineering SWS RW** for read-write on Engineering (Dabacon) project SWS in a Unified Engineering environment enabled at the CONNECT account level.

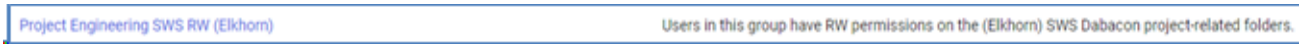
  or **Project ElecInst SWS R** for read on Electrical\Instrumentation project SWS in a Unified Engineering environment enabled at the CONNECT account level.

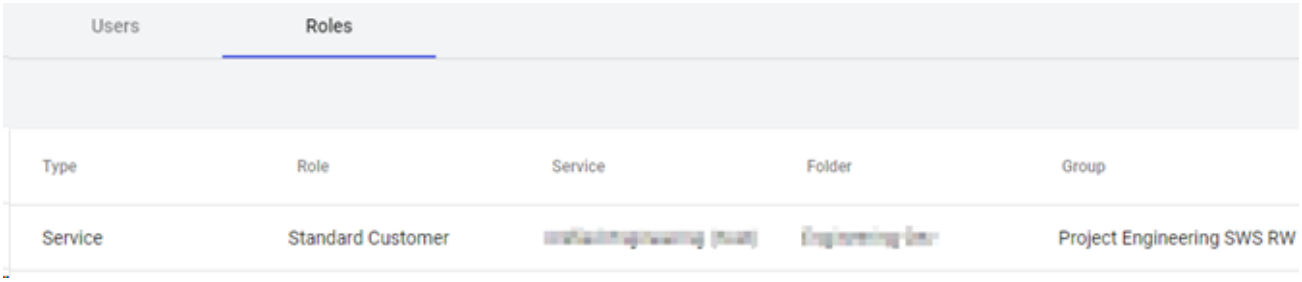
  or **Project PID 12345 RW** for read-write on P&ID project 12345 in a Unified Engineering environment enabled at the CONNECT account level.

  or Project Engineering SWS RW (Elkhorn) for read-write on Engineering (Dabacon) project SWS in a Unified Engineering environment enabled at the Elkhorn CONNECT folder level

- Add the "Standard Customer" role for the UE service and relevant folder to the group

- Raise a support case via the *AVEVA Knowledge & Support Center* with the following details:
  - **Request to implement Unified Engineering Project Access Control for a Project**

    This should be in the description of the support case
  - **CONNECT Account**

    This is the name of the account from the profile icon in CONNECT
  - **CONNECT folder in which the Unified Engineering Environment is deployed**

    This is the name of the CONNECT folder in which Unified Engineering has been enabled
  - **Name of CONNECT Group**

    This is the name of the CONNECT Group the customer admin created
  - **Project Type**

    3 valid values: Engineering or PID or ElecInst

    Note that "Engineering" Project Type represents any Dabacon-based project (E3D, Engineering, Diagrams etc)

- **Project Name**

  The name of the project for the Project Type

  - Dabacon: 3-letter Project designator from the tile on login screen
  - PID: Project Name from the tile on login screen
  - AIAE: Project Name from the tile on login screen
- **File System Project Folder**

  The name of the <Project> folder storing the project

  - Dabacon: Folder name under P:\AVEVAFiles\Engineering\
  - PID: Project Folder name under P:\AVEVAFiles\PID\
  - AIAE: Folder name under P:\AVEVAFiles\ElecInst\
- **File Permission**

  Read or Read-Write

- AVEVA Support\Cloud Dev Ops will link the CONNECT group to Active Directory permissions and notify the customer via the support case once actioned.
- Add users to the group in CONNECT to control access.

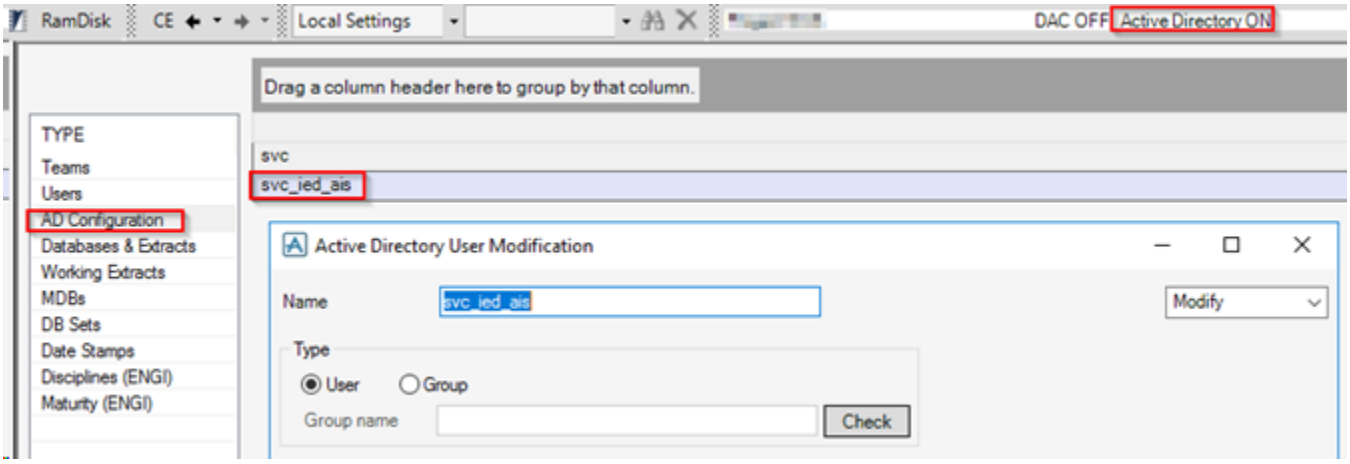
For more information on Project Access Control, please discuss with your AVEVA support contact or raise a support incident via the *AVEVA Knowledge & Support Center* https://softwaresupport.aveva.com.

Unified Engineering Integration Service Account

Dabacon Projects

For AD authenticated Dabacon projects using Integration Service, it is necessary to define the service account running these services as an AD User in AVEVA™ Administration for the services to function.

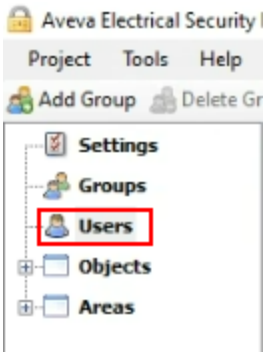
Where required, in the AVEVA Unified Engineering environment this account name is `svc_ied_ais`:

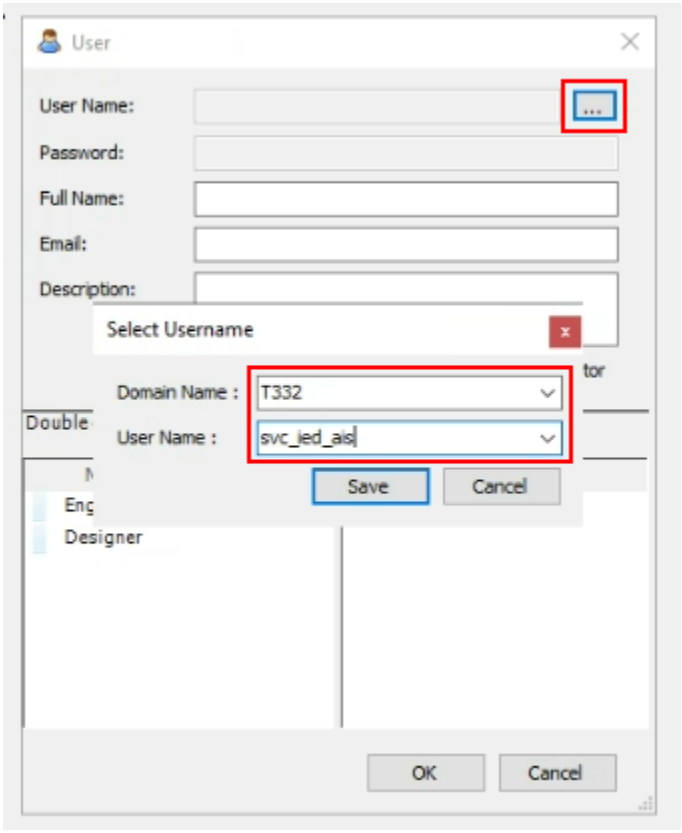


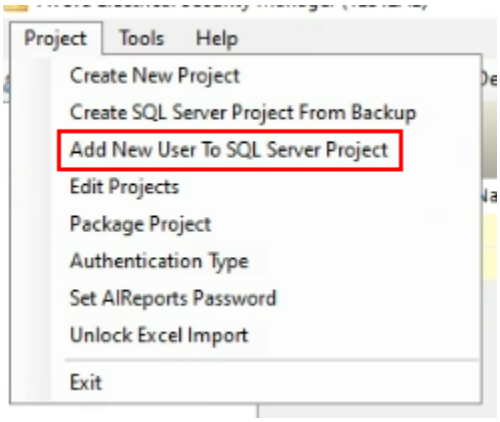
Electrical and Instrumentation projects

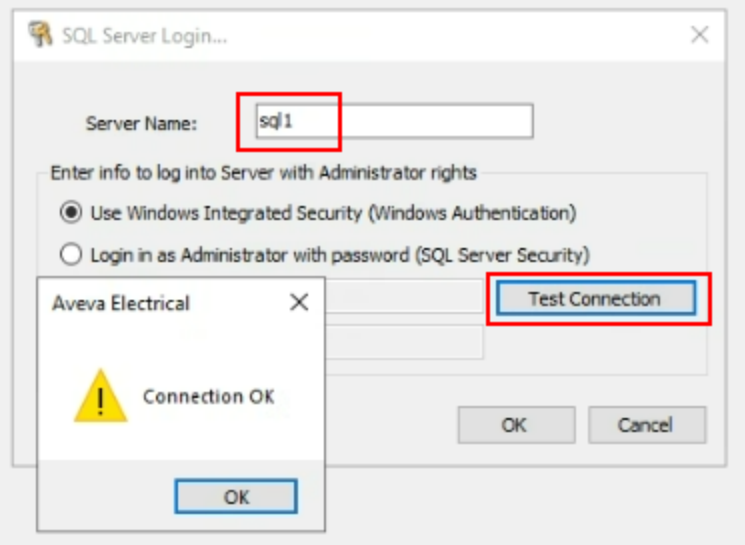
For Electrical and Instrumentation projects using Integration Service, it is necessary to define the service account as a Read Only user and SQL user in Security Manager for the services to function.

