Quick Reference

This guide describes VWorks Plus 14.0 or later versions.

Software components

VWorks Plus consists of OpenLab components and the VWorks software with compliance features.

Figure VWorks Plus architecture and primary components
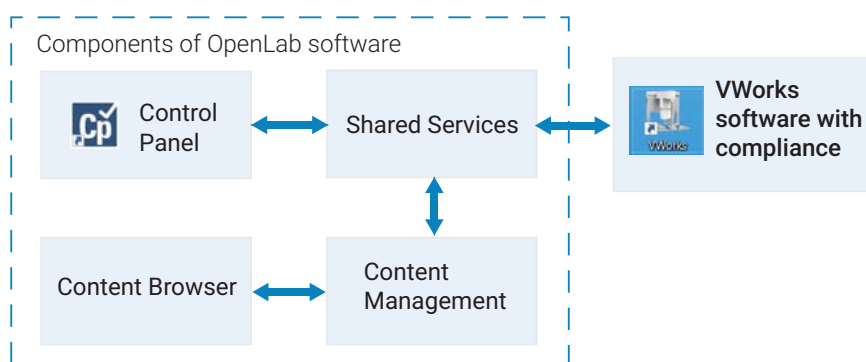
VWorks software with compliance features

You use the VWorks software to manage and control your automation devices. You create labware definitions and liquid classes, set up your devices, 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.

Components of OpenLab software

• **Control Panel** and **Shared Services**. An administrator uses the Control Panel to configure Shared Services to control user access to the software, manage software licenses, and manage storage.

• **Content Management and Content Browser.** Shared Services uses a secure storage repository, Content Management, to store records of interest and audit trails. The records are stored in the following location:

`/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.

A system administrator can use the Content Browser to view and edit the VWorks project structure. The administrator can also edit project contents, 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.

Workflow The following table provides the overall workflow for VWorks Plus.

You can find detailed descriptions of these tasks in the VWorks Knowledge Base. See "Opening VWorks Knowledge Base" on page 8.

Step	Task	VWorks Role	See …
1	Log in to Control Panel (OpenLab component).	Administrator*	"Using Control Panel" on page 3
2	Use the Control Panel (OpenLab component) to: • Configure user access. • Manage the software licenses. • Configure storage.	Administrator	*VWorks Plus Administrator Guide*
3	Understand VWorks compliance features and configure audit trail options.	Administrator	"VWorks compliance features" on page 4 and "Setting options for folders and audit trails" on page 4
4	Set up the VWorks software.	Administrator or Technician	"Setting up VWorks" on page 5
5	Set up your automation devices.	Administrator or Technician	Device user guide, for example, *Bravo Platform User Guide*
6	Create protocols and forms to run your automation devices.	Administrator or Technician	*VWorks Automation Control User Guide* and *VWorks Protocol Authors Quick Guide*
7	Run a protocol.	Administrator, Technician, or Operator	"Running a protocol" on page 6
8	Generate audit trail reports.	Administrator or Technician	"VWorks compliance features" on page 4
9	Perform periodic software and data backups.	Administrator or Technician	*VWorks Plus Administrator Guide*
10	View the VWorks project structure in the Content Browser.	Administrator	"Opening Content Browser" on page 7

*VWorks Technicians, Operators, and Guests may log in to Control Panel and change their passwords, but they cannot configure other Control Panel settings.

Note: The VWorks software supports only the roles of VWorks Administrator, Technician, Operator, and Guest. VWorks does not support additional roles that you may create in the Control Panel. For details, see the *VWorks Plus Administrator Guide*.
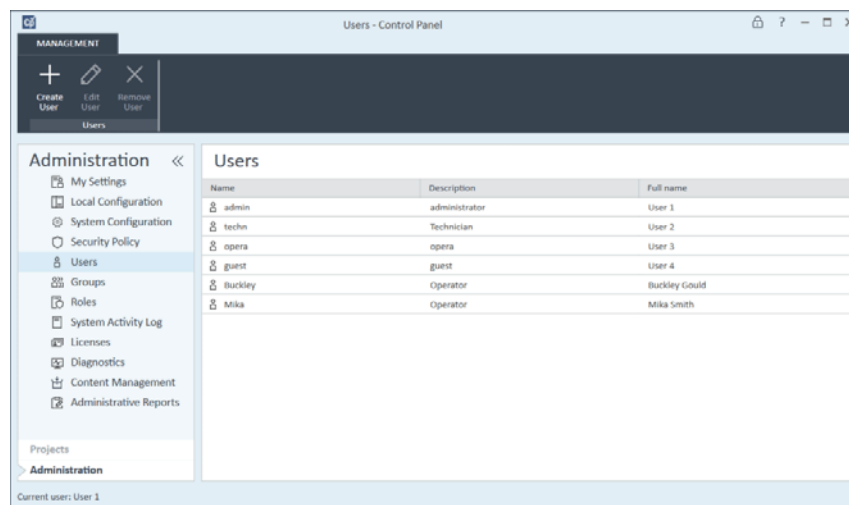
Using Control Panel

