



VWorks Automation Control
Plus Edition

Administrator Guide

Notices

Manual Part Number

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Safety Notices

WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

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Preface

This preface contains the following topics:

- “What this guide covers” on page vi
- “Accessing the user guides” on page viii

What this guide covers

What is covered

This guide provides administrator instructions for VWorks Plus. The guide describes the software architecture, compliance features and workflow, and provides instructions for the following:

- Generating and installing the license
- Configuring and managing the user access
- Backing up and restoring data and software
- Viewing the content in the Content Browser

Table Terms used in this guide

Term	Description
VWorks Automation Control	VWorks software component that you use to create the protocols that run your automation devices.
VWorks Plus	Collection of software components required for running the VWorks software with compliance features. This edition includes Control Panel, Shared Services, Content Management, and Content Browser.
VWorks Standard	Collection of software components required for running the standard VWorks software. This edition includes Control Panel and Shared Services.
Content Management (OpenLab component)	<i>VWorks Plus only.</i> The storage repository for VWorks-related records of interest. An administrator can use the Content Browser to view the VWorks project content in Content Management.
Control Panel (OpenLab component)	The Shared Services user interface for configuring and managing user access and licenses.
Microsoft Control Panel	Part of the Microsoft Windows operating system.
Shared Services (OpenLab component)	Set of administrative services that control VWorks user access and file storage. Shared Services are accessed via the Control Panel.

Related guides

For information about the following VWorks-related topics, see the corresponding Agilent guide.

For information about ...	See...
Computer requirements and software installation	VWorks Automation Control Installation Guide
Quick reference for the software	VWorks Plus Quick Reference
<ul style="list-style-type: none"> • Managing audit trails and record states • Setting up labware definitions and liquid classes • Setting up an Experiments database, if applicable • Setting up an Inventory database, if applicable • Migrating protocols from previous versions of the VWorks software 	VWorks Automation Control Setup Guide
<ul style="list-style-type: none"> • Setting up devices • Writing protocols and creating forms • Running protocols • Troubleshooting protocols 	VWorks Automation Control User Guide
Setting up a specific device and operating the device using VWorks and device diagnostics software	Relevant Agilent device user guide
General safety information and potential safety hazards that you might encounter when using Automation Solutions products	Automation Solutions Products General Safety Guide

Software version

This guide documents VWorks Plus 14.0 and later editions.


Accessing the user guides

About this topic

This topic describes the different formats of user information and explains how to access it for the Agilent Automation Solutions products.

Where to find user information

The user information is available in the following locations:

- *Knowledge base.* The help system for the Automation Solutions products is available from:
 - Help menu within the VWorks software: Select **Help > Knowledge Base** or press F1.
 - From the Windows desktop: Select **Start () > All Apps > Agilent Technologies > VWorks Knowledge Base.**For guidelines on using the VWorks context-sensitive help and knowledge base features, see *Using the knowledge base*, below.
- *PDF files.* The PDF files of the user guides are installed with the VWorks software (C:\Program Files (x86)\Agilent Technologies\VWorks\UserGuides) and are available in the VWorks Knowledge Base.
- *Website.* You can search the online VWorks Knowledge Base or download the latest version of any PDF file from the Agilent website at www.agilent.com/chem/askb.

Accessing safety information

Safety information for the Agilent Automation Solutions devices appears in the [Automation Solutions Products General Safety Guide](#) and in the corresponding device safety guide or user guide.

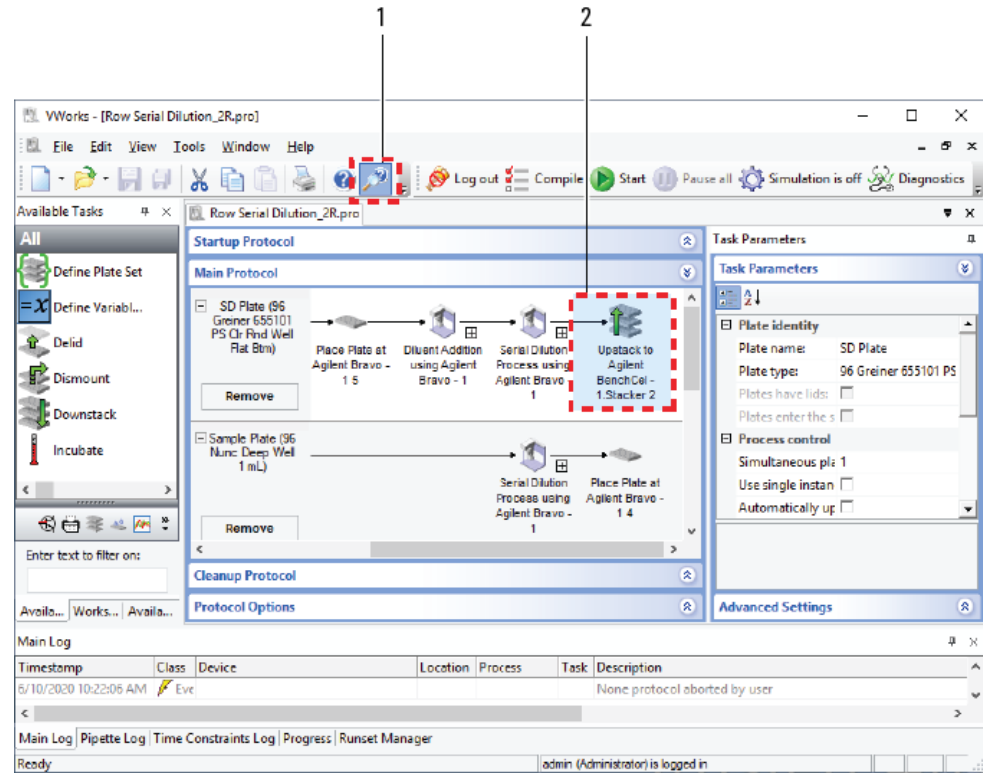
You can also search the knowledge base or the PDF files for safety information.

Using the knowledge base



Knowledge base topics are displayed using web browser software such as Microsoft Edge.

Note: If you want to use Internet Explorer to display the topics, you might have to allow local files to run active content (scripts and ActiveX controls). To do this, in Internet Explorer, open the Internet Options dialog box. Click the Advanced tab, locate the Security section, and select Allow active content to run in files on my computer.

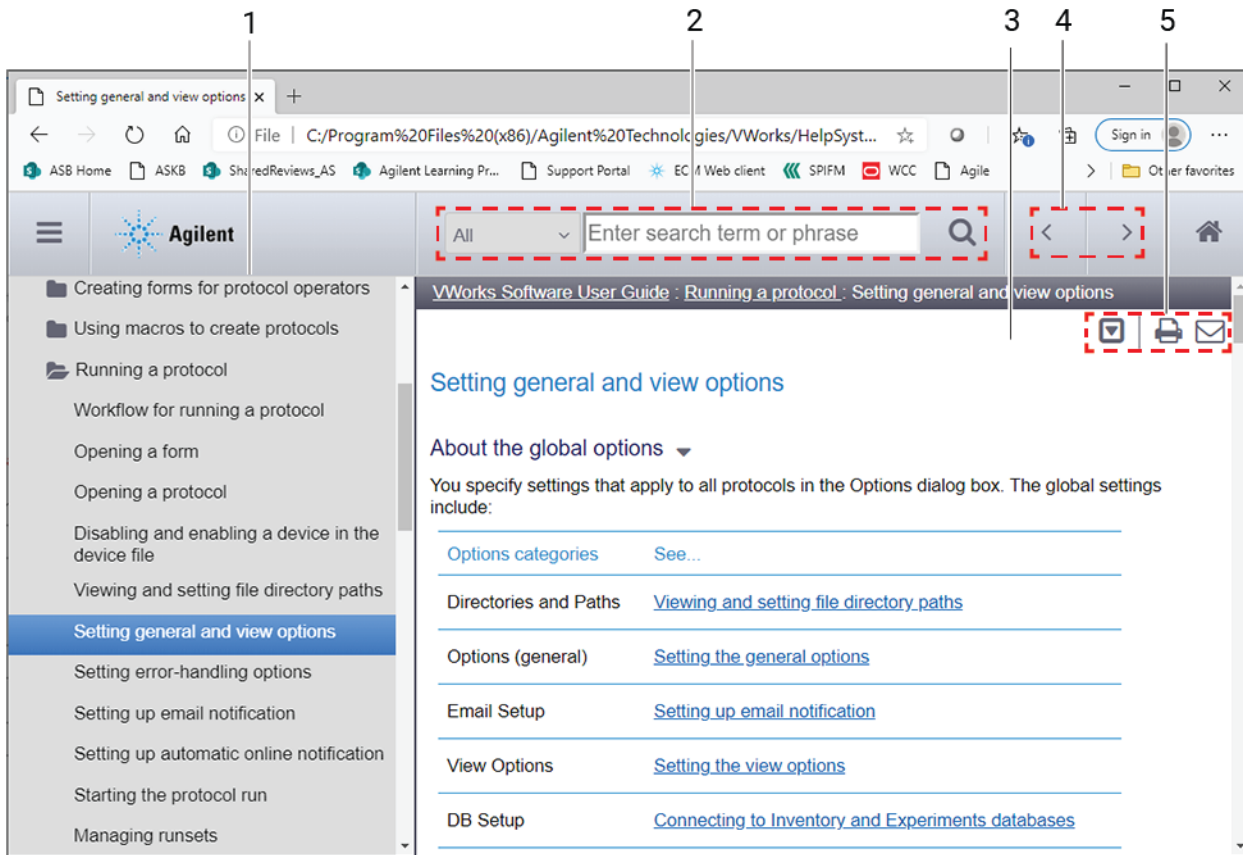
Opening the help topic for an area in the VWorks window



To access the context-sensitive help feature:

- 1 In the main window of the VWorks software, click the help button . The pointer changes to . Notice that the different icons or areas are highlighted as you move the pointer over them.
- 2 Click an icon or area of interest. The relevant topic or document opens.

Features in the Knowledge Base window



Step	For this task...
1	<i>Contents pane.</i> Lists all the books and the table of contents of the books.
2	<i>Search.</i> Allows you to search the Knowledge Base (all products or selected products) using keywords.
3	<i>Topic area.</i> Displays the selected online help topic.
4	<i>Navigation buttons.</i> Enable you to navigate through the next or previous topics listed in the Contents tab.
5	<i>Toolbar buttons:</i> Enable you to: <ul style="list-style-type: none"> • Expand or collapse all the sections in a topic that has drop-down headings. • Print the topic. • Send feedback by email for a given topic.



1 About VWorks Plus

This chapter provides an overview of the VWorks Plus software. The topics are:

- “Software architecture” on page 2
- “21 CFR Part 11 Compliance” on page 3
- “Workflow for VWorks Plus” on page 4
- “Logging in to Control Panel” on page 5

Software architecture

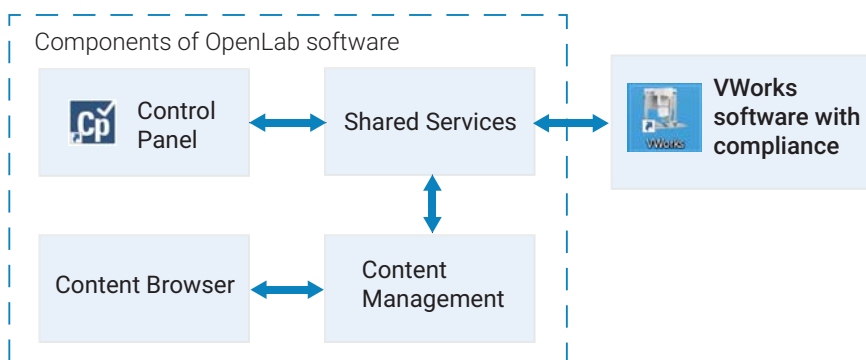
VWorks Plus runs on a single computer and controls standalone automation devices or integrated automation devices in a laboratory automation system.

VWorks Plus consists of the following:

- Components of the OpenLab software
- VWorks software with compliance features

The following figure shows the relationships between these components.

Figure VWorks Plus architecture



Components of OpenLab software

The components of the OpenLab software include:

- **Control Panel** and **Shared Services**. Control Panel is the user interface for Shared Services, which are set of administrative services. An administrator uses the Control Panel to configure the following:
 - User access management
 - Software licenses
 - Storage
- **Content Management** and **Content Browser**. Shared Services uses a secure storage repository, Content Management, to store VWorks files and audit trails at:

`/VWorks Projects/VWorks`

Note: Unlike previous VWorks versions, the Windows Registry is not used for storing any records, such as labware definitions and device profiles.

Content Browser is a user interface for Content Management. An administrator can use Content Browser to view and edit the VWorks project structure and contents in the Content Management Repository. For example, if the current version of a VWorks file is corrupted or has been tampered, the administrator can restore a previous version of the file using the Content Browser.

VWorks software with compliance features

The VWorks software controls your automation devices. You create labware definitions and liquid classes, set up your devices and create device profiles, and create and run protocols.

The VWorks software logs audit trails for records of interest, tracks records by record state (In Development, In Validation, and Released), and performs tamper detection on the records.

21 CFR Part 11 Compliance

VWorks Plus provides the following features to enable compliance with the FDA rules and guidelines for compliant electronic records and computerized systems:

- *Data security.* Physical protection of data by limiting access to the system and preventing unauthorized access.
- *Data integrity.* Protecting raw data and metadata and preventing these from unauthorized modification, and linking raw data and results to reproduce the original results at any time, for example, in an audit situation, and document each new result copy.
- *Audit traceability.* Documenting who did what to the results and when.

The following table lists the specific features.

Table Features that support compliance with 21 CFR Part 11

Feature	Description	For details, see...
Authentication, security policy, and user management	Prevent unauthorized access and unauthorized modification of records of interest. The Control Panel enables management of user access.	"Configuring the software" on page 13
Content Management	Securely stores records of interest and audit logs.	"Using Content Browser" on page 29
Control Panel system activity log	Records events that occur during a Control Panel session, for example, logging in, updates to users, groups or roles, updates to licenses, and so forth.	"System Activity Log" on page 40
Backup and restore procedures	Required for disaster recovery planning to ensure data security.	"Disaster recovery planning" on page 43
Audit trails and reports	Provide audit traceability for records of interest, documenting who did what and when. The VWorks software provides tracking based on record states.	<i>VWorks Automation Control Setup Guide</i>
Record state tracking and version control	Tracks records that transition through development, validation and released states to ensure record integrity and traceability.	<i>VWorks Automation Control Setup Guide</i>
Tamper detection	Detects corrupted records and records that have been modified outside of the VWorks software.	<i>VWorks Automation Control Setup Guide</i>
VWorks activity logs	Record events that occur during a VWorks session. The VWorks logs include the Main log, Pipette log, and Time Constraints log. The Diagnostics software for each device also provides logs of device profile activity.	<i>VWorks Automation Control User Guide</i>

CAUTION

Data integrity risk! Customers subject to regulations from US FDA or similar organizations are cautioned that FTP services are enabled by default. This may be considered as a data integrity risk.

Impacted customers are advised to disable FTP services when not needed. See “Disabling and enabling FTP services” on page 52.

Workflow for VWorks Plus

The following table provides an overall software workflow and shows which user roles may perform each task.