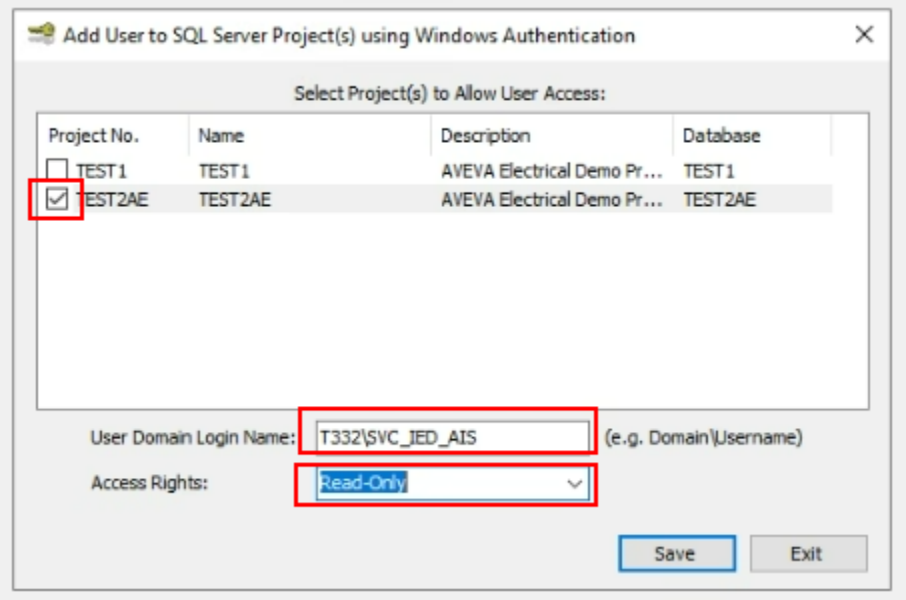
Where required, in the AVEVA Unified Engineering environment this account name is `svc_ied_ais`:











Clash Manager in AVEVA Unified Engineering

In this release of Unified Engineering, AVEVA Clash Manager is available to customers subject to AVEVA approval. If you wish to use AVEVA Clash Manager, in the first instance please contact your AVEVA Business Unit Representative for approval.

Subject to approval, AVEVA Clash Manager is included on users' workspaces utilizing the SQL Server provided as part of the Unified engineering deployment to store and manage clash projects.

Unified Engineering is a managed service with protected access to servers, the SQL sa password and SQL sysadmin role user passwords. Therefore, to create Clash Manager project SQL databases and associated Clash projects, interaction between the customer admin and AVEVA is required as described in the process below:

- Customer Admin
  - Raise a support case via the AVEVA Knowledge & Support Center with the following details:

- **Request to implement a Clash Manager Project**

  This should be in the description of the support case
- **CONNECT Account**

  This is the name of the account from the profile icon in CONNECT
- **CONNECT folder in which the Unified Engineering Environment is deployed**

  This is the name of the CONNECT folder in which Unified Engineering has been enabled
- **Clash Manager Project Name**

  This is the name of the Clash Manager Project to be created

  Note. No spaces or special characters permitted
- **Dabacon Project 3 letter designator**

  This is the Dabacon 3-character project Code (e.g. APS).

  It is used to generate the name of the Clash Manager SQL Server Database hosting all Clash Manager projects for this particular Dabacon project. It is also used during Clash Manager Project creation.
- **SQL Database Collation**

  This is the SQL Database Collation value used when creating the Clash Manager SQL Database. The default is “Latin1_General_CS_AS”
- **Clash Manager Project details**

  These are optional initial values provided when setting up the Clash Manager Project. Customer admins can retrospectively change these values inside Clash Manager running on their workspace after the project has been setup.

  Project Title

  Project Number

  Client

  Display Units
- **Email address of Customer Admin(s)**

  Email addresses of customer admins used by AVEVA Cloud DevOps in steps below to securely acquire and share usernames and passwords

- AVEVA Support 24-7
  - Triage Support case and forward to AVEVA Cloud DevOps for processing
- AVEVA Cloud DevOps
  - Send email to Customer Admins requesting the following login information:
    - E3D login details

      Used by AVEVA Cloud DevOps to access the project in E3D and run the Clash Manager Wizard. It should be a FREE or DESADMIN team user and can be temporary if required

      Username

      Password

      MDB
    - Clash Manager 3D Model login

      Provided by AVEVA Cloud Dev Ops for the Clash Manager 3d Model login used for Desclash checking and Clash Manager loading processes (can be a read-only login)

Username

password

- Customer Admin
  - Sends login information securely in an encrypted email to AVEVA Cloud DevOps
- AVEVA Cloud DevOps
  - Creates SQL Database (where needed)
  - Creates Clash Project
  - Sends Clash Manager Project Login and Password securely in an encrypted email to Customer admins
  - Closes Support Case
- Customer Users
  - Access Clash Manager Project from E3D running on their workspaces.

The process above can be repeated for additional Clash Manager projects.

AVEVA Gateway Data Publisher in AVEVA Unified Engineering

In this release of Unified Engineering, AVEVA™ Gateway Data Publisher is available as an optional component.

AVEVA™ Gateway Data Publisher enables users of AVEVA Gateways to publish data to AVEVA™ Asset Information Management through AVEVA™ Ingestion Service. Therefore, enabling AVEVA™ Gateway Data Publisher should only be considered if there are plans to use Unified Engineering with AVEVA™ Asset Information Management.

Refer to the AVEVA™ Gateway Data Publisher product documentation available from the *AVEVA Support and Knowledge Center* (https://softwaresupport.aveva.com/) for further details.

Unified Engineering is a managed service with protected access to the Gateways server. Therefore, to enable AVEVA™ Gateway Data Publisher, interaction between the customer admin and AVEVA is required as described in the process below:

- Customer Admin
  - Raise a support case via the AVEVA Knowledge & Support Center with the following details:
    - **Request to enable Gateway Data Publisher**

      This should be in the description of the support case
    - CONNECT Account

      This is the name of the account from the profile icon in CONNECT
    - CONNECT folder in which the Unified Engineering Environment is deployed

      If Unified Engineering is deployed at folder level (rather than account level), this is the name of the CONNECT folder in which Unified Engineering has been enabled
    - CONNECT folder in which AVEVA™ Asset Information Management - Advanced is deployed

      If AVEVA™ Asset Information Management - Advanced is deployed at folder level (rather than account level), this is the name of the CONNECT folder in which AVEVA™ Asset Information Management - Advanced has been enabled
    - Email address of Customer Admin(s)

      Email addresses of customer admins used by AVEVA Cloud DevOps in steps below to securely

acquire and share Access Tokens

- AVEVA Support 24-7
  - Triage Support case and forward to AVEVA Cloud DevOps for processing
- AVEVA Cloud DevOps
  - Send email to Customer Admins with instructions on how to generate an AIM-A Service Access Token (Data Pipeline)
- Customer Admin
  - Sends the AVEVA™ Asset Information Management - Advanced Service Access Token (Data Pipeline) securely in an encrypted email to AVEVA Cloud DevOps
- AVEVA Cloud DevOps
  - Applies the token to the AVEVA™ Gateway Data Publisher Server service

Unified Engineering users assigned the Admin Superuser CONNECT role have permissions to modify the AVEVA™ Gateway Data Publisher service configuration files via file explorer in their workspace.

The configuration files are located under the folder **P:\AVEVFiles\Miscellaneous\GDP**

When the AVEVA™ Gateway Data Publisher component is deployed for the first time, it provides a sample folder structure with predefined configurations. The configuration should be adjusted to your specific requirements as follows:

- Edit or create any number of `IngestionCfg*.json` configurations that will define the rules for publishing the data from **P** drive as well as target `DefaultEndPointUri` and `DefaultAssetId`
- Edit `InitGdpCfg.json` file and configure any number of AVEVA™ Gateway Data Publisher instances that will be watching various locations of **P** drive.

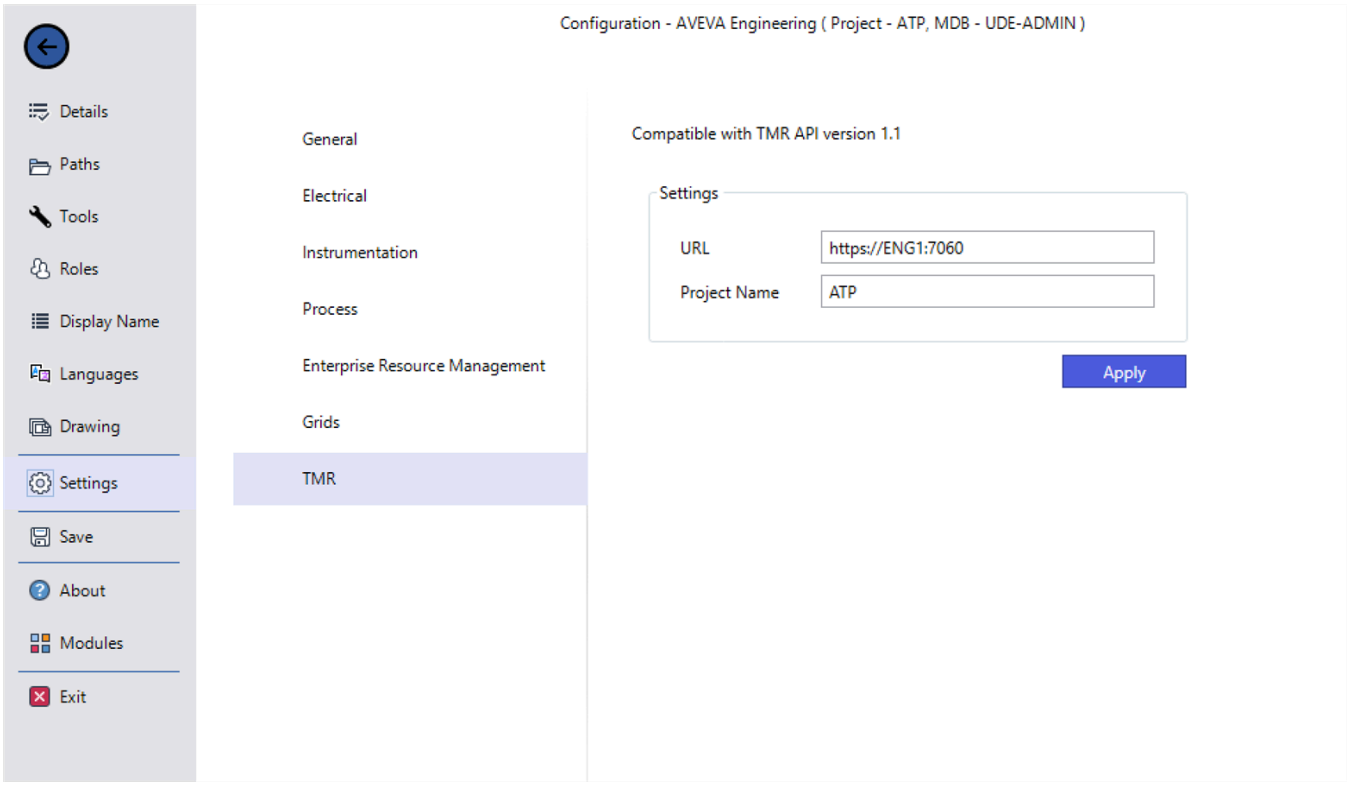
Depending on the application gateways in use, the following are the recommended locations of watching locations:

Application\Gateway	**Watched Folder**
E3D (2s&3s) Model IE&D Gateway	P:\ProjectFiles\Design**<Project>**\IEDGateway\Model
E3D (3s) Draw IE&D Gateway	P:\ProjectFiles\Design**<Project>**\IEDGateway\Draw
E3D (2s) Draw Legacy Gateway	P:\ProjectFiles\Design**<Project>**\DrawGateway\Draw
Engineering IE&D Gateway	P:\ProjectFiles\Mechanical**<Project>**\IEDGateway\Engineering
	P:\ProjectFiles\Process**<Project>**\IEDGateway\Engineering
Diagrams IE&D Gateway	P:\ProjectFiles\Drafting**<Project>**\IEDGateway\Diagrams

Application\Gateway	Watched Folder
P&ID PID Gateway	P:\ProjectFiles\Drafting**<PRJ>**\PIDGateway\PID
Electrical ANET Export	P:\ProjectFiles\Electrical**<Project>**\AnetExport\Wiring P:\ProjectFiles\Electrical**<Project>**\AnetExport\Designer P:\ProjectFiles\Electrical**<Project>**\AnetExport\ProcessEngineer P:\ProjectFiles\Electrical**<Project>**\AnetExport\InstrumentEngineer
Instrumentation ANET Export	P:\ProjectFiles\Instrumentation and Controls**\<Project>**\AnetExport\Wiring P:\ProjectFiles\Instrumentation and Controls**<Project>**\AnetExport\Designer P:\ProjectFiles\Instrumentation and Controls**<Project>**\AnetExport\ProcessEngineer P:\ProjectFiles\Instrumentation and Controls**<Project>**\AnetExport\InstrumentEngineer

AVEVA Engineering TMR in AVEVA Unified Engineering

For new Engineering projects created in 15.7.1.0 the URL of the machine name required in engineering configuration module is https://ENG1:7060 (Where ENG1 is the alias name of Engineering server).



