Welch Allyn Service Tool

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Installation and Configuration Guide

WelchAllyn®

Advancing Frontline Care™

For information about any Welch Allyn product, contact Welch Allyn Technical Support: www.welchallyn.com/about/company/locations.htm.

Contents

1 Introduction

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).

System requirements

- **Supported operating systems**: Windows XP with SP3, Windows 7, Windows 8.0, and Windows 8.1.

- **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.

- **CD ROM drive**

- **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
5920	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 WelchAllynRSDSGateway)	welchallynsolutions.com IP:209.202.167.28 HTTP/HTTPS port: 80/443	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: 5094/5095	Used to activate the Service Tool and enable device feature licenses. (This IP address does NOT respond to "ping.")

Installed Welch Allyn service component	Required outbound network Domain name IP address Port	Service feature description
Connex Server (via Windows service called WelchAllynRSDSGateway)	welchallynsolutions.com IP:209.202.167.28 HTTP/HTTPS port: 80/443	Inbound - Used by customers to receive software/device firmware upgrades. Outbound - Used by customers to send device service information.
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.
ConnexDashboard	https://connexdashboard.com IP: 209.202.186.109 HTTP port: 443	Used by customers to view the status of their devices and deploy firmware upgrades and device configurations. The portal requires prior account setup.
RNDIS Driver	TCP: 139 UDP: 137, 138, 1900, 5353, 51996, 51997	Port configuration for RNDIS private networks.

File outbound types	.log, .xml, .zip, .txt
File inbound types	.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.

- Close all programs before starting the installation.

- If you have a previous version of the service tool installed on your PC, you can uninstall it as described in "Uninstalling applications" on page 21 or allow the Service Tool to uninstall it when you run the installation setup.

Note   Attention Windows XP users

Elevated privileges do not exist in Windows XP. Based on articles from MS Technet and MSDN forums, elevated privileges, commonly known as "RUN AS ADMINISTRATOR," were not introduced in the MS Windows product line until the Vista and Server 2008 product lines. As a result, attempting to nstall the 1.8 version of the Welch Allyn Service Tool (WAST) without a functioning local XP Administrator account can prevent the WAST from connecting to the CSM with the right USB drivers and permissions.

Under XP, the 1.8 version of WAST will not install USB drivers properly unless the actual local to the machine administrator account is used to remove old software and drivers while installing the new version of WAST. Furthermore, using an account with "administrator equivalent" rights on the local machine isn't likely to work for two reasons: 1) some of the uninstall/install process calls inherit improper user rights in the environment, and 2) those process calls lack proper privileges in the registry and file locations during that installation process.

To align with Microsoft's XP lifecycle policy guidelines, Welch Allyn recommends using MS Windows version 7 and higher and ensuring that "RUN AS ADMINISTRATOR" is selected when running setup.exe from WAST 1.8.

Alternatively, if you must use XP, you must also use the local administrator account with the local administrator password.

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.

- **PartnerConnect**
  This tool remotely monitors your Welch Allyn Platform systems and devices. It captures operating information (not clinical data) and periodically sends it to Welch Allyn. Welch Allyn then analyzes the information to assist in remotely troubleshooting a device or to automatically notify you about issues such as a need for equipment replacement.

- **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: www.welchallyn.com/en/service-support/service-center/service-tool.html.

3. Scroll to the bottom of the screen and click **DOWNLOAD** under Service Tool Software.

4. Start Windows Explorer and open the WAST download.

5. Double-click **setup**.
   The installation package downloads, and the Welcome screen appears.

6. Click **Next**. A Previous Versions screen appears with the following message: "Any previous versions of WAST will be uninstalled if you continue."

7. Click **Next**. The Select Installation Folder screen appears.

   ⚠ **Caution**   You must use the default installation location. Failure to do so may may provide undesired results when you run the software.

8. Click **Next**. This accepts the default installation location. A Confirm Installation screen appears.

9. Click **Next**. Setup installs the Service Tool and displays a progress bar during installation. The Installation Complete screen then appears.

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

Installation continued: USB driver

The Setup program automatically starts the USB driver installation, and the Welcome screen appears.