Step	Task	VWorks role	See ...
1	Log in to Control Panel (OpenLab component).	Administrator*	“Logging in to Control Panel” on page 5
2	In Control Panel, install and manage your software license.	Administrator	“Licensing the software” on page 7
3	In Control Panel, configure and manage user access to the software.	Administrator	“Configuring the software” on page 13
4	If future VWorks compatibility with legacy OpenLab ECM 3.x servers is not required, you can change the default option in the VWorks software.	Administrator, Technician	“About the VWorks Project settings” on page 26
5	Understand the VWorks compliance features, including, audit trails, records of interest and record states, and tamper detection.	Administrator	<i>VWorks Automation Control Setup Guide</i>
6	Set up the VWorks software: <ul style="list-style-type: none"> • If applicable, migrate protocols from earlier VWorks versions. 	Administrator	<i>VWorks Automation Control Setup Guide</i>
	<ul style="list-style-type: none"> • Verify the labware definitions for any labware you plan to use. • If you have a Bravo Platform, specify the pipetting speed and accuracy. • <i>If applicable</i>. Set up MySQL database for labware inventory management and the Experiments database. 	Administrator or Technician	
7	In the VWorks software, set up your automation devices.	Administrator or Technician	Device user guide, for example, <i>Bravo Automated Liquid Handling Platform User Guide</i>
8	In the VWorks software, create protocols to run your automation devices.	Administrator or Technician	<i>VWorks Automation Control User Guide</i>

Step	Task	VWorks role	See ...
9	Run protocols.	Administrator, Technician, or Operator	VWorks Automation Control User Guide
10	Generate audit trail reports	Administrator or Technician	VWorks Automation Control Setup Guide
11	Perform periodic software and data backups.	Administrator	"Disaster recovery planning" on page 43


*VWorks technicians, operators, and guests may log in to Control Panel and change their passwords, but they cannot configure other Control Panel settings.

Logging in to Control Panel

IMPORTANT

Ensure that the computer is connected to a LAN, otherwise the connection to the Content Management component will fail. A local network is sufficient, for example, if the computer is connected to an automation device.

To log in to the Control Panel:

- 1 To start the Control Panel, click  on the Windows desktop.
Alternatively, you can click **All apps > Agilent Technologies > Control Panel**.
- 2 In the Login window, enter your Login (user name) and password.
If this is the first time to log in to Control Panel after installing the software, enter the following:
 - Login: *admin*
 - Password: *openlab*

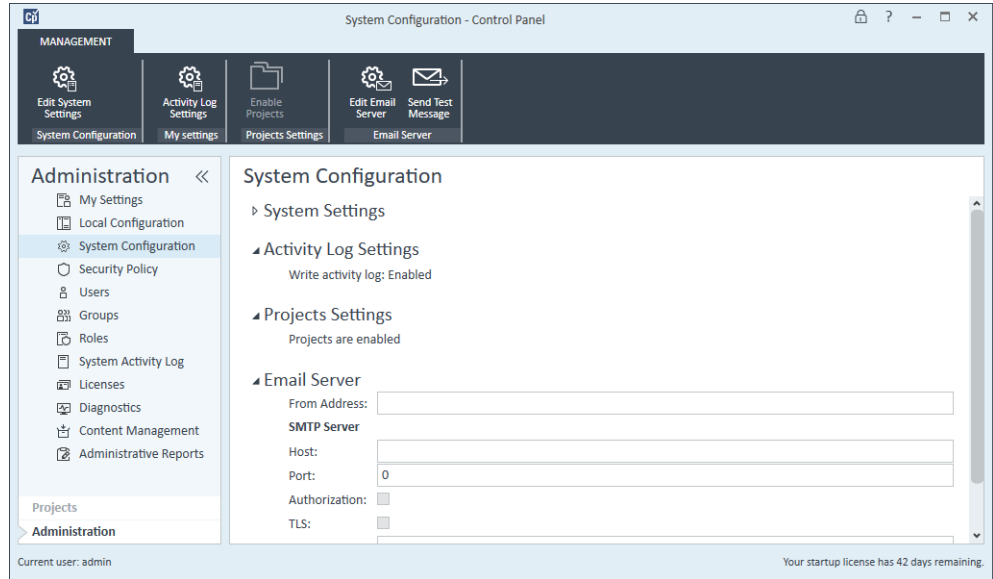
Note: After installing the software license, you will configure user accounts in Control Panel and change the password for this login.



The Control Panel window opens.

1 About VWorks Plus

Logging in to Control Panel





2 Licensing the software

This chapter describes how to obtain your software license. The topics are:

- “About software licensing” on page 8
- “About the Control Panel Licenses page” on page 8
- “Workflow for software licensing” on page 9
- “Prerequisites for getting a license” on page 9
- “Getting a license” on page 10
- “Installing your license” on page 11

About software licensing

License types

The license or activation key in the license file can be for one of the following VWorks editions:

- VWorks Standard
- VWorks Plus

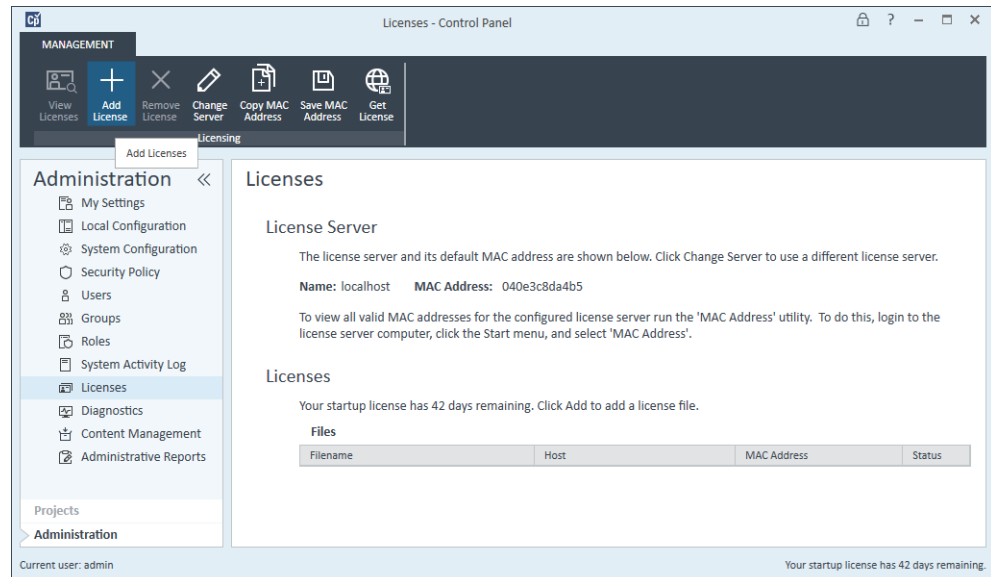
A trial license for the software allows you to run either edition for 60 days after the installation. In order to run the software after the 60-day period, you must install your license file.

License file


A license file contains your software license. You generate and download the license file in SubscribeNet. This file will be installed on the computer where the VWorks software is installed. The license file is bound to this computer, and cannot be moved to another computer without regenerating the license in SubscribeNet.

About the Control Panel Licenses page

The following figure shows the Licenses page in Control Panel.



To view the Licenses page:

- 1 If you have not already done so, log in to Control Panel . For details, see [“Logging in to Control Panel” on page 5.](#)

- 2 In the Control Panel navigation pane, click **Administration > Licenses** to display the Licenses page.

The ribbon at the top of the page includes the following controls that you can use to manage your software licenses:

- **Add License** and **Remove License**. Allows you to install and uninstall license files.
- **Copy MAC Address**. Copies the MAC address of the license server.
- **Save MAC Address**. Saves the MAC address of the license server to a text file (.txt) at the specified location.
- **Get License**. Links to the Agilent SubscribeNet Electronic Software and License Delivery web page, where you can obtain a license.
- **Change Server**. Not applicable. This feature is for systems that have a license server on a separate computer from the client software.

Workflow for software licensing

Step	For this task...	See...
1	Make sure you have met the prerequisites for getting a license.	"Prerequisites for getting a license" on page 9
2	Generate and download your license.	"Getting a license" on page 10
3	Install your license using Control Panel.	"Installing your license" on page 11
4	Restart the computer for the license to have an immediate effect.	–

Prerequisites for getting a license

License prerequisites

To generate, download, and install a license for your product, you will need:

- The authorization code label provided in the envelope containing your Software Entitlement Certificate.

If you have not received an envelope for your product, contact your vendor or internal support.

- The URL for SubscribeNet from the Software Entitlement Certificate.
- The name of the computer (local host) where the VWorks software and the OpenLab components are running.

Note: If any changes are made to the computer name or domain reference after the license is installed, remove the license. A new license will need to be created in SubscribeNet, downloaded, and installed.

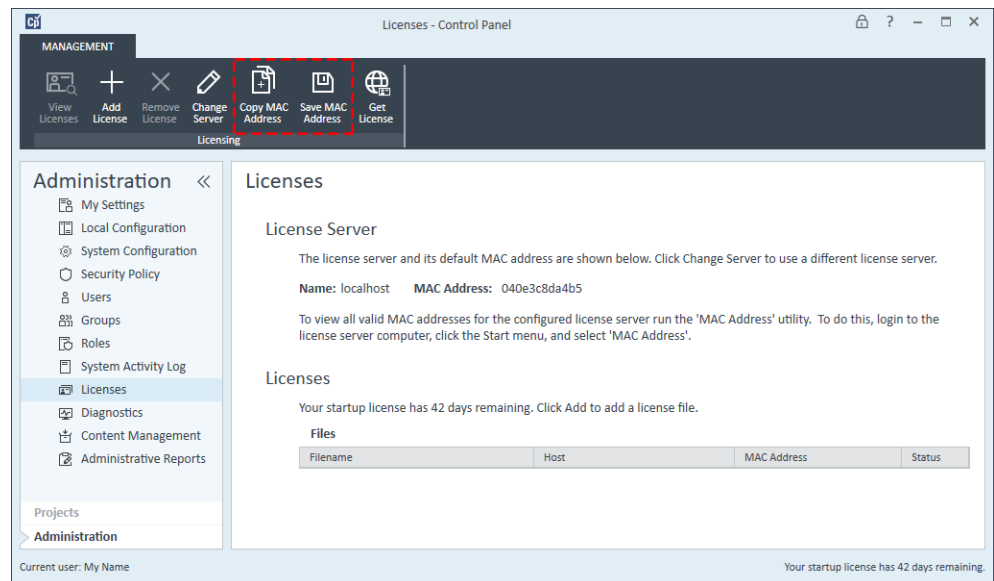
- The MAC address. See the following procedure to retrieve the MAC address.

Note: If the network adapter that provides the MAC address used during license creation is removed from the computer, your license will no longer be valid. A new license will need to be generated with a currently available MAC on the license server.

Retrieving your MAC address

To retrieve your MAC address:

- 1 In the Control Panel navigation pane, click **Administration > Licenses**.
- 2 Use the **Copy MAC Address** or **Save MAC Address** to obtain the MAC address for license generation.



Getting a license

This section describes how to generate and download your license in SubscribeNet.

- If you are a new user who has not registered with SubscribeNet, see [“New SubscribeNet users” on page 10](#).
- If you have registered with SubscribeNet, go to [“Users registered with SubscribeNet” on page 11](#).

New SubscribeNet users

To generate and download your license:

- 1 Go to <https://agilent.subscribe.net/control/agil/AgilRegisterToAccount> to register the product with SubscribeNet.

Note: If the computer where the VWorks software and the OpenLab components are installed is connected to the Internet, you can connect to this site from the Control Panel Licenses page.

- 2 On the registration page, enter the authorization code from the label and complete the profile information.

Note: Required fields are marked with an asterisk (*).

The email address you enter will become your login ID.

- 3 Click **Submit**. The system will generate and display an account name for you. SubscribeNet will send a welcome email with your login ID and password.

- 4 Log in to SubscribeNet using your login ID and password.

Note: Once you log in, you can use the online user manual link for help with any questions you have.

- 5 Select **Generate or View licenses** from the left navigation bar.

- 6 Follow the prompts to generate your new license.

You will be prompted for the HOST NAME of the computer. The host name you enter must match with the network name of the computer where the VWorks Control Panel is running. Do not include any DNS suffix (domain.com) references in the entered computer name.

- 7 When the system generates the license, view its details, and then click **Download License File**. Save the license file to your computer and to a backup location, such as a portable storage device.

Use your login ID and password when you revisit the Agilent SubscribeNet site to regenerate a license file, add new authorization codes, or further configure the license for your system.

Users registered with SubscribeNet

To generate and download your license:

- 1 If you already have a SubscribeNet account, go to <https://agilent.subscribenet.com/>

Note: If you lost your SubscribeNet password, go to <https://agilent.subscribenet.com/control/agil/password> to have it emailed to you.

- 2 Select the SubscribeNet account associated with this authorization code.

- 3 From the SubscribeNet navigation pane, select **Register Authorization Code**.


This will allow you to enter your new authorization code and make available the new license entitlements.

- 4 Follow [step 5](#) through [step 7](#) in the previous procedure (“[New SubscribeNet users](#)” on [page 10](#)) to generate or view your new licenses.

Installing your license

You add the license to your system using Control Panel (OpenLab component).

To install your license:

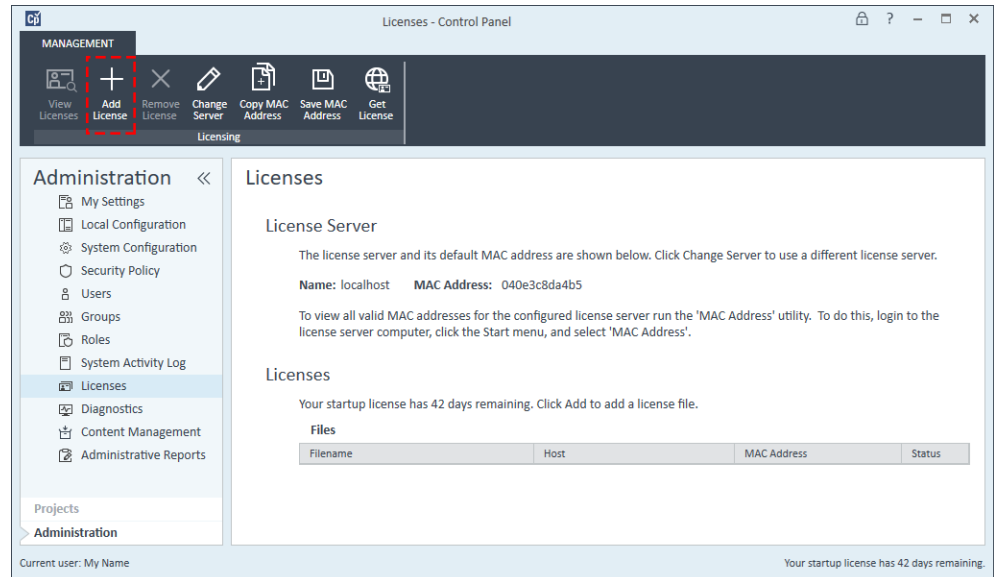
- 1 If you have not already done so, log in to Control Panel . For details, see “[Logging in to Control Panel](#)” on [page 5](#).

- 2 In navigation pane, click **Administration > Licenses**.