Note also that only users in CONNECT groups with either the Standard Mechanical or Standard Process roles assigned are granted access to the TMR service from AVEVA Engineering.

Global Services Add-On Help

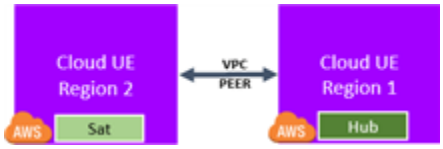
This document describes the Global Services Add-On for AVEVA™ Unified Engineering on CONNECT (Unified Engineering).

Introduction

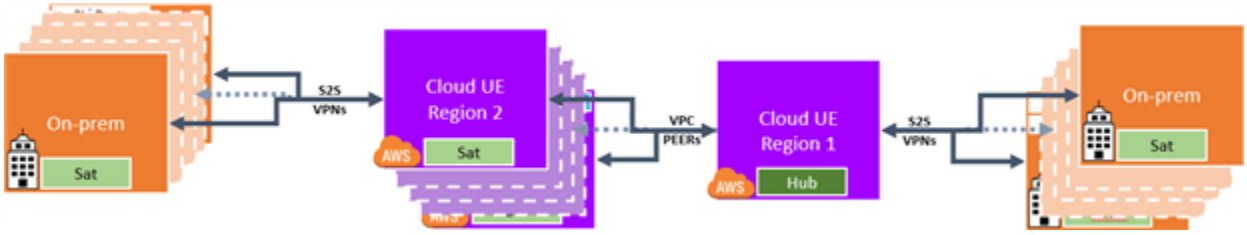
The Global Services Add-On is an optional add-on to Unified Engineering that uses AVEVA Global to:

- Connect an existing Unified Engineering environment to a Customers on-prem environment (**Hybrid Cloud**).

- Connect an existing Unified Engineering environment to another Unified Engineering environment (**Cross-Regional Peering**).



- Implement multiple combinations of **Hybrid Cloud** and **Cross-Regional Peering** connections.



This document is aimed at Customers and AVEVA personnel who have a proficient knowledge of AVEVA Global and wish to understand the Global Services Add-On in detail.

This document will be used as a reference point during the deployment process.

This document should be read in conjunction with the *AVEVA Unified Engineering Service Description* accessed from the AVEVA Services Descriptions for Cloud Service page on the AVEVA Legal Trust Center site.

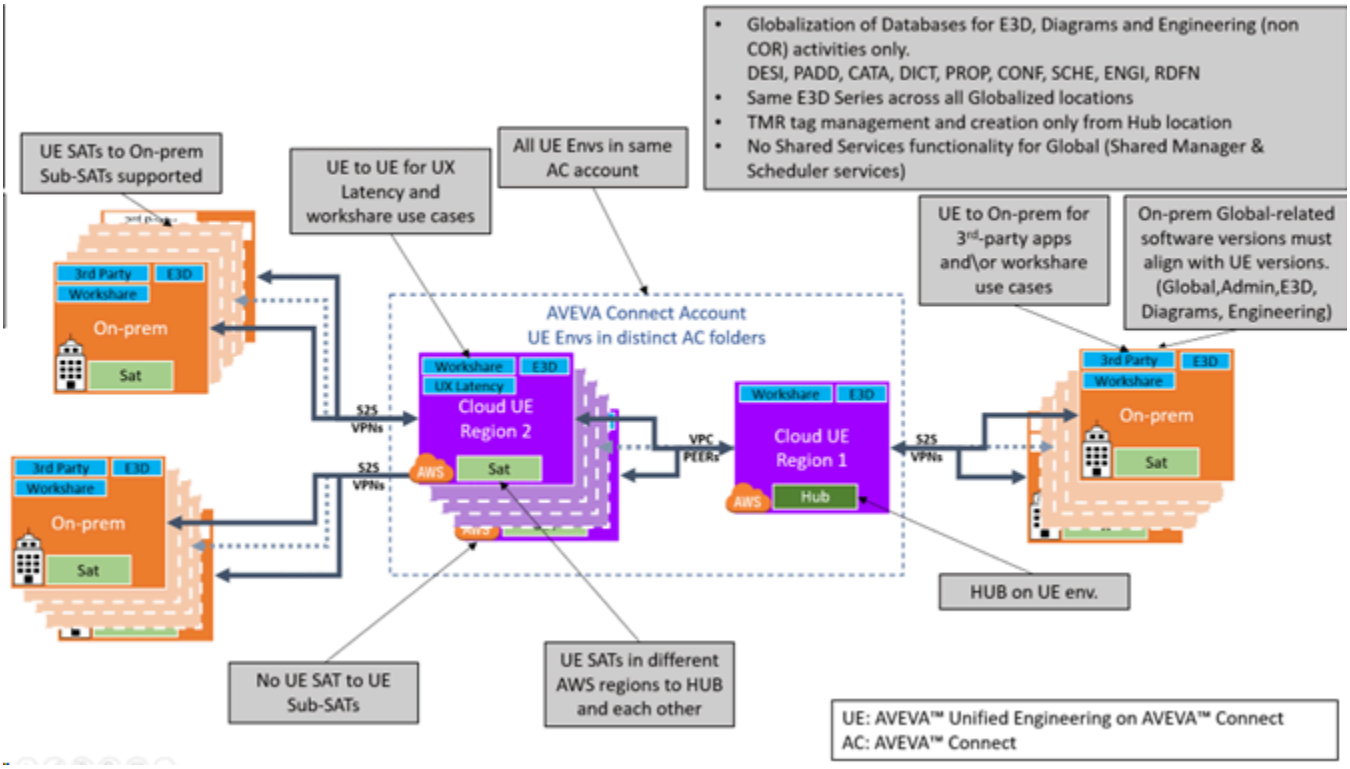
Use cases and boundaries

This release of the *Unified Engineering Global Services Add-On* uses AVEVA Global in a restricted scope to cater for specific Hybrid Cloud use cases and boundaries and Cross-Regional peering use cases and boundaries.

The use of AVEVA Global functionality outside of these use cases and boundaries is not supported and will invalidate Service Level Agreements (SLA). In such circumstances, liaise with your sales representative for more details.

Limiting the supported use case and functionality is a prudential measure. Subsequent releases of the *Global Services Add-On* may extend the supported use cases and extend the boundaries.

Summary illustration of use cases and boundaries



Hybrid Cloud use cases and boundaries

Hybrid Cloud Use Case	Details
For 3rd party products\processes on-prem	AVEVA is unable to deploy some 3rd-party products in Unified Engineering for legal, compliance and licensing reasons. This use case employs AVEVA Global to synchronize Cloud UE E3D, Diagrams & Engineering (non COR) based project data to On-prem customer infrastructure enabling deliverable production (such as isometrics and reports) using 3rd-party products and processes.This
Workshare	This use case employs AVEVA Global to enable Unified Engineering project workshare with On-prem for E3D, Diagrams & Engineering (non COR) based project data. This can be simple single-location writeable or multi-location writeable (using extracts).

Hybrid Cloud Boundary	Details
Globalization of databases for E3D, Diagrams and Engineering (non COR) activities only	Supporting DESI, PADD, CATA, DICT, PROP, CONF, SCHE, ENGI, RDFN databases.
Same Global-related software versions across all Globalized locations. Global, Admin, E3D, Diagrams & Engineering (where used).	It is imperative that the versions of software relating to the Globalized databases are the same in all locations (Cloud UE & On-prem) to avoid data corruption. These include Global, Admin, E3D, Diagrams and Engineering (where used).It
Same E3D Series across all Globalized locations	All globalized locations (Unified Engineering & on-prem) in a globalized network should use the same E3D series (2 or 3) to avoid data corruption.
No Shared Services functionality for Global	For multi-write workshare with extracts, Shared Manager & Scheduler services are not available in this release of Unified Engineering.
The Unified Engineering environment location should be configured as the Global HUB.	Configuring the on-prem location as the Global HUB should be avoided as it diminishes AVEVA's ability to recover all data in the event of a disaster. Under special circumstances, the on-prem location can be configured as the Global HUB subject to AVEVA and the customers agreement to reduced SLA's.
Tag management and generation from HUB location only.	If TMR is used on projects, tag management and generation can only be performed at the HUB location for all these projects with tags propagated via global.

Cross-Regional peering use cases and boundaries

Cross-Regional Peering Use Case	Details
UX Latency	User desktops in a Cloud UE environment are hosted in a specific region, users located long distances from the region can witness compromised user experience due to streaming communications latency. For E3D, Diagrams & Engineering (non COR) project data, this can be mitigated by hosting a second CUE environment in a region closer to these users and synchronising the project data between both Cloud UE environments using AVEVA Global.
Workshare	This use case employs AVEVA Global to enable Unified Engineering project workshare with On-prem for E3D,

	Diagrams & Engineering (non COR) based project data. This can be simple single-location writeable or multi-location writeable (using extracts)..

Cross-Regional Peering Boundary	Details
Globalization of databases for E3D, Diagrams and Engineering (non COR) activities only	Supporting DESI, PADD, CATA, DICT, PROP, CONF, SCHE, ENGI, RDFN databases.
Same Global-related software versions across all Globalized locations. Global, Admin, E3D, Diagrams & Engineering (where used).	It is imperative that the versions of software relating to the Globalized databases are the same in all locations (Cloud UE & On-prem) to avoid data corruption. These include Global, Admin, E3D, Diagrams and Engineering (where used).
Same E3D Series across all Globalized locations	All globalized locations (Unified Engineering & on-prem) in a globalized network should use the same E3D series (2 or 3) to avoid data corruption.
No Shared Services functionality for Global	For multi-write workshare with extracts, Shared Manager & Scheduler services are not available.
No Unified Engineering SAT to Unified Engineering Sub-SATs.	In this release, only Unified Engineering HUB to one or more Unified Engineering SATs is supported. Unified Engineering SAT to Unified Engineering Sub-SATs are not supported.
All Unified Engineering Environments should be in the same CONNECT account	In this release, all the Unified Engineering environments in a globalized network must reside in the same CONNECT account. Flex Credits will be consumed from this single CONNECT account.
Unified Engineering SATs must be in different regions to the HUB and other SATs	In this release, globalization between two Unified Engineering environments in the same region is not supported.
Tag management and generation from HUB location only.	If TMR is used on projects, tag management and generation can only be performed at the HUB location for all these projects with tags propagated via global.