1. Click **Next**. The Install Location screen appears.

2. Identify where you want to install the driver. The default location is as follows:

    ```
    {ProgramDirectory}\Common Files\Welch Allyn\Drivers\
    ```
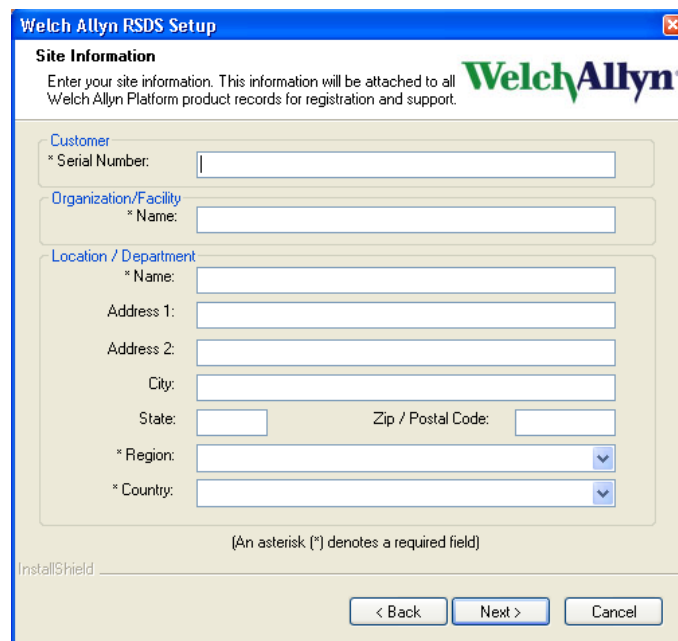
    Note   Your default location may differ slightly.

3. Click **Next**. Setup displays a Ready-to-install screen, providing an opportunity to ensure that the settings are correct before proceeding.

4. Click **Install**. Setup installs the files you selected. The InstallShield Wizard Completed screen then appears.

5. Click **Finish**. The Installation Complete screen appears.

6. Click **Close**. The USB driver installation is complete.

Installation continued: PartnerConnect® (RSDS)

The Setup program automatically starts the RSDS installation, and the Welcome screen appears.

1. Click **Next**. The License Agreement screen appears.

2. Accept the license agreement, and click **Next**. The Site Information screen appears.

3. In the serial number field, enter 1234567890.

4. Enter the rest of the information as shown in the next table. Information entered in this screen is attached to all Welch Allyn Platform product records.

Field	Description
Organization/ Facility *	Enter the organization (customer) name. Example: ABC Hospital System.
Location/ Department *	Enter the location code or the department name. Example: 3NW, ER, 7NTower. If HIS is used, enter the HIS location code.
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 the region of the organization location.
Country *	Select the country of the organization location.

*   Required field.

5. Click **Next**. The Setup program displays the settings you selected, providing an opportunity to ensure that the settings are correct before proceeding.

6. Click **Next**. The InstallShield Wizard Complete screen appears.

7. Click **Finish**. The Installation Complete screen appears. You have successfully installed PartnerConnect.

Installation continued: RNDIS driver

The Setup program automatically starts the RNDIS driver installation, and the Welcome screen appears.

1. Click **Next**. The Install Location screen appears.

2. Identify where you want to install the driver. The default location is as follows:

   `{ProgramDirectory}\Common Files\Welch Allyn\Drivers\`

   Note   Your default location may differ slightly.

3. Click **Next**. Setup displays a Ready-to-install screen, providing an opportunity to ensure that the settings are correct before proceeding.

4. Click **Install**. Setup installs the files you selected. The InstallShield Wizard Completed screen then appears.

5. Click **Finish**. The Welch Allyn RNDIS Service Setup Welcome screen appears.

6. Click **Next**. Setup displays the Select Installation Folder screen.

7. Identify where you want to install the service. The default location is as follows:

   `{ProgramDirectory}\Welch Allyn\Welch Allyn\RNDIS Service\`

   Note   Your default location may differ slightly.

   To save the RNDIS service in a different folder, either enter it in the field or click **Browse** and select a location.

8. Click **Next**. Setup displays a Confirm Installation screen.

9. Click **Next**. The Installation Complete screen appears.

10. Click **Close**. The RNDIS Service installation is complete,

Final steps

After installing the Welch Allyn Service Tool, 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.

