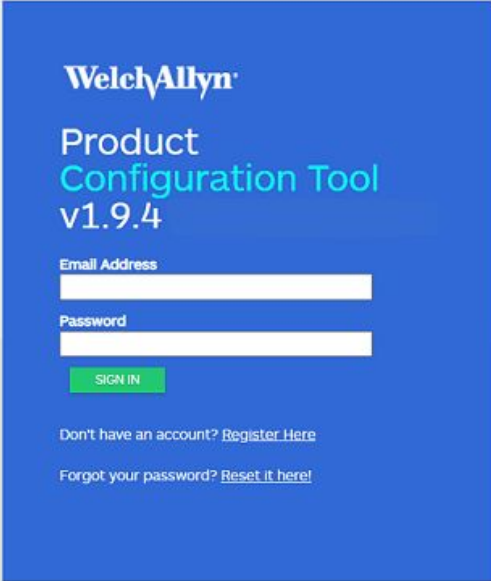




Hillrom™

Welch Allyn Configuration Tool



WelchAllyn®

**Product
Configuration Tool
v1.9.4**


Email Address

Password

SIGN IN

Don't have an account? [Register Here](#)

Forgot your password? [Reset it here!](#)



Reference guide

Software version 1.9.4

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About this Reference guide

This *Reference guide* is intended to help users interact with the Configuration Tool by describing its capabilities and operation. Before using the Configuration Tool, read this manual.

Primary intended users

Primary intended users of the Configuration Tool include biomedical personnel, systems integrators, and both Welch Allyn and third-party service personnel. Secondary intended users include medically qualified, trained healthcare professionals.

System requirements

Item	Requirement description
Web browser	<ul style="list-style-type: none">Internet Explorer (version 11 or greater)Chrome for Windows (latest version)Firefox QuantumIOS Safari 11
High-speed Internet connection	Broad-band Internet connection (minimum download speed 1.5 Mbps)



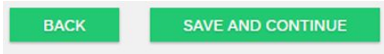
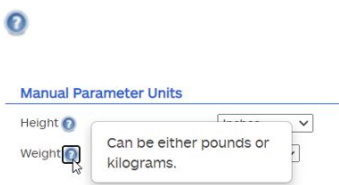
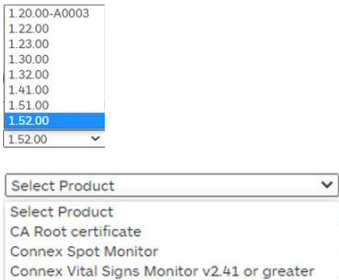
IT Network Security

Computers used to connect to the Configuration Tool should be set up and maintained following IEC 80001 or similar IT Network security practices. These include:

- physical security of the computer and any connected peripherals to prevent theft, tampering, unauthorized use, or unintended disclosure of private data shown on the computer screen
- individual user authentication using strong passwords and, if possible, some form of multi-factor authentication
- idle-session timeouts with either screen locking or automatic logout
- user access rights/permissions limited to those required for the user's assigned role
- timely installation of all computer and operating system vendor's security patches and updates
- anti-virus, anti-malware, and/or intrusion detection/prevention software from a trusted vendor installed and regularly updated
- periodic system backups, with regular testing of system recovery procedures
- secure network connection, either wired or wireless. Wired network connections should be physically secured and/or protected by 802.1X network access control and/or IPsec. Wireless network connections should use WPA2-PSK or WPA2- Enterprise security with strong username/password or X.509 certificate-based authentication.

Item	Requirement description
	Customers should only download Configuration files directly from the Configuration Tool (secure website).


Screen elements

Global navigation	
Navigation tabs	
	Click the navigation tab to move to the next section on the screen. (For example, click Select Units to move to that section. Tabs in green or yellow are active.)
	Click the navigation tab to move to the next section on the screen. (For example, when clicking Select Profiles that tab appears red indicating that the section is not complete and not active yet.)
Navigation buttons	
	Click global navigation buttons. (For example, click BACK or SAVE AND CONTINUE , to move to the previous or next screen.
Controls, buttons, drop down lists, and fields	
Help button	
	Click ? for on screen context-sensitive help. (Click the button to see additional information presented on the screen.)
Drop down lists	
	Select an item from a drop down list. (Choices are pre-populated and the maximum number of choices appear in each list. Scroll through the list and click on the choice to select it. When selected, the choice is indicated with a highlight.)