Architecture

This section lists all the Global Services Add-On architectures.

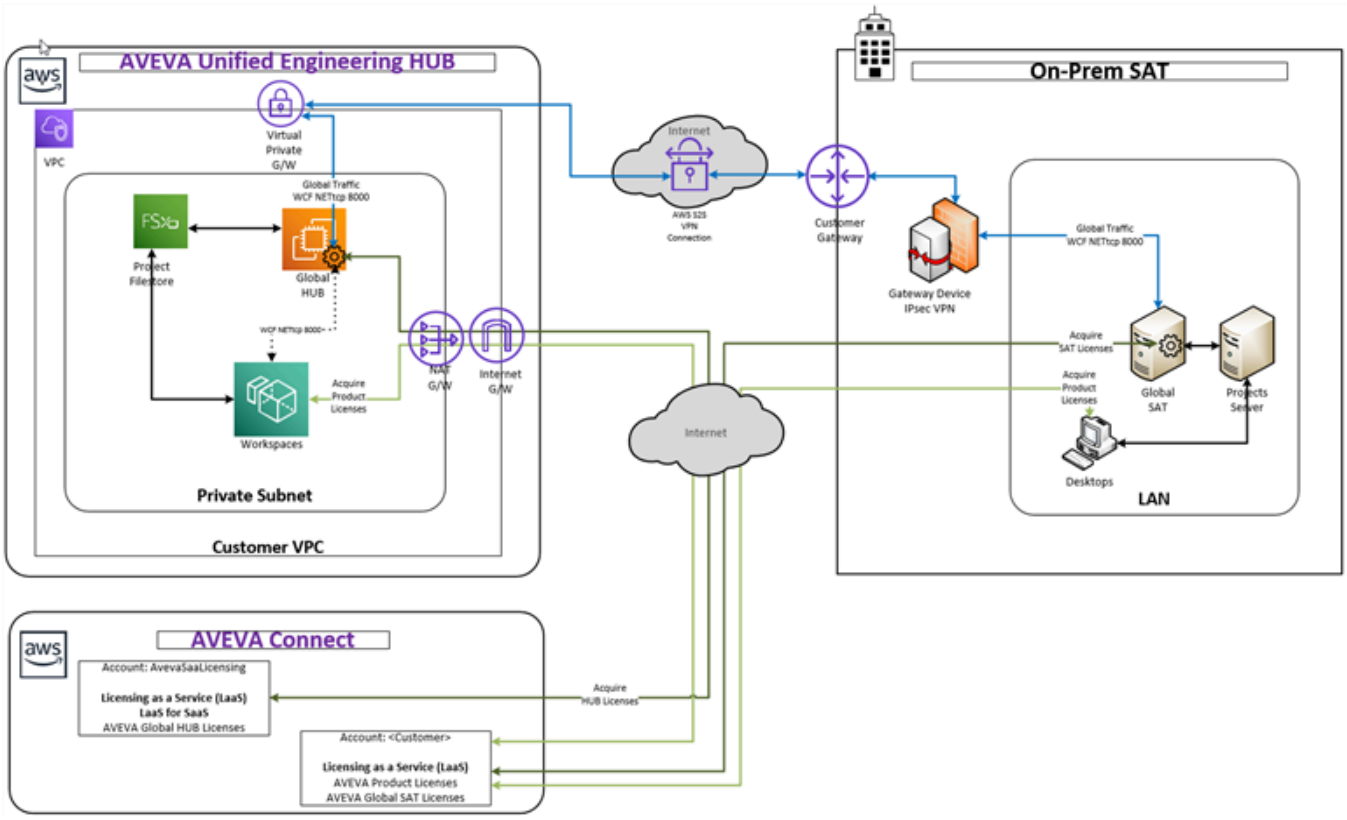
Hybrid cloud architecture

The diagram below illustrates the Global Services Add-On architecture for Hybrid Cloud with a Unified Engineering HUB location (top-left) and one on-prem SAT location (right).

CONNECT (bottom-left) provides the authentication, authorization and licensing services.

In the Hybrid Cloud architecture, the Global Services Add-On uses AWS Site-to-Site VPN https://docs.aws.amazon.com/vpn/latest/s2svpn/VPC_VPN.html service to enable AVEVA Global daemon communication between the Unified Engineering and on-prem environments.

AWS Site-to-Site VPN is a managed service from Amazon Web Services providing a highly available, scalable and secure connections.



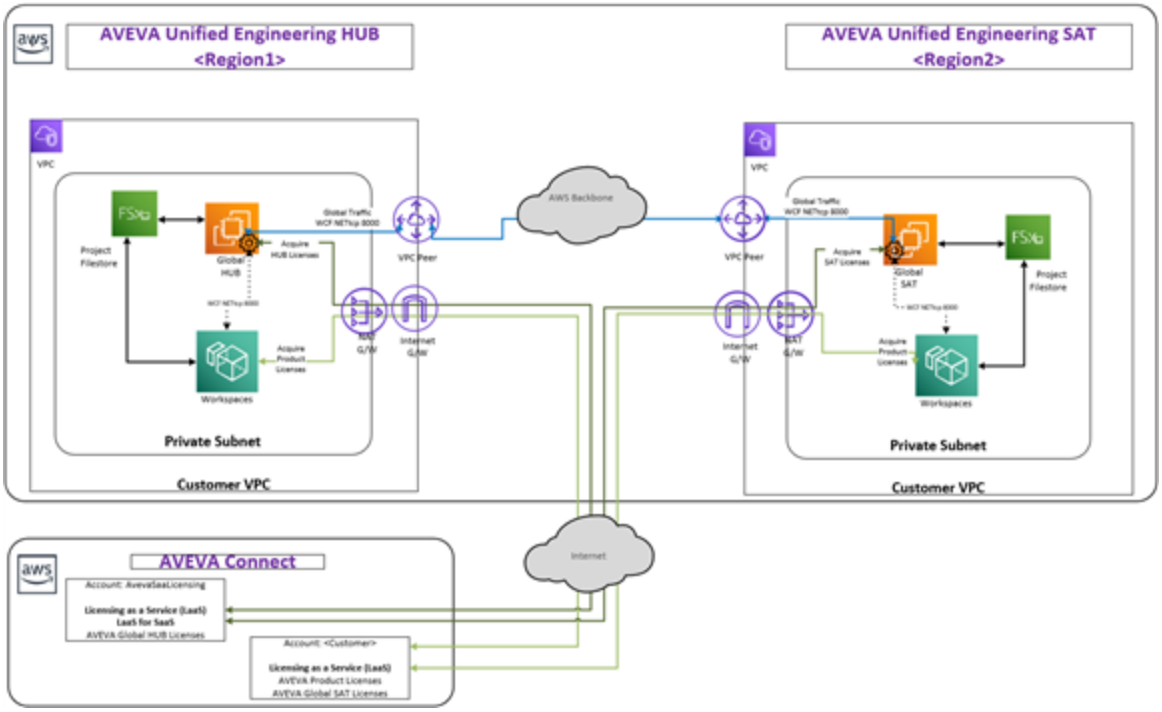
Cross-Regional peering architecture

The diagram below illustrates the Global Services Add-On architecture for Cross-Regional Peering with a Unified Engineering HUB location (top-left) and another Unified Engineering SAT location (right) in a different region.

CONNECT (bottom-left) provides the authentication, authorization and licensing services.

In the Cross-Regional Peering architecture, the Global Services Add-On uses AWS VPC Peering https://docs.aws.amazon.com/vpc/latest/peering/what-is-vpc-peering.html service to enable AVEVA Global daemon communication between the Unified Engineering environments.

AWS VPC Peering is a managed service from Amazon Web Services transferring data securely over their global backbone.



Combined Architectures

Subject to the Use Cases & Boundaries described in this document, **Hybrid Cloud** and **Cross-Regional Peering** architectures can be combined by implementing multiple Global Services Add-Ons.

Communications

In both **Hybrid Cloud** and **Cross-Regional Peering** communication architectures:

- The AVEVA Global daemon to daemon communication is configured for WCF NET.TCP on port 8000 by default.

  This provides for best communication performance and bandwidth use.

  The protocol is fixed and is used across the entire AVEVA Global network for all projects (known as AVEVA Global homogenous communications).

  The port can be changed if required.
- The Unified Engineering workspace to Cloud UE daemon communication is also configured as WCF NET.TCP on port 8000 by default.

  On the Unified Engineering environment, communication between AVEVA products running on users' WorkSpaces and AVEVA Global daemons is required for certain AVEVA Global commands.

  The port can be changed if required, but this must match the daemon to daemon port above (AVEVA Global homogenous communications).
- On Unified Engineering environments, a GPO updates the default configuration for AVEVA applications from basichttp on port 8000 to WCF NET.TCP on port 8000.

  The GPO also provides flexibility should Heterogeneous Global Communication be approved at a later date.

Licensing

In both **Hybrid Cloud** and **Cross-Regional Peering** communication architectures:

- AVEVA Global Daemons running on the Global server in Unified Engineering environments acquire AVEVA Global HUB licenses via Licensing as a Service (LaaS) LaaS for SaaS (L4S).
- AVEVA Unified Engineering applications running on workspaces in Unified Engineering environments acquire product licenses via Licensing as a Service (LaaS) authenticating with the users CONNECT (AC) credentials.

In the **Hybrid Cloud** communication architecture:

- AVEVA Global Daemons running on the Global servers in the on-prem environments should acquire AVEVA Global SAT licenses via Licensing as a Service (LaaS) authenticating using CONNECT (AC) User Access Tokens using an interactive approach.

  Note: CONNECT (AC) User Access Tokens auto-expire after 6 months, therefore it is important that the customer diaries renewal of the token in good time.
- AVEVA Unified Engineering applications running on client PCs in the on-prem environment(s) should acquire product licenses via Licensing as a Service (LaaS) authenticating with the users CONNECT (AC) credentials.

Tag management

In both Hybrid Cloud and Cross-Regional Peering communication architectures:

If you are manually managing and creating tags using your own tag register, then this section can be ignored.

Where AVEVA Tag Management Repository (TMR) is required\used on globalized projects, tag management and creation should only be performed at the HUB globalized location for all these projects.

The HUB location is also where the TMR Service and associated SQL Databases reside and where the TMR ENGI database for each globalized project is primary.

This ensures consistent single-location tag management and tag uniqueness for each globalized project.

New tags are propagated via global for consumption at SAT locations.

With TMR ENGI databases for each globalized project set as primary at the HUB location, if an attempt to create a tag from a SAT location is made, users are prompted with a “TMR request error: Tag names not available” message acting as a reminder that tags are created from the HUB location.

The HUB location should be specified before deployment of the Unified Engineering Global Services Add-On.

This is specified in the discovery form.

Deployment and Upgrades

Global Services Add-On Hybrid Cloud deployment requires active participation from both AVEVA and customer stakeholders. Understanding stakeholder responsibilities for each task is key to a successful deployment in a predictable time frame.