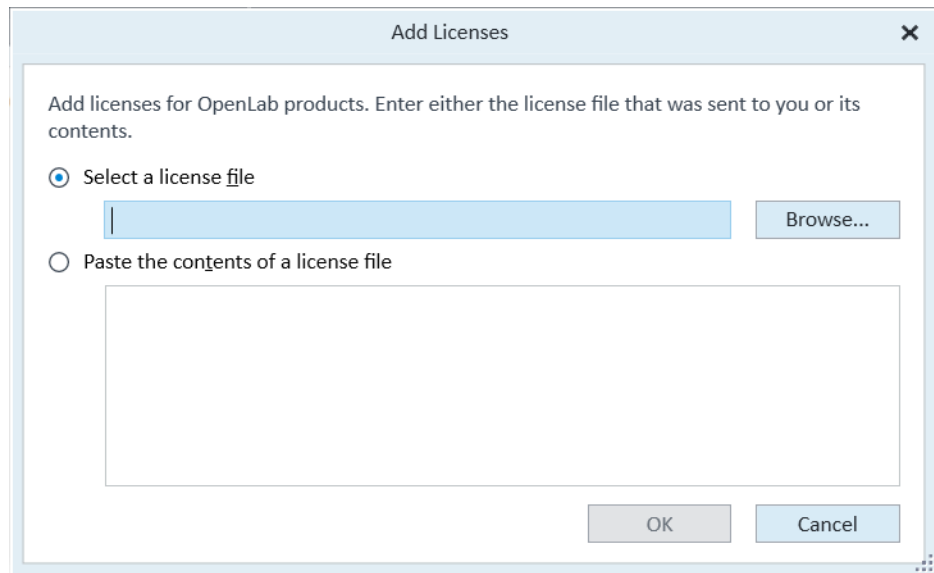
- 3 In the ribbon, click **Add License**.

2 Licensing the software

Installing your license



- 4 In the **Add Licenses** dialog box, select one of the following:
- **Select a license file.** Browse to and open the license file (.lic) saved from the license generation process in SubscribeNet.
 - **Paste the contents of a license file.** Copy the license text from a text file and paste the copy in the provided field.



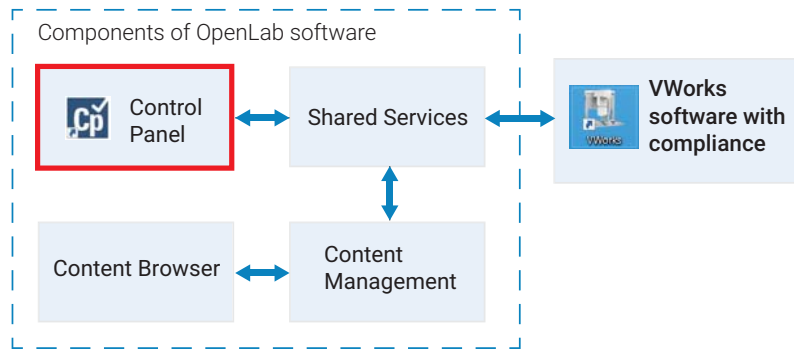
- 5 Click **OK**. The Licenses page in the Control Panel displays the status of installed licenses.

IMPORTANT

Restart the computer for the license to have an immediate effect.

3 Configuring the software

This chapter describes how to use Control Panel to configure the Shared Services for VWorks Plus.



The topics are:

- [“Configuring authentication” on page 14](#)
- [“Configuring the security policy” on page 16](#)
- [“Configuring users, groups, and roles” on page 17](#)
- [“About the VWorks Project settings” on page 26](#)
- [“About configuring instruments” on page 28](#)

Note: The Control Panel System Activity Log provides a record of the activities during each Control Panel session. For details, see [“System Activity Log” on page 40](#).

Configuring authentication

IMPORTANT

VWorks Plus supports only Internal or Windows Domain as authentication providers.

Authentication options

VWorks Plus supports Internal or Windows Domain as authentication providers.

Internal (default)

The Internal option uses OpenLab components of the VWorks Plus software to perform the authentication. You create the users and manage user access in the Control Panel, and Shared Services provides the user authentication.

Internal authentication is the only mode in which you can create new users within the Control Panel (OpenLab).

After the software installation, internal authentication is configured by default. If you want to use internal authentication, you can proceed to [“Setting the security policy parameters” on page 16](#).

Windows Domain


The Windows Domain option uses Microsoft Windows to perform the user authentication. You use the Control Panel (OpenLab) to map to users that exist in the active Windows directory and to assign them to VWorks roles and privileges.

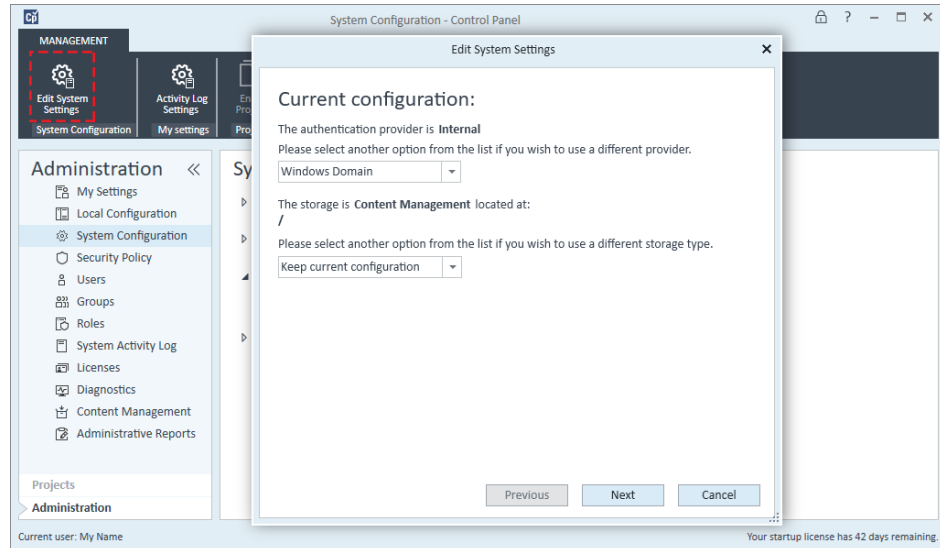
Table Workflow for Windows Domain authentication

Step	For this task...	See...
1	Configure Windows Domain authentication.	“Configuring Windows Domain authentication” on page 15
2	Create users and user groups and configure the Security Policy in Microsoft Windows.	Microsoft Windows user documentation
3	Use Control Panel (OpenLab) to: <ul style="list-style-type: none">a Import the Windows users and user groups from the active Windows directory.b Assign the imported users and user groups to VWorks roles to configure their user privileges.	“Configuring users, groups, and roles” on page 17

Configuring Windows Domain authentication

To configure Windows Domain authentication:

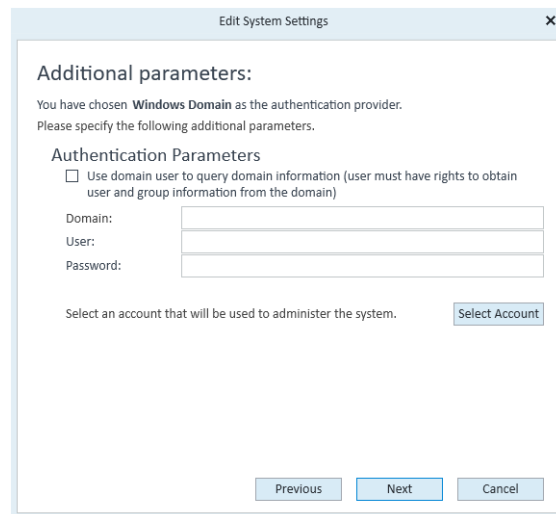
- 1 If you have not already done so, log in to the Control Panel .
- 2 In the **System Configuration** page, click **Edit System Settings** in the top-left corner of the ribbon. The Edit System Settings dialog box opens.
- 3 Select the authentication provider **Windows Domain** from the list, and then click **Next**.



IMPORTANT

Do not change the storage type. The storage type is determined automatically based on the VWorks edition for which you have a license.

- 4 In the **Edit System Settings** dialog box, select the **Windows Domain** check box, click **Next**, and then confirm your settings.
When complete, the Control Panel will restart.



Configuring the security policy

To comply with specific standards (for example, 21 CFR Part 11), adjust the security policy as required.

- **Internal authentication.** You can set all security policy parameters in the Control Panel (OpenLab component) using the following procedure.
- **Windows Domain authentication.** You can set only the inactivity time in the Control Panel. All other parameters are defined by the Windows operating system. See the Microsoft Knowledge Base for instructions.


IMPORTANT

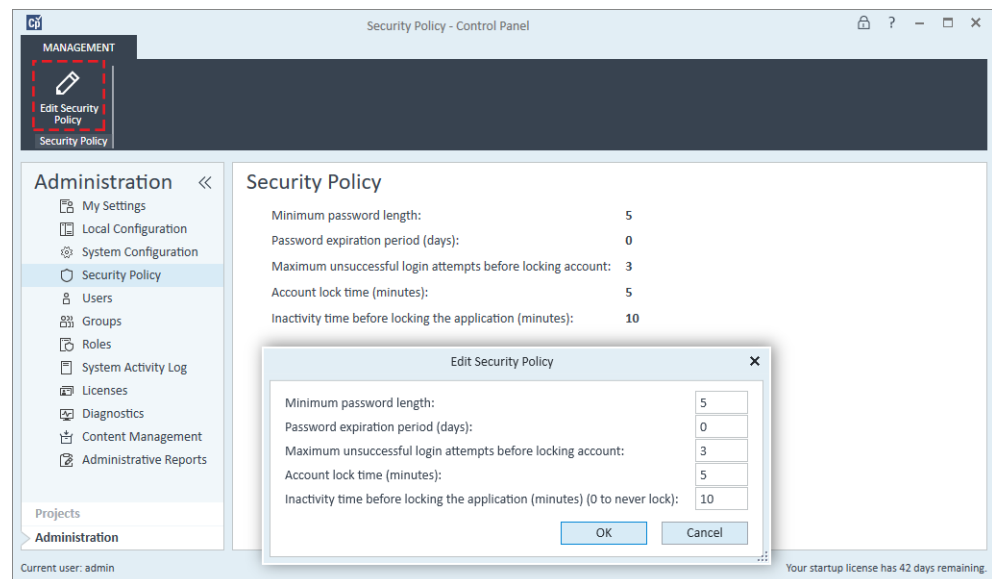
Ensure that your settings meet 21 CFR Part 11 requirements.

Setting the security policy parameters

Note: The Control Panel setting for **Inactivity time before locking the application** applies to the Control Panel, but this setting does not apply to the VWorks software.

To configure the security policy in Control Panel:

- 1 If you have not already done so, log in to the Control Panel .
- 2 In the Control Panel navigation pane, click **Administration > Security Policy**.
- 3 In the ribbon, click **Edit Security Policy**.
- 4 Edit the settings per your requirements, and then click **OK**.



- 5 When the restart message appears, restart Control Panel to ensure that any changes take effect.

Configuring users, groups, and roles

This section contains the following topics:

- [“VWorks user roles and privileges” on page 17](#)
- [“Workflow for configuring users and groups” on page 18](#)
- [“Creating a user \(internal authentication\)” on page 19](#)
- [“Importing users and assigning them to groups” on page 20](#)
- [“Importing user groups from Windows” on page 21](#)
- [“Assigning imported user groups to VWorks roles” on page 22](#)
- [“Changing a password and managing user data” on page 24](#)
- [“Removing users” on page 25](#)

VWorks user roles and privileges

You configure a primary administrator account in the Control Panel with all privileges (Everything role) before setting up other users. This administrator account is for a superuser who has access privileges to everything in the software.

In addition to this primary administrator account, you can create or import users that have the VWorks roles and privileges listed in the following table. Each VWorks user is assigned to a group, which is associated with one of four predefined VWorks roles. Each role defines what the users of the associated group are allowed to view or do. Roles are equipped with numerous specific privileges.

IMPORTANT

The VWorks software supports only the roles of Everything, VWorks Administrator, VWorks Technician, VWorks Operator, and VWorks Guest. The VWorks software does not support additional roles that you may create in the Control Panel.

Roles supported by the VWorks software	Has privileges to ...
VWorks Administrators	<ul style="list-style-type: none"> • Unlock the Control Panel (OpenLab component). • Log in and out of the Content Browser. • Edit the content of a project, including restoring a tampered or corrupted record to a previous clean version. • View and edit project folder structure. • Manage user accounts. • Run a protocol that contains compiler errors. • Delete development state records of interest. • Perform all the functions of VWorks Technicians.
VWorks Technicians	<ul style="list-style-type: none"> • Perform all functions listed in the VWorks Tools menu. • Create and save protocols. • Manage devices through the device manager. • Perform all the functions of VWorks Operators.

3 Configuring the software

Configuring users, groups, and roles

Roles supported by the VWorks software	Has privileges to ...
VWorks Operators	<ul style="list-style-type: none">• Run protocols.• Operate devices in real-time using diagnostics software.• Perform all the functions of VWorks Guests.
VWorks Guests	<ul style="list-style-type: none">• Log in and log out of VWorks.• Access the VWorks Knowledge Base through the Help menu.• Use context-sensitive help.

The effect of privileges:

- If you do not have the privilege to perform a function associated with a particular menu command, the text of the command is gray.
- If you do not have the privilege to perform the functions accessed from a particular tabbed page, the tab is not visible to you.
- In some cases, if you do not have the privilege to perform an operation, when you attempt the operation you get an error message telling you that your privileges are insufficient.

Workflow for configuring users and groups


To create the required VWorks users:

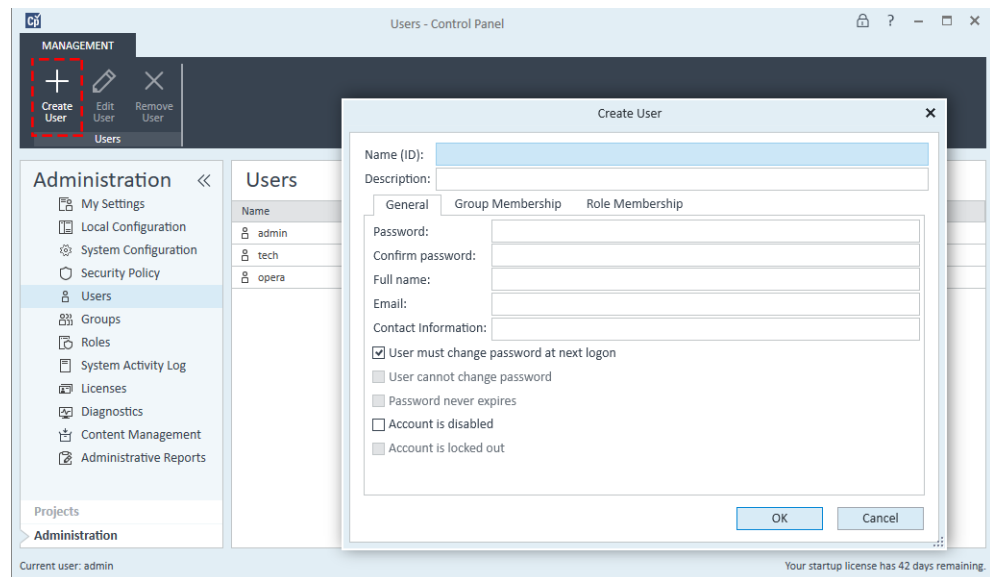
- **Internal authentication.** You create the required users in the Control Panel (OpenLab component) and add them to one of the VWorks groups with predefined roles. See [“Creating a user \(internal authentication\)” on page 19](#).
- **Windows domain authentication.** You import the Windows domain users into Control Panel (OpenLab component) using the following procedures:
 - [“Importing users and assigning them to groups” on page 20](#)
 - [“Importing user groups from Windows” on page 21](#). and [“Assigning imported user groups to VWorks roles” on page 22](#)

Creating a user (internal authentication)

Use this procedure if your system configuration uses internal authentication.

