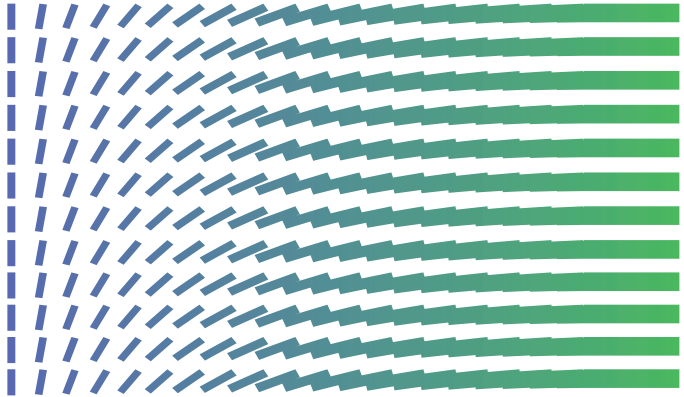




**Hillrom™**

**Welch Allyn® Service Tool**



## Installation and configuration guide

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# 1 Introduction

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## Product overview

This guide describes how to install the Welch Allyn Service Tool, a software application that clinicians and technical service personnel can use to manage and maintain supported Welch Allyn products.

This guide is written for system administrators and others with a background in information technology.

## Editions

The service tool is available in the following editions:

- **Standard unlicensed:** Accompanies your monitor. This edition provides basic access to device information and firmware updates.
- **Licensed (Gold):** Required to perform complete functional verification and calibration. This edition requires a license. For more information about acquiring this license, contact Welch Allyn.



**NOTE** To qualify for the Gold license, you must attend a Welch Allyn technical training course or complete online training for your devices.

## Purpose

You can use the service tool to do the following:

- **Install updates and upgrades.** The service tool can read the firmware version for each module and check for available updates or upgrades.
- **Review monitor information.** When connected to the monitor, the service tool lists installed modules, installed firmware and hardware versions, warranty and repair information, status, and usage history.
- **Receive notifications when periodic maintenance is needed.** The service tool can help you manage and maintain your entire inventory of supported Welch Allyn products. Through the remote service

function, the service tool can connect to Welch Allyn Customer Service. With this functionality you can automatically receive firmware updates and feature upgrades for your supported products, including software upgrades for the service tool.

- **Create a work list.** The work list provides information about service actions—referred to as work orders—that are waiting for you to perform on your maintained devices. Work orders may include periodic calibrations, upgrades, or license installations.
- **Schedule periodic maintenance.** You can use the service tool to set the service interval for each maintained device.
- **View and save logs.** You can download and save log files from the device for analysis to help diagnose and identify reported issues.
- **Create user accounts.** Administrators can create user accounts and set permission levels to control access to the features, allowing one group to perform administrative tasks and another to perform service tasks. Restricting access prevents the service tool from being used to make unauthorized changes on a connected device.
- **Perform functional verification.** You can use the service tool to test each component of the system to ensure that its performance meets design specifications. Functional verification is required to meet the periodic maintenance requirements. This feature is not supported for all products and requires the service tool Gold edition for each supported product.
- **Perform calibration verification.** The service tool can check any system requiring calibration and, if necessary, calibrate the monitor to match the design specifications. Calibration verification is required to meet the periodic maintenance requirements. This feature is not supported for all products and requires the service tool, Gold edition, for each supported product.
- **Recover devices.** In the rare case where a device can no longer boot because of corrupted firmware, the service tool can connect the device to Welch Allyn Technical Support to reinstall the firmware.
- **Extensible.** The service tool accepts new plug-ins to support future Welch Allyn products.

# 2 Installation

---

This chapter explains how to install the service tool and the other programs included with the service tool: USB driver, Remote Service Delivery System (PartnerConnect), and the RNDISdriver (for Connex Spot Monitor only).

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## System requirements

- **Supported operating systems:** Windows 10, 64 bit
- **Supporting software:** .Net Framework 3.5
- **Processor:** 400 MHz Pentium processor or equivalent (minimum); 1GHz Pentium processor or equivalent (recommended).
- **RAM:** 1 GB (minimum); 2 GB (recommended).
- **Hard disk:** Up to 10 GB of available space may be required.
- **Display:** 800 x 600, 256 colors (minimum); 1024 x 768 high color, 32-bit (recommended)
- **USB:** 2.0 (minimum)
- **Internet connection:** Required to download files.