Hybrid cloud deployment and upgrades

The diagram below illustrates the deployment plan phases, stakeholder responsibilities and provides a checklist for the required tasks in each phase:

AVEVA™ Unified Engineering on AVEVA™ Connect (UE) - Hybrid Cloud Global Services Add-On - Plan and Stakeholder Responsibilities

		PHASE	DISCOVERY >>>		IMPLEMENT >>>			CONFIGURE >>>					Test\Handover >>>		LIVE RUNNING SUPPORT & MAINTENANCE					
		TASK	Kick-Off Meeting (*1)	Technical Meetings (*2)	Deploy S2S VPN and UE Objects (*3)	Setup On-Prem VPN & Global server (*4)	Ping Tests (*5)	UE Configure AVEVA Global (*6)	On-Prem Configure AVEVA Global (*7)	AVEVA Global Comms Test (*8)	AVEVA Global DB Allocation and Updates (*9)	Testing (*10)	Handover Meeting (*11)	UE Monitoring (*12)	VPN Tunnel Keepalive Monitoring (*13)	UE AVEVA Global Infra Issues (*14)	AVEVA Global Product Issues (*15)	Regular Admin Activities (*16)	Upgrades (*17)
STAKEHOLDER	Customer	Coordinator\Manager	Y										Y							
		I.T. & Security	Y	Y		Y	Y						Y		Y			Y		
		Dabacon Admin	Y	Y		Y	Y		Y	Y	Y	Y	Y					Y		
	AVEVA	Professional Services (*a)	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y				Y			
		Tech Sales	Y						Y				Y							
		Cloud Dev Ops (*b)	Y	Y	Y		Y	Y					Y	Y		Y		Y	Y	
		Customer Support	Y										Y			Y	Y			
PLAN	ESTIMATED ELAPSED TIME	WEEK1																		
		WEEK2																		
		WEEK3																		
		Week4+																		

(*1) Identify Customer Requirements and establish if they fit Boundaries & Limitations. Present High-level Architecture, Implementation Process, Support & Maintenance. Agree roles & responsibilities.
(*2) Present Detailed Architecture and Implementation Process. Confirm Product Versions match\will continue to match. Confirm VPN tunnel security options. Fill in pre-requisites (confluence page).
(*3) Deploy & setup Site to Site VPN Objects. Deliver VPN Connection Configuration File to customer. Setup UE Objects (Infra, Active Directory, IAM, Global EC2, Projects Storage, GPO & Alarms). Deliver Global EC2 IP to customer.
(*4) Setup On-prem VPN device, firewalls, routes. Setup VPN tunnel keepalive mechanism. Setup Global Server.
(*5) Perform ping tests over VPN between UE and On-Prem Global Servers.
(*6) Globalise projects. Generate and securely pass transfer sets to customer. Configure locations. Configure multidsCUE.bat for projects.
(*7) Acquire the transfer sets. Configure the project folders & files. Configure daemon(s) for projects.
(*8) Test communications between all locations are successful (using TELNET and AVEVA Admin)
(*9) Setup Global Project Database allocation and update schedules
(*10) Test global updates working
(*11) Meeting with all stakeholders. Include handover documentation
(*12) Monitor Slack Channels and react according to documented procedures in Confluence
(*13) Monitor Keepalive process to ensure VPN tunnels remain UP. Tunnels are Opened from On-Prem location and require kepalive pings to stay UP.
(*14) Infra related issues raised on support site with GCS and triaged for 1. standard reply list on Confluence. 2. To CDO\DEV if necessary
(*15) Product related issues raised on support site with GCS and triaged for 1. standard reply list on Confluence. 2. To Professional Services\GSC Technical Services. 3. To CDO\DEV if necessary
(*16) Clean-up log files (quarterly). SAT LaaS Connect token reminders.
(*17) Upgrades to Global Components in parallel to UE upgrades. Rotation of Site to Site VPN tunnel IKE pre-shared keys.

(*a) AVEVA Global Services or GCS Technical Services (responsible for overall project planning & management)
(*b) CDO supported by Development team for initial deployments.

The following sections detail Stakeholder personas and their responsibilities for the tasks in each deployment phases.

Stakeholders

The following stakeholders must be readily available for the duration of the deployment process:

- **Customer Coordinator\Manager**

  Coordinate and manage the on-prem customer environment resources.

  Working closely with the AVEVA Professional Services to ensure deployment is delivered on-time.
- **Customer I.T. Administrator and Security Representative**

  Knowledge of and full administration access to the on-prem customer environment I.T. networking infrastructure and security requirements (DMZ, VPN devices, routing & firewalls, and so on.
- **Customer Dabacon Administrator**

  Knowledge of the AVEVA products and projects on the on-prem customer environment.

  Knowledge of AVEVA Global product.
- **AVEVA Professional Services**

  AVEVA Global Services or GCS Technical Services representative(s)

  Highly proficient with AVEVA Global

Responsible for overall project planning & management.

- **AVEVA Tech Sales**

  Respond to Sales related activities. Arrange CONNECT agreements and licenses.

- **AVEVA Cloud Dev Ops (CDO)**

  During initial deployments, AVEVA CDO will be supported by Unified Engineering product development team representatives.

- **AVEVA Customer Support**

  Familiarize with the AVEVA Global environments and be ready to support the customer during live running support and maintenance.

Discovery Phase

The discovery phase begins with an all-hands Kick-Off meeting followed by technical meetings.

Kick-off Meeting

The discovery phase begins with an all-hands Kick-Off meeting to determine if and how the Global Services Add-On will satisfy the customer's requirements.

Once agreement has been reached that the Global Services Add-On will satisfy the customer's requirements, AVEVA CDO will present:

- High-level architectural diagrams
- High-level implementation processes
- Support and Maintenance processes

Other deliverables from this meeting include:

- Agreement on which Unified Engineering environments the Global Services Add-On should be applied to (preprod and\or prod).
- Individuals, roles & responsibilities for the next steps

Technical meetings

Technical meetings will follow involving stakeholders responsible for deployment tasks up to and including the point of test\handover. This will ensure stakeholders fully understand the technical details and their responsibilities during these phases.

The first step in this phase is to confirm (for the products relating to Globalized databases) that the on-prem AVEVA Unified Engineering product versions align with the versions used in Unified Engineering. This is a mandatory pre-requisite to Global Services Add-On deployment.

The table below identifies the relevant software versions deployed in Unified Engineering 3.3.1.0:

Software	Version
AVEVA Global Server	3.10.2.0
AVEVA Administration	2.1.2.0
AVEVA E3D Design	2.1.0.35 3.1.8.1
AVEVA Diagrams	14.1.5.0
AVEVA Engineering	15.7.3.1

If the on-prem versions do not match, then the customer will have to organize upgrading versions, or possibly setting up a separate environment with the correct versions.

The second step is to confirm (for the products relating to Globalised databases) that the on-prem AVEVA Unified Engineering product versions will continue to align with the versions used in Unified Engineering as the AVEVA Unified Engineering environment is upgraded (Cadence is generally Quarterly). This is a mandatory requirement to on-going Global Services Add-On availability.

The final step is to review and complete the Global Services **Hybrid Cloud** Add-On Customer Discovery form in Hybrid cloud global services add-on customer discovery form. The details provided in this form are used by AVEVA to configure the Global Services Add-On components in Unified Engineering.

Implement Phase

This section describes the implementation process.

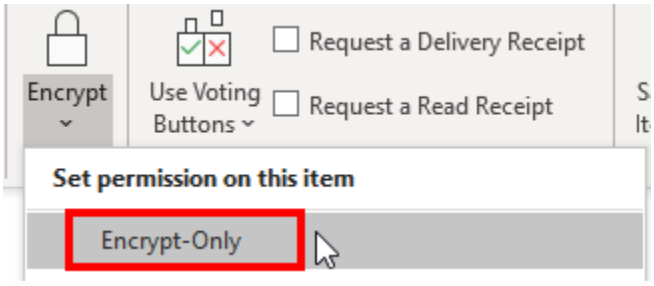
Deploy site to site VPN and Unified Engineering objects

AVEVA CDO will use the details on the Global Services Add-On Customer Discovery form and internally documented procedures to setup the Unified Engineering VPN objects.

A key deliverable from this process will be a VPN Connection Configuration File (VCCF) specific to the customers gateway device. This will be securely passed by AVEVA CDO to Customer I.T.

Note: The VCCF contains 2 pre-shared keys (1 for each VPN tunnel) that are used to authenticate the VPN tunnel end-points. These keys must be kept secure, transferred between stakeholders securely and only made available to stakeholders with sufficient privileges, that is, AVEVA CDO and Customer I.T.

The recommended secure communication method is using the Outlook email Encrypt feature:



AVEVA CDO will configure the remaining Unified Engineering objects as described in internal AVEVA

documentation.

Once the Unified Engineering Global server configuration is complete, the private IP address of this server needs to be communicated to Customer I.T.

Setup on-prem VPN and global server

Using the VCCF, Customer I.T. will configure their customer gateway device (the physical or software appliance on the on-prem side of the VPN connection), routing and firewalls to the Unified Engineering network and Global server.

Customer I.T. must also configure a keepalive mechanism for the VPN tunnel.

In this release of the Global Services Add-On, IKE initiation is from the on-prem side of the VPN connection. If the VPN connection experiences a period of idle time (usually 10 seconds), the tunnel goes down resulting in AVEVA Global updates sent from the Unified Engineering environment failing. To prevent this, customers should use a network monitoring tool to generate keepalive pings, for example by using IP SLA, scheduled tunnel monitoring or a powershell script.

Customer I.T., Customer Dabacon Admin and AVEVA Professional Services will configure the on-prem Global server and firewalls.

Ping tests

This phase culminates with successful ping tests between the Global servers at both locations.

These are simple PING <IPAddress> commands from CMD prompts to ensure communications between Global servers are working. It is expected that a number of test\update iterations will be required in this phase, so stakeholder availability will be a necessity.

Note: Generally, ICMP traffic is blocked for security reasons, so it may be required to temporarily allow ICMP to perform these ping tests between the Global servers at both locations.

Configure Phase

Once validation that the Global servers at each location can communicate (ICMP V4 ping) with each other over the VPN connection(s), the configure phase can start.

This involves combined stakeholder activities setting up the remaining components both in Unified Engineering and on-prem to allow AVEVA Global updates between locations.

Unified Engineering configure AVEVA global

On the Unified Engineering environments, AVEVA CDO will provide access to AVEVA Professional Services who will:

- Configure (initialize) locations for projects agreed with the customer.

  Note: Where needed, an alias of **GLB1** exists for the the Global Server. When creating new or modifying existing Global locations in AVEVA Administration, there is a Hostname "Check" button that attempts an ICMP PING to the Hostname.
  For security reasons, ICMP is blocked between Unified Engineering workspaces and servers and ICMP is generally blocked by on-prem IT. Therefore, it is probable that when clicking the "Check" button you will

receive a "Could not contact the host <hostname>" message. The location can still be created or modified and after the daemon has been setup a Global PING can be used to test communications.

- Generate and securely pass transfer sets to customer making allowance for the <NON_DABACON_PROJECT_FOLDER_FILE_LIST>
- Configure the AVEVA Global multi daemon Service for projects agreed with the customer. The configuration file for the service is named **MultidsCUE.bat** residing in the Global installation folder.