Controls, buttons, drop down lists, and fields

Add a program

Program Name:

Number of Intervals: 

Interval 1(min):

Frequency 1: 

Select an item from a drop down list. (Choices are pre-populated and the maximum number of choices appear in each list. For the screen example shown for **Add a program**, the maximum Number of Intervals: is "5".)

Field entry

Provide a user friendly name for your configuration.

Displays the characters you enter. The field name appears above this field. Refer to the on screen help for character limitations for entry fields. (The Configuration Tool provides messages on screen when too few or too many characters are entered in a field, or if incorrect characters are entered. Example messages: "The name for your interval profile is invalid, it should be 1-10 characters long." Or, "A valid Program Name is required. It must be 1-32 characters in length.")

Radio buttons



Click a Radio button to choose between options presented on the screen. When selected, the choice is indicated with the circle filled in.

Select box

Profile Types

☒ Intervals

☐ Office

☒ Spot

Click a Select box to choose between options presented on the screen. When selected, the choice is indicated with the box filled in.

Lock button



Incomplete configuration. Download locked.

Sliders



Click on a parameter slider to change a parameter value presented on the screen and on a device configuration file (once loaded onto the device). When selected, the parameter value is indicated with the numeric value appearing above the

Controls, buttons, drop down lists, and fields

slider. (Example screen: "75". Lower values ["1"] are on the left of the scale and higher values ["240"] are on the right of the scale.)

Logout time

After a period of inactivity of approximately 20 minutes, log back in to the Configuration Tool.



NOTE You may need to edit a configuration file if the last transaction was not saved before log out.

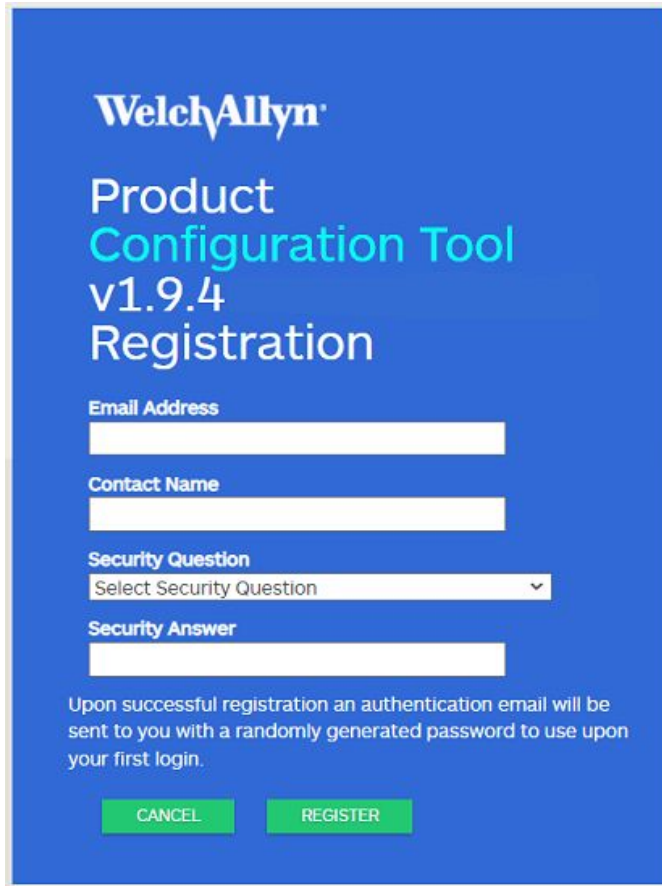
Registering the Configuration Tool



NOTE New users: Click **Register Here**. Existing users: Enter your Email Address and Password in the *Email Address* and *Password* fields of the Configuration Tool and then click **SIGN IN**.

1. Use a web browser to navigate to the Welch Allyn Configuration Tool at: <https://config.welchallyn.com/configurator/>.

2. **New users:** If you do not have an account set up, click **Register Here** and complete the fields on the *Registration* screen.



The image shows a registration form for the WelchAllyn Product Configuration Tool v1.9.4. The form is set against a blue background with white text. It includes fields for Email Address, Contact Name, a Security Question (selected from a dropdown menu), and a Security Answer. Below the fields is a message explaining that an authentication email with a temporary password will be sent upon successful registration. At the bottom are two green buttons: CANCEL and REGISTER.

WelchAllyn

**Product
Configuration Tool
v1.9.4
Registration**

Email Address

Contact Name

Security Question
 Select Security Question ▼

Security Answer