# Network requirements

When you use the service tool to license or download firmware, network traffic travels over non-registered ports. You must open these ports for TCP/IP and UDP traffic on your PC or network firewall:

Ports	Description
5093, 5094	Welch Allyn licensing server
443	Welch Allyn PartnerConnect server



**NOTE** To open these ports, consult the Service software IT setup table below and your network administrator.

## Service software IT setup

Installed Welch Allyn service component	Required outbound network Domain name IP address Port	Service feature description
Welch Allyn Service Tool (via Windows service called PartnerConnect)	servicehub.iot.hillrom.com/ IP:52.224.38.138:443 HTTP/HTTPS port: 443	Inbound - Used by customers to receive software/device firmware upgrades. Outbound - Used by customers to send device service information.
	IP:12.38.86.181 TCP port: 5094	Used to activate the Service Tool and enable device feature licenses. (This IP address does NOT respond to "ping.")

<b>Installed Welch Allyn service component</b>	<b>Required outbound network</b> <b>Domain name</b> <b>IP address</b> <b>Port</b>	<b>Service feature description</b>
Teamviewer Host	IP: multiple depending on geographic location Default TCP port: 80/443 (can be configured to use TCP port 5938)	Used by Welch Allyn Service personnel to access a customer's machine (with customer's consent/permission) to address device issues.
RNDIS Driver	TCP: 139 UDP: 137, 138, 1900, 5353, 51996, 51997	Port configuration for RNDIS private networks.
<b>File outbound types</b>	.log, .xml, .zip, .txt	
<b>File inbound types</b>	.tar.gz, .tar, .seq, .wsf, .pim, .xml, *.txt, *.pdf	

## Before you begin

All users must complete the following tasks before starting:

- Verify that this computer meets the hardware and software requirements listed in System requirements.
- Verify that you have administrator rights for the computer. The operating system will prompt you for Administrator credentials.

## Installation overview

The installation download for the service tool, which supports a full suite of functional tests, consecutively installs the following programs:

- **USB driver**  
This program allows Welch Allyn devices to connect to a PC for testing.
- **RNDIS driver (Connex Spot Monitor only)**  
The Connex Spot Monitor and the Welch Allyn Service Tool interact via Ethernet over USB technology. This creates a network interface that can be assigned an IP address and otherwise treated as ordinary Ethernet

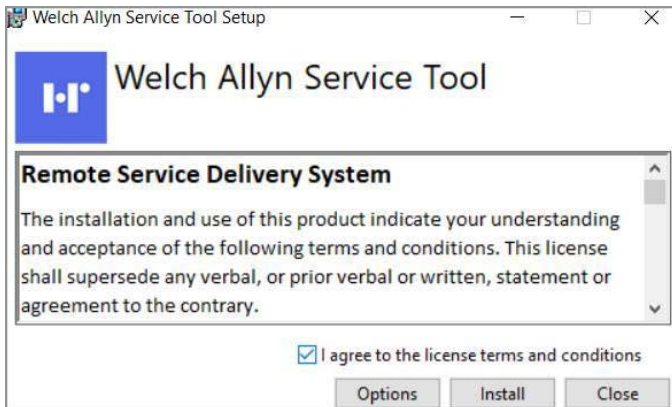
hardware. This interface is used for the Connex Spot Monitor firmware upgrades.

## Download and install the service tool

1. Log in as Administrator.
2. Navigate to the Welch Allyn Service Tool website:  
<https://www.hillrom.com/en/services/welch-allyn-service-tool/>.
3. Scroll to the bottom of the screen and click **DOWNLOAD ZIP** under Service Tool Software.
4. Navigate to your Downloads folder and extract the WAST download.
5. Right-click and select **Run as administrator**.

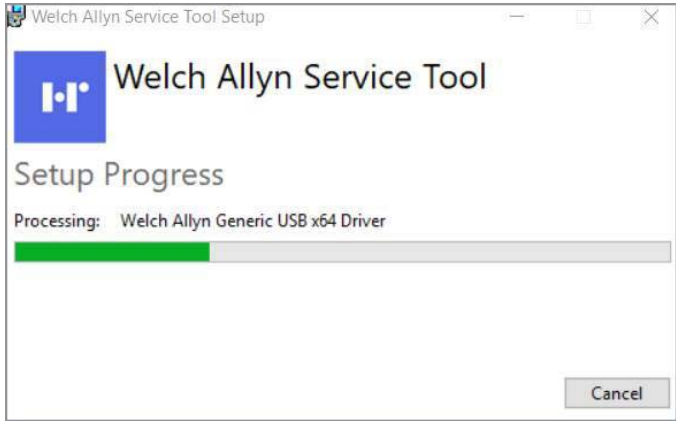


**NOTE** If a Windows security warning notifies you that the publisher cannot be verified, confirm that you want to run the installation program. This security warning displays while opening the zip file as an administrator.

