

Welch Allyn Connex[®] VM data management system

Installation guide



Advancing Frontline Care™

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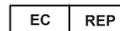
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Connex VM 2.0 Installation Guide



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Contents

Overview	1
About this guide	1
Installation flowchart	2
Requirements	3
Installing the Connex VM system	7
Server	7
Clients	14
Configuring Connex VM and vital signs devices	21
Configure the Connex VM system	21
Configure Welch Allyn devices	22
Troubleshooting	25
Manually activating the Connex VM license	25
Verifying a console connection	26
Verifying the SQL Server version	27
Symptoms and solutions	28
Location Management for Connex VM (1.0, 1.1, and 2.0)	31
Before you begin	31
Performing Location Management	32
Uninstalling programs	37
Remove the Connex VM application	37
Remove PartnerConnect software	38

Overview

Connex VM is a software system that clinicians use to collect patient data from a variety of vital signs devices, manually enter data, review data and, optionally, send data to a hospital information system.

About this guide

This guide describes how to install the Welch Allyn Connex VM system software.

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

For related procedures, such as configuring vital signs devices for connectivity or configuring the wireless radio, see separate instructions for the specific product.

While this guide mentions HL7 connectivity, installation of the corresponding software module (Corepoint Health software) is optional and beyond its scope. For details on HL7 connectivity, contact your Welch Allyn service representative.

Symbols

Documentation symbols



Caution Caution statements in this manual identify conditions or practices that could result in damage to the equipment or other property.

Miscellaneous symbols



Manufacturer



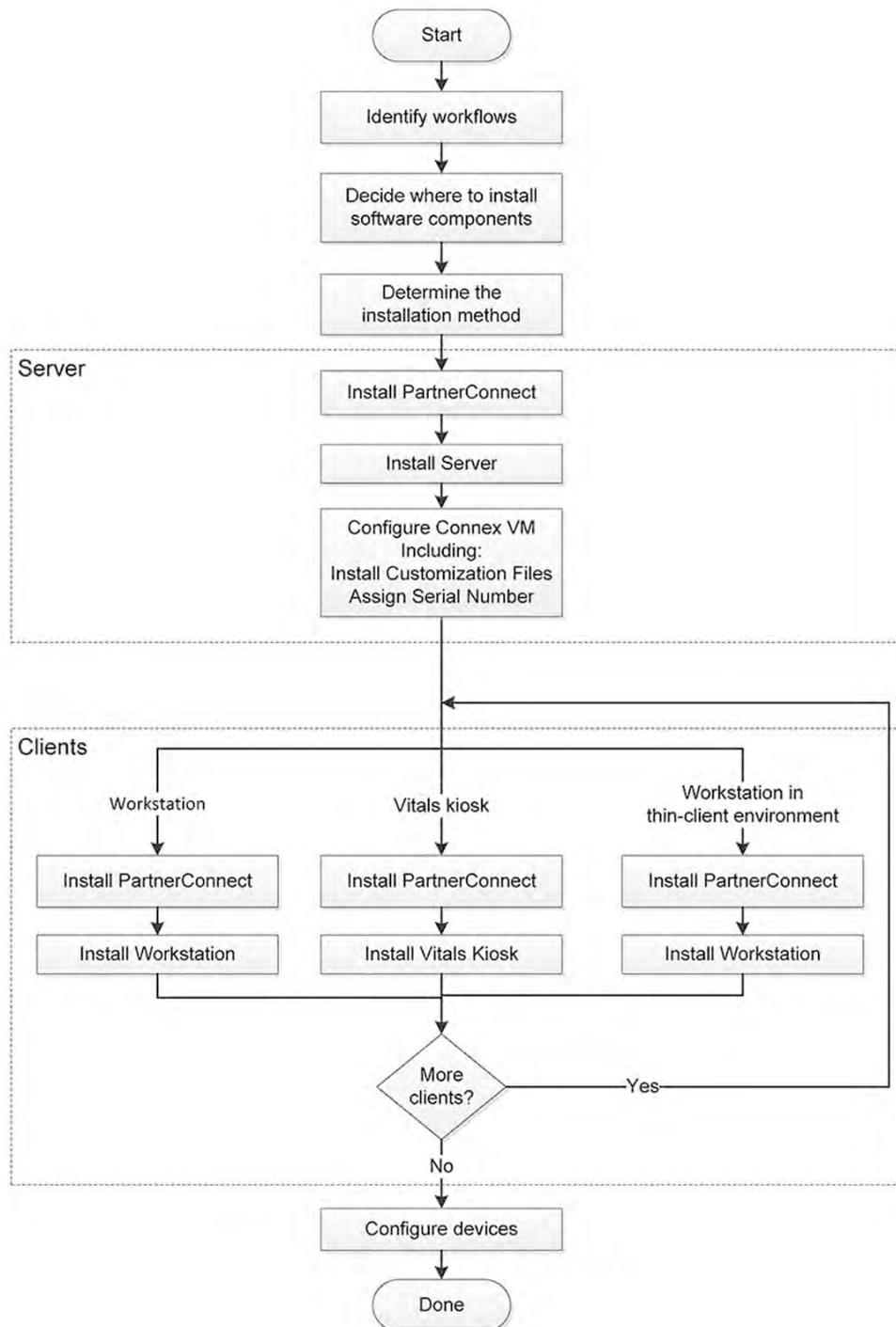
Meets essential requirements of European Medical Device Directive 93/42/EEC



European Community representative

Installation flowchart

Install Connex VM as shown in the next figure. The remainder of this guide details the process shown in the flowchart.



Requirements

Workflows

Before installing the Connex VM system, identify the workflows you plan to use to capture vital signs from Welch Allyn devices. The following summarizes the characteristics of each workflow. For more information, see the corresponding *Welch Allyn Partners in Care Workflow Quick Reference Card*.

Workflow	Description	Available devices
Wireless	Supports a vital signs device with a wireless radio. The device also enables clinicians to enter patient identification either manually or from a barcode scanner. The clinician sends readings directly from the device to the server. No workstation user interface is needed. The server sends the data immediately to the hospital information system. Typically the device is mobile and running on battery power.	Spot Vital Signs LXi, Connex Vital Signs Monitor 6500, Connex Vital Signs Monitor 6400 with internal radio upgrade
One per bed	Supports a vital signs device with an Ethernet connection. The device also enables clinicians to enter patient identification either manually or from a barcode scanner. The clinician sends readings directly from the device to the server. No workstation user interface is needed. The server sends the data immediately to the hospital information system. Typically the device is stationary and plugged in to an electrical outlet.	Connex Vital Signs Monitor 6000 Series
Batch upload	Supports a vital signs device that enables clinicians to enter patient identification either manually or from a barcode scanner. The clinician uses the device to capture multiple patients' vital signs. The clinician then connects the device to a workstation or kiosk via USB and imports all readings at once. The server sends the data immediately to the hospital information system. Typically the device is mobile and running on battery power.	Spot Vital Signs LXi, Connex Vital Signs Monitor 6000 Series
Mobile computer	Supports a vital signs device and a workstation mounted together. Both the device and a barcode scanner are connected to the workstation. The clinician uses the client application to start vital signs readings and enter additional patient data. After the clinician saves the data, the server sends the data immediately to the hospital information system.	Spot Vital Signs, Spot Vital Signs LXi, Vital Signs Monitor 300, Connex Vital Signs Monitor 6000 Series, Connex ProBP 3400
Monitoring	Supports a device capable of continuous vital signs monitoring. The device monitors a single patient. The device also enables clinicians to enter patient identification either manually, using a barcode scanner, or the client application. The clinician then uploads the readings to the server which sends the data immediately to the hospital information system.	Vital Signs Monitor 300, Connex Vital Signs Monitor 6000 Series
Triage	Supports a device that is permanently attached to a workstation. A barcode scanner might also be attached to the workstation. The clinician uses the	Spot Vital Signs, Spot Vital Signs LXi, Vital Signs Monitor 300, Connex Vital

Workflow	Description	Available devices
	client application to start vital signs readings and enter additional patient data. After the clinician saves the data, the server sends the data immediately to the hospital information system.	Signs Monitor 6000 Series, Connex ProBP 3400

Software components

After identifying the applicable workflows for this installation site and before installing the Connex VM system, determine which software components to install on each machine in your system.