To create a new user:

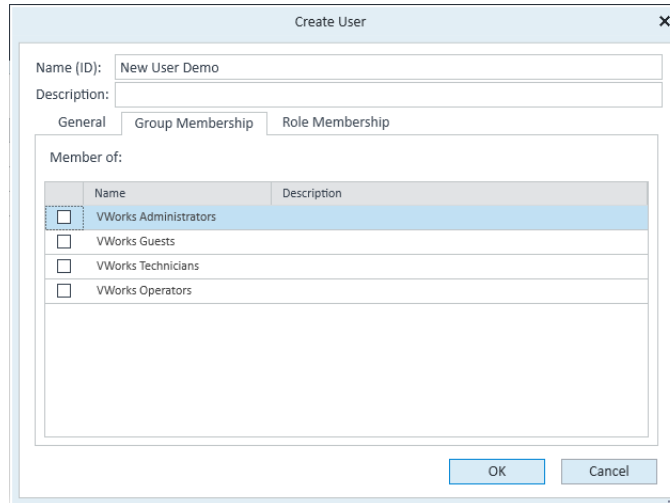
- 1 If you have not already done so, log in to the Control Panel .
- 2 In the Control Panel navigation pane, click **Administration > Users**. The Users page appears, which displays the current list of users that have been assigned to VWorks groups.
- 3 In the ribbon, click **Create User**. The Create User dialog box opens.



- 4 Enter a **Name (ID)** and **Description** for the user.
- 5 In the **General** tab, enter a **Password** for the user and **Confirm password**.
Note: The password length and expiration period is set under the Security policy.
- 6 *Optional.* Enter the user's **Full name**, **Email**, and **Contact Information**.
The full name is used in activity log entries and the welcome message at the lower right of the Control Panel.
- 7 Select the password options:
 - Typically, you select **User must change password at next logon** so that the user can set their password and keep it private.
 - To prevent the user from changing the password assigned here, select **User cannot change password**.
 - To set the password to never expire, select **Password never expires**.*Note:* To prevent the user from logging in to the VWorks software, select **Account is disabled**.
- 8 Click the **Group Membership** tab, select the VWorks group for this user, and click **OK**.

3 Configuring the software

Configuring users, groups, and roles



These predefined groups correspond to the predefined VWorks groups. For details, see “VWorks user roles and privileges” on page 17.

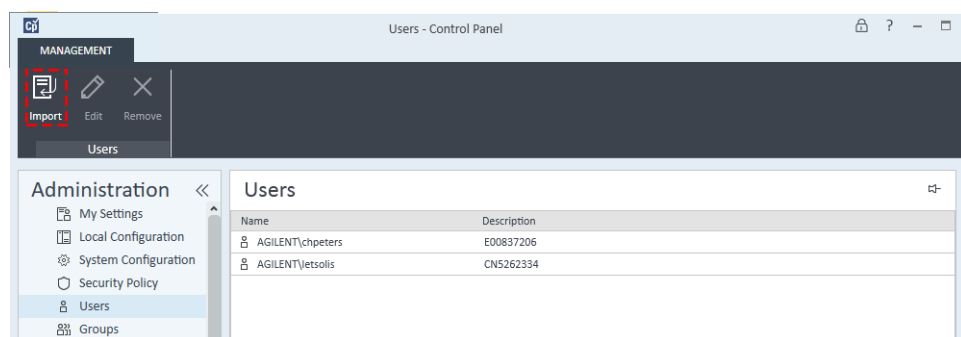
Importing users and assigning them to groups

If you are using Windows Domain as the authentication provider, you can import users into the Control Panel and assign them to groups using the following procedure.

Note: The computer must be connected to the server of the company network to import Windows users.

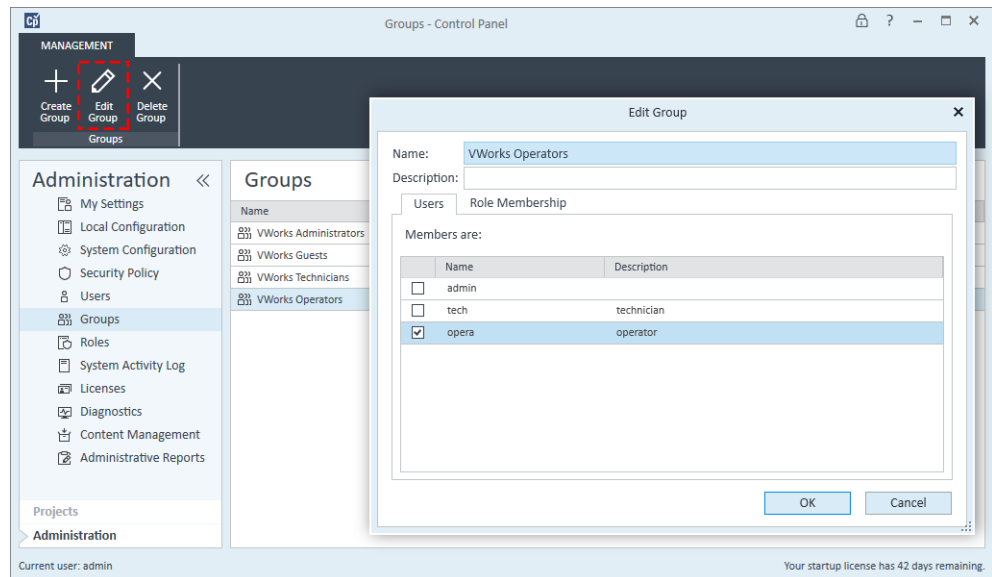
To import Windows users and assign them to groups:

- 1 In the Control Panel navigation pane, click **Administration > Users**. The Users page appears and displays the current list of users that have been assigned to VWorks groups.
- 2 In the ribbon, click **Import**.



- 3 In the **Search Users** dialog box, type the search string for the user name.
- 4 In the **Search Results** list, select the user you want to import, and click **Add**. The user is added to the Selected Users list.
- 5 Repeat steps 2 through 4 until you have added all the user names that you want to import, and then click **OK**.
- 6 In the Control Panel navigation pane, click **Administration > Groups**. The Groups page appears.

- 7 Select one of the **Groups**, and then click **Edit Group** on the ribbon. The Edit Group dialog box opens.



- 8 In the **Users** tab, select the check box of the user to be assigned to this group, and then click **OK**.

IMPORTANT

Do not change the roles for the predefined VWorks groups. The VWorks software supports only the roles of Everything, VWorks Administrator, VWorks Technician, VWorks Operator, and VWorks Guest.

Importing user groups from Windows

If you are using Windows Domain as the authentication provider, you can import user groups from the active Windows directory. After you import the groups, you assign the groups to one of the VWorks roles.

To import a Windows user group:

- 1 In the Control Panel navigation pane, click **Administration > Groups**.
- 2 In the ribbon, click **Import**.
- 3 In the **Search Groups** dialog box, type the search string for the group name.
- 4 In the **Search Results** list, select the group you want to import, and click **Add**. The group is added to the Selected Groups list.
- 5 Click **OK**.

Assign the imported group to a VWorks role using the following procedure.

Assigning imported user groups to VWorks roles

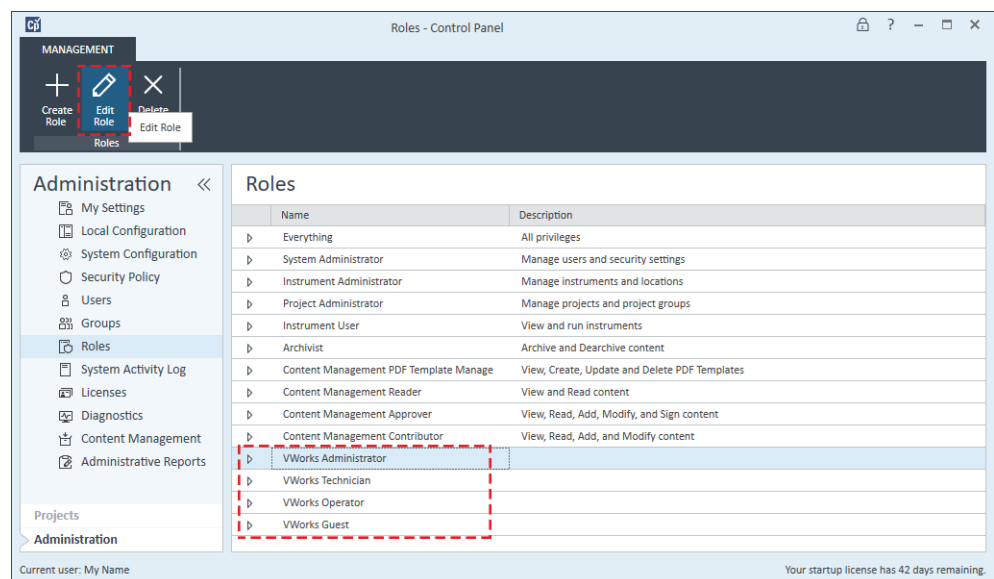
IMPORTANT

Do not change the roles for the predefined VWorks groups. The VWorks software supports only the roles of Everything, VWorks Administrator, VWorks Technician, VWorks Operator, and VWorks Guest.

Use the following procedure to assign previously created or imported users to membership in a selected group.

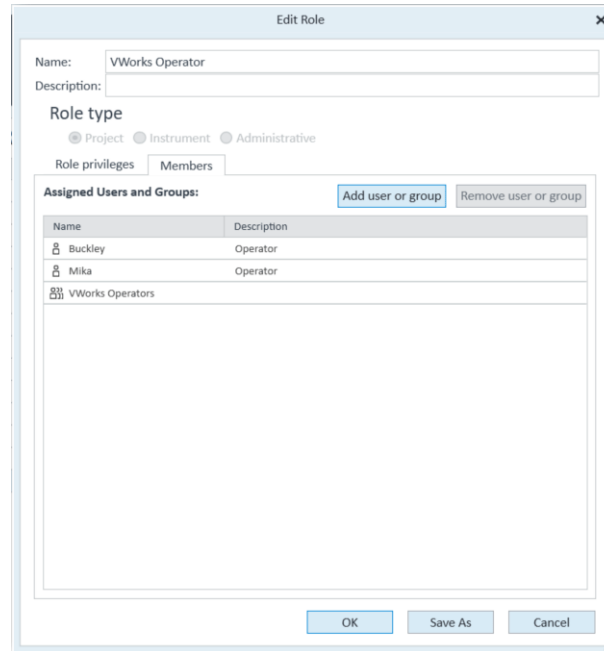
To assign a group to a predefined VWorks role:

- 1 In the Control Panel navigation pane, click **Administration > Roles**. The Roles page appears.
- 2 Select one of the predefined VWorks roles:
 - VWorks Administrator
 - VWorks Technician
 - VWorks Operator
 - VWorks Guest

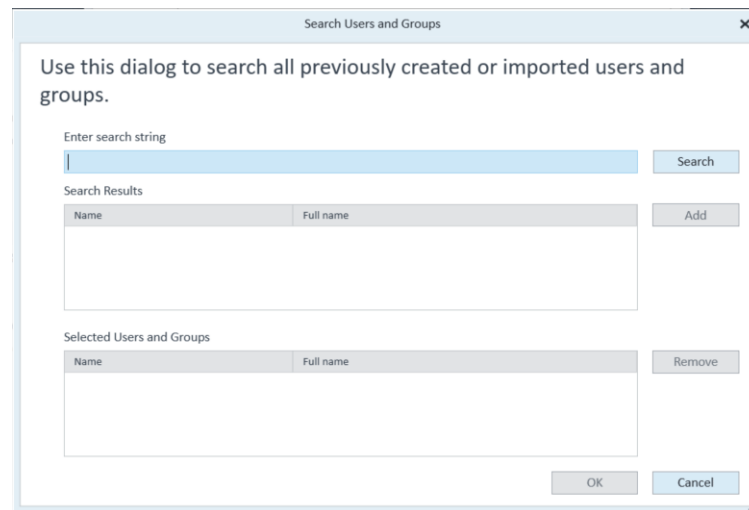


For a description of the role privileges, see [“VWorks user roles and privileges” on page 17](#).

- 3 In the ribbon, click **Edit Role**. The Edit Role dialog box opens.



- 4 In the **Members** tab, click **Add user or group**. The Search Users and Groups dialog box opens.



- 5 Type the user name in the **Enter search string** box, and click **Search**.
- 6 In the **Search results** box, select the name and click **Add**.
- 7 Click **OK**.

Changing a password and managing user data

You may use the following procedures to change a password using the Control Panel if the following conditions are met:

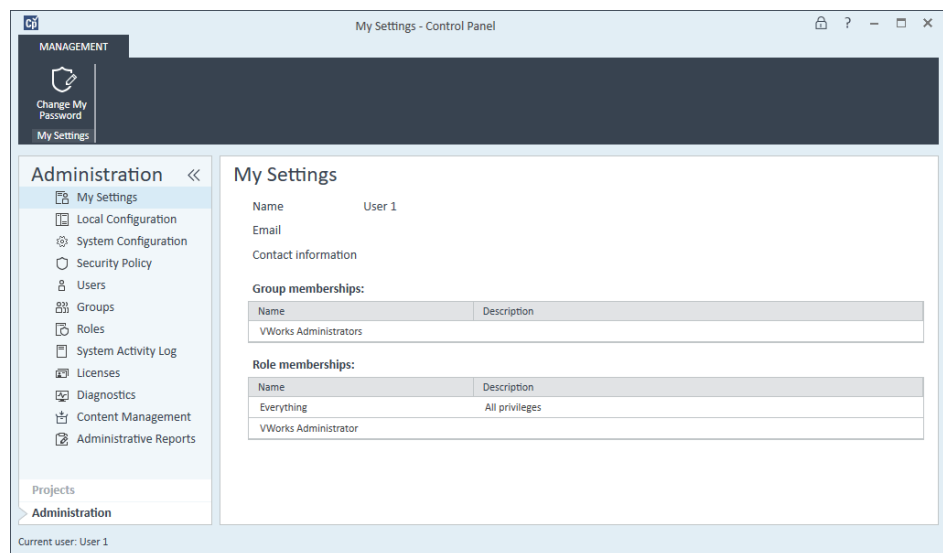
- Your system is using Internal authentication
- You have administrator privileges

Note: When a VWorks Technician, VWorks Operator, or VWorks Guest logs in to the Control Panel, the My Settings page opens and allows the user to change their password. These users may view the Local Configuration, System Activity Log, and Licenses pages. The other Control Panel pages are not available to these users.

Changing your password

To change your password:

- 1 In the Control Panel navigation pane, click **Administration > My Settings**.

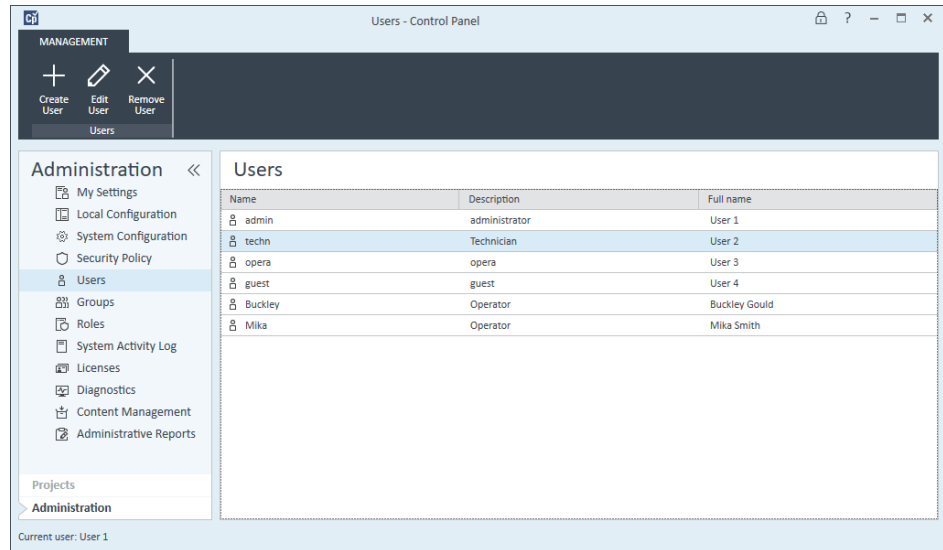


- 2 In the ribbon, click **Change My Password**. The Change My Password dialog box opens.
- 3 Type the **Old password**, **New password**, and **Confirm new password**.
- 4 Click **OK**.