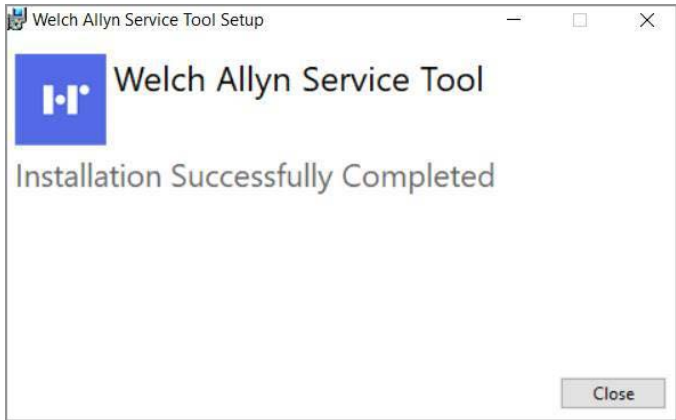


6. Accept the license terms and conditions and click **Install**. The Setup screen appears.

Setup installs the Service Tool and displays a progress bar during installation.



7. The Installation Successfully Completed screen then appears.



8. Click **Close**. Service tool installation is complete.

## Install PartnerConnect software



**NOTE** If you have already installed PartnerConnect, please see the “Removing PartnerConnect software” section for instructions about uninstalling previous versions.

1. Access the PartnerConnect file provided to you. To request the PartnerConnect software, you can contact customer service at:

Phone: +1 800 535 6663

Fax: +1 315 685 4091

Welch Allyn Inc. Corporate Headquarters

4341 State Street Road

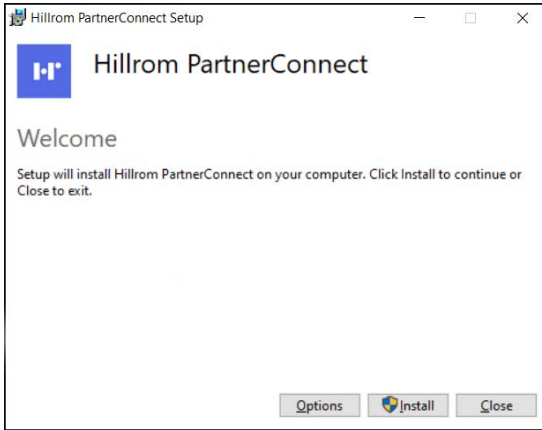
Skaneateles Falls, NY 13153

Or, you can find your nearest location at  
[hillrom.com/en/about-us/locations](http://hillrom.com/en/about-us/locations)

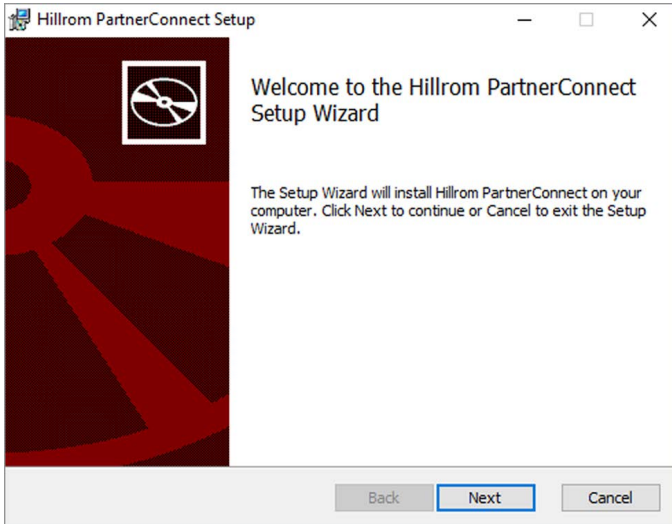
During the interaction with Hillrom support, you will provide a user ID (email address) and password. You will use this login information during the software download and again for the registration process below.

2. Extract the installation program, PartnerConnect.exe, from the zip file.

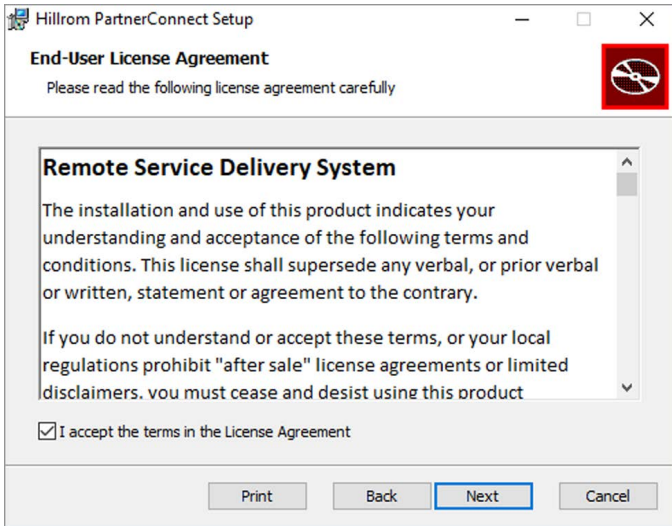
- 3. Double click the PartnerConnect.exe file.  
The Setup screen appears.