To use the Control Panel (OpenLab component):

1 Click the Control Panel icon on the Windows desktop.

2 Log in using your user name and password. If you cannot log in, contact your administrator.

3 Under **Administration**, click the item to display the corresponding page.

Administrators only. To add a user, click **Users > Create User**. To edit a user, click **Users**, select the user in the **Users** page, and click **Edit User**.


Note: Non-administrators have only limited access to the Control Panel features. Also, some Control Panel features are not supported in VWorks Plus, such as, Diagnostics and instrument reports.

Starting VWorks

To start the VWorks software:

1 Click the VWorks desktop icon. The VWorks window opens.

2 Click **Log in** on the toolbar. The VWorks Login window opens.

3 Type your VWorks login and password, and then click **OK.**
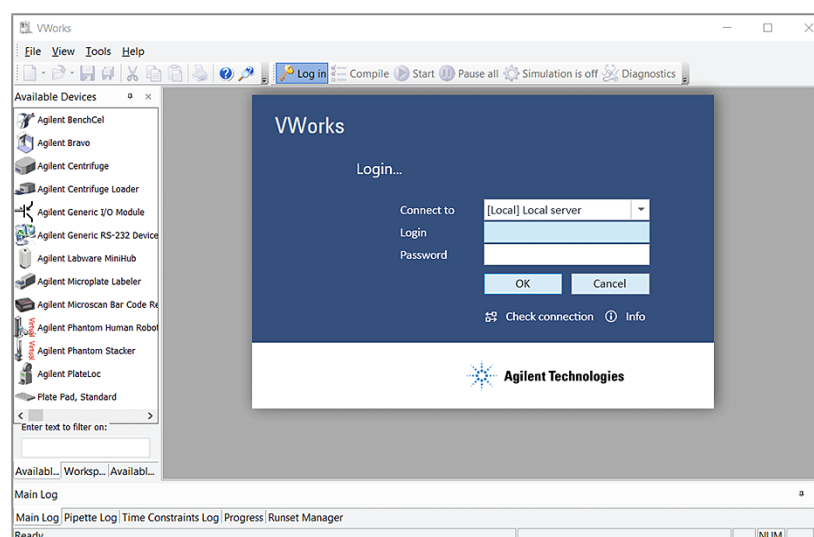
VWorks compliance features

The following table lists the primary features in the VWorks software that support compliance with Part 11 of Title 21 of the Code of Federal Regulations (21 CFR Part 11). Ensure that you have an understanding of these features and how to use them. For a detailed description, see the *VWorks Automation Control Setup Guide*.

| Feature	Task
Audit trails and reports	The VWorks software automatically logs audit trails for records of interest (ROI) that are in validation or released states and for records exempt from record states. Released records cannot be changed. Before saving a change to a record that is not yet in the released state, the user must enter an audit comment.
	To generate an audit trail report for a record of interest, in the **VWorks** window click **Tools > Audit Trail Reports**.
Record state tracking	The states for records of interest are In Development, In Validation, and Released. An administrator or technician can change a record's state.
	To change a record state, ensure no records are open In the **VWorks** window, and then click **Tools > Change ROI State**.
	Note: Some records of interest are exempt from state changes, for example, the VWorksOptions.xml file that stores your settings for the VWorks global options.
Tamper detection	The software verifies data integrity automatically by detecting corrupted records and records that have been modified externally from the VWorks software.
	You can also run the Tamper Detection command at any time. In the **VWorks** window, click **Tools > Tamper Detection**.
VWorks activity logs	The VWorks software records events that occur during a VWorks session in the Main log, Pipette log, and Time Constraints log. The logs for the current session can be displayed in the VWorks window. The logs from previous sessions are saved to the Content Management Repository. For details on how to view logs, see the *VWorks Automation Control User Guide*.
Device activity logs	The diagnostics software for each automation device records events that occur during a diagnostics session. The log for the current session appears in the diagnostics window for the device. These logs are saved in the VWorks Main log.