- **Server:** Stores data sent to this machine from vital signs devices or clients.
 - Note** To support your workflows, you must install the server component on one machine at your site. If your site needs more than one server, contact Welch Allyn Technical Support.
- **Clients:** Depending on the workflows you selected, your site can have from none to any number of workstations, thin clients, and vitals kiosks. Install one of the following components on a given machine, based on the workflow assigned to that machine.
 - **Workstation:** Can either display information processed by Connex VM and perform Administrator activities (which are not part of vital sign capture workflow), or pull data from a vital signs device onto this machine and send it to the server as part of the *Mobile computer* and *Batch upload* workflows.
 - Note** Welch Allyn recommends installing at least one Workstation to access administrative functions without using the interface on the server.
 - **Thin client:** The Connex VM workstation, configured for a multi-user system (Citrix Server or Microsoft Remote Desktop Services Server). You install the thin-client component on the virtual desktop server. This applies only to the use of thin clients used in a device-capture process when interfacing through the client application.
 - Note** Thin clients that do not have a serial port available require the Welch Allyn Virtual Channel Client (VCC) software (part number 103945).
 - **Vitals kiosk:** Allows a vital signs device to push data to this machine which then sends it to the server.

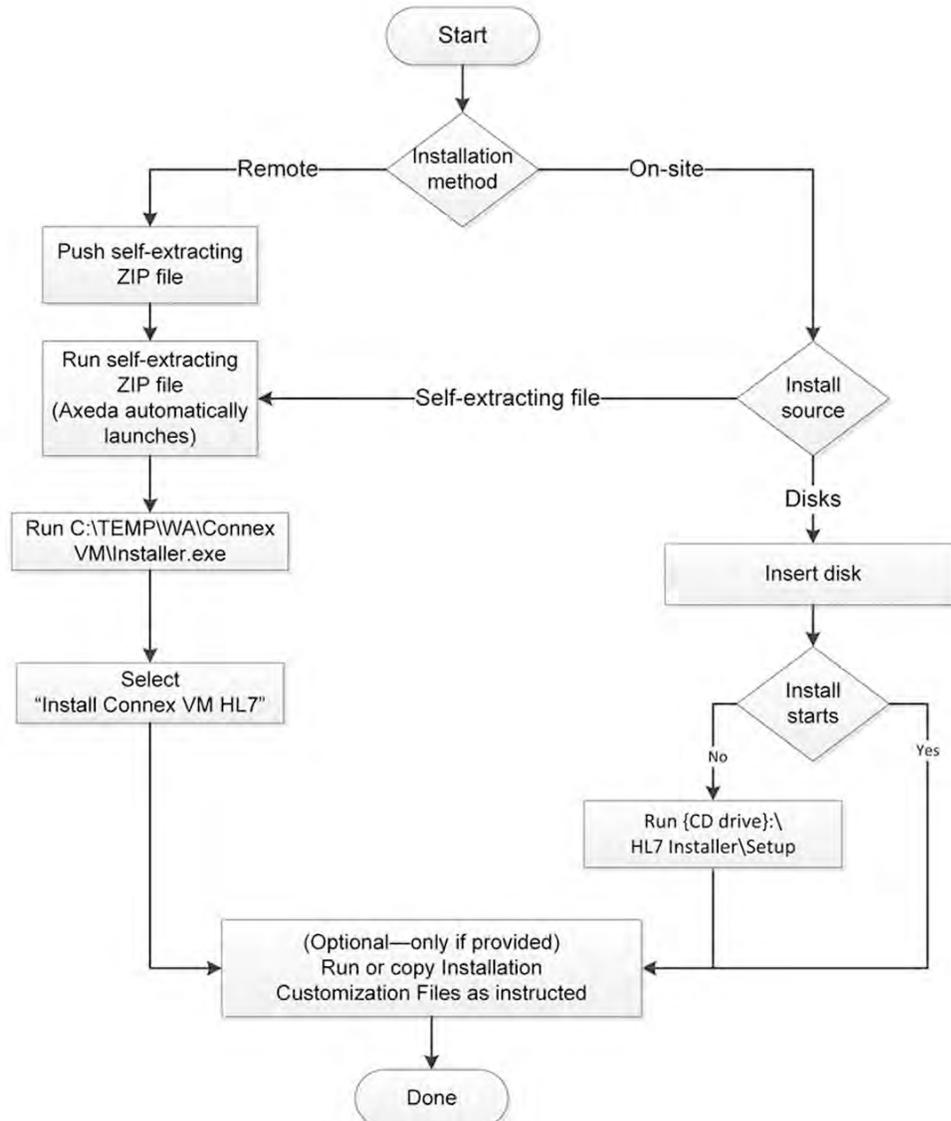
Installation method

Before installing the Connex VM system, determine how to install it, and acquire the resources identified in the following:

- **Remote installation:** Provides product installation without being at the site. Requires a self-extracting ZIP file.
- **Onsite installation:**
 - **Disks:** Offers the simplest installation process, but also requires physical access to each machine. Requires product disks.
 - **Self-extracting file:** Provides a faster installation than the product disks. Requires a self-extracting ZIP file that contains the installation files.

Note The self-extracting ZIP file can be found as a package in PartnerConnect® or in SAP (50010751).

The following flowchart details the process for the installation methods:



PartnerConnect software

PartnerConnect software enables remote support and provides remote resource monitoring.

Welch Allyn recommends that you install PartnerConnect software on each machine on which you plan to install a Connex VM component. For installation instructions, see the *PartnerConnect[®] installation guide* (part number 80016392). You can download the software and the installation guide at <http://www.welchallyn.com/promotions/services/PartnerConnect.htm>.

When the PartnerConnect installation program prompts you for a serial number and customer name, enter the information as described in the next section.

Manufacturing checklist

“Appendix A - Manufacturing Checklist” of the *Order Fulfillment Document* (part number 70021118) is in the envelope containing the CD and DVD.

Enter the following information on the Site information screen:

- ① **System Serial Number:** Enter this number in the Serial Number field.
- ② **Customer Name:** Enter this value in the Name field.

Appendix A -- Manufacturing Checklist
[To be completed by Manufacturing]

Sales Order Number {Order number}	System Serial Number {7-digit Serial Number}	Customer Name {Organization/Facility name}
NMR ID <input type="checkbox"/> NA [check NA if no NMR's]		Authorization Code {authorization code}

Description	N/A	Result	NMR ID
Verify all material on s are present.	<input type="checkbox"/>	<input type="checkbox"/> P <input type="checkbox"/> F	
Verify DHR content is complete.	<input type="checkbox"/>	<input type="checkbox"/> P <input type="checkbox"/> F	
Manufacturing Technician		Date	
Print Name			
Signature			

Note: If a fail occurs check F in the Results field, and write the NMR ID in the adjacent cell. After the NMR is resolved, initiate a new checklist and write the NMR ID in the header NMR ID box. If no NMR occurs leave the NMR ID field blank.

Installing the Connex VM system

Server

The server component is required. Install the server before installing any client components.

Install the server

Before you begin

Note An internet connection is required for a remote installation. In an initial installation, no PII (Personal Identification Information) exists until your Connex VM system is operational and live.

- Make sure PartnerConnect software is installed on the target machine. For installation information, see “PartnerConnect software.”
- Make sure you have any applicable Technical Service Bulletin (TSB) or Customer Service Bulletin (CSB) related to the Connex VM installation.
- Obtain the server ID—the IP address, machine name, or Domain Name System (DNS) name. If you don’t know this information, ask your IT department.
- Decide where to store the data. The Connex VM Setup program offers SQL Server 2008 Express, the free edition of SQL Server, which is intended *only* for demonstration and test systems. This version limits the size of the database to 4 gigabytes, limits memory usage to 1 gigabyte, and can use only one physical processor.

For a production system, you must use one of the other SQL Server editions listed in *Connex VM Technical System Requirements* (80016022).

- Before installing the Connex VM server component in a production system, do the following:
 - Make sure that .NET Framework 3.5 SP1 is installed.
 - (Recommended) Install .NET Framework, version 4.0.
 - Make sure that MSMQ (Microsoft Message Queuing) is installed. For installation information, see “Installing MSMQ” in the HL7 installation guide.
 - Make sure that the SQL Server instance is installed, operational, reachable, and allows sufficient privileges. The SQL Server can be located on a different system from the Connex VM server.