These tasks are described in internal AVEVA documentation.

On-prem configure AVEVA global

On the on-prem environment, Customer Dabacon Admin and AVEVA Professional Services will acquire the transfer sets, configure the project folders & files and configure AVEVA Global Daemons. Liaison with the AVEVA Sales may be required to ensure SAT licenses are made available via LaaS.

Note there are parameter changes required on the on-prem environment for AVEVA Global performance improvements. See AVEVA global performance improvement parameters.

AVEVA global comms test

The Customer Dabacon Admin and AVEVA Professional Services will test Project AVEVA Global communications work between locations using:

- TELNET <IPAddress> <Daemon Port> from a CMD prompt

  To test the high-level network communications work in both directions from each Global Server.
- AVEVA Admin Query>Global Status>Communications

  To test Daemon to Daemon communications work to\from all locations.

AVEVA global DB allocation and updates

The Customer Dabacon Admin and AVEVA Professional Services will then allocate the relevant databases to locations and setup the AVEVA Global update schedules.

Test\Handover Phase

This section describes testing and handover process.

Testing

AVEVA Global updates should be tested over a few days.

AVEVA Admin functionality from WorkSpaces should be tested.

Being the HUB location, AVEVA Global Administration activities are made from the Unified Engineering environment.

Handover meeting

This phase closes with an all-hands meeting to discuss the process to date, highlight any lessons learned before officially handing over to the customer users for Live Running and AVEVA CDO\Customer Support for support and maintenance activities.

Live running support and maintenance

During live running of the Global Services Add-On, certain stakeholders will continue to be involved from support, maintenance and administration perspectives.

Unified Engineering monitoring

AVEVA CDO will monitor the Unified Engineering environment and react to any alarms raised according to internally documented procedures.

Note that this does not include monitoring of the VPN tunnels, as the status of these are dependent on the Keepalive mechanisms under control of Customer I.T.

VPN tunnel keepalive monitoring

Customer I.T. will monitor their Keepalive mechanism to ensure AVEVA Global updates sent from the Unified Engineering environment are successful.

Unified Engineering AVEVA global infrastructure issues

For example, AVEVA Professional Services unable to access the Unified Engineering environment resources.

All such issues should be raised via the AVEVA Knowledge and Support Center https://softwaresupport.aveva.com/.

Unified Engineering AVEVA Global Infrastructure issues will be triaged by AVEVA Customer Support and where necessary passed to AVEVA CDO\Product Development.

AVEVA global product issues

For example, Globalising a new project or database allocation not working from AVEVA Admin.

All such issues should be raised via the AVEVA Knowledge and Support Center https://softwaresupport.aveva.com/.

AVEVA Global Product issues will be triaged by AVEVA Customer Support and where necessary passed to AVEVA Professional Services in the first instance. In some cases, AVEVA Professional Services may need to pass the ticket to AVEVA CDO\Product Development.

Regular admin activities

AVEVA CDO will perform regular housekeeping activities on the Unified Engineering environment such as log file maintenance etc. It is expected that corresponding activities on the on-prem environment are performed by the

Customer.

The AVEVA Global Daemon(s) running on the Global server in the on-prem environment acquire AVEVA Global SAT licenses via Licensing as a Service (LaaS) authenticating using CONNECT (AC) User Access Tokens. These auto-expire after 6 months, therefore it is important that the Customer diaries renewal of the token in good time. AVEVA CDO will also diary this activity as a backup measure.

Upgrades

The Unified Engineering environment follows a defined upgrade cadence where Infrastructure and software are updated to new technologies and versions. This cadence also applies to components in the Global Services Add-On.

AVEVA CDO liaise with customers and organize upgrade activities.

Given the hybrid nature of the Global Services Add-On, AVEVA CDO will endeavor to provide as much notice as possible to customers of the newer versions of software, so customers can prepare their on-prem upgrade plans accordingly.

Authentication of the VPN tunnel end-points is dependent on pre-shared keys. These keys will be rotated on each upgrade as a security and control measure. AVEVA CDO will generate the new keys, apply them to the VPN tunnels before upgrading (to prevent global traffic during the upgrade) and after receiving confirmation of on-prem software upgrade complete will pass the keys (securely) to the Customer I.T. who will apply them to their Customer Gateway Device.

Note that software version alignment between Unified Engineering and On-prem is a mandatory pre-requisite to Global Services Add-On availability.

Cross-Regional peering deployment and upgrades

Global Services Add-On Cross-Regional Peering deployment requires active participation from both AVEVA and customer stakeholders. Understanding stakeholder responsibilities for each task is key to a successful deployment in a predictable time frame.

The diagram below illustrates the deployment plan phases, stakeholder responsibilities and provides a checklist for the required tasks in each phase:

AVEVA™ Unified Engineering on AVEVA™ Connect (UE) - Cross-Regional Peering Global Services Add-On - Plan and Stakeholder Responsibilities														
PHASE			DISCOVERY >>>	IMPLEMENT >>>	CONFIGURE >>>			Test\Handover >>>		LIVE RUNNING SUPPORT & MAINTENANCE				
TASK			Kick-Off Meeting (*1)	Deploy VPC Peer and UE Objects (both UE envs) (*2)	UE Configure AVEVA Global (both UE envs) (*3)	AVEVA Global Comms Test (*4)	AVEVA Global DB Allocation and Updates (*5)	Testing (*6)	Handover Meeting (*7)	UE Monitoring (*8)	UE AVEVA Global Infra Issues (*9)	AVEVA Global Product Issues (*10)	Regular Admin Activities (*11)	Upgrades (*12)
STAKEHOLDER	Customer	Coordinator\Manager	Y						Y					
		Dabacon Admin	Y			Y	Y	Y	Y					
	AVEVA	Professional Services (*a)	Y		Y	Y	Y	Y	Y			Y		
		Tech Sales	Y						Y					
		Cloud Dev Ops	Y	Y	Y				Y	Y	Y		Y	Y
		Customer Support	Y						Y		Y	Y		
PLAN	ESTIMATED ELAPSED TIME	WEEK1												
		WEEK2+												

(*1) ☐ Identify Customer Requirements and establish if they fit Boundaries & Limitations. Present High-level Architecture, Implementation Process, Support & Maintenance. Agree roles & responsibilities.
(*2) ☐ Deploy & setup VPC Peer. Setup UE Objects at both UE environments using fully automated scripts. Ping and telnet tests completed.
(*3) ☐ Globalise projects. Generate and securely pass transfer sets. Configure the project folders & files. Configure locations. Configure multidsCUE.bat for projects.
(*4) ☐ Test communications between all locations are successful (using TELNET and AVEVA Admin)
(*5) ☐ Setup Global Project Database allocation and update schedules.
(*6) ☐ Test global updates working.
(*7) ☐ Meeting with all stakeholders. Include handover documentation
(*8) ☐ Monitor Slack Channels and react according to documented procedures in Confluence
(*9) ☐ Infra related issues raised on support site with GCS and triaged for 1. standard reply list on Confluence. 2. To CDO\DEV if necessary
(*10) ☐ Product related issues raised on support site with GCS and triaged for 1. standard reply list on Confluence. 2. To Professional Services\GSC Technical Services. 3. To CDO\DEV if necessary
(*11) ☐ Clean-up log files (quarterly).
(*12) ☐ Upgrades to Global Components in parallel to UE upgrades.
(*a) AVEVA Global Services or GCS Technical Services (responsible for overall project planning & management)

The following sections detail Stakeholder personas and their responsibilities for the tasks in each deployment phases.

Stakeholders

The following stakeholders must be readily available for the duration of the deployment process:

- **Customer Coordinator\Manager**

  Coordinate and manage the on-prem resources.

  Working closely with the AVEVA Professional Services to ensure deployment is delivered on-time.
- **Customer Dabacon Administrator**

  Knowledge of the AVEVA products and projects on the on-prem customer environment.

  Knowledge of AVEVA Global product.
- **AVEVA Professional Services**

  AVEVA Global Services or GCS Technical Services representative(s)

  Highly proficient with AVEVA Global

  Responsible for overall project planning & management.
- **AVEVA Tech Sales**

  Respond to Sales related activities. Arrange CONNECT agreements and licenses.
- **AVEVA Cloud Dev Ops (CDO)**

  During initial deployments, AVEVA CDO will be supported by Unified Engineering product development team representatives.
- **AVEVA Customer Support**

  Familiarize with the AVEVA Global environments and be ready to support the customer during live running

support and maintenance.

Discovery Phase

The discovery phase begins with an all-hands Kick-Off meeting.

Kick-off Meeting

Kick-Off meeting determines if and how the Global Services Add-On will satisfy the customer's requirements.

Once agreement has been reached that the Global Services Add-On will satisfy the customer's requirements, AVEVA CDO will present:

- High-level architectural diagrams
- High-level implementation processes
- Support and Maintenance processes

Other deliverables from this meeting include:

- Agreement on which Unified Engineering environments the Global Services Add-On should be applied to (preprod and\or prod).
- Individuals, roles & responsibilities for the next steps

The final step is to review and complete the Global Services **Cross-Regional Peering** Add-On Customer Discovery form in Cross-Regional peering global services add-on customer discovery form. The details provided in this form are used by AVEVA to configure the Global Services Add-On components in Unified Engineering.

Implement Phase

This section describes the implementation process.

Deploy VPC Peer and Unified Engineering Objects (both UE envs)

AVEVA CDO will use the details on the Global Services Add-On Customer Discovery form and internally documented procedures to setup the VPC peer between both Unified Engineering environments and configure their Unified Engineering objects as described in internal AVEVA documentation.

This phase culminates with successful ping tests between the Global servers at both locations.

These are simple PING <IPAddress> commands from CMD prompts to ensure communications between Global servers are working.

Configure Phase

On completion of the Implement phase and validation that the Global servers at each location can communicate (ICMP V4 ping) with each other over the VPC Peer connection(s), the configure phase can start.

This involves combined stakeholder activities setting up the remaining components in both Unified Engineering

environments to allow AVEVA Global updates between locations.

Unified Engineering Configure AVEVA Global (both UE envs)

On the Unified Engineering environments, AVEVA CDO will provide access to AVEVA Professional Services who:

- Configure (initialize) locations for projects agreed with the customer.

  Note: Where needed, an alias of GLB1 exists for the Global Server.

  When creating new or modifying existing Global locations in AVEVA Administration, there is a Hostname "Check" button that attempts an ICMP PING to the Hostname.
  For security reasons, ICMP is blocked between Unified Engineering workspaces and servers and ICMP is generally blocked by on-prem IT. Therefore, it is probable that when clicking the "Check" button you will receive a "Could not contact the host <hostname>" message. The location can still be created or modified and after the daemon has been setup a Global PING can be used to test communications.

- Generate and securely pass transfer sets to customer making allowance for the <NON_DABACON_PROJECT_FOLDER_FILE_LIST>
- Configure the AVEVA Global multi daemon Service for projects agreed with the customer. The configuration file for the service is named **MultidsCUE.bat** residing in the Global installation folder.

These tasks are described in internal AVEVA documentation.