Setting options for folders and audit trails

To set options for folders and audit trails:

In the **VWorks** window, click **Tools > Options**. The Options dialog box opens. See the following figure.

In the Options dialog box, select or clear the check boxes for the following options:

• Restrict file saving to 4th level folders only to support legacy ECM servers.

   Selected by default. If compatibility with legacy ECM servers is not required and you want to remove this restriction, clear the check box.

• Log audit trail for records of interest that are in development state.

• Automatically change the state of dependent records.

• Prompt user with a list of device profiles when running a protocol in RELEASED state.
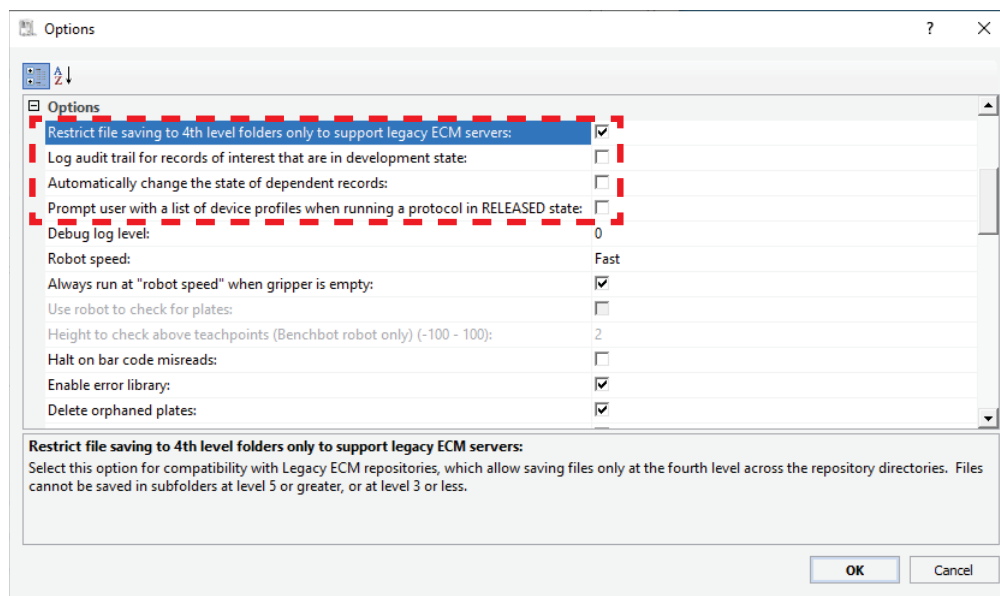
For details on audit options, see the *VWorks Automation Control Setup Guide*. For details on other options, see the *VWorks Automation Control User Guide*.

Setting up VWorks

The following table provides a summary of the setup tasks. Only Administrators can migrate or import files from previous VWorks versions. Administrators or Technicians can perform the other setup tasks.

Step	Task for VWorks Administrator or Technician	Where to find instructions
1	*If applicable*. Migrate files and registry information from VWorks 12.3, 13.0, or 13.1.x into Shared Services storage for use in VWorks Plus. In the **VWorks** window, click **Tools > Migration** to open the Migration Wizard.	*VWorks Automation Control Setup Guide*
2	Use the Labware Editor to create labware definitions for the labware you will use during protocol runs. In the **VWorks** window, click **Tools > Labware Editor** to open the Labware Editor.	*VWorks Automation Control Setup Guide*
3	*Bravo Platform only*. Use the Liquid Library Editor to specify the pipetting speed and accuracy. C In the **VWorks** window, click **Tools > Liquid Library Editor** to open the Liquid Library Editor and define liquid classes.	*VWorks Automation Control Setup Guide*
4	Set up your automation devices.	See the user guide for the device.
5	*Labware storage device only*. If you have a Labware MiniHub, set up the Inventory database to manage the labware inventory.	*VWorks Automation Control Setup Guide*
6	*Optional*. If you plan to track the protocol parameter settings involved in preparing a microplate for downstream analysis, set up the Experiments database.	*VWorks Automation Control Setup Guide*

Note: You can click [?] in the VWorks window or dialog box to display the corresponding knowledge base topic for a given setup task.