The following SQL Shared features must be installed:

- Client Tools SDK
- SQL Client Connectivity
- SQL Server Management Studio (SSMS)

The SQL Server must be configured for mixed-mode authentication.

Connex VM does not require Integration Services, SQL Server Books Online, or Microsoft Sync Framework.

- Gather the following information:

Directory path to the SQL Server instance you plan to use
 SQL Server name
 SQL user name
 SQL password

If you don't know this information, ask your IT department.

- Verify that the account being used during the installation has sysadmin privileges on the SQL server target.

- If you are upgrading from a previous version of Connex VM:

- Back up lservrc, your Connex VM license file. The file location varies by operating system:

- **Windows 2003 Server:** C:\Documents and Settings\All Users\Application Data\Welch Allyn
- **Windows 2008 Server:** C:\ProgramData\Welch Allyn

Note By default, the ProgramData folder is hidden.

- Back up the Corepoint license file. This file, which has an LIC extension, is stored on your system. Example names:

NeoBrowse.lic
 NeoBrowse96.lic
 NeoIntegrate.lic
 NeoIntegrate5920.lic

You can find the file in one of these directories:

- C:\Program Files\Corepoint Health\Corepoint Integration Engine
- C:\Program Files (x86)\Corepoint Health\Corepoint Integration Engine

- Back up the existing Connex HL7 installation. For more information about backing up Connex files and Connex HL7 databases, see the "Connex VM Administrators Guide" (80015957).

- If you plan to install remotely, make sure the installation software is on the system where you plan to install the server.

- If you plan to use installation customization files, make sure those files are copied to the following location:

C:\TEMP\WA\Connex VM\Install Customization

- Ensure that this computer meets the hardware and software requirements listed in *Connex VM Technical System Requirements* (80016022).

- Make sure that you have administrator rights for the computer.

- Make sure that you have a direct console connection, either via PartnerConnect or an actual console connection.

Note To determine whether you have console connection, see "Verifying a console connection" in "Troubleshooting."



CAUTION Do not use a remote desktop connection.

- Close all programs before starting the installation.

Install the software

1. Start the Setup program as required by the installation method you selected:
 - **Remote:** Extract ConnexVM2.0.exe, the self-extracting ZIP file located in C:\TEMP\WA, then run C:\TEMP\WA\Connex VM\Installer.exe.
 - **Onsite:**
 - **Self-extracting ZIP file:** Launch the file to extract it, then run C:\TEMP\WA\Connex VM\Installer.exe.
 - **Installation media:** Place the installation media (such as a CD, DVD, or flash drive) in your computer. If AUTORUN is disabled or the Setup program does not start, open the Setup.exe file on the installation media.

The Setup program evaluates your computer and does one of the following:

- If .NET Framework (version 4.0) and the .NET hotfix are already installed on your computer, Setup displays the Welcome screen. Go to Step 4.
 - If .NET Framework (version 4.0) is already installed, but the .NET hotfix is not installed, Setup displays the hotfix dialog box. Go to Step 2.
 - If your computer does not have .NET Framework (version 4.0), Setup installs .NET Framework. This process might take up to 45 minutes. Go to Step 2.
2. Accept or decline the .NET hotfix according to the policies and preferences of your facility.

Note The desired option is completely dependent on customer preference and has no impact on the operation of Connex VM software. If there is no preference, accept the hotfix.

- If you accept, Setup installs the hotfix and then continues the Connex VM installation.
 - If you decline, Setup continues the Connex VM installation.
3. If Setup prompts you to restart, do the following:
 - a. Click **OK**. Setup restarts your computer. If the Welcome screen automatically appears, go to step 4.
 - b. Open the `setup.exe` file on the application media. The Welcome screen appears.
 4. Click **Next**.

The License Agreement screen appears.
 5. Accept the license and click **Next**.

The Install type screen appears.
 6. Select **Server** and click **Next**.
 - If SQL Server 2008 Express is already installed on your computer, Setup displays the Server Address screen. Go to Step 9.
 - If your computer does not have SQL Server 2008 Express, Setup displays the Database Server screen. Go to Step 7.
 7. Specify whether you want to install SQL Server 2008 Express.

Note This database server is intended only for demonstration and test systems only. Do not install or use it in a production system.



(Unchecked). Select this option for production systems. Selecting this option does not install SQL Server 2008 Express. You must manually

identify the SQL Server you want to install the Connex VM instance and database on.



(Checked) Installs SQL Server 2008 Express. Select this option if you plan to store collected data in this database. Installation might take up to fifteen minutes.

Note If you are updating from a previous version of Connex VM software, Setup upgrades your database. Your data is retained. This applies only to the Connex VM database (with a default name of “WADB”). It does not upgrade HL7 components. For more information, see the “Connex VM HL7 Installation Guide” (part number 20011625).

8. Click **Next**.

The Server Address screen appears.

9. Enter one of these to identify the Connex VM server for DCP use:

If you don't know this information, ask your IT department.

Server ID	Description
IP address	The server's IP address. You can select the address from the drop-down combo box or enter the address in ###.## format.
Machine name	The server's computer or Active Directory (AD) name. You can find this name in the System Properties window. You can access this window by right-clicking My Computer and selecting Properties or through the Control Panel. Access through the Control Panel varies, based on operating system and view configuration.
DNS name	The server's DNS name.

10. Click **Next**.

Setup installs SQL Server 2008 Express (if specified) and continues the Connex VM installation. The Connex VM installation screen appears.

11. Click **Next**.

The Destination Folder screen appears.

12. Identify where you want Setup to install the server software.

The default location is as follows:

- **32-bit OS:** \Program Files\Welch Allyn\Connex VM\
- **64-bit OS:** \Program Files (x86)\Welch Allyn\Connex VM\

13. Click **Next**.

The SQL Server Connection screen appears.

14. Enter the SQL Server name, database name, and security credential to use for SQL script execution during installation.

A SQL Server might have more than one instance, each of which can contain one or more databases. This step enables you to select the specific SQL Server and instance on which to

install the database provided by the installation. You can also name the database (the default name is WADB).

If you don't know this information, ask your IT department.

Server ID	Description
SQL Server Name	The name of the SQL server used to store Connex VM data. If you are using a different SQL server, supply the path to the SQL server instance being used. For example, " <i>ServerMachine\SQLInstance</i> ". If you are using the version installed by the Setup program, the server name is ".\SQLEXPRESS".
Database Name	The name of the Connex VM database.
Database Authentication	Select one of these: <ul style="list-style-type: none"> Windows NT Authentication (default). If you are using the SQL Server Express version installed by the Connex installation process, select this option. SQL Authentication (seldom used). If you select this option, you must provide the SQL user name and password. <p>Note If you are using a SQL server not installed by the Setup program, choose the method appropriate for your installation. Make sure the SQL Server is configured for mixed-mode authentication.</p>

15. Click **Next**.

Setup installs the server components of workstation software and then displays the License Activation screen.

16. Enter the authorization code provided in "Appendix A - Manufacturing Checklist" of the *Order Fulfillment Document* (70021118). This document is in the envelope containing the CD and DVD and can also be found in the Project Document Repository available to Welch Allyn resources.

17. Verify that the Connex VM database is created:

Note Do not close the installation. Instead, pause, open SSMS separately, verify, then close SSMS and return to the installation process.

- Launch the SQL Server Management Studio (SMSS).
- Select your database instance.
- Click the database name, either **WADB** (default) or the name you entered during installation.

The folder expands. If a series of tables appear in the expanded folder, the database is installed.

If the databases are not found, stop and contact Technical Support.

18. Click **Activate License** to submit the authorization code.

After the code is accepted, Setup displays a message that verifies a successful installation. If license activation fails, consult the troubleshooting section of this guide, or activate the license manually as described in "Manually activate the Connex VM license."

19. Click **Finish**.

Server installation is now complete.

20. Create a new query.

a. Select **File > New > Query with Current Connection**.

b. Type the following in SSMS:

```
USE [xxx]
```

```
DENY SELECT ON dbo.sysfiles to [WelchAllynDbUsers];
```

```
GO
```

where xxx is the database name, either **WADB** (default) or the name entered during installation.

c. Press **F5**.

This corrects the situation where EGS is not installed and provides access to the admin tools, allowing you to assign the serial number avoiding any errors.