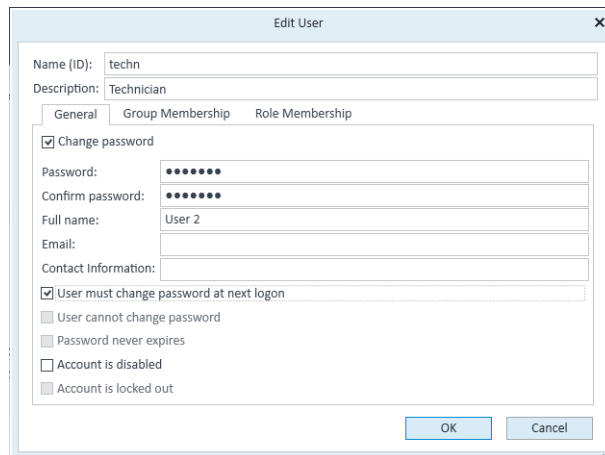
Editing user data and resetting user passwords

To edit a user's data and reset their password:

- 1 In the Control Panel navigation pane, click **Administration > Users**.
- 2 In the **Users** page, select the user.



- 3 In the ribbon, click **Edit User**. The Edit User dialog box opens.
 - In the **General** tab, you may change the user password. For example, to reset the user password:
 - Select **Change password**.
 - Clear the remaining password check boxes, and then select **User must change password at next logon**.



- In the **Group Membership** tab, you may change the user's group assignment.
 - In the **Role Membership** tab, you may change the user's role assignment.
- 4 Click **OK**.

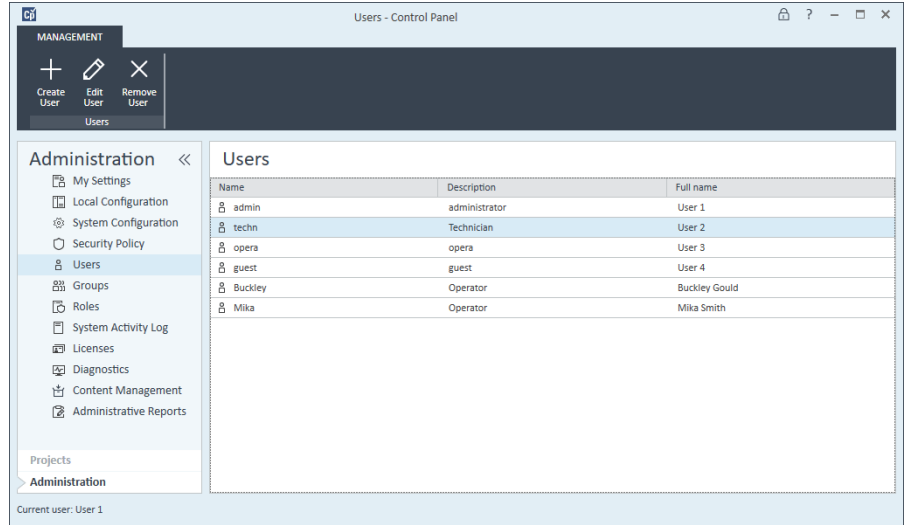
Removing users

To remove a user:

- 1 In the Control Panel navigation pane, click **Administration > Users**.
- 2 In the **Users** page, select the user.

3 Configuring the software

About the VWorks Project settings



3 In the ribbon, click **Remove User**.

About the VWorks Project settings

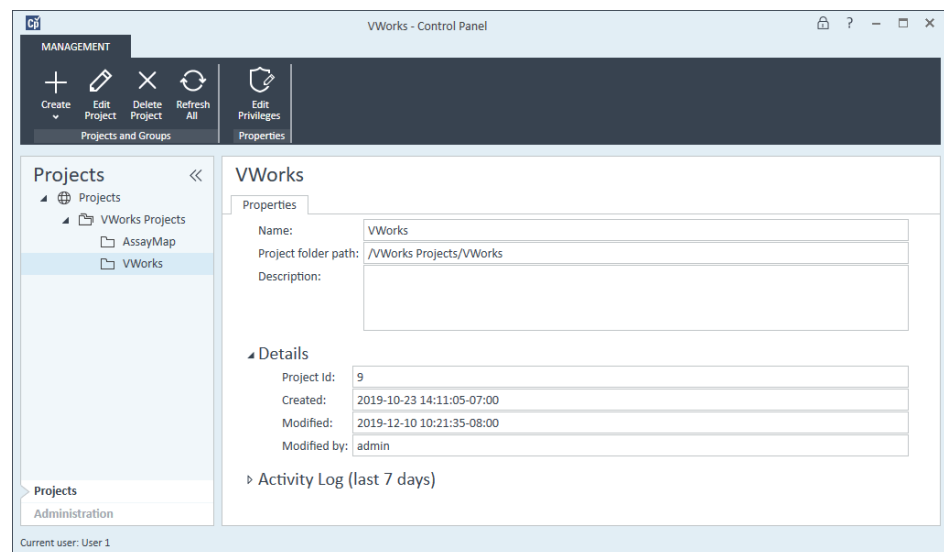
Project name and folder path

The VWorks project name and the project folder path are preconfigured during the installation. This is the only project configured in the Control Panel for the VWorks software and the only project that VWorks Plus supports.

CAUTION

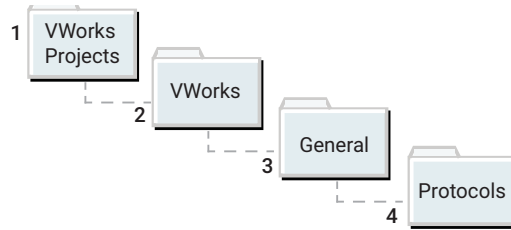
Do not change the preconfigured /VWorks Project/VWorks folder name. Changing the /VWorks Project/VWorks folder name will cause unexpected results.

Figure Example of Projects page in Control Panel for VWorks Plus



Fourth-level folder restriction

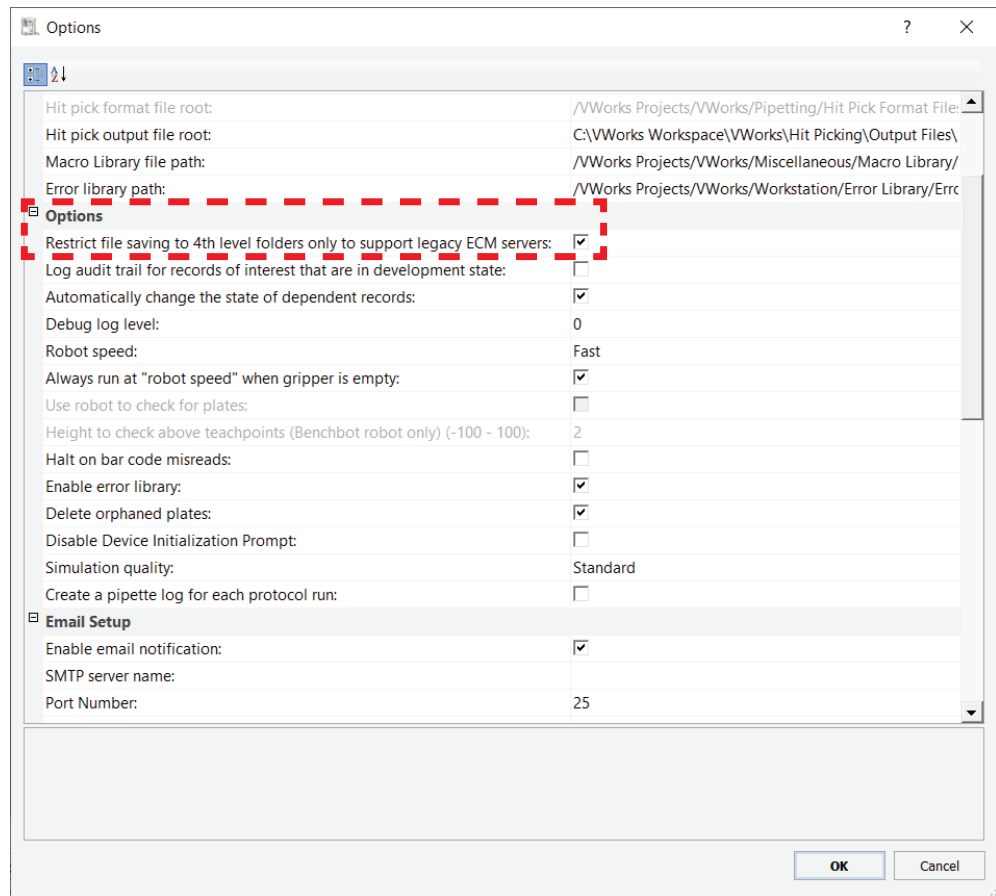
During installation, a VWorks Projects folder structure is created that includes 4 levels. The following figure shows an example: /VWorks Projects/VWorks/General/Protocols/



By default, VWorks Plus restricts file saving to fourth-level folders in order to maintain compatibility with legacy OpenLab ECM 3.x servers. The legacy OpenLab ECM 3.x servers do not allow files to be saved in folders above or below the fourth level.

An administrator can add additional fourth-level subfolders. For example, you might want to store a subset of protocols in a folder named *MyExperiment*. You can view the project structure and edit the project folders in the Content Browser. (For details, see [“Using Content Browser” on page 29.](#))

If compatibility with legacy OpenLab ECM 3.x servers is not required, you can remove the folder restriction. To remove this folder restriction, you change the **Restrict file saving to 4th level folders** option in the VWorks software. The following figure shows this option.



3 Configuring the software

About configuring instruments

For detailed instructions on setting this option and other VWorks compliance-related options, see the [VWorks Automation Control Setup Guide](#).

About configuring instruments

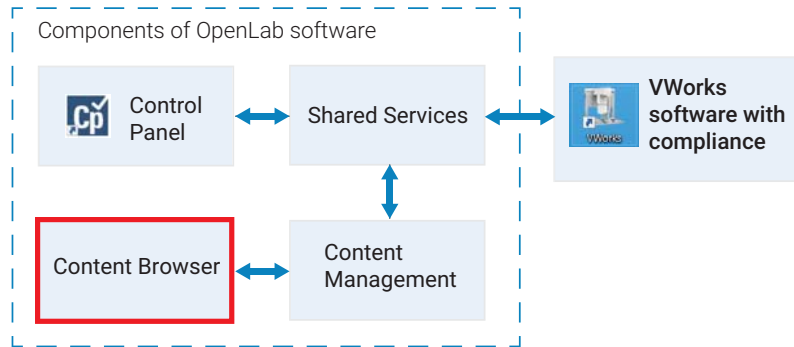
To communicate with and to control the robot and any integrated devices, the VWorks software uses a device file, which contains the relevant devices. A device can be a robot, an instrument, or a location on the lab automation workstation that can hold a piece of labware. The following are examples of devices:

- BenchCel Microplate Handler
- Bravo Platform
- PlateLoc Sealer
- Microplate Labeler
- Labware MiniHub
- Platepad
- Waste Bin

Each device is configured in its corresponding device diagnostics window in the VWorks software. For details, see the [VWorks Automation Control User Guide](#) in the VWorks Knowledge Base.

4 Using Content Browser

This chapter provides an overview of Content Browser for VWorks Plus.



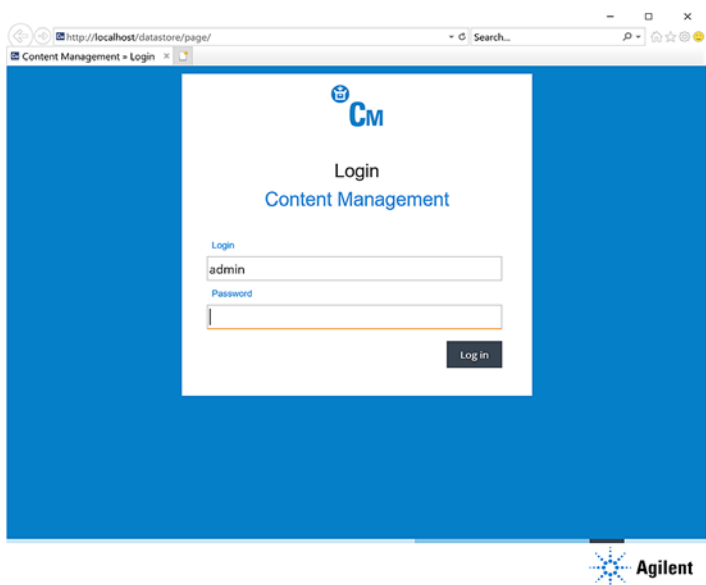
The topics are:

- [“Viewing the project structure” on page 30](#)
- [“Editing the project structure” on page 31](#)
- [“Restoring a previous version of a record” on page 33](#)
- [“Viewing the Content Browser Activity Log” on page 35](#)
- [“Using Content Browser Help system” on page 36](#)

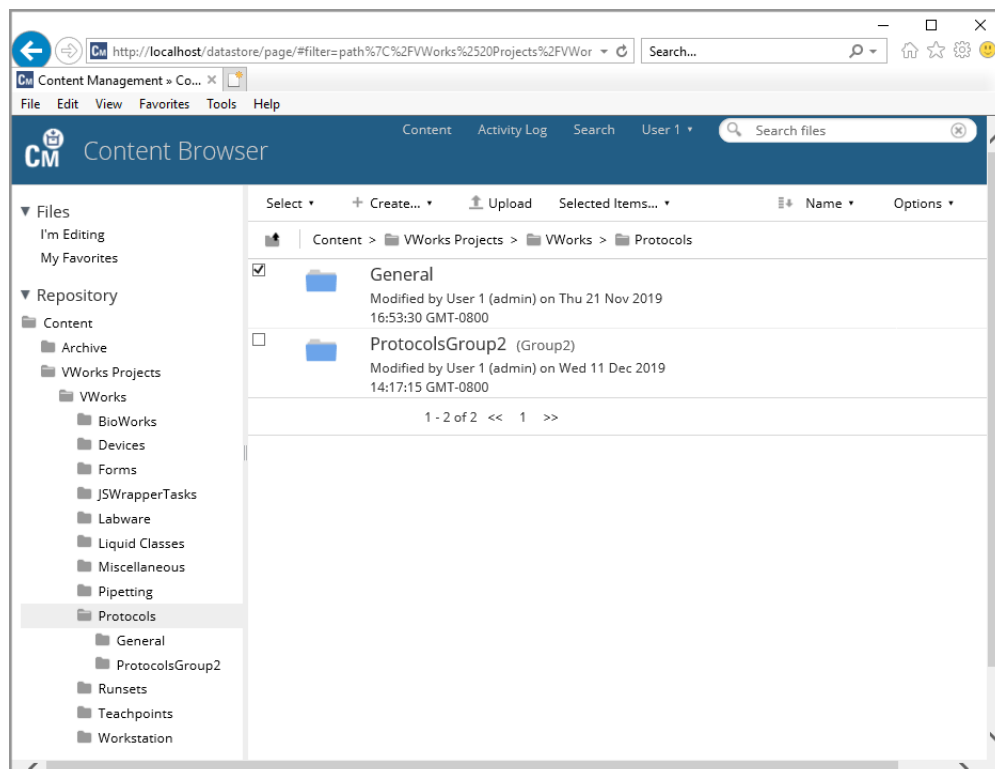
Viewing the project structure

To view the project structure:

- 1 Click **All apps > Agilent Technologies > Content Browser**.
- 2 Log in using your user name and password.