Running a protocol

If you are using a VWorks form:

Use the controls in the form to set up and run the protocol.

If you are running a protocol from the VWorks window:

1   Click **Simulation is on** to turn off the simulation mode. The button changes to Simulation is off (figure, item **1**).

2   Click **Start** (**2**).

To pause the protocol run:

1   Click **Pause all** (**3**).

2   In the **Scheduler Paused** dialog box, select the command to resume, finish processing existing labware already in the system, or abort the run. You can also make device adjustments in the diagnostics software before resuming the run.

To stop the protocol run in an emergency:

Press the hardware emergency-stop button. Note that you may not be able to resume a run after an emergency stop.
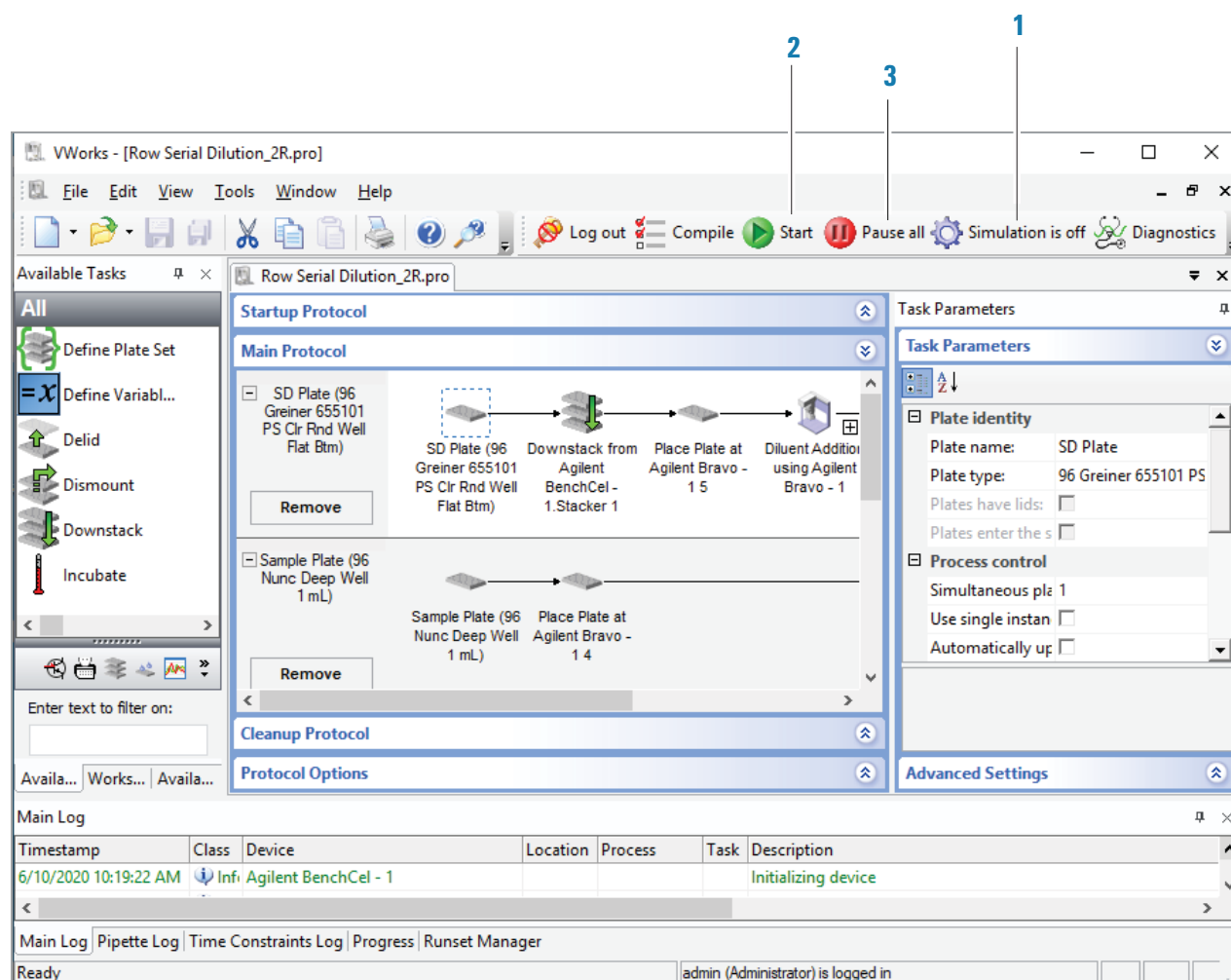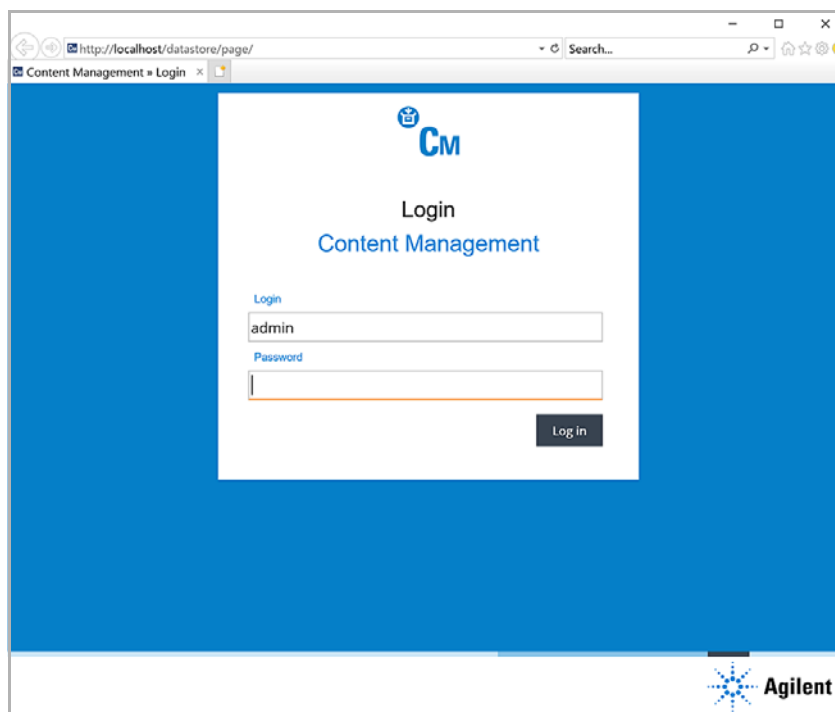
Opening Content Browser