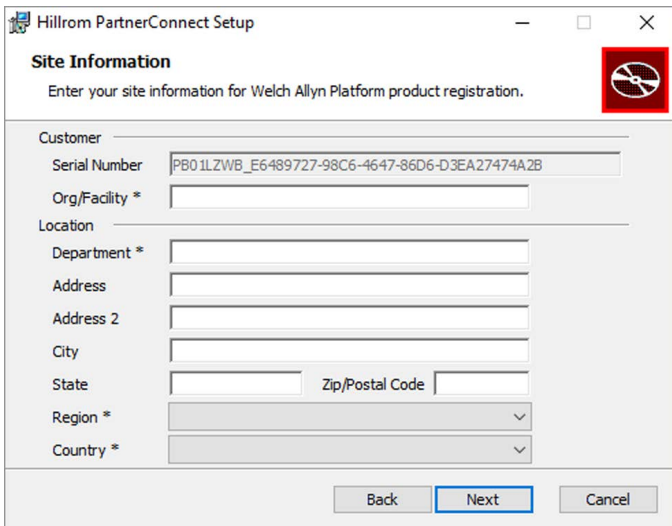
- 4. Click **Install**.  
The Welcome screen appears.



- 5. Click **Next**.  
The License Agreement screen appears.



- 6. Check to accept the license and click **Next**.  
The Site Information screen appears.





**NOTE** After accepting the license agreement, if a previous version of PartnerConnect was installed, you will be prompted to uninstall.

- 7. Enter the site information that you need to register PartnerConnect for your organization.



**NOTE** The following table provides additional details about the fields that you need to complete. This information allows Hillrom to quickly and efficiently locate this system for remote connection.



**NOTE** Ensure that the **Org/Facility** name or any other field does not contain special or non-English characters because PartnerConnect does not support them.

Field	Description
Customer	
Serial Number	This field auto-populates.
Org/Facility*	Enter the organization (customer) name followed by its city and state (for example, ABC Hospital System-New York NY). For more information, see your product documentation.
Location	
Department*	Enter your department information.
Address 1 and 2	Enter the street address or post office box.
City	Enter the city of the organization location.
State	Enter the state or province of the organization location.
Region*	Select a region that matches your location from the pull-down list.



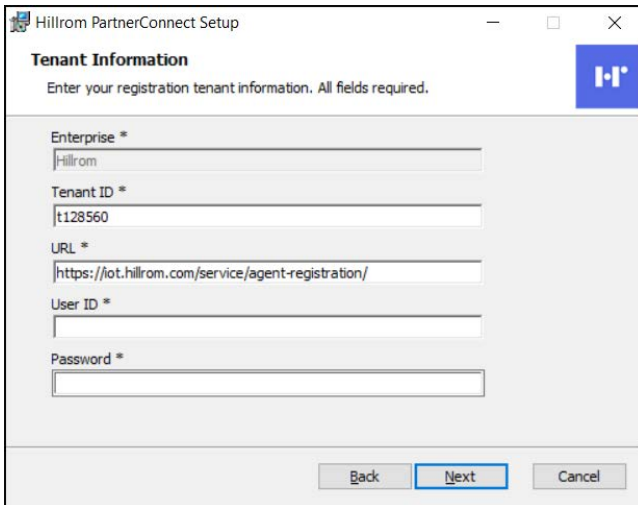
Country\*

Enter the country of the organization location.

\* Required field

- 8. Confirm settings and click **Next**.

The Tenant Information screen appears. See the example below.



The installer will auto-populate the Tenant ID and the end-point URL. Enter the user ID and password used during account setup with Hillrom Support.

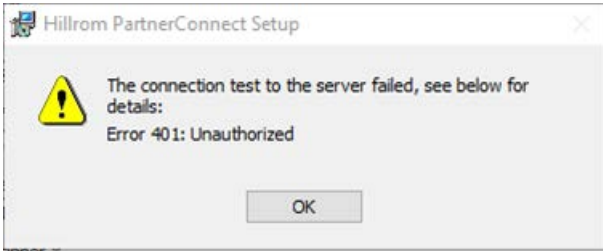
- 9. If you are prompted to uninstall a previous version of PartnerConnect, follow the uninstall prompts and then continue.

- 10. Click **Next**.