If an error message appears, type the following in SSMS, using the same value for xxx as used above:

```
USE [xxx]
```

```
GRANT SELECT ON dbo.sysfiles to [WelchAllynDbUsers];
```

```
GO
```

Assign the serial number

After installation, you must configure Connex VM with a product serial number. Complete the following procedure once per server.

1. Find the System Serial Number (①) in "Appendix A - Manufacturing Checklist" of the *Order Fulfillment Document* (70021118), which is in the envelope containing the CD and DVD.

① **Appendix A -- Manufacturing Checklist**
[To be completed by Manufacturing]

Sales Order Number {Order number}	System Serial Number {7-digit Serial Number}	Customer Name {Organization/Facility name}
NMR ID <input type="checkbox"/> NA [check NA if no NMR's]		Authorization Code {authorization code}

Description	N/A	Result	NMR ID
Verify all material on s are present.	<input type="checkbox"/>	<input type="checkbox"/> P <input type="checkbox"/> F	
Verify DHR content is complete.	<input type="checkbox"/>	<input type="checkbox"/> P <input type="checkbox"/> F	
Manufacturing Technician		Date	
Print Name			
Signature			

Note: If a fail occurs check F in the Results field, and write the NMR ID in the adjacent cell. After the NMR is resolved, initiate a new checklist and write the NMR ID in the header NMR ID box. If no NMR occurs leave the NMR ID field blank.

2. From a workstation, start the Connex VM program by double-clicking the Welch Allyn Connex VM Workstation icon located on your desktop.

3. In the menu bar, click **Administration > Administrator tools**.
4. In the navigation bar on the left side of the page, click **Configuration Setting > Server configuration**.
5. In the list, find SERIALNUMBER.
6. Next to the setting name, click ▼ and select **Edit**.
7. Enter the serial number at the bottom of the screen.
8. Click anywhere in the **Available settings** list box to save.

You can now do the following:

- View the serial number from the server or any workstation connected to the server. To view the serial number, go to the **Help > About** window in the Connex VM program.
- Run installation customization files.
- Configure Connex VM as described in “Configure the Connex VM system.”

Clients

On a given client computer, install the workstation, thin-client, or vitals kiosk component, based on the workflow you have chosen for that computer.

Note Do not install a workstation and a vitals kiosk on the same computer.

Install a workstation

Before you begin

Before you install the software, do the following:

- Obtain the Connex VM server ID—the IP address, machine name, or DNS name. If you don't know this information, ask your IT department.
- Ensure that the server software is installed.
- If you plan to install remotely, make sure the installation software is on the system where you plan to install the workstation. This requires that you push a self-extracting ZIP file that contains the installation files to the site, using a tool such as PartnerConnect software.
- Ensure that this computer meets the hardware and software requirements listed in *Connex VM Technical System Requirements* (80016022).
- Make sure PartnerConnect software is installed on the target machine. For installation information, see "PartnerConnect software."
- Ensure that this computer can communicate with the server.
- Ensure that you have administrator rights for the computer.
- Disable any software that prevents permanent changes to the computer, for example, virus protection or other security software.
- If you plan to use this computer to run the repair tool for Spot Vital Signs LXi devices, make sure the repair tool is installed.
- Close all programs before starting the installation.

Install the software

To install a workstation, complete the following steps.

1. Start the Setup program as required by the installation method you selected:
 - **Remote:** Launch the self-extracting ZIP file to extract it, then run C:\TEMP\WA\Installer.exe.
 - **Onsite:**
 - **Self-extracting ZIP file:** Launch the file to extract it, then run C:\TEMP\WA\Installer.exe.
 - **Installation media:** Place the installation media (such as a CD, DVD, or flash drive) in your computer. If AUTORUN is disabled or the Setup program does not start, open the Setup.exe file on the installation media.

The Setup program evaluates your computer and does one of the following:

- If .NET Framework (version 4.0) and the .NET hotfix are already installed on your computer, Setup displays the Welcome screen. Go to Step 4.
- If .NET Framework (version 4.0) is already installed, but the .NET hotfix is not installed, Setup displays the hotfix dialog box. Go to Step 2.

- If your computer does not have .NET Framework (version 4.0), Setup installs .NET Framework. This process might take up to 45 minutes. Go to Step 2.
2. Accept or decline the .NET hotfix according to the policies and preferences of your facility.
 - If you accept, Setup installs the hotfix and then continues the Connex VM installation.
 - If you decline, Setup continues the Connex VM installation.
 3. If Setup displays the restart dialog box, do the following:
 - a. Click **OK**. Setup restarts your computer.
 - b. Open the Setup.exe file on the DVD. The Welcome screen appears.
 4. Click **Next**.
The License Agreement screen appears.
 5. Accept the license and click **Next**.
The Install type screen appears.
 6. Select **Workstation**.
 7. Click **Next**.
The Server Address screen appears.
 8. Enter one of these to identify the VM server:
If you don't know this information, ask your IT department.

Server ID	Description
IP address	The server's IP address. You can select the address from the drop-down combo box or enter the address in #.#.#.# format.
Machine name	The server's computer or Active Directory (AD) name. You can find this name in the System Properties window. You can access this window by right-clicking My Computer and selecting Properties or through the Control Panel. Access through the Control Panel varies, based on operating system and view configuration.
DNS name	The server's DNS name.

9. Click **Next**.
The Connex installation screen appears.
10. Click **Next**.
The Destination Folder screen appears.
11. Identify where you want Setup to install workstation software and click **Next**.
Setup displays a message verifying a successful installation.
12. Click **Finish**.

Install a vitals kiosk

Before you begin

Before you install the software, do the following:

- Make sure PartnerConnect software is installed on the target machine. For installation information, see “PartnerConnect software.”
- Obtain the Connex VM server ID—the IP address, machine name, or DNS name. If you don’t know this information, ask your IT department.
- Ensure that the server software is installed.
- If you plan to install remotely, make sure the installation software is on the system where you plan to install the vitals kiosk. This requires that you push a self-extracting ZIP file that contains the installation files to the site, using a tool such as PartnerConnect software.
- Ensure that this computer meets the hardware and software requirements listed in *Connex VM Technical System Requirements* (80016022).
- Ensure that this computer can communicate with the server.
- Ensure that you have administrator rights for the computer.
- Disable any software that prevents permanent changes to the computer, for example, virus protection or other security software.
- Close all programs before starting the installation.

Install the software

To install a vitals kiosk, complete the following steps.

1. Start the Setup program as required by the installation method you selected:
 - **Remote:** Launch the self-extracting ZIP file to extract it, then run C:\TEMP\WA\Installer.exe.
 - **Onsite:**
 - **Self-extracting ZIP file:** Launch the file to extract it, then run C:\TEMP\WA\Installer.exe.
 - **Installation media:** Place the installation media (such as a CD, DVD, or flash drive) in your computer. If AUTORUN is disabled or the Setup program does not start, open the Setup.exe file on the installation media.

The Setup program evaluates your computer and does one of the following:

- If .NET Framework (version 4.0) and the .NET hotfix are already installed on your computer, Setup displays the Welcome screen. Go to Step 4.
 - If .NET Framework (version 4.0) is already installed, but the .NET hotfix is not installed, Setup displays the hotfix dialog box. Go to Step 2.
 - If your computer does not have .NET Framework (version 4.0), Setup installs .NET Framework. This process might take up to 45 minutes. Go to Step 2.
2. Accept or decline the .NET hotfix according to the policies and preferences of your facility.
 - If you accept, Setup installs the hotfix and then continues the Connex VM installation.
 - If you decline, Setup continues the Connex VM installation.
 3. If Setup displays the restart dialog box, do the following:
 - a. Click **OK**. Setup restarts your computer.
 - b. Open the Setup.exe file on the DVD. The Welcome screen appears.