- 3 In the Content Browser navigation pane, click **Repository > Content > VWorks Projects > VWorks** to display the project structure.



Editing the project structure

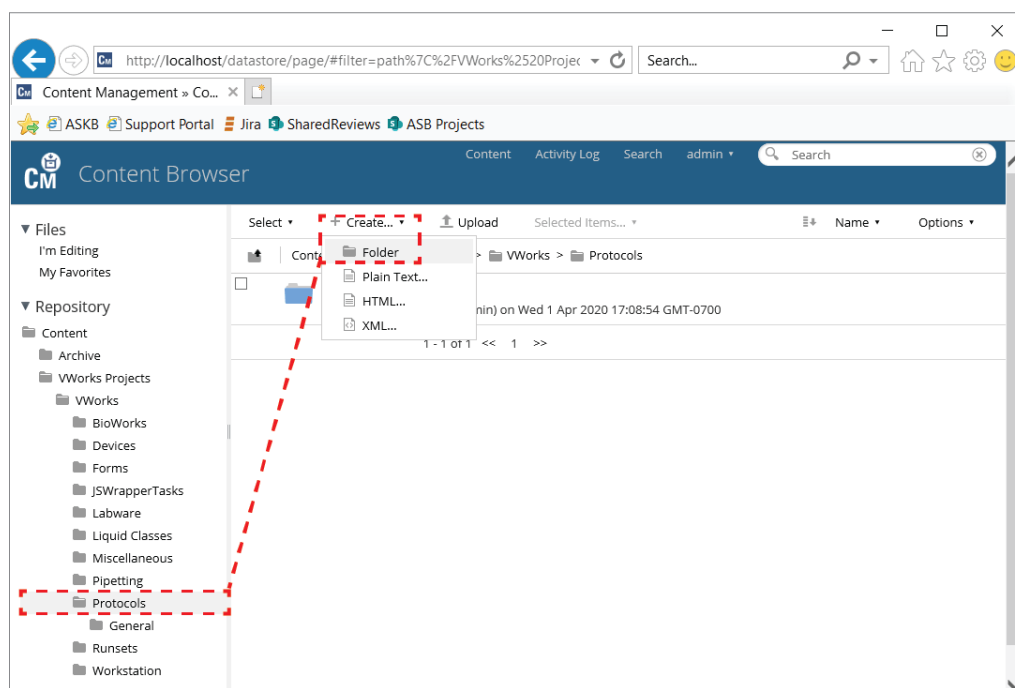
IMPORTANT

The VWorks software either restricts or allows file saving at levels other than fourth-level folders based on the option specified in the VWorks Options dialog box.

Creating a subfolder in Content Browser

To create a subfolder in the project structure:

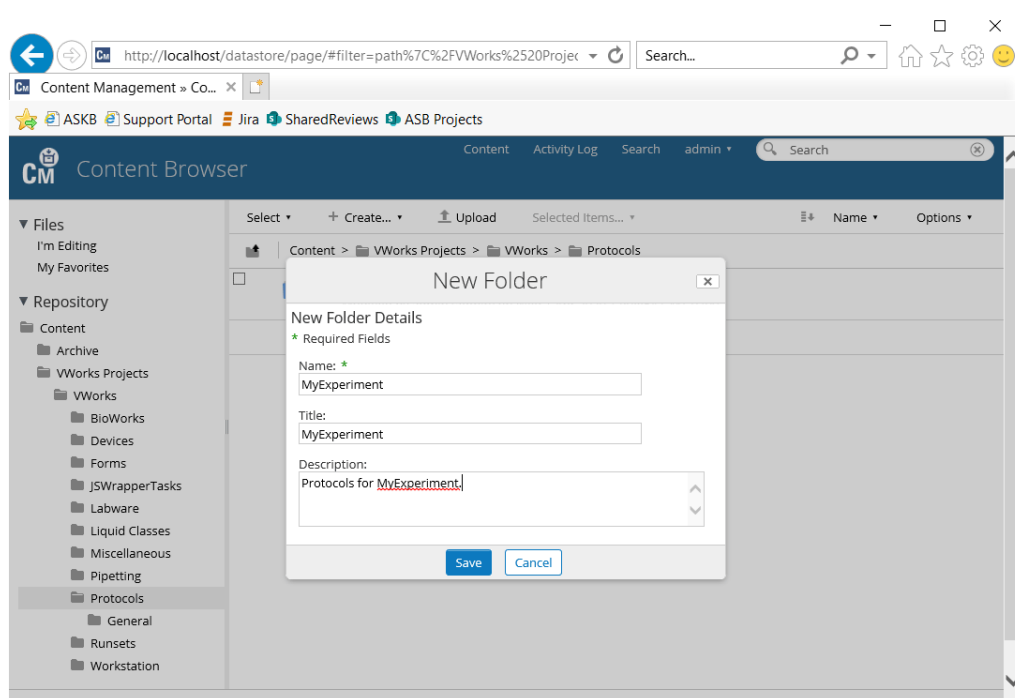
- 1 In the Content Browser navigation pane, click **Repository > Content > VWorks Projects > VWorks** to display the project structure.
- 2 Select the folder to which you want to add a subfolder. For example, in the following figure the Protocols folder is selected.



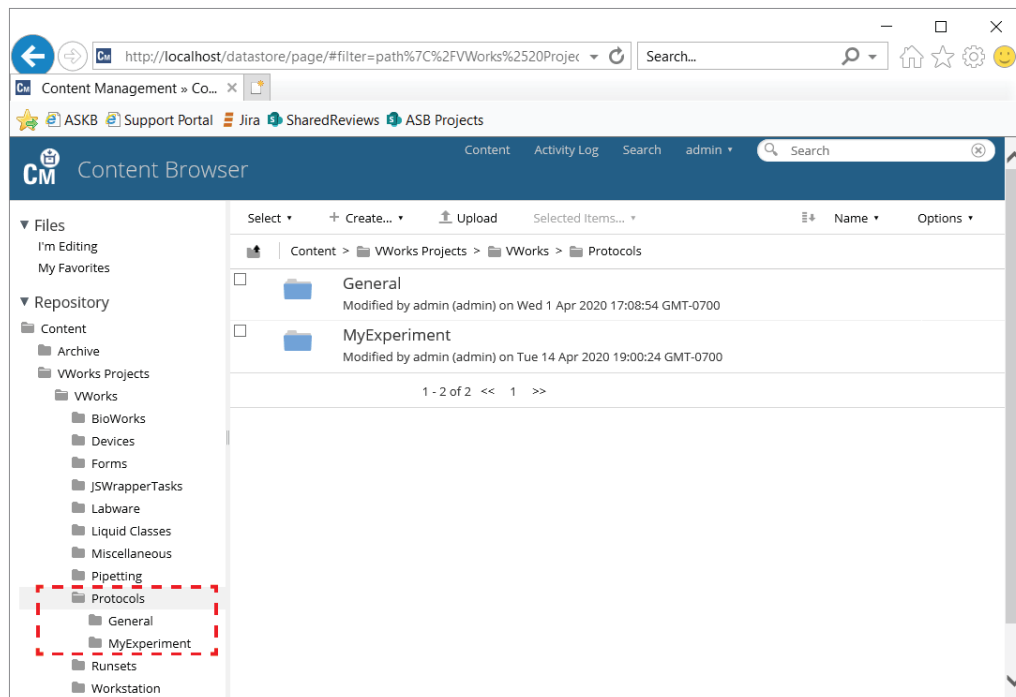
4 Using Content Browser

Editing the project structure

3 In the ribbon, click **Create > Folder**. The New Folder dialog box opens.



4 Type the information under **New Folder Details**, and then click **Save**. The new folder appears in navigation pane, as the following figure shows.

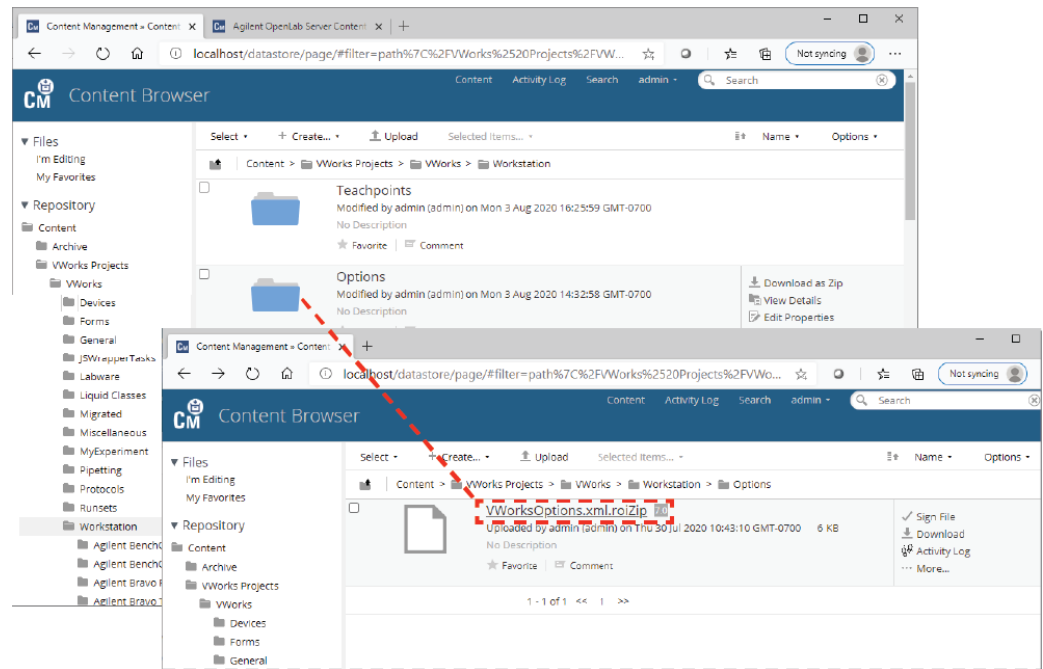


Restoring a previous version of a record

Each time you save a change to a record of interest in the VWorks software, a new version is uploaded in Content Management. If a record becomes corrupted or is tampered outside of the VWorks software, an administrator may use the following procedure to restore a previous version of the record.

To restore a previous version of a record of interest:

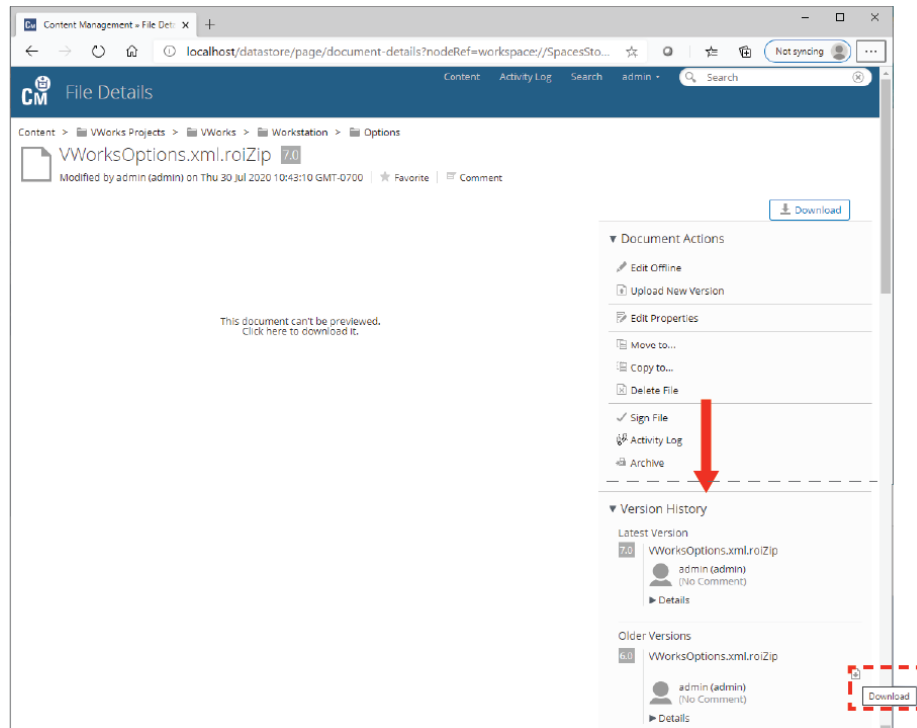
- 1 In the Content Browser navigation pane, click **Repository > Content > VWorks Projects > VWorks** to display the project folders. Locate the folder that contains the record of interest.
- 2 Locate the record and click the record link (.roiZip) to display the File Details page. In the following figure the VWorksOptions.xml.roiZip record is selected.



4 Using Content Browser

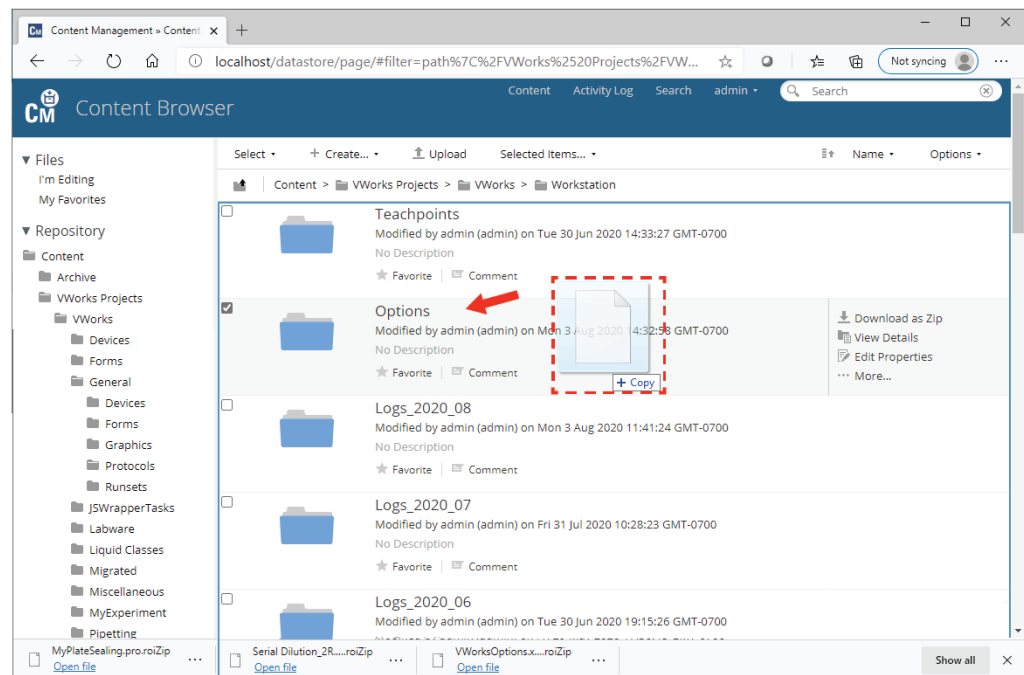
Restoring a previous version of a record

- 3 In the **File Details** page, scroll down to **Version History > Older Versions**, locate the version to be restored, and then click **Download**.



- 4 To upload the downloaded version of the record and use it as the current version, drag-and-drop the downloaded record in the corresponding project folder in the Content Browser.

The figure shows the downloaded VWorksOptions.xml.roiZip file being dropped in the Options folder.



