VWorks Software Quick Start

Workflow overview

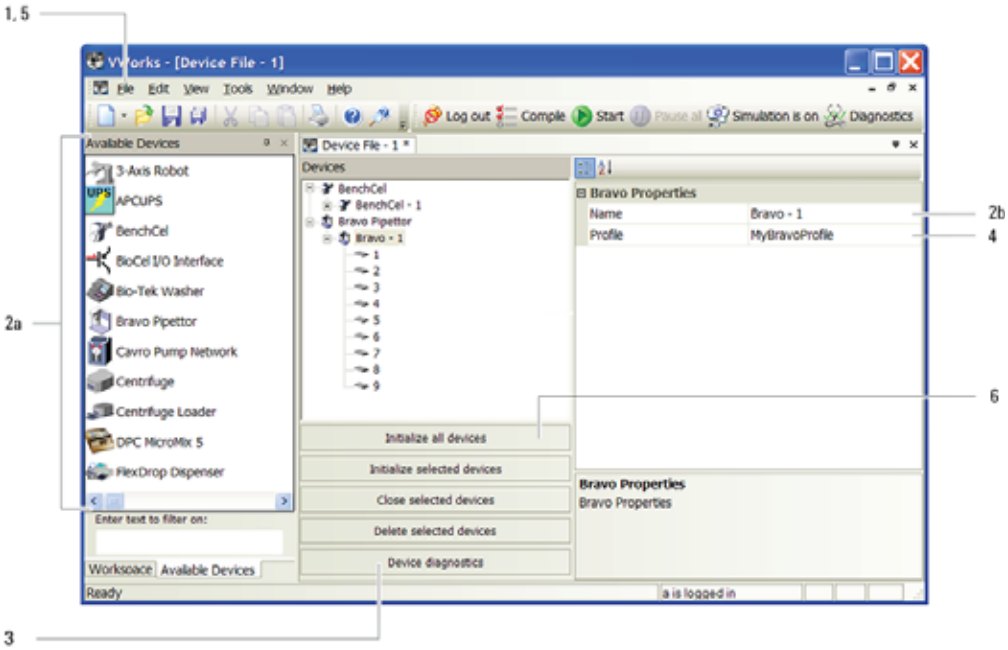
This guide provides an overview of how to use the VWorks Automation Control software. The overall workflow is:

1. Add devices.
2. Create a protocol.
3. Add tasks.
4. Compile the protocol and simulate the protocol run.
5. Start, pause, and stop the protocol run.

Step 1—Adding devices

To add devices:

1. Select **File > New > Device.**
2. Add a device to the device file:
   - **a** Double-click the device icon in the **Available Devices** area. (If you are in the Workspace tab, click the **Available Devices** tab to display the devices.)
   - **b** Type a name for the device and set the device properties.
3. Create a profile for the device:
   - **a** Select the device in the **Devices** list, and then click **Device diagnostics** to name the profile, select the connection type (Ethernet or serial), and locate and connect to the device in the Discovered Bionet Devices dialog box (Ethernet connections only).
   - **b** Set the teachpoints. For devices such as the system robot and BenchCel Workstation, you also need to reference the teachpoint file.
4. Select the profile in the device properties area.
5. Select **File > Save,** and then repeat steps 1 to 4 to add other devices.
6. In the **Devices** area, click **Initialize all devices**.