AVEVA Global Comms Test

The Customer Dabacon Admin and AVEVA Professional Services will test Project AVEVA Global communications work between locations using:

- TELNET <IPAddress> <Daemon Port> from a CMD prompt

  To test the high-level network communications work in both directions from each Global Server.
- AVEVA Admin Query>Global Status>Communications

  To test Daemon to Daemon communications work to\from all locations.

AVEVA Global DB Allocation and Updates

The Customer Dabacon Admin and AVEVA Professional Services will then allocate the relevant databases to locations and setup the AVEVA Global update schedules.

Test\Handover Phase

This section describes testing and handover process.

Testing

AVEVA Global updates should be tested over a few days.

AVEVA Admin functionality from WorkSpaces should be tested.

Being the HUB location, AVEVA Global Administration activities are made from the Unified Engineering environment.

Handover Meeting

This phase closes with an all-hands meeting to discuss the process to date, highlight any lessons learned before officially handing over to the customer users for Live Running and AVEVA CDO\Customer Support for support and maintenance activities.

Live Running Support and Maintenance

During live running of the Global Services Add-On, certain stakeholders will continue to be involved from support, maintenance and administration perspectives.

Unified Engineering Monitoring

AVEVA CDO will monitor the Unified Engineering environment and react to any alarms raised according to internally documented procedures.

Unified Engineering AVEVA Global Infrastructure Issues

E.g. AVEVA Professional Services unable to access the Unified Engineering environment resources.

All such issues should be raised via the AVEVA Knowledge and Support Center https://softwaresupport.aveva.com/.

Unified Engineering AVEVA Global Infrastructure issues will be triaged by AVEVA Customer Support and where necessary passed to AVEVA CDO\Product Development.

AVEVA Global Product Issues

E.g. Globalising a new project or database allocation not working from AVEVA Admin.

All such issues should be raised via the AVEVA Knowledge and Support Center https://softwaresupport.aveva.com/.

AVEVA Global Product issues will be triaged by AVEVA Customer Support and where necessary passed to AVEVA Professional Services in the first instance. In some cases, AVEVA Professional Services may need to pass the ticket to AVEVA CDO\Product Development.

Regular Admin Activities

AVEVA CDO will perform regular housekeeping activities on the Unified Engineering environment such as log file maintenance etc.

Upgrades

The Unified Engineering environment follows a defined upgrade cadence where Infrastructure and software are

updated to new technologies and versions. This cadence also applies to components in the Global Services Add-On.

AVEVA CDO liaise with customers and organize upgrade activities.

Hybrid cloud global services add-on customer discovery form

HYBRID CLOUD GLOBAL SERVICES ADD-ON CUSTOMER DISCOVERY FORM			
CATEGORY	**INFORMATION REQUIRED**	**DESCRIPTION**	**PARAMETER NAME**
Customer gateway device		The physical or software device on the customers on-prem side of the VPN connection.	
	Office Location	The physical Office location for which the customer gateway device serves. For Example "Cambridge" This is used to uniquely identify each customer gateway name to which a site to site VPN is setup.	<CGW_OFFICE_LOC>
	Vendor	The manufacturer of the customer gateway device. For example, Cisco	<CGW_VENDOR>
	Platform	The class of the customer gateway device. For example, ISR Series Routers.	<CGW_PLATFORM>
	Software Version	The operating system running on the customer gateway device. For example, IOS 12.4	<CGW_SW_VERSION>
	The internet-routable IP address for the device's external interface	The Internet-routable IP address for the gateways' external interface. This public IP address value must be static. If your customer gateway is behind a network address translation (NAT) device	<CGW_EXT_IF_IP_ADD>

		that is enabled for NAT traversal (NAT-T), use the public IP address of your NAT device and adjust your firewall rules to unblock UDP port 4500.	
	The type of routing	Static or Dynamic If your customer gateway device supports Border Gateway Protocol (BGP), specify dynamic routing. If your customer gateway device does not support BGP, specify static routing.	<CGW_ROUTING_TYPE>
	For dynamic routing, the Border Gateway Protocol (BGP) Autonomous System Number (ASN)	You can use an existing ASN assigned to your network. If you don't have one, you can use a private ASN in the 64512–65534 range. Otherwise, the default ASN is 65000.	<CGW_BGP_ASN>
	For static routing, the IP prefixes for your private network.	The following IP addresses: For software VPN, the private /32 IP address of the software VPNhost (only required to allow keepalive script to run) The /32 IP address of the on-prem Global server. Note the /16 CIDR of the on-prem network must NOT overlap with the /16 CIDR of the Cloud UE VPC.	<CGW_PRIV_IP_PREFIXES>
VPN tunnels Security Options			
	Phase 1 Encryption Algorithms	☐AES128 ☐AES256 ☐AES128-GCM-16 ☐AES256-GCM-16	
	Phase 2 Encryption Algorithms	☐AES128 ☐AES256 ☐AES128-GCM-16 ☐AES256-GCM-16	

	Phase 1 Integrity Algorithms	☐SHA1 ☐SHA2-256 ☐SHA2-384 ☐SHA2-512	
	Phase 2 Integrity Algorithms	☐SHA1 ☐SHA2-256 ☐SHA2-384 ☐SHA2-512	
	Phase 1 DH Group Numbers	☐2 ☐14 ☐15 ☐16 ☐17 ☐18 ☐19 ☐20 ☐21 ☐22 ☐23 ☐24	
	Phase 2 DH Group Numbers	☐2 ☐5 ☐14 ☐15 ☐16 ☐17 ☐18 ☐19 ☐20 ☐21 ☐22 ☐23 ☐24	
	IkeVersion	☐ikev1 ☐ikev2	
Customer Network			
	The /16 CIDR in which the on-prem Global server resides.	The /16 CIDR of the on-prem network must NOT overlap with the /16 CIDR of the Cloud UE VPC> By default Cloud UE is setup with a 10.x/16 CIDR.	<CNW_CIDR>
AVEVA Global Daemon			
	Port	WCF NETtcp port for AVEVA Global daemon traffic. Default (recommended) is 8000.	<DAEMON_PORT>
AVEVA Software			
	AVEVA Software versions	For the products relating to Globalized databases, the on-prem AVEVA Global, AVEVA Administration, AVEVA E3D, AVEVA Diagrams & AVEVA Engineering versions must match the versions deployed in Cloud UE. If they do not match, the customer will need to uplift their versions.	<GLOBAL_VERSION> <ADMIN_VERSION> <E3D_VERSION> <DIAGS_VERSION> <ENG_VERSION>
Projects	Customer Projects	List of projects customer	<PROJECT_LIST>

		wishes to Globalize.	
	Non-Dabacon Project Folders/Files	When generating the initial project database transfer set, by default this will include all auxiliary project folders (folders not dependent on databases). It is usual that not all these folders and files are required, so a list of the required folders\files should be agreed in advance.	<NON_DABACON_PROJECT_FOLDER_FILE_LIST>
Tag Management	HUB location that will generate tags.	Only for projects using TMR, specify HUB location from which tags are created and managed.	<TMR_LOC>

Cross-Regional peering global services add-on customer discovery form

CROSS-REGIONAL PEERING GLOBAL SERVICES ADD-ON CUSTOMER DISCOVERY FORM			
CATEGORY	**INFORMATION REQUIRED**	**DESCRIPTION**	**PARAMETER NAME**
AVEVA Global Daemon			
	Port	WCF NETtcp port for AVEVA Global daemon traffic. Default (recommended) is 8000.	<DAEMON_PORT>
Projects	Customer Projects	List of projects customer wishes to Globalize.	<PROJECT_LIST>
	Non-Dabacon Project Folders/Files	When generating the initial project database transfer set, by default this will include all auxiliary project folders (folders not dependent on	<NON_DABACON_PROJECT_FOLDER_FILE_LIST>

		databases). It is usual that not all these folders and files are required, so a list of the required folders\files should be agreed in advance.	
Tag Management	HUB location that will generate tags.	Only for projects using TMR, specify HUB location from which tags are created and managed.	<TMR_LOC>

AVEVA global performance improvement parameters

AVEVA Global Performance Improvement Parameters			
FILE	**PARAMETER**	**VALUE**	**COMMENT**
Admindwcf.config globalwcfclient.config <netTcpBinding> section	Maxbufferpoolsize	1048576	Increasing these from 65536 to 1048575 in both config files for all AVEVA software (on servers and client machines) resolves issues with a message size quotas being exceeded. 
	Maxbuffersize	1048576	
	Maxreceivemessagesize	1048576	
Multids<xxx>.bat	AVEVA_ADMIND_BUFFER	100	Increasing to 100 improved allocate all performance in our env and based on MVW analysis, I think we stick with 100.

Engage Add-on Help

This document describes the Engage Add-On for AVEVA™ Unified Engineering on CONNECT (Unified Engineering).

Introduction

The Engage Add-On is an **optional** add-on to Unified Engineering. It enables AVEVA GCD Creator and AVEVA Engage from Customers on-prem environment to connect to an Applications Service in Unified Engineering environment.

This document is aimed at Customers and AVEVA personnel who have a proficient knowledge of AVEVA GCD Creator, AVEVA Engage and AVEVA Applications Service and wish to understand the Engage Add-On in detail.

This document will be used as a reference point during the deployment process.

This document should be read in conjunction with the AVEVA™ Unified Engineering on CONNECT Service Description.

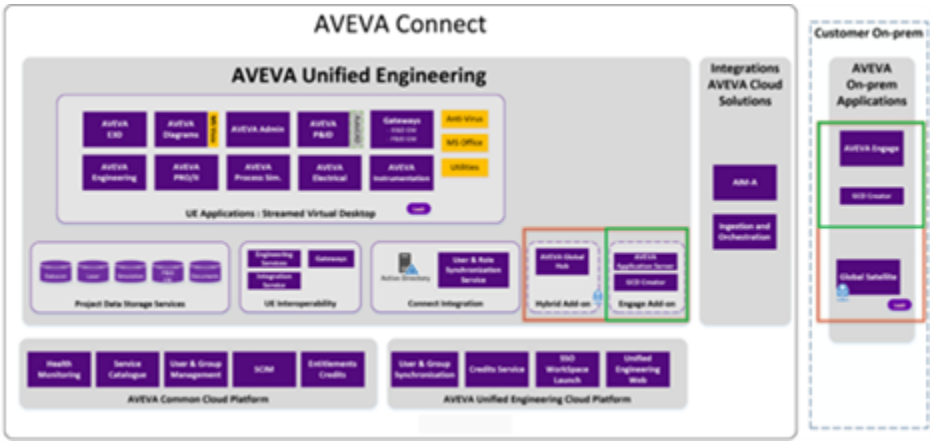
Architecture and Workflows

This section lists the Engage Add-On architectures and workflows.