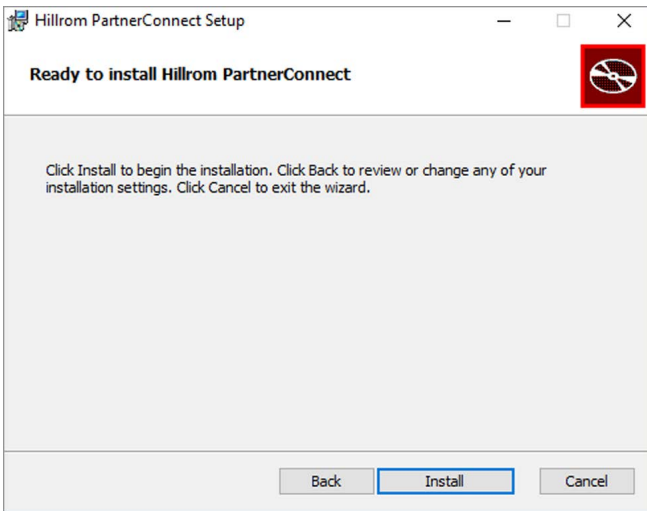
The installer will then perform a connection test to the service platform.



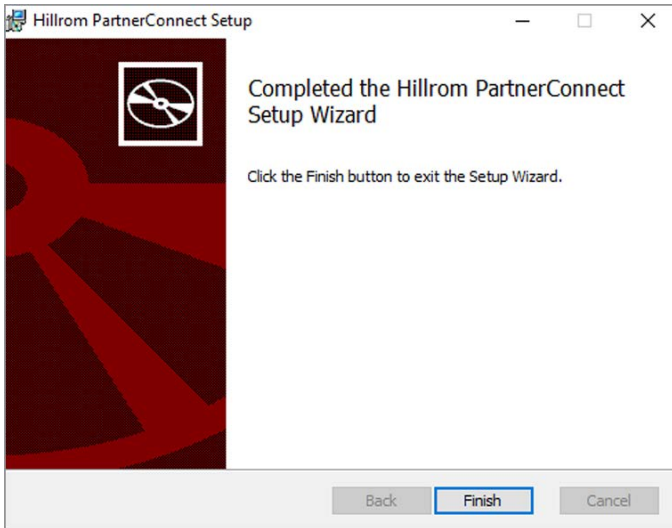
**NOTE** An error message will appear if there is a problem completing this test. See the image below. If you receive this message, please verify your user ID and password are correct, confirm you have Internet access, and try again. Otherwise contact Technical Support.



If no error message appears, the installer is ready to begin the installation.



11. Click **Install** to install PartnerConnect.



Setup verifies a successful installation.

12. Click **Finish** to exit the Setup wizard.

The "Installation Successfully Completed message" displays.

13. Click **Close**.

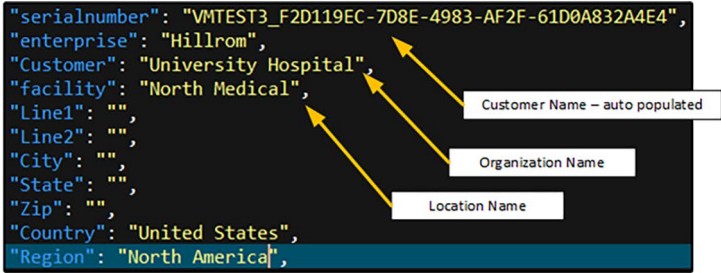


**NOTE** To complete your registration, please contact your Hillrom Support representative to activate your account.

14. To verify the successful installation and registration and to collect registration information for setting up your SmartCare Remote Management access, please obtain the following file: C:\Program Files (x86)\Welch Allyn\PartnerConnect\config\bootstrap.json

The file contains the following information as the result of a successful installation:

```
"serialnumber": "VMTEST3_F2D119EC-7D8E-4983-AF2F-61D0A832A4E4",  
"enterprise": "Hillrom",  
"customer": "University Hospital",  
"facility": "North Medical",  
"line1": "",  
"line2": "",  
"city": "",  
"state": "",  
"zip": "",  
"country": "United States",  
"region": "North America",
```



### Check the Welch Allyn Service Tool installation

After installing the Welch Allyn Service Tool and PartnerConnect, complete the following steps to check your installation:

1. Reboot your computer.
2. Log in as a standard user.
3. Plug in the device to the computer to test connectivity.
4. Enter Administrator credentials when the Service Tool prompts you.

## Moving a device from one PartnerConnect agent to another

If you are moving a device from one PartnerConnect agent to a new or different one, the device will not connect to the new agent until you remove the device from the former agent.

Devices need PartnerConnect to register to SmartCare Remote Management. The Welch Allyn Service Tool (WAST) also uses the PartnerConnect agent with which it is associated and that is on the same computer on which it is installed. Because of this association, sometimes you may need to move a device from one PartnerConnect agent to another.