A confirmation message appears when the upload is complete. The software increments the version number of the record. For example, if version 7.0 is tampered, and you restore version 6.0, the uploaded record becomes version 8.0.

Viewing the Content Browser Activity Log

You can use the Activity Log in the Content Browser to display an overview of activities that took place during Content Browser sessions.

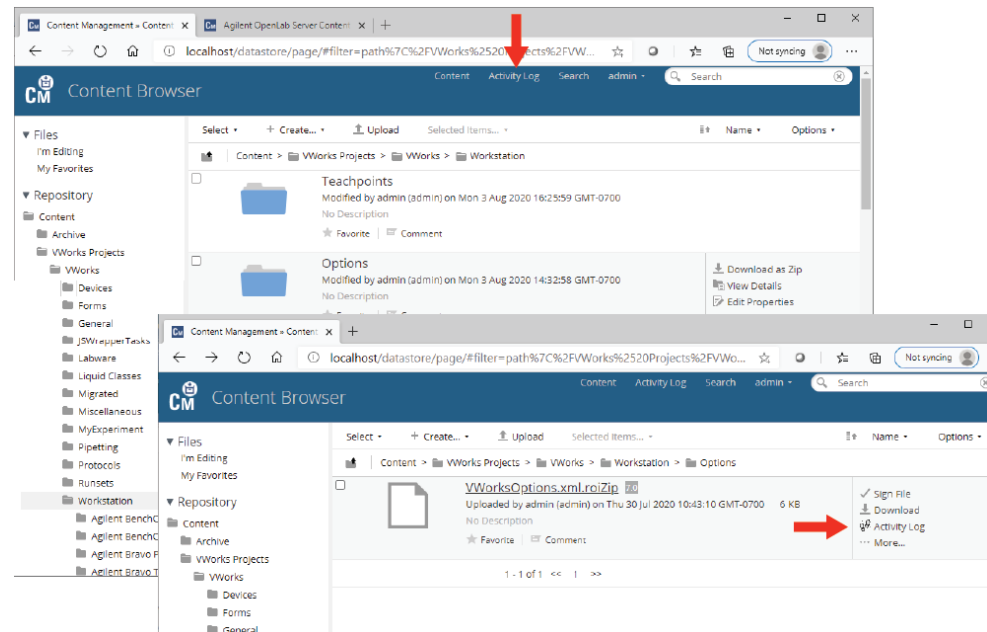
See the [VWorks Automation Control Setup Guide](#) for instructions on how to display an audit trail report for a record. For details on how to view the activity logs for sessions in the VWorks software, see the [VWorks Automation Control User Guide](#).

To view the Activity Log for all items in Content Browser:

- 1 In Content Browser, click **Activity Log** in the ribbon.

To view the Activity Log for a record in Content Browser:

- 1 In the Content Browser navigation pane, click **Repository > Content > VWorks Projects > VWorks** to display the project folders.
- 2 Open the folder that contains the record of interest. Select the record and then click **Activity Log**.



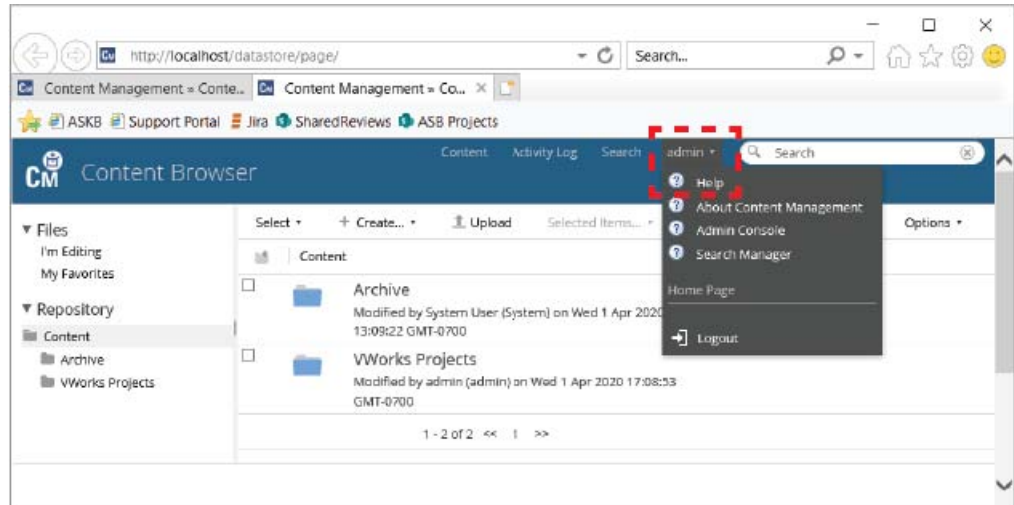
Using Content Browser Help system

Note: Not all Content Browser features are available for VWorks users, such as the Sign File feature.

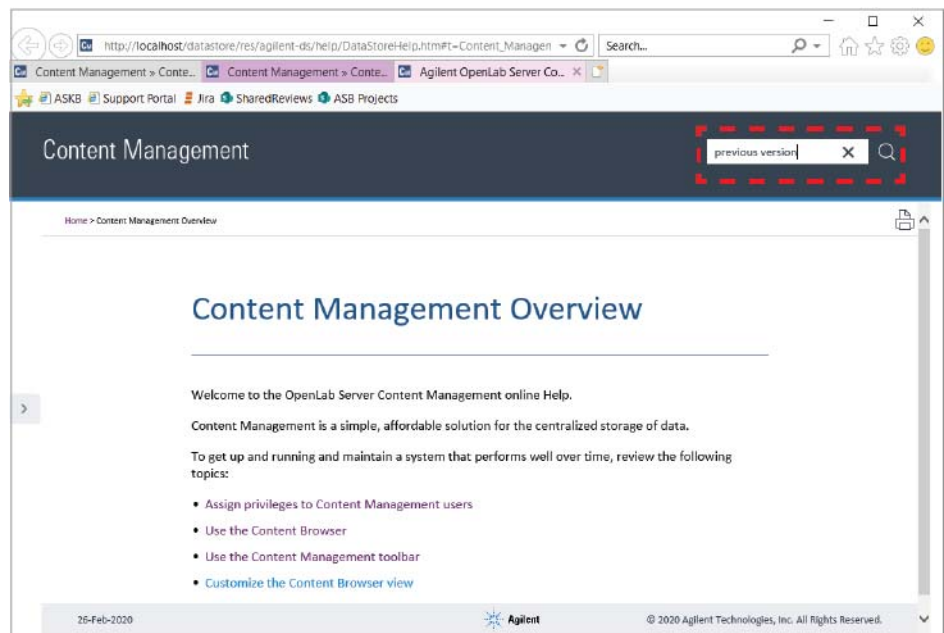
You can use the Help system available from the Content Browser ribbon to view procedures for additional features that are available to a VWorks administrator.

To use the Content Browser Help system:

- 1 In the Content Browser ribbon, click your logon name (*admin*), and then click **Help**.

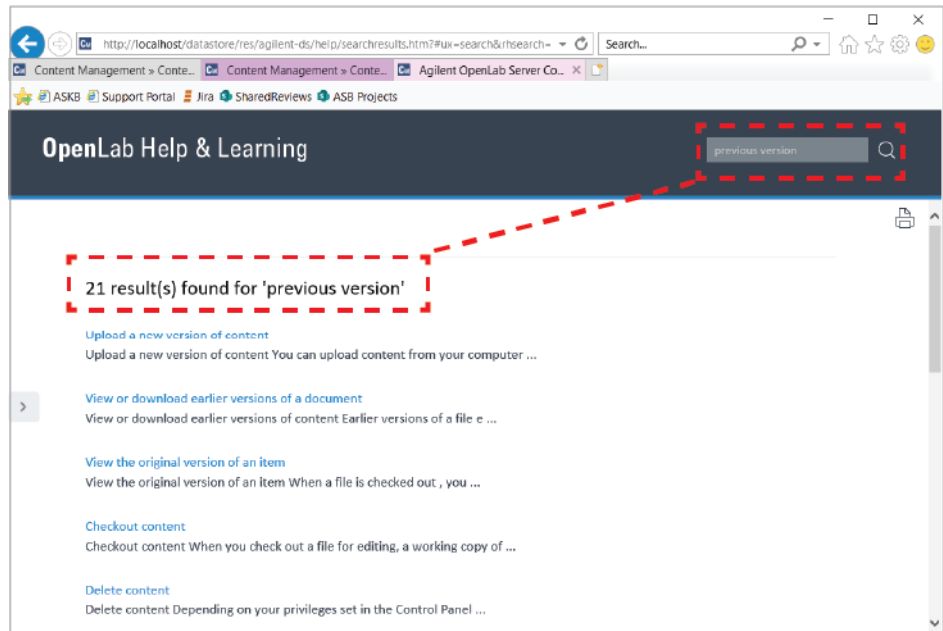


- 2 In the Content Management Overview page, click a link to display the corresponding help topic.



- 3 To display help for a topic not listed on this page, type the topic name in the search box in the top right corner of this help page.

The OpenLab Help & Learning page opens and displays a list of potential matches, as the following figure shows.



This page is intentionally blank.



5 System maintenance

This chapter includes the following topics:

- “Control Panel activity log and administrative reports” on page 40
- “Shared Services Maintenance utility” on page 42
- “Disaster recovery planning” on page 43
- “Software backup and recovery” on page 44
- “Data backup procedure” on page 45
- “Data recovery procedure” on page 47
- “Routine maintenance” on page 50
- “Disabling and enabling FTP services” on page 52

Control Panel activity log and administrative reports

This section describes the System Activity Log and Administrative Reports pages in the Control Panel.

For a description of the License page, see [“Licensing the software” on page 7](#). For a description of the authentication provider, security policy, and user management, see [“Configuring the software” on page 13](#).

System Activity Log

Note: For information on activity logs in the VWorks software, see the [VWorks Automation Control User Guide](#).

The System Activity Log contains information on the various events associated with Shared Services. You can filter the list in order to view only events of a specific type, in a specific time range, created by a specific user, or containing a specific description.

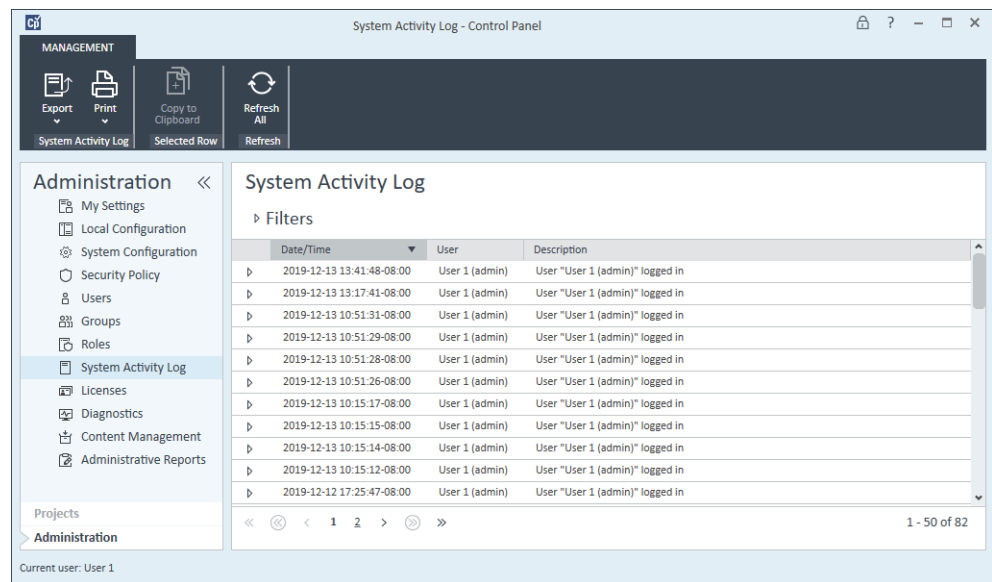
The following types of events are recorded:

- System
- Project Management
- User
- Group
- Security
- License

The messages can come from other components, such as the user management, system messages, or event messages. The System Activity Log records these events irrespective of whether you have been alerted to them or not. To get more information on an event, expand the line of interest in the activity logbook viewer.

To display the System Activity Log:

In the Control Panel navigation pane, click **Administration > System Activity Log**.



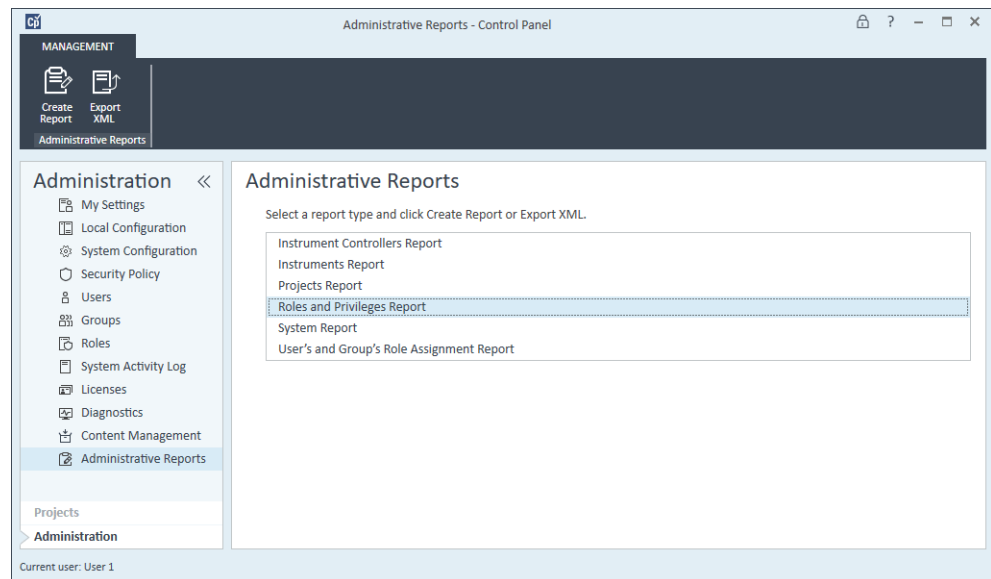
Administrative Reports view

In the Administrative Reports view, you can additionally create and export various XML or PDF reports related to the system configuration, including:

- **Projects Report.** Provides detailed information about configuration and access privileges for all projects on the system.
- **Roles and Privileges Report.** Describes all roles defined on the system, including details of all privileges included in each role.
- **System Report.** Provides a consolidated view of the system, which includes all information about instrument controllers, instruments, projects, roles, users, and groups.
- **User's and Group's Role Assignment Report.** Provides an overview of all users and groups with their assigned roles.

To display the Administrative Reports view:

In the Control Panel navigation pane, click **Administration > Administrative Reports**.



Shared Services Maintenance utility

The Shared Services Maintenance utility is automatically installed with VWorks Plus to help administrators manage the system.

To open the utility:

Select **Start > All Apps > Agilent Technologies > Shared Services Maintenance**.

A user must have Windows administrator rights to access this utility.

Backup and Restore tab

This tab does not apply to VWorks Plus.

Windows Domain tab

In this utility, the Windows Domain tab is relevant if you use Windows domain authentication to identify your VWorks Plus users.

VWorks Plus must be given access to the server where these credentials are stored. In the Windows Domain tab, you specify or change the credentials that VWorks Plus will use to access your Windows domain server.

For client/server systems: This feature can only access credentials that are stored on the computer where you launched the Shared Services Maintenance program. To specify or change the Domain, User name, or Password for the Windows account that will be used to access your Windows domain server, use the Shared Services Maintenance utility that is installed on the server.