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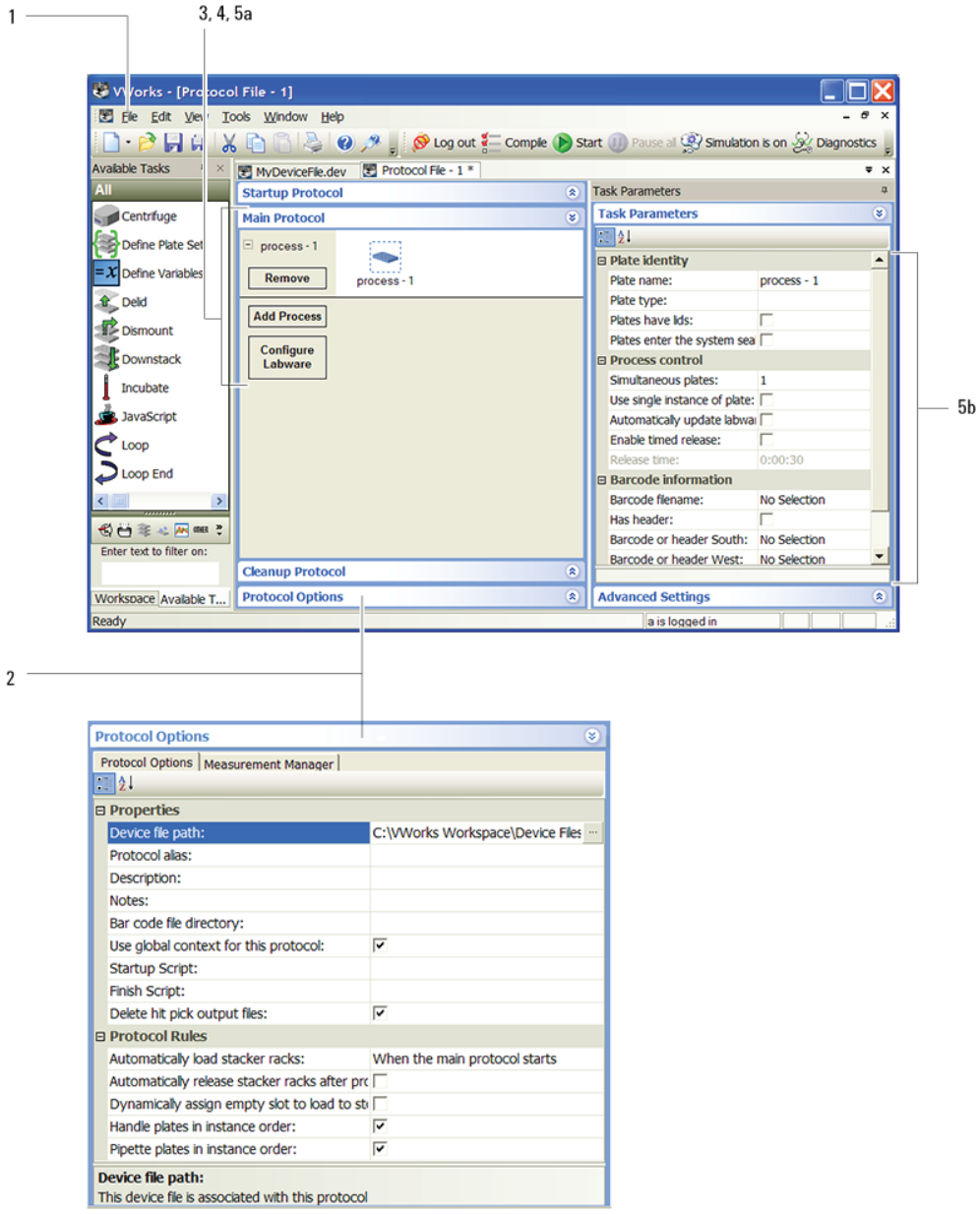
Step 2—Creating a protocol

To create a protocol:

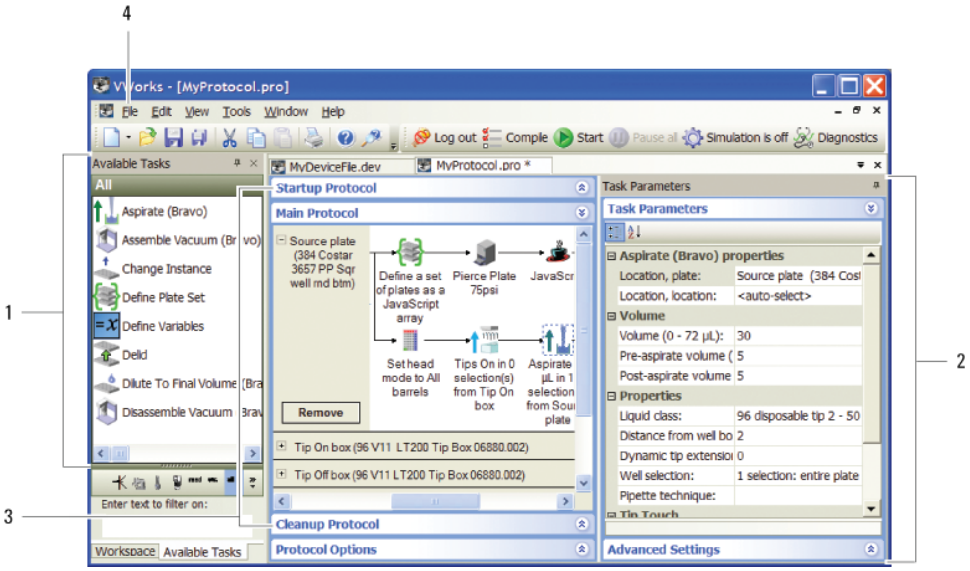
1. Select **File > New > Protocol.**
2. Click **Protocol Options** in the protocol area to verify the device file location, provide a description of the protocol, add notes about the protocol, and set other options.
3. Click **Main Protocol.**
4. Click **Configure Labware** to set the starting locations of labware in a device. (Configured labware will return to its starting location by the end of the protocol run.) Repeat for each device in the system.
5. Set up a process. (A process is a sequence of tasks that are performed on a particular labware or a group of labware. The labware will move into the system to be processed and out of the system when processing is finished.)
   a. Click the **process - n** icon.
   b. Set the process plate parameters in the **Task Parameters** area.
6. Repeat step 5 to add additional processes.



Step 3—Adding tasks

To add tasks:

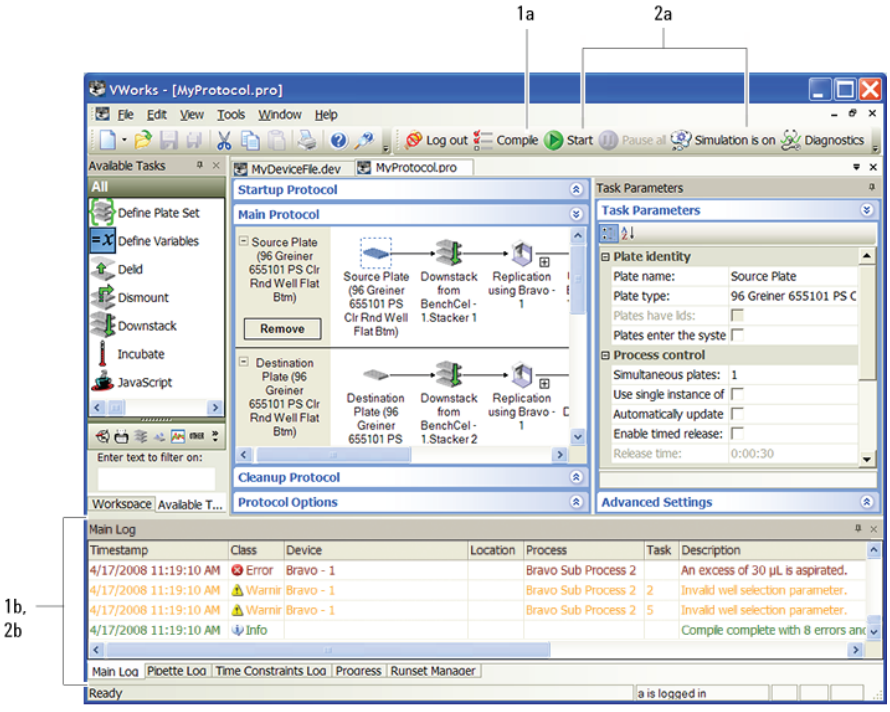
1. Drag tasks from the **Available Tasks** area to the protocol area.
2. Set the parameters in the **Task Parameters** area.
3. *Optional.* Click **Startup Protocol** or **Cleanup Protocol** in the protocol area to add processes that start before or finish after the main protocol starts and finishes.
4. Select **File > Save.**