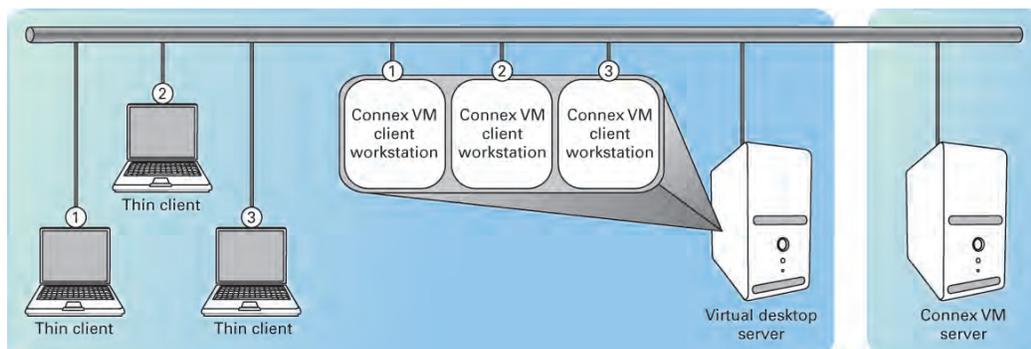
4. From the Welcome screen, click **Next**.
The License Agreement screen appears.
5. Accept the license and click **Next**.
The Install type screen appears.
6. Select **Vitals Kiosk**.
7. Click **Next**.
The Server Address screen appears.
8. Enter one of these to identify the Connex VM server:
If you don't know this information, ask your IT department.

Server ID	Description
IP address	The server's IP address. You can select the address from the drop-down combo box or enter the address in #.#.#.# format.
Machine name	The server's computer or Active Directory (AD) name. You can find this name in the System Properties window. You can access this window by right-clicking My Computer and selecting Properties or through the Control Panel. Access through the Control Panel varies, based on operating system and view configuration.
DNS name	The server's DNS name.

9. Click **Next**.
The Connex VM installation screen appears.
10. Click **Next**.
The Destination Folder screen appears.
11. Identify where you want Setup to install vitals kiosk software and click **Next**.
Setup displays a message verifying a successful installation.
12. Click **Finish**.

Install Connex VM in a thin-client environment

If you plan to operate Connex VM in a thin-client environment, you install the thin-client component on a virtual desktop server. Clients can access the application via presentation applications such as Citrix. The Connex VM workstation on the virtual desktop server, not the thin client, communicates directly with the Connex VM server.



Before you begin

Before you install the software, do the following:

- Obtain the Connex VM server ID—the IP address, machine name, or DNS name. If you don't know this information, ask your IT department.
- Ensure that the server software is installed.
- If you plan to install remotely, make sure the installation software is on the thin-client system where you plan to install the workstation. This requires that you push a self-extracting ZIP file that contains the installation files to the site, using a tool such as PartnerConnect software.
- Ensure that the virtual desktop server meets the requirements contained in *Connex VM Technical System Requirements* (80016022).
- Make sure PartnerConnect software is installed on the target machine. For installation information, see "PartnerConnect software."
- Ensure that this computer can communicate with the server.
- Ensure that you have administrator rights for the computer.
- Disable any software that prevents permanent changes to the computer, for example, virus protection or other security software.
- Close all programs before starting the installation.
- If you use Citrix and the virtual desktop server is running Windows Server 2003 Service Pack 2 (SP2), you must install the Microsoft hotfix described in and available at the following URL:

<http://support.microsoft.com/kb/955692>

Failure to install this hotfix means the login screen might not appear on thin clients.

Install the software on the virtual desktop server

1. Start the Setup program as required by the installation method you selected:
 - **Remote:** Launch the self-extracting ZIP file to extract it, then run C:\TEMP\WA\Installer.exe.
 - **Onsite:**
 - **Self-extracting ZIP file:** Launch the file to extract it, then run C:\TEMP\WA\Installer.exe.

- **Installation media:** Place the installation media (such as a CD, DVD, or flash drive) in your computer. If AUTORUN is disabled or the Setup program does not start, open the Setup.exe file on the installation media.

The Setup program evaluates your computer and does one of the following:

- If .NET Framework (version 4.0) and the .NET hotfix are already installed on your computer, Setup displays the Welcome screen. Go to Step 4.
 - If .NET Framework (version 4.0) is already installed, but the .NET hotfix is not installed, Setup displays the hotfix dialog box. Go to Step 2.
 - If your computer does not have .NET Framework (version 4.0), Setup installs .NET Framework. This process might take up to 45 minutes. Go to Step 2.
2. Accept or decline the .NET hotfix according to the policies and preferences of your facility.
 - If you accept, Setup installs the hotfix and then continues the Connex VM installation.
 - If you decline, Setup continues the Connex VM installation.
 3. If Setup displays the restart dialog box, do the following:
 - a. Click **OK**. Setup restarts your computer.
 - b. Open the Setup.exe file on the DVD. The Welcome screen appears.
 4. From the Welcome screen, click **Next**.
The License Agreement screen appears.
 5. Accept the license and click **Next**.
The Install type screen appears.
 6. Select **Thin Client**.
 7. Click **Next**.
The Server Address screen appears.
 8. Enter one of these to identify the Connex VM server:
If you don't know this information, ask your IT department.

Server ID	Description
IP address	The server's IP address. You can select the address from the drop-down combo box or enter the address in #.#.#.# format.
Machine name	The server's computer or Active Directory (AD) name. You can find this name in the System Properties window. You can access this window by right-clicking My Computer and selecting Properties or through the Control Panel. Access through the Control Panel varies, based on operating system and view configuration.
DNS name	The server's DNS name.

9. Click **Next**.
The Connex VM installation screen appears.
10. Click **Next**.
The Destination Folder screen appears.
11. Identify where you want Setup to install thin-client software and click **Next**.

Setup displays a message verifying a successful installation.

12. Click **Finish**.

Configure thin clients

To connect vital signs devices via serial cable, enable COM port forwarding through RDC or Citrix.

- **RDP COM port forwarding.** If you use Terminal Services (RDP), you can select from the options in the Terminal Services Client.
 - a. Open Remote Desktop Connection.
 - b. Select the **Options** button to expand the dialog.
 - c. Navigate to the **Local Resources** tab.
 - d. If serial devices is not present on this page, select **More**.
 - e. In the Local devices and resources list, check **Serial ports**.
 - f. Select **OK** and connect to the remote computer.

- **ICA COM port forwarding.** If you use Citrix (ICA), you map the serial port from the server using the following command:

```
net use comx: \\client\comz:
```

where *x* is the server COM port and *z* is the client COM port. Note that `client` is the word `client` and not the client workstation name.

For NFuse implementations, you may need to change the `template.ica` file from `COMAllowed=NO` to `COMAllowed=Yes`.

For detailed information about enabling COM port forwarding, see documentation from Microsoft or Citrix.

Note If you plan to connect vital signs devices via USB cable to a thin client, install the Welch Allyn Virtual Channel Client (VCC) on each thin client. VCC enables the remote machine to see USB-connected devices. For detailed information, see *Welch Allyn Virtual Channel Client (VCC) installation guide (80016179)*.

Configuring Connex VM and vital signs devices

After installation, you must configure the Connex VM application and configure Welch Allyn vital signs devices to communicate with the server or through a client (workstation, vitals kiosk, or virtual desktop server) as described in this section.

Configure the Connex VM system

- Ensure that Connex VM clients can communicate with the Connex VM server.
- Configure the following:
 - System options
 - User roles and privileges
 - User accounts
- Determine whether firewalls, anti-virus software, and router access lists are configured to allow Connex VM ports.

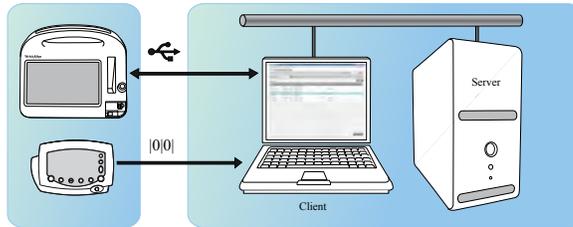
For detailed information, see the *Welch Allyn Connex VM data management system administrator guide* (part number 80015957).

Configure Welch Allyn devices

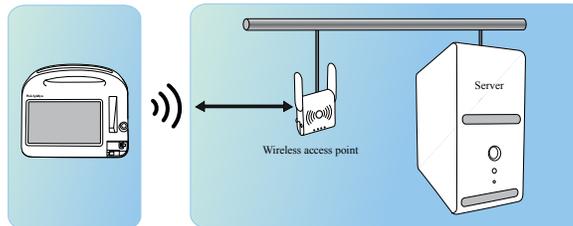
After installing the software, you must configure Welch Allyn devices to communicate, as described in the instructions that accompany each device. The next table provides examples.