A user with administrator privileges can open the Content Browser to view and manage the VWorks Project contents in the Content Management Repository.
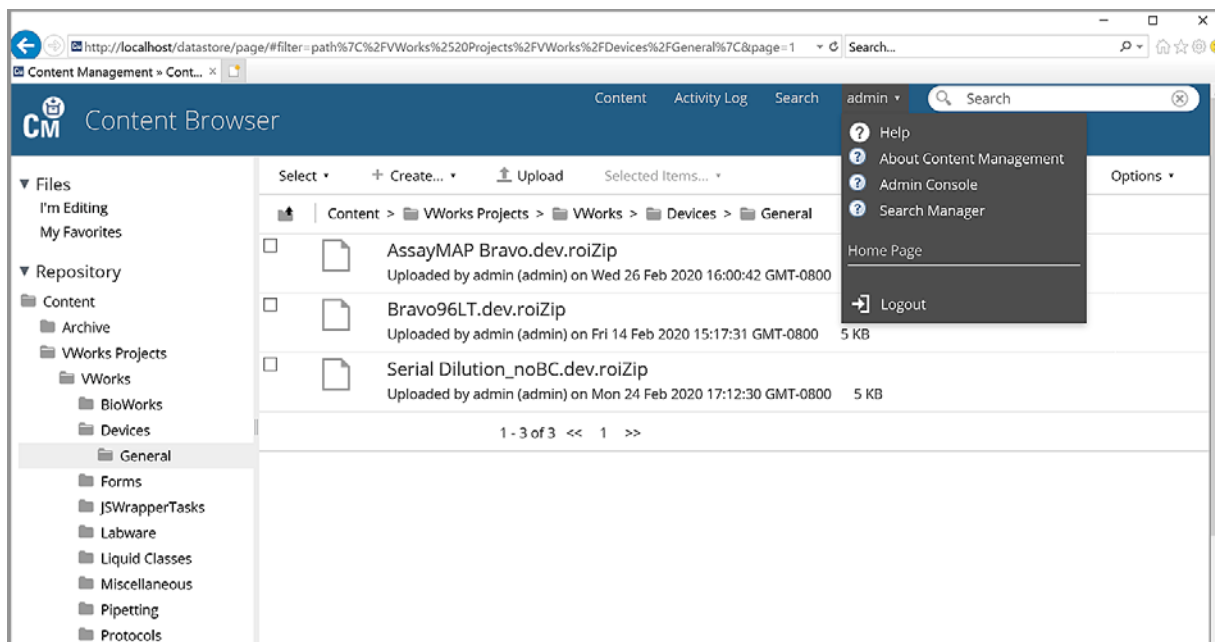
To start the Content Browser:

1   Select **Start** ⊞ **> All apps > Agilent Technologies > Content Browser**.

2   Log in using your user name and your password.

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

To open the help topics in the Content Browser, click the user name in the Content Browser banner, and then click **Help**.The OpenLab Help & Learning page opens.

Opening VWorks context-sensitive help

To open context-sensitive help in the VWorks window:

1 In the VWorks window, click the 🔍 button on the toolbar. The pointer changes to ⑦.

2 Click an icon or area of interest in the VWorks window. The relevant help topic or guide opens.
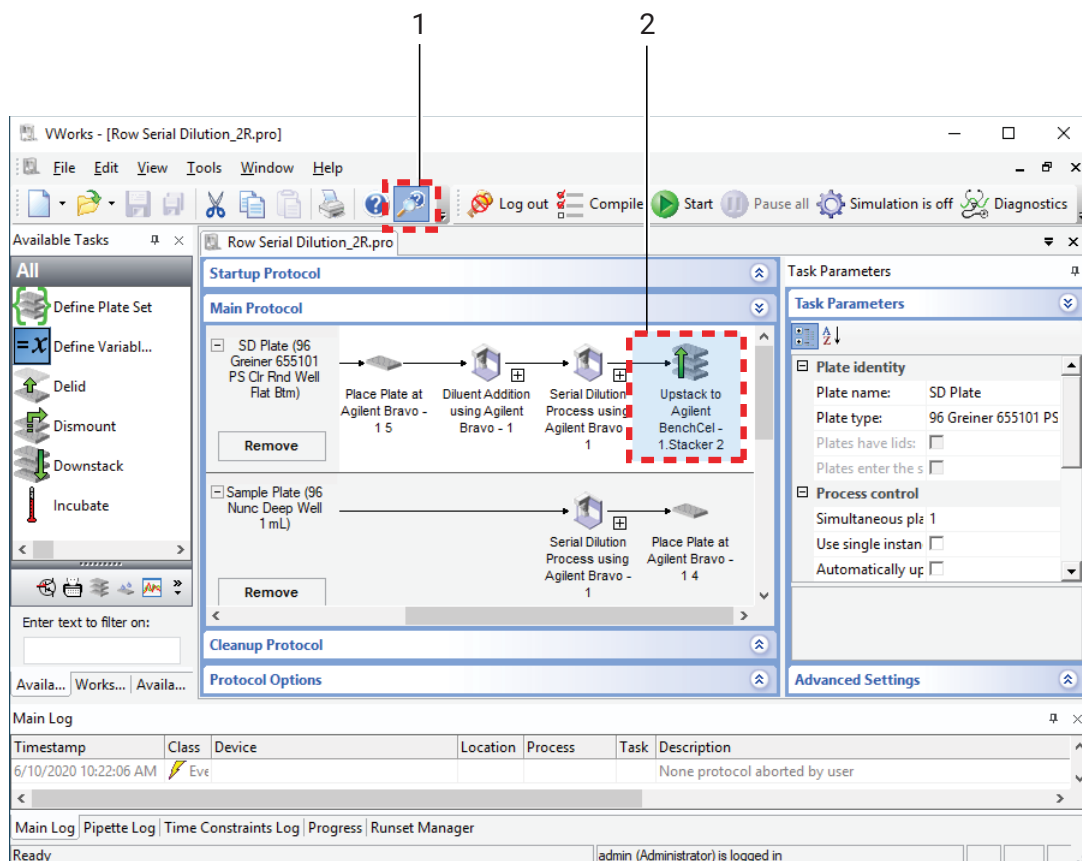
Opening VWorks Knowledge Base

To open the knowledge base:

- From within the VWorks software, click **Help > Knowledge Base** or press F1.

- From the Windows desktop, select **Start ⊞ > All apps > Agilent Technologies > VWorks Knowledge Base.**

Contacting Agilent

Web: https://www.agilent.com

Contact page: https://www.agilent.com/en/contact-us/page

Documentation feedback: documentation.automation@agilent.com