### Moving a device connected to the Welch Allyn Service Tool

New devices that connect to WAST first before connecting to SmartCare Remote Management will register to the PartnerConnect agent associated with WAST. In this case, contact Hillrom Support to register the new device to SmartCare Remote Management.



**NOTE** You may prevent a new device from registering to the PartnerConnect agent on WAST by stopping the PartnerConnect service on the computer where WAST is installed. For example, you may want to do so if calibration, certificate downloads, or firmware updates are needed. After the work is done, restart the PartnerConnect service.

### Moving a device currently in SmartCare Remote Management

If your device is currently registered in SmartCare Remote Management and it will be used in WAST, then you do not need to take any actions.

The PartnerConnect Agent that works with WAST pulls firmware from the cloud and stores the data locally. Services through WAST only need a local connection, so you do not need to register the device to the PartnerConnect agent.



**NOTE** If you have multiple PartnerConnect agents and, therefore, do need to move the device from one agent to another, you can delete the device in SmartCare Remote Management from the first agent so that it can register to the second agent.

# 3 Operation

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This chapter describes how to operate the service tool.

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## Starting the service tool

To start the service tool, go to the Windows Start menu, and select **All Programs > Welch Allyn > Welch Allyn Service Tool**. Either the simple user interface screen (page 17 ) or the main screen (page 18 ) appears, depending on the configuration.

## Activating a feature or license

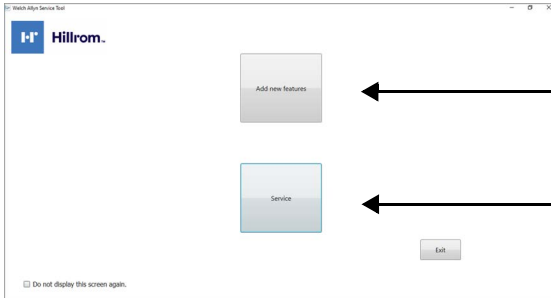
When you purchase a licensed upgrade or option for a supported product, you also receive an authorization code from Welch Allyn. Use this code to activate the new feature(s). You can activate features through the simple user interface or through the Administration menu.

Before you begin, make sure you have the following:

- Computer (see System requirements).
- Welch Allyn medical device requiring a license upgrade.
- USB 2.0/5-pin Mini-B cable, gold, 6 feet.

## Activate through the simple user interface

1. Go to the Windows Start menu, and select **All Programs > Welch Allyn > Welch Allyn Service Tool**. The simple user interface appears:



Simply activate **device features** (with a device license).

Access the full **service tool application** (or activate a Gold license).

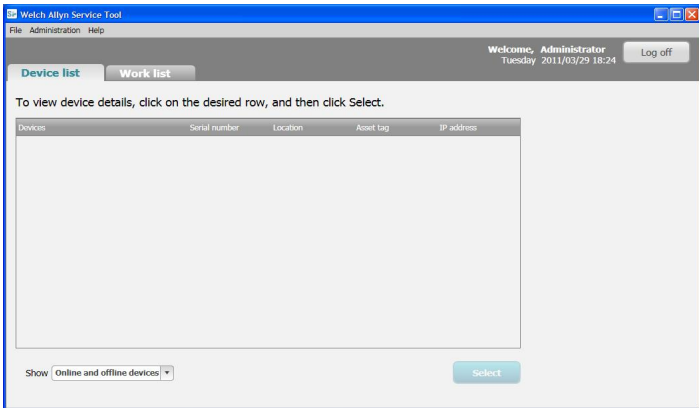


**NOTE** If this is not the screen you see, go to [“Activate through the Administration menu”](#) on page 18.

2. Click **Add new features**.
3. Follow the instructions on the screen. If activation fails, see [“Troubleshoot the activation”](#) on page 19.
4. When activation is complete, disconnect the USB cable from the device, and power down the device as described in its documentation.

## Activate through the Administration menu

1. Go to the Windows Start menu, and select **All Programs > Welch Allyn > Welch Allyn Service Tool**. The main screen appears.



**NOTE** If this is not the screen you see, go to [“Activate through the simple user interface”](#) on page 17.

2. If prompted, log on. For details, see [“Log on for the first time”](#) on page 20.
3. Click **Administration > Install license**. The Install license screen appears.
4. Select **Medical device license**.
5. Connect the USB cable to the mini-B USB port on the Welch Allyn device and the opposite end of the USB cable to the PC.
6. If the device is powered down, power it up.
7. If more than one device is connected, select the device you want to license from the list.
8. Under Connected and maintained devices, click the device and then click **Select**.
9. Enter the authorization code and then click **Activate**. The service tool displays a message verifying a successful activation.  
If activation fails, see [“Troubleshoot the activation”](#) on page 19.
10. Power down the device as described in its documentation.