Network configuration **Description**

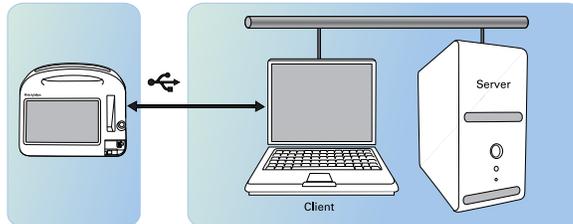
Workstation-to-server



Wireless



Connex VM vitals kiosk



Device-to-server



Symbols: → Data flow USB |0|0| Serial))) Radio signal Ethernet Network

Configure USB connections

Note Load device drivers only if you plan to use a USB cable to connect vital signs devices to this computer. If you plan to use a wireless connection, see the device documentation for instructions.

The Connex VM Setup program installed the drivers required to communicate with each Allyn vital signs device when connected via a USB cable. To load a driver, complete the following steps.

1. Connect a Welch Allyn vital signs device to a client using a USB cable.

Your computer detects the device and prompts you to load that device's hardware driver.

Note The dialog box that appears differs depending upon the Windows operating system you are running.

2. Follow the prompts to load the device driver.

Note Select the automatic install option. Since the drivers already exist on your computer, you do not need to search a remote location or insert a CD to find the driver.

3. Ensure that the Connex VM client can communicate with the device.

The device driver is now loaded on the USB port. Repeat these steps for each USB port.

If data does not successfully transfer, contact your Welch Allyn service representative.

Configure wireless connections

For information about configuring a device for a wireless connection, see instructions that accompany the specific device. After configuration, ensure that the Connex VM client can communicate with the device.

Troubleshooting

Manually activating the Connex VM license

Certain situations require the manual application of a license file. The following details the manual process.

1. Call the Welch Allyn project coordinator or project manager and provide the following information:
 - a. The authorization code provided with the installation media.
 - b. The machine fingerprint displayed in the Welch Allyn License Admin tool on the Advanced tab. The License Admin tool is started by selecting:

Start Menu > Programs > Welch Allyn > License Admin

The project coordinator forwards a license file via email.

2. Store the license file on the hard drive of the Connex VM server.
3. Launch the Welch Allyn License Admin utility by selecting the following:

Start Menu > Programs > Welch Allyn > License Admin

4. Click the **Add License** button on the License Admin screen.

A File Selection dialog appears.

5. Specify the license file saved in Step 2.

The following message appears:

License codes successfully added to the user's license file.

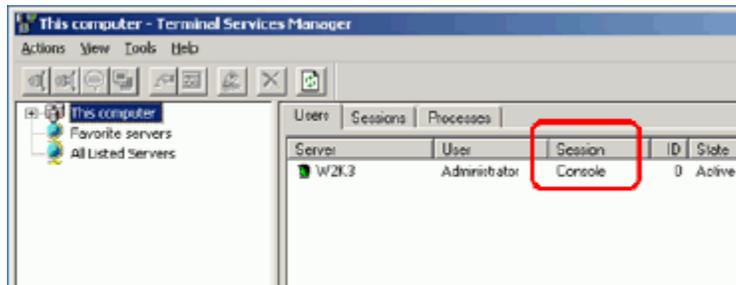
6. Restart the Connex server.

To verify that the authorization code has activated the license, always run the Welch Allyn License Admin application.

Verifying a console connection

To confirm you are currently connected to the Console session of the server, perform the following steps:

1. Launch the Terminal Services Manager (tsadmin.msc).
2. Select **This computer Users**.
3. Verify that the session is identified as a CONSOLE session, as shown in the next figure.



Verifying the SQL Server version

1. Launch SQL Server Management Studio.
2. Enter one of the following SQL commands, and then press **EXECUTE**:

- **Select @@version**
A long string appears.

Note Make sure you scroll through the entire returned response to find all the information.

- **SERVERPROPERTY('productversion'), SERVERPROPERTY ('productlevel'), SERVERPROPERTY ('edition')**
Three columns appear: numeric version, level (RTM, SP1, etc.), and edition.

When executing this option, use the following table below to translate the Version Number to its description

Version number	Description
9.00.1399	SQL Server 2005 RTM
9.00.2047	SQL Server 2005 Service Pack 1
9.00.3042	SQL Server 2005 Service Pack 2
9.00.4035	SQL Server 2005 Service Pack 3
9.00.5000.00	SQL Server 2005 Service Pack 4
10.00.1600.22	SQL Server 2008 RTM
10.00.2531.00	SQL Server 2008 Service Pack 1
10.00.4000.00	SQL Server 2008 Service Pack 2
10.50.1600.1	SQL Server 2008 R2 RTM

Symptoms and solutions

Symptom	Possible solutions
License activation software cannot access the internet	<p>Confirm that you have internet access. (Note that the licensing process uses TCP ports 5093 and 5094.)</p> <ul style="list-style-type: none"> • If you have access to the internet and if TCP ports 5093 and 5094 are open for internet traffic, try activating the license again. • If you do not have access to the internet, or if TCP ports 5093 and 5094 are blocked, contact Welch Allyn Technical Support to activate the license.
The device cannot connect with Connex VM	<ul style="list-style-type: none"> • See the device Directions for Use. • If the device has a DB-9 serial port and the computer has only USB ports, a DB-9 to USB adapter may be required. For a recommended adapter, contact Welch Allyn. • If you are using a USB-to-serial adapter, make sure the adapter has been tested and is sold by Welch Allyn. When unplugging and then plugging the vital device back into the PC, the Connex VM workstation fails to see the device when using some non-approved USB-to-serial adapters (Keyspan) adapters. • If you are connecting to a USB port, make sure to connect and power on the device before starting the workstation. • Exit and re-start Connex VM. This allows Connex VM to scan again for devices, a task that occurs only during startup.
Services don't start	<p>Ensure that you have Admin privileges and then start the services through the Connex VM Administrator tools or through the Microsoft Management Console snap-in for Services.</p>
Error 88 appears	<p>You are not connected to the Console session of the server. Cancel the install, connect to the Console session, then install again.</p>
Error 1316 appears	<ol style="list-style-type: none"> 1. Acknowledge the error message but proceed no further. 2. Using Windows Explorer, open the SSCERuntime directory (on the Connex VM DVD or within the ConnexInstaller directory), locate the correct version of SQL Server Compact Edition: <ul style="list-style-type: none"> • 64-bit Operating System: SSCERuntime_x64-ENU.msi • 32-bit Operating System: SSCERuntime_x86-ENU.msi 3. Launch the program by double-clicking it. 4. Once the installation completes successfully, close the Windows Explorer and return to the Connex VM installation. <p>If problems are still encountered, contact Technical Support.</p>

Symptom	Possible solutions
Error 1710 or 1722 appears	<ol style="list-style-type: none"><li data-bbox="695 296 1227 323">1. Acknowledge the error and cancel the installation.<li data-bbox="695 327 1393 386">2. Launch SSMS and log in to the SQL Server environment that you are trying to install into.<li data-bbox="695 390 1341 478">3. Check for and delete the database. IMPORTANT: Contact Technical Support before deleting the database. WADB is the default database. If you were trying to use a database name other than WADB, verify with the customer that it is unique and not being used by another application. Once verified that it is not in use for another purpose, delete the database.<li data-bbox="695 646 1068 674">4. Check for and delete WA_EIE_DB.<li data-bbox="695 678 967 705">5. Restart the SQL Server.<li data-bbox="695 709 964 737">6. Restart the installation.

Location Management for Connex VM (1.0, 1.1, and 2.0)

The location associated with a patient must be defined via Location Management for vital signs capture to work as expected. A location mismatch will affect patient result display and may make locating patient results more difficult. Excessive patient location mismatches might impact system operation.

With Location Management, available from the menu bar under **Administration > Administrator tools**, you can add locations, edit location names, and delete locations.

Because Location Management has a profound effect on proper functioning of the system, only Welch Allyn Technical Support personnel can make adjustments to locations following these instructions.