Server Settings tab

The Server Settings tab can be used to manage different server connections. VWorks Plus typically has only the connection to the local computer.

Disaster recovery planning

Prepare a recovery plan for the unlikely potential of VWorks Plus becoming inoperable due to a hardware or software failure. This plan must include information and procedures for completely restoring the operating system, the software, and the data. Make sure that the disaster recovery plan has been tested and confirmed to be working.

The Disaster Recovery Plan must include the following:

Category	Details
Computer specifications	CPU, memory, and hard disk configuration information
Computer identity	<ul style="list-style-type: none"> • Computer name, IP, domain, URI, and so forth • Computer administrator information: user name and passwords for logging in to the server • If applicable, user names and passwords for the database
Software	OS version and build
Installation parameters	<ul style="list-style-type: none"> • Installation folder • Installation log file • Content Management content folder • Content Management indexes folder • Shared Services language • Shared Services database name • Installed licenses • Registered applications
3rd party software information	Applications and their revisions and installation paths
Backup and restore	<ul style="list-style-type: none"> • “Software backup and recovery” on page 44 • “Data backup procedure” on page 45 • Backup media location and organization details • “Data recovery procedure” on page 47

Ensure the following:

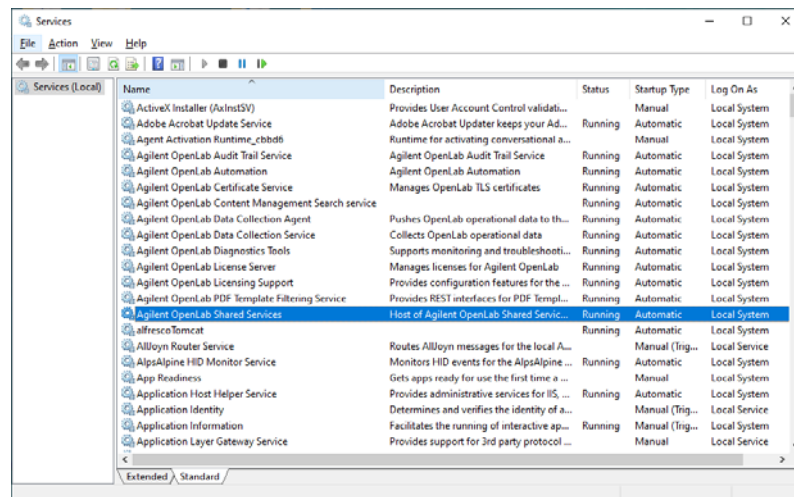
- *Regular backups.* Administrators should perform periodic full backups and differential backups between the full backups. These backups are the only way to restore a system in the event of a hardware or software failure.
- *Tested procedures.* Make sure your disaster recovery plan and restore procedures are tested to confirm that the backups are sufficient to restore your system.

Software backup and recovery

Software backup workflow

Step	For this task...	Description
1	Exit any running applications.	Close the VWorks software, Control Panel, and any other open applications.
2	Stop Windows Services.	<p>In Microsoft Windows, open Services and stop the following services in the following order:</p> <ol style="list-style-type: none"> 1 Agilent OpenLab Content Management Search service 2 alfrescoTomcat 3 Agilent OpenLab Shared Services 4 olcm-postgresql-x64-11 <p>See Microsoft Windows documentation for more information on stopping services.</p>
3	Create an image of the current system.	See Microsoft Windows documentation.
4	Start Windows Services.	<p>In Microsoft Windows, open Services and start the following services in the following order:</p> <ol style="list-style-type: none"> 1 olcm-postgresql-x64-11 2 Agilent OpenLab Shared Services 3 alfrescoTomcat 4 Agilent OpenLab Content Management Search service <p>See Microsoft Windows documentation for more information on starting services.</p>

Figure Windows Services window



About software recovery

See the Windows Installation documentation for detailed information on how to perform software recovery using a Windows Recovery DVD.

Data backup procedure

Use the following workflow to perform a complete system back up of the VWorks Plus server and content.

Ensure that you store all backup copies in a secure location.

Step	For this task...	See...
1	<p>If applicable, use the VWorks software to create backup copies of the following databases:</p> <ul style="list-style-type: none"> • Inventory database. You can export the inventory data to create a backup copy. • Experiments database. To create backup copies, do the following: <ul style="list-style-type: none"> – Export all experiment IDs to a backup file (.expTags file). – Make a backup copy of any archived experiment ID files. 	VWorks Automation Control Setup Guide
2	Close the Control Panel, VWorks software and any other running applications.	—
3	<p>In Microsoft Windows, open Services and stop the following services in the following order:</p> <ol style="list-style-type: none"> a Agilent OpenLab Content Management Search service b alfrescoTomcat c Agilent OpenLab Shared Services d olcm-postgresql-x64-11 	Microsoft Windows documentation
4	In Windows Explorer, make a backup copy of the PostgreSQL database folder, which is located at C:\ProgramData\Agilent\PostgreSQLData-10-OLCM.	Microsoft Windows documentation
5	<p>Use Windows Explorer to make a backup copy of the following content folders:</p> <ul style="list-style-type: none"> • C:\DataStoreContet • C:\DataStoreIndex • C:\DataStoreArchive 	Microsoft Windows documentation

5 System maintenance

Data backup procedure

Step	For this task...	See...
6	<p>Back up the OpenLab server configuration information:</p> <ul style="list-style-type: none">a Locate the C:\Program Files (x86)\Agilent Technologies\OpenLAB Data Store\tomcat\temp\com.agilent.datastore.cache file, and copy it to the C:\ProgramData\Agilent\Installation folder.b Make a backup copy of the C:\ProgramData\Agilent\Installation folder. <p>This will be used to reconfigure the system at a later point.</p>	—
7	<p>Use Windows Explorer to create a backup copy of the following:</p> <ul style="list-style-type: none">• C:\VWorks Workspace folder• If applicable, any barcode and hitpick input files stored elsewhere on the local drive	—
8	<p>In Microsoft Windows, open Services and start the following services in the following order:</p> <ul style="list-style-type: none">a olcm-postgresql-x64-11b Agilent OpenLab Shared Servicesc alfrescoTomcatd Agilent OpenLab Content Management Search service	Microsoft Windows documentation

Data recovery procedure

Use the following workflow to restore your VWorks Plus system from an existing backup if the software becomes inoperable due to a hardware or software failure.

If you are upgrading your VWorks Plus or VWorks Standard software, perform the following procedures after the upgrade.

Step	For this task...	See...
1	Exit the VWorks software, Control Panel, and any other running applications..	—
2	In Microsoft Windows, open Services and stop the following services in the following order: <ol style="list-style-type: none"> a Agilent OpenLab Content Management Search service b alfrescoTomcat c Agilent OpenLab Shared Services d olcm-postgresql-x64-11 	Microsoft Windows documentation
3	Restore the PostgreSQL database from your backup copy to the following location: C:\Program Data\Agilent\PostgreSqlData-10-OLCM <i>Note:</i> Keep the original paths to simplify further configuration.	—
4	Use your backup copies to restore the content of the following folders: <ul style="list-style-type: none"> • C:\DataStoreContent • C:\DataStoreIndex • C:\DataStoreArchive <p>IMPORTANT Only move the folder contents. Copying, pasting, and renaming entire folders from your backup into the new installation may cause errors in your subsequent performance of your new installation.</p> <p><i>Note:</i> Keep the original paths to simplify further configuration.</p>	—
5	Rebuild the Activity Log Index	“Rebuilding the Activity Log Index” on page 49
6	In Microsoft Windows, open Services and start the following services in the following order: <ol style="list-style-type: none"> a olcm-postgresql-x64-11 b Agilent OpenLab Shared Services c alfrescoTomcat d Agilent OpenLab Content Management Search service 	Microsoft Windows documentation

5 System maintenance

Data recovery procedure

Step	For this task...	See...
7	<p>Open the Control Panel (OpenLab), and check the license. If necessary, reapply the license.</p> <p><i>Note:</i> If your server MAC address changed during a upgrade, the license for the new server will be different from the old server.</p>	"Licensing the software" on page 7
8	<p>Start the VWorks software, and then do the following, if applicable:</p> <ul style="list-style-type: none">a Import the Inventory database from the backup copy.b Restore the Experiments database:<ul style="list-style-type: none">• Import all exported experiment IDs from your backup file (.expTags file).• Restore any archived experiment ID files.	VWorks Automation Control Setup Guide
9	<p>Use your backup copies to restore the following:</p> <ul style="list-style-type: none">• C:\VWorks Workspace folder• If applicable, any barcode and hitpick input files stored elsewhere on the local drive	VWorks Automation Control Setup Guide

Rebuilding the Activity Log Index

Use the following procedure to rebuild the OpenLab Shared Services Activity Log Index when the Activity Log table or data is corrupted or when the Shared Services database has been restored with an existing OpenLab installation.

The Activity Log Index is automatically rebuilt in the following scenarios:

- The Shared Services database has been restored with a fresh installation
- You are migrating or updating your data

The time required to rebuild the index depends on the amount of Activity Log records. It may take up to a few hours. During this time, you cannot search the Activity Log in the application.

To rebuild the Activity Log Index:

- 1** In Microsoft Windows, start the **Command Prompt** as an Administrator.
- 2** Execute the following command:

```
net stop SharedServicesHost &&&& del /s /f /q %ProgramData%\
Agilent\OLSS\Index\ActivityLog && net start SharedServicesHost
```

Possible errors include:

- Message:
The Agilent OpenLab Shared Services service is not started. More help is available by typing NET HELPMSG 3521.
Solution:
Use the following command instead:

```
del /s /f /q %ProgramData%\Agilent\OLSS\Index\ActivityLog &&
net start SharedServicesHost
```
- Message:
System error 5 has occurred. Access is denied.
Solution:
Make sure the Command Prompt has been started as an Administrator.

Routine maintenance

About this topic

This topic assumes that you have an understanding of database management.

VWorks Plus uses a PostgreSQL database, which is installed with the software. To maintain the database, you should perform the following procedure on a regular basis. The frequency depends on the usage of the system. As a guideline, you should at least do this every time you perform a full system backup.

Updating statistics for PostgreSQL database

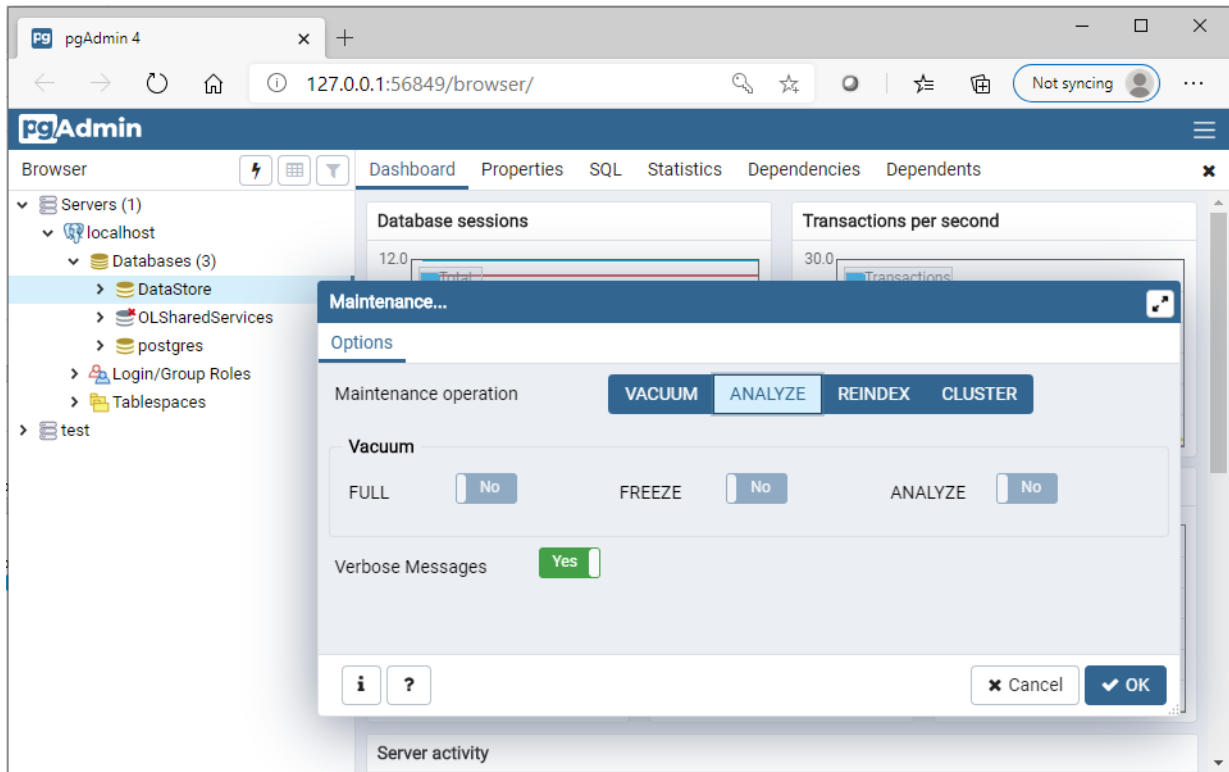
Before you start:

Ensure that your Windows System Environment Variables **Path** settings include the following path in order to run a Python script:

```
C:\Program Files (x86)\PostgreSQL-10-OLCM\pgAdmin  
4\venv\Scripts
```

To update the PostgreSQL database statistics:

- 1 Start **PostgreSQL pgAdmin** and connect as the database administrator.
The default database administrator user name is *postgres* and the password set during installation is *superadmin*.
- 2 In the **pgAdmin** page that opens, select the database for which you want to update the statistics.
Note: You may need to create a server in the pgAdmin page to display the databases. In the navigation pane, right-click Servers, and then click Create > Server to create a server.
- 3 Right-click the database of interest in the server, for example, DataStore, and select **Maintenance**.
- 4 In the Maintenance dialog box, click **ANALYZE** and click **OK** to analyze the database. See the following figure.



Additional maintenance for PostgreSQL database

PostgreSQL supports some additional maintenance commands that can be beneficial to helping keep your database system running smoothly. These include VACUUM and REINDEX. See the PostgreSQL documentation for additional details about these commands.

CAUTION

Only apply Agilent-provided service packs or Hotfixes to your Agilent PostgreSQL server.

Disabling and enabling FTP services

CAUTION

Data integrity risk! Customers subject to regulations from US FDA or similar organizations are cautioned that FTP services are enabled by default. This may be considered as a data integrity risk.

Impacted customers are advised to disable FTP services when not needed.

Disabling FTP services

To block FTP access on your VWorks Plus installation, you must disable the FTP services.

To disable the FTP services:

- 1 In Microsoft Windows, open Services and stop the alfrescoTomcat service.
- 2 Locate C:\Program Files (x86)\Agilent Technologies\OpenLab Data Store\tomcat\shared\classes folder.
- 3 Open the `alfresco-global.properties` file in any text editor.
- 4 Change `ftp.enabled=true` to `ftp.enabled=false`.
- 5 Save the file.
- 6 In Microsoft Windows, open Services and start the alfrescoTomcat service.

Enabling FTP services

To enable the FTP services:

- 1 In Microsoft Windows, open Services and stop the alfrescoTomcat service.
- 2 Locate C:\Program Files (x86)\Agilent Technologies\OpenLab Data Store\tomcat\shared\classes folder.
- 3 Open the `alfresco-global.properties` file in any text editor.
- 4 Change `ftp.enabled=false` to `ftp.enabled=true`.
- 5 Save the file.
- 6 In Microsoft Windows, open Services and start the alfrescoTomcat service.

In this Guide

This guide provides administrator instructions for the VWorks Workstation Plus edition.

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