## Troubleshoot the activation

If the activation does not succeed, check the following, and try again:

- Make sure that you rebooted the device. A new license takes effect only after the device reboots.
- Confirm that you entered the correct authorization code.
- Check your Internet connection.
- Verify that the proper ports are open, as described in [“Network requirements”](#) on page 4.

If activation still does not succeed, contact Welch Allyn Technical Support for assistance.

# Accessing the service tool

## Log on for the first time

1. Go to the Windows Start menu and select **All Programs > Welch Allyn > Welch Allyn Service Tool**.
2. Click **Service**. The Login dialog displays, with ADMIN as the user ID. No password is required for the initial logon.
3. Click **Log on**.
4. Set a password for the ADMIN account:
  - a. From the drop-down menu, select **Administration > Manage accounts**.
  - b. Select **ADMIN** and click **Edit**.
  - c. Click **Change password**. The Change password dialog displays.
  - d. Enter a password in the **Enter new password box**, then confirm the password by entering it again in the **Re-enter** password box.



**NOTE** Record your password and save it in a safe place.

- e. Click **Save**.

You can now use the service tool. For information about creating more user accounts, select **Help > Service Tool help > Menu options > Administration menu**.

# Configuring the service tool

## Disable the simple user interface

You can configure the service tool to bypass the simple user interface when starting. If this interface is disabled, users must activate licenses from the Administration menu.

To disable the simple user interface, do one of these:

- On the simple user interface, select the **Do not show this screen again** check box.
- On the service tool's main screen, select **Administration > Settings**, and clear the **Simple user interface** check box.

## Enable clinician access without logon

You can configure the service tool to allow Clinician functionality without logging on. (Biomed and Admin functionality always requires a log on.)

1. Log on as ADMIN.
2. Go to the service tool's main screen.
3. Select **Administration > Settings**.
4. Select the **Admin** tab.
5. Clear the **Require clinical log on** check box.
6. Click **Save**.
7. Restart the service tool.



**NOTE** This setting takes effect only after the service tool restarts.

# Running the service tool

Before you begin, make sure you have your user ID and password.



**NOTE** The system administrator responsible for the service tool can provide the user ID and password. If you don't have an account, the administrator can create one.

Your account may not require a log in. Accessing Admin or Biomed functions always require a log in.

1. Go to the Windows Start menu and select **All Programs > Welch Allyn > Welch Allyn Service Tool**.
2. (Optional) Click **Service**. The Login dialog displays.
3. Enter your user ID and password, and then click **Log on**.
  - Standard unlicensed edition features are now available.
  - Licensed (Gold) edition features are available, provided you have the following:
    - An installed Gold license.
    - A user account with the Biomed attribute.

## Getting additional information

The service tool includes help that you can use to learn more about the tool's features and functionality.

To access help, log in and select **Help > Service Tool help**.

# 4 Uninstalling applications


---

This chapter explains how to uninstall the service tool and the other programs included with the service tool.

## Removing service tool software

You must have administrative privileges to uninstall service tool software.

### Remove service tool software on Windows® 10

1. Right-click  and select **Apps and Features**.

Windows lists the programs on this computer in Apps & Features.

2. Remove the service tool programs one at a time—Welch Allyn USB driver, PartnerConnect (RSDS), and the Welch Allyn RNDIS driver.
  - a. Select the program.
  - b. Click the **Uninstall** option.

Windows launches the Uninstall program.

To verify that the programs you deleted are removed:

1. Navigate to the uninstall screen.


Windows lists the programs on this computer.

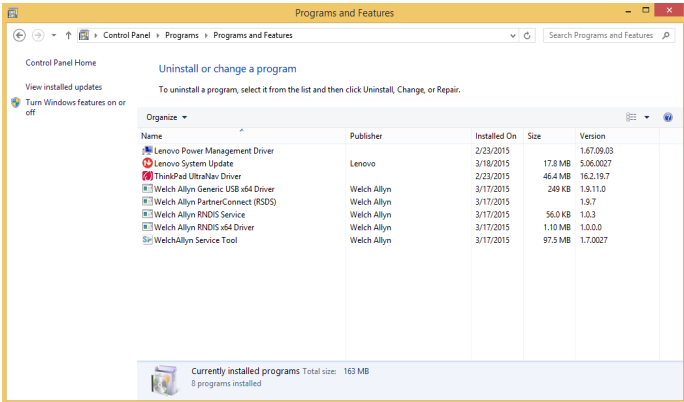
2. Visually inspect to make sure that the programs you deleted no longer appear in the list of programs.

If the programs still appear in the program list, contact your IT department or workstation support and ask if there is anything on the network that prevents program removal.

In certain situations, programs external to Welch Allyn software may block uninstallation. If this is a possibility in your IT environment, contact your IT department to verify whether additional steps are required.

## Remove service tool software on Windows® 7

1. Select  > **Control Panel**.  
The Control Panel appears.
2. Select **Uninstall a program** in the Programs section.
3. Scroll to the following Welch Allyn programs.



4. Remove the programs, starting with Welch Allyn RSDS. For each program:
  - a. Select the program.
  - b. Click the uninstall option.  
Windows launches the uninstall program.
  - c. Follow the prompts to remove the program.



**NOTE** Accept the default values on the Select Options screen.

To verify that the programs you deleted are removed:

1. Navigate to the uninstall screen.  
Windows lists the programs on this computer.
2. Visually inspect to make sure that the programs you deleted no longer appear in the list of programs.


If the programs still appear in the program list, contact your IT department or workstation support and ask if there is anything on the network that prevents program removal.

In certain situations, programs external to Welch Allyn software may block uninstallation. If this is a possibility in your IT environment, contact your IT department to verify whether additional steps are required.

## Removing PartnerConnect software

### Remove PartnerConnect software on Windows® 10

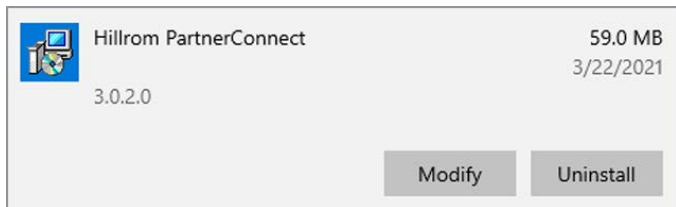
You must have administrative privileges to uninstall PartnerConnect software.

1. Right-click  and select **Apps and Features**.

Windows lists the programs on this computer in Apps & features.

2. Remove the Hillrom PartnerConnect program.

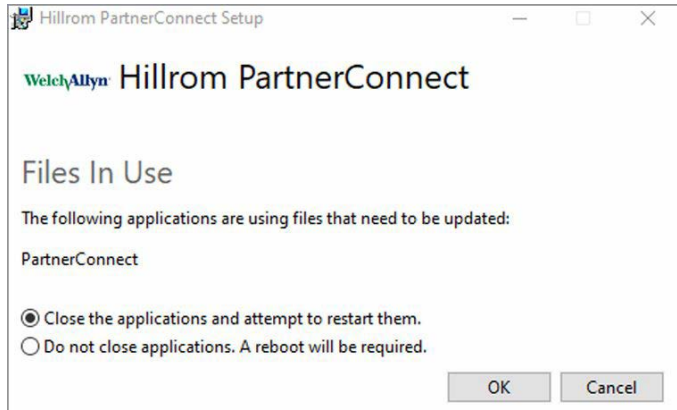
- a. Select the program.
- b. Click the **Uninstall** option.  
Windows launches the Uninstall program.



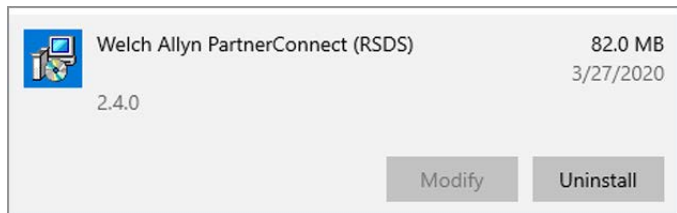
- c. If the Files In Use screen appears, choose the option you want to use.

The first option tries to stop and restart the services. The second

option does not stop the services. You will need to reboot before continuing with the uninstallation.



- d. Follow the prompts to remove the program. When the uninstallation is complete, a confirmation screen appears.
  - e. Click **Close**.
  - f. The Hillrom PartnerConnect uninstall program will prompt you to reboot the computer. You can reboot later, but you must reboot to complete the uninstall.
3. If you still have the Axeda Desktop Server and Welch Allyn RSDS programs on your computer, remove them. For each program:
- a. Select each program.
  - b. Click the **Uninstall** option. Windows launches the Uninstall program.



- c. Follow the prompts to remove the program. When the uninstallation is complete, a confirmation screen appears.



- d. Click **Close**.
- e. The Axeda Desktop Server uninstall program will prompt you to reboot the computer. You can reboot later, but you must reboot to complete the uninstall.

To verify that the programs you deleted are removed:

1. Navigate to the Windows Uninstall screen.  
Windows lists the programs on this computer.
2. Visually inspect to make sure that the programs you deleted no longer appear in the list of programs.

If the programs are not in the program list, they are now removed from your computer.

If the programs still appear in the program list, contact your IT department or workstation support and ask if there is anything on the network that prevents program removal.

In certain situations, programs external to Hillrom software may block uninstallation. If this is a possibility in your IT environment, contact your IT department to verify whether additional steps are required.