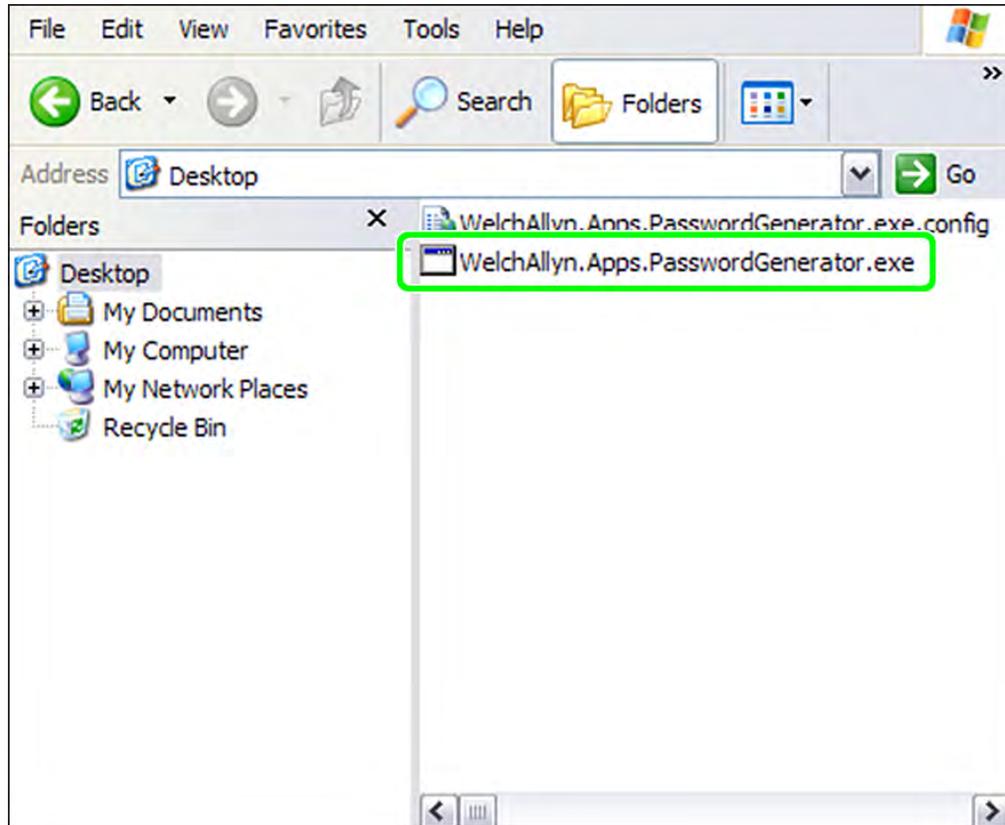
Before you begin

Before accessing the Location Management function, you must generate a password using `Welchallyn.Apps.PasswordGenerator.exe`.

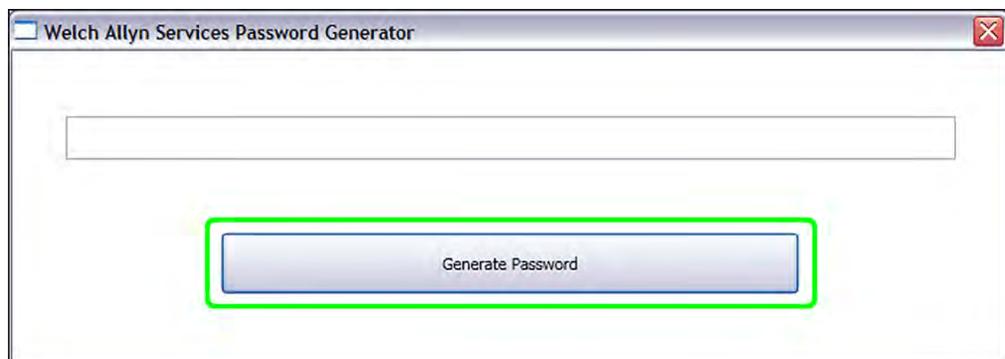
- Note** Do not install this program on a customer system. This program is only for Welch Allyn resources.
- Note** Copy the password generated from a WA system and paste to the customer's system.
- Note** You can use each password only one time on the same system.

Performing Location Management

1. Double-click **WelchAllyn.Apps.PasswordGenerator.exe** to launch the program.



The following dialog appears. ^a



2. Click the **Generate Password** button. The system generates a character string similar to the one shown in the following dialog.

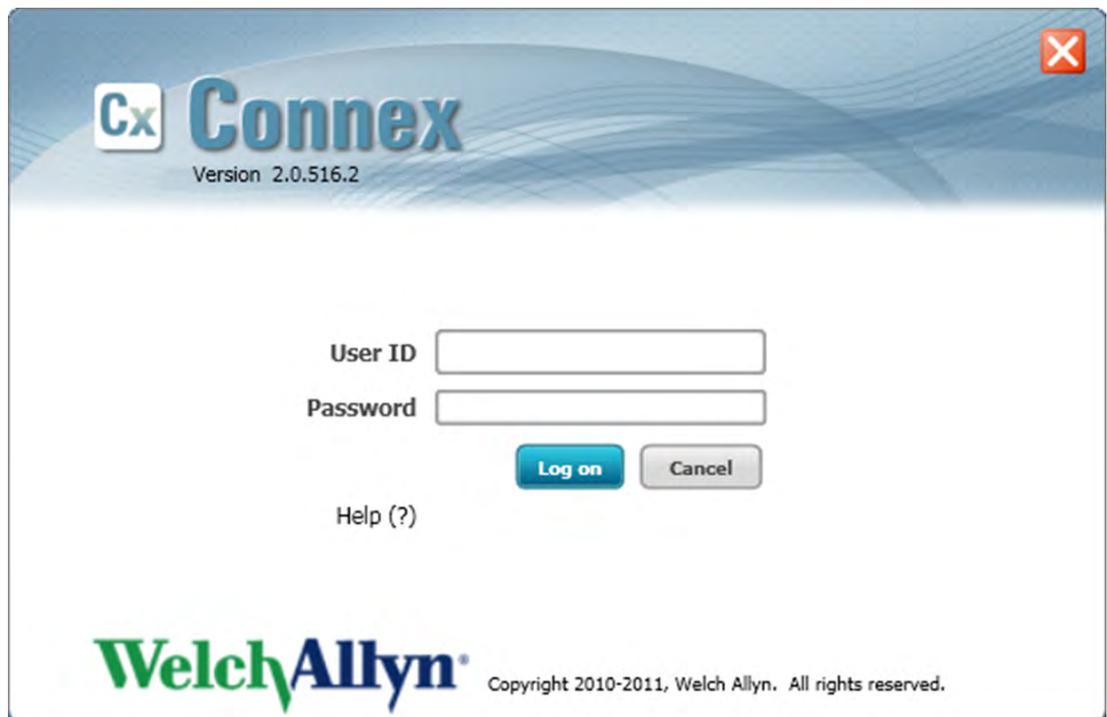


You will later enter this character string as the password required to enter the Location management function.

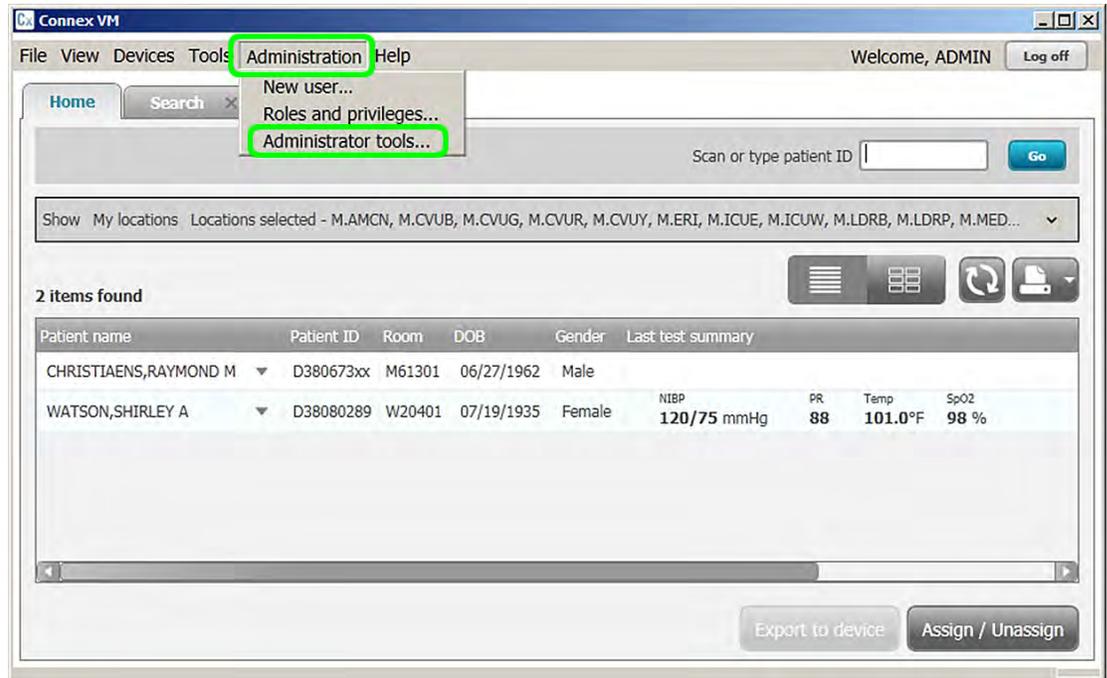
Note Because the password is lengthy, Welch Allyn recommends that you copy this password and paste it when prompted.