3 Operation

This chapter describes how to operate the service tool.

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 15) or the main screen (page 16) 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).
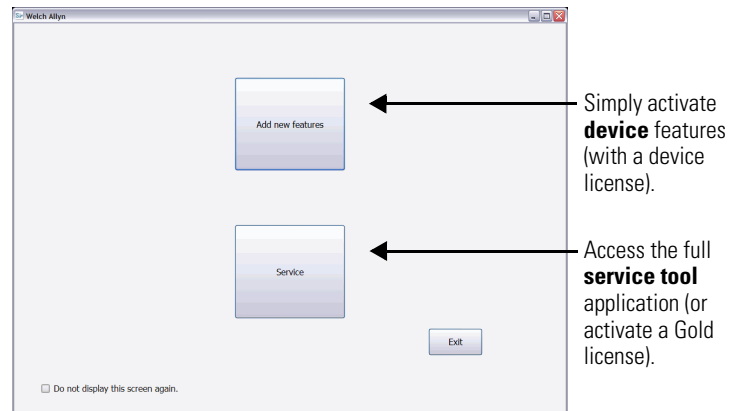
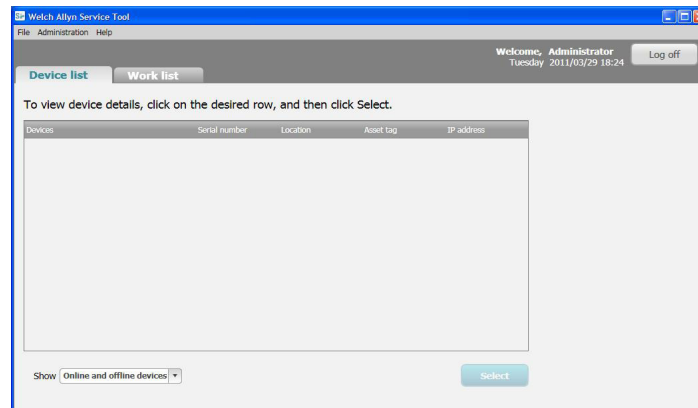**Note**   If this is not the screen you see, go to "Activate through
the Administration menu" on page 16.

2. Click **Add new features**.

3. Follow the instructions on the screen. If activation fails,
   see"Troubleshoot the activation" on page 17.

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 15.

2. If prompted, log on. For details, see "Log on for the first time" on page 18.

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 17.

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 5.

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.

To remove the service tool and the other programs included with the service tool—Welch Allyn USB driver, PartnerConnect (RSDS), and the Welch Allyn RNDIS driver:

1. Open the Control Panel using one of these methods:

    *   **Windows 8**: Select 🏁 > **Control Panel**.

    *   **Windows 7**: Select 🏁 > **Control Panel**.

    *   **Windows XP**: Select **Start** > **Settings** > **Control Panel**.
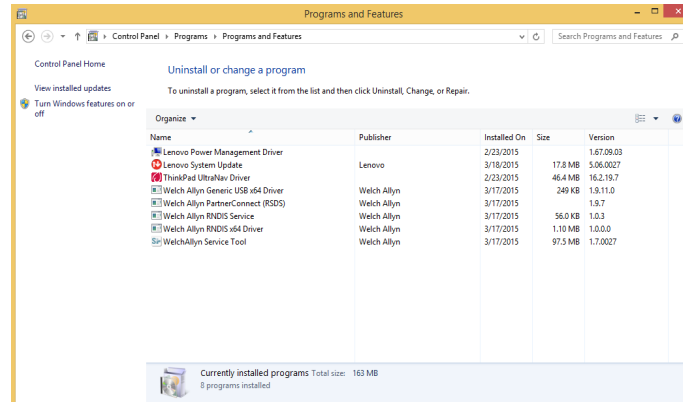
    The Control Panel appears.

2. Open the Add or Remove Programs dialog using one of these methods:

    *   **Windows 8**: Select **Uninstall a program** in the Programs and Features section.

    *   **Windows 7**: Select **Uninstall a program** in the Programs section.

    *   **Windows XP**: **Select Add or remove programs**.

    Windows lists the programs on this computer.

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.

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