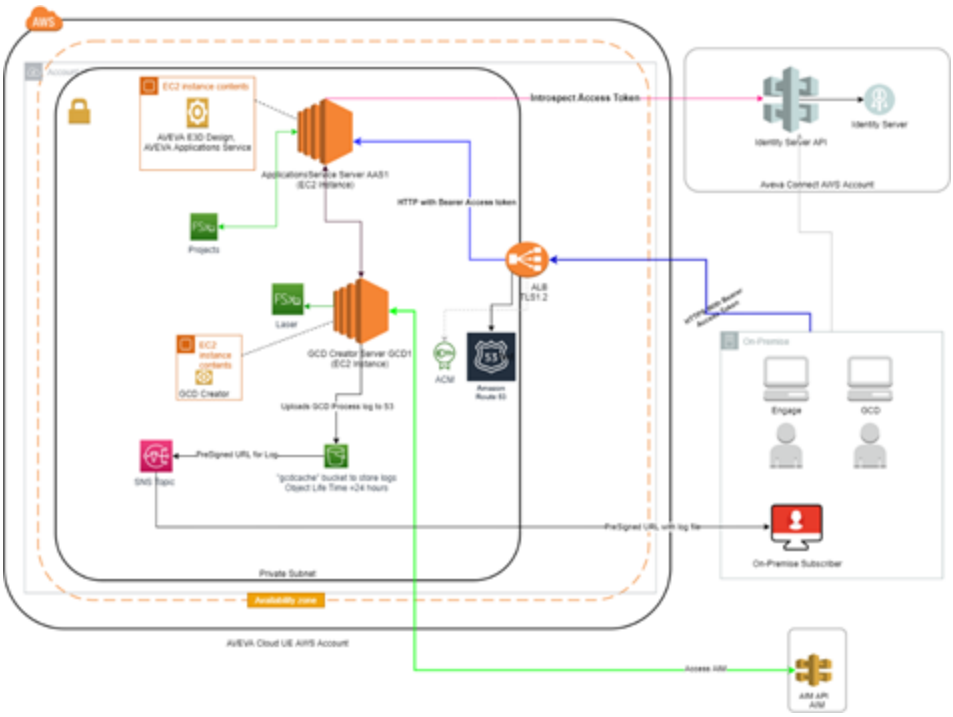
Architecture

The diagram below illustrates the placement of Engage Add-On (Green Box) with Unified Engineering and on-prem AVEVA Applications(right).

CONNECT (bottom) provides the authentication, authorization and licensing services.



The diagram below illustrates the Engage Add-On architecture with Unified Engineering.



Licensing

The AVEVA Applications Service running on the Applications Service server in the Unified Engineering environment acquire AVEVA Engage and GCD Creator licences via Licensing as a Service (LaaS for SaaS).

No need for additional licensing for On-premise applications i.e. AVEVA Engage and AVEVA GCD Creator.

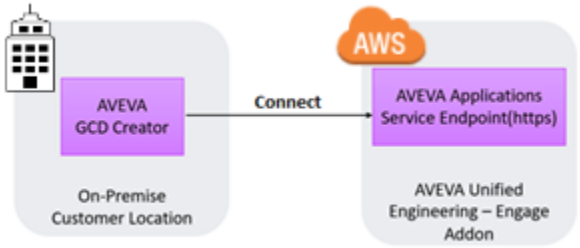
Workflows

- AVEVA GCD creator workflow
- AVEVA engage workflow

AVEVA GCD creator workflow

The AVEVA GCD Creator workflow is as follows:

- Connect to AVEVA Applications Service endpoint(https) from AVEVA GCD Creator



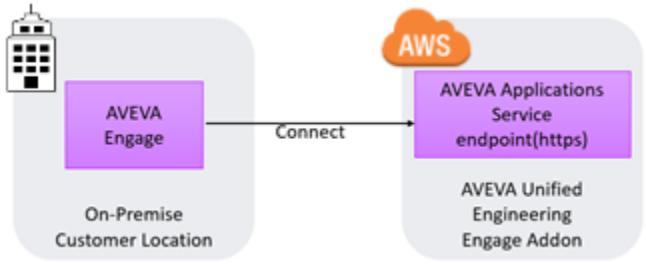
- AVEVA GCD Creator authenticates with CONNECT

- Select an AVEVA™ E3D Design project and login
- Select the GCD Creator to create a GCD file or the Visual Query Template Editor to create/edit visual query templates
- During GCD Creator configuration
  - Specify the parts of the 3D model to be made available to AVEVA Engage
  - Specify any visual queries to be run and synchronised with the model
  - Specify the number of Appserver instances
- **Create** option will start the GCD Creation in Unified Engineering Environment
- Post completion of GCD Cache Creation in Unified Engineering Environment, corresponding log file will be emailed to the Subscribers
- GCD Model created will be available for AVEVA Engage to view (see below)

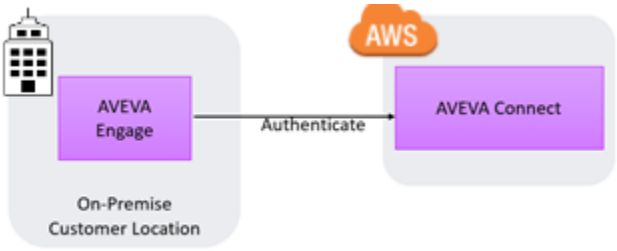
AVEVA engage workflow

The AVEVA Engage Workflow is as follows:

- Connect to AVEVA Applications Service endpoint(https) from AVEVA Engage and Add to list of Servers



- AVEVA Engage authenticates with CONNECT



- AVEVA Engage Project page shows the list of GCD models that are created under a project
- Select a GCD model and Login to view in Engage model viewer

Engage add-on deployment

The Engage add-on deployment requires active participation from both AVEVA and customer stakeholders. Understanding stakeholder responsibilities for each task is key to a successful deployment in a predictable time frame.

The following sections detail Stakeholder personas and their responsibilities for the tasks in each of the deployment phases.

Stakeholders

The following stakeholders must be readily available for the duration of the deployment process:

- **Customer Coordinator\Manager**

  Coordinate and manage the on-prem customer environment resources.

  Working closely with the AVEVA Professional Services to ensure deployment is delivered on-time.
- **Customer I.T. Administrator**

  Knowledge of and full administration access to the on-prem customer environment I.T. networking infrastructure (Customer Network CIDR IP Range).
- **AVEVA Professional Services**

  AVEVA Applications Services or GCS Technical Services representative(s)

  Highly proficient with AVEVA Applications Service, AVEVA Engage and GCD Creator

  Responsible for overall project planning & management.
- **AVEVA Cloud Dev Ops (CDO)**

  During initial deployments, AVEVA CDO will be supported by Unified Engineering product development team representatives.

Discovery Phase

The discovery phase begins with technical meetings.

Technical meetings

The discovery phase begins with technical meetings involving stakeholders responsible for deployment tasks up to and including the point of test\handover. This will ensure stakeholders fully understand the technical details and their responsibilities during these phases.

The first key step in this phase is to confirm the on-prem AVEVA Unified Engineering product versions align with the versions used in Unified Engineering. This is a mandatory pre-requisite to *Engage Add-On deployment*.

The table below identifies the relevant software versions deployed in Unified Engineering 3.3.1.0:

Software	Version
AVEVA Engage	4.1.4
AVEVA GCD Creator	4.1.3.1

If the on-prem versions do not match, then the customer will have to organize upgrading versions, or possibly setting up a separate environment with the correct versions.

The second step is for AVEVA CDO to acquire the details below from the Customer.

Requirement	Details
Customer SITE CIDR IP range	Required for Whitelisting. CIDR IP Range/IP Address of Customer location (Where Engage and GCD Creator are installed on-premise) is needed for deployment to Whitelist traffic on Applications Service https endpoint. **Customer I.T**. would need to provide the required IP CIDR.
Customer on-premise Group/work Email Ids	Email addresses of the subscribers must be provided during deployment to receive notifications of GCD Cache creation logs in Engage Addon infrastructure. We recommend that the "email address" provided should be a "Group Email address" of the customer site, since then Customer can arrange for the mail distribution themselves **Customer Coordinator** would need to provide the required Email Ids
Customer CONNECT Account details	Customer CONNECT account that has access to AVEVA Unified Engineering, which will be used to connect to from Customer on-premise AVEVA Engage and AVEVA GCD Creator during Cache creation and viewing. **Customer Coordinator** would need to provide the required CONNECT details such as Account ID and Account Name

Implement Phase

This section describes the implementation process.

Deploy engage add-on

AVEVA CDO will use the details on the Engage Add-On internally documented Unified Engineering deployment guide.

A key deliverable from this process to deploy the Engage Addon infrastructure with Whitelisted IPs and Notification email IDs provided by the customer.

Once the Unified Engineering Engage Add-on deployment is complete, the Applications Service connection endpoint(https) URL needs to be communicated to **Customer Coordinator** by **AVEVA CDO**.

Handover Phase

The section describes handover process.

Test connectivity from on-premise

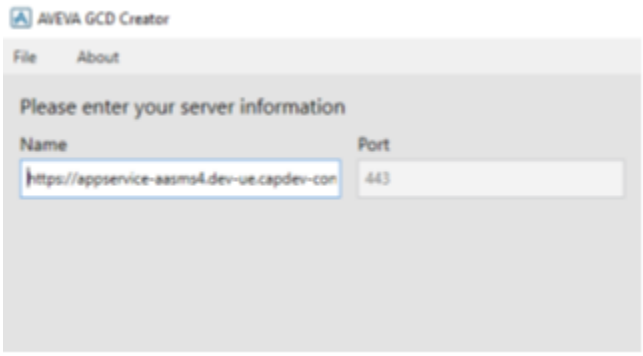
Customer with assistance of **AVEVA Professional Services** will verify the connection from customer on-premise applications.

Obtain the Applications Service https connection endpoint from AVEVA CDO (refer implement phase deliverable).

Connect to the endpoint from AVEVA GCD Creator and AVEVA Engage.

Note: Use https connection endpoint in Server information page for 'Name' in AVEVA GCD Creator and AVEVA Engage applications.

See below for example



Upon successful connection, GCD Creator and Engage applications would display the projects information.

Refer to product documentation for detailed procedures.

Live running support and maintenance

During live running of the Engage Add-On, certain stakeholders will continue to be involved from support, maintenance and administration perspectives.

Unified Engineering monitoring

AVEVA CDO will monitor the Unified Engineering environment and react to any alarms raised according to internally documented procedures.

Unified Engineering AVEVA engage add-on infrastructure issues

For example, AVEVA Professional Services unable to access the Unified Engineering environment resources.

All such issues should be raised via the AVEVA Knowledge and Support Center.

Unified Engineering AVEVA Engage Addon Infrastructure issues will be triaged by AVEVA Customer Support and where necessary passed to AVEVA CDO\Product Development.

AVEVA on-premise product issues

All such issues corresponding to AVEVA GCD Creator and Engage on-premise should be raised via the AVEVA Knowledge and Support Center.

AVEVA On-premise Product issues will be triaged by AVEVA Customer Support and where necessary passed to AVEVA Professional Services in the first instance. In some cases, AVEVA Professional Services may need to pass the ticket to AVEVA CDO\Product Development.

Upgrades

The Unified Engineering environment follows a defined upgrade cadence where Infrastructure and software are

updated to new technologies and versions. This cadence also applies to components in the Engage Add-On.

AVEVA CDO will liaise with customers and organize upgrade activities.

On-premise application versions should align with Unified Engineering Versions. AVEVA CDO will endeavor to provide as much notice as possible to customers of the newer versions of software, so customers can prepare their on-prem upgrade plans accordingly.

AVEVA Group Limited
High Cross
Madingley Road
Cambridge
CB3 0HB
UK

Tel +44 (0)1223 556655

www.aveva.com

To find your local AVEVA office, visit **www.aveva.com/offices**