Accessing the Location management function

1. Launch Connex VM. The login screen appears:

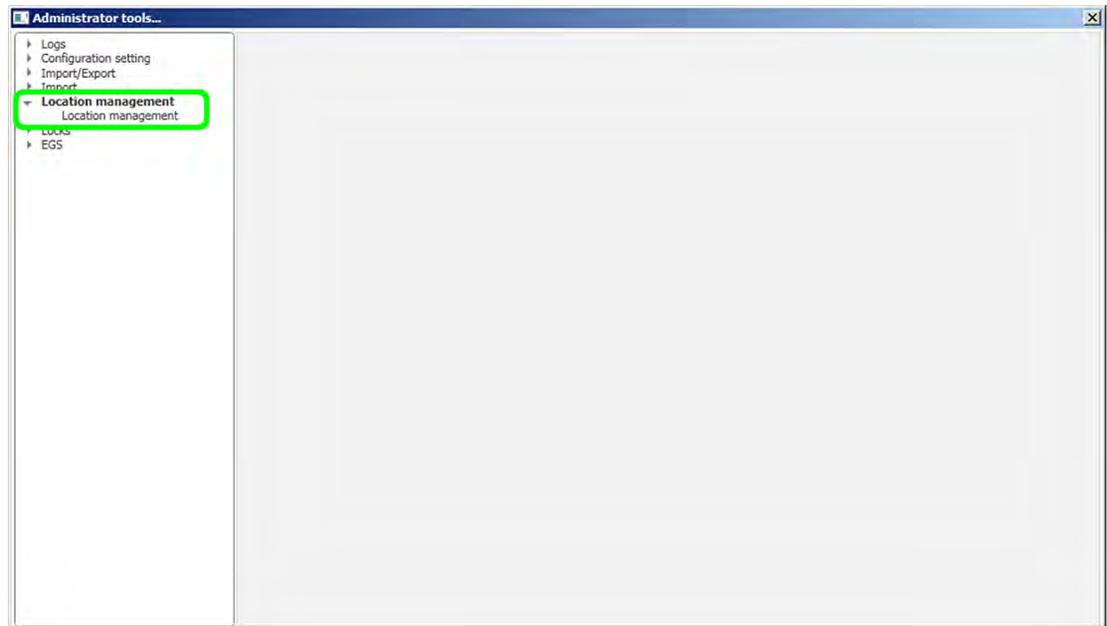


2. Enter your **User ID** (WAService) and **Password**, and then click the **Log on** button.
The following screen appears.
3. Select **Administration > Administrator tools**.

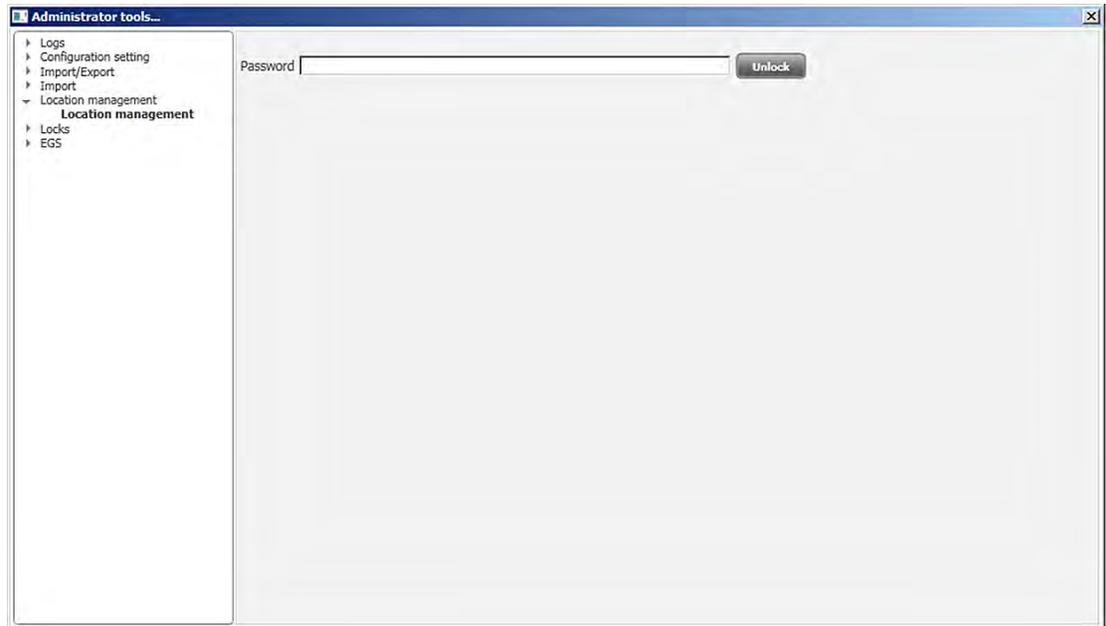


The Administrator Tools screen appears.

4. Click **Location Management** to expand the item, and then select **Location management**.



The Location management screen appears.



5. Copy the password you generated in “Before you begin” and paste it into the **Password** field, then click the **Unlock** button.

Note Because the password is lengthy, Welch Allyn recommends that you copy and paste this password.

Note You can use the password only one time on any single system.

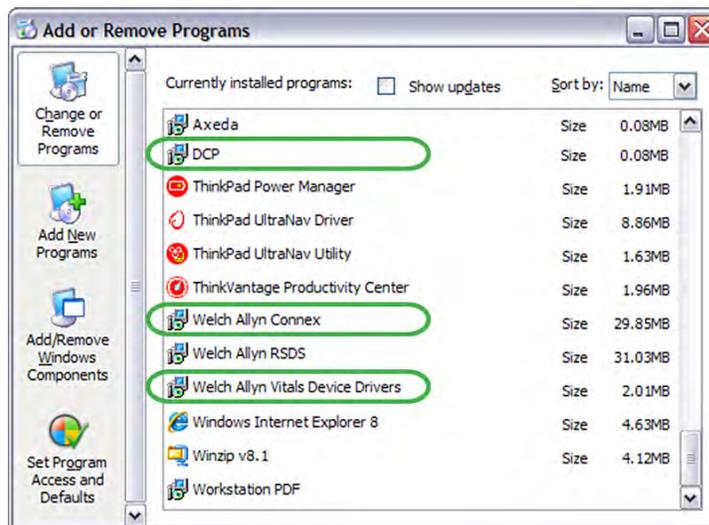


You can now enter the Location management function and complete the desired actions.

Uninstalling programs

Remove the Connex VM application

1. Select **Start > Settings > Control Panel**.
The Control Panel appears.
2. Select **Add or Remove Programs**.
Windows lists the programs on this computer.
3. Ensure that **Change or Remove Programs** is selected in the left pane.
4. Scroll to the following Welch Allyn programs:



5. For each program:
 - a. Select the program.
The program listing expands to display additional information and a Change/Remove button.
 - b. Select **Change/Remove** and confirm your desire to remove the program.
Windows removes the program.
6. Verify that the programs you deleted are removed:
 - a. Reboot the computer.
 - b. Select **Start > Settings > Control Panel**.
The Control Panel appears.

- c. Select **Add or Remove Programs**.

Windows lists the programs on this computer.

- d. Visually inspect to ensure that the programs you deleted no longer appear in the list of programs.

If the programs are not in the program list, the Connex VM application is 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.

Remove PartnerConnect software

Remove the software as described in the PartnerConnect installation guide, available at <http://www.welchallyn.com/promotions/services/PartnerConnect.htm>.