Step 4—Compiling and simulating a protocol

To compile and simulate a protocol run:

1. To compile the protocol to check for protocol-writing or logical errors:
   - **a** Click **Compile.**
   - **b** View and fix the errors and warnings listed in the **Main Log** tab.
   - **c** Repeat steps a and b until the protocol compiles error free.
   - **d** Save changes made to the protocol.



2 To simulate the protocol run to check for potential deadlocks:

   a Click **Simulation is off** to turn on the simulation mode (the button changes to Simulation is on), and then click **Start.**

   b View and fix any deadlock errors that are listed in the **Main Log** tab.

   c Repeat steps a and b until all deadlock errors are fixed.

   d Save changes made to the protocol.

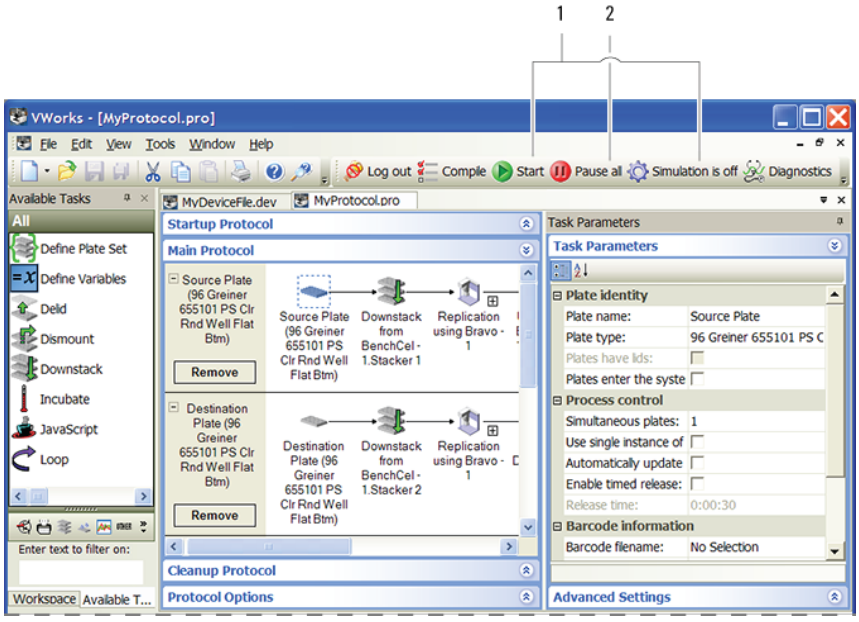
Step 5— Starting, pausing, and stopping

To start, pause, and stop a live protocol run:

1 Click **Simulation is on** to turn off the simulation mode (the button changes to Simulation is off), and then click **Start.**

2 To pause the protocol run, click **Pause all.** 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 before resuming the run.

3 To stop the protocol run in an emergency, press the hardware emergency stop or robot disable button. Note that you cannot resume a run after an emergency stop.



For more information

See the *VWorks Automation Control User Guide* for detailed instructions on the workflow steps. For detailed instructions on adding devices, see the device user guide.

User information is available in the online help format and in PDF within the software or on the software CD. You can also search the Knowledge Base or download the PDF files at www.agilent.com.

Contacting Agilent Technologies

Use the following contact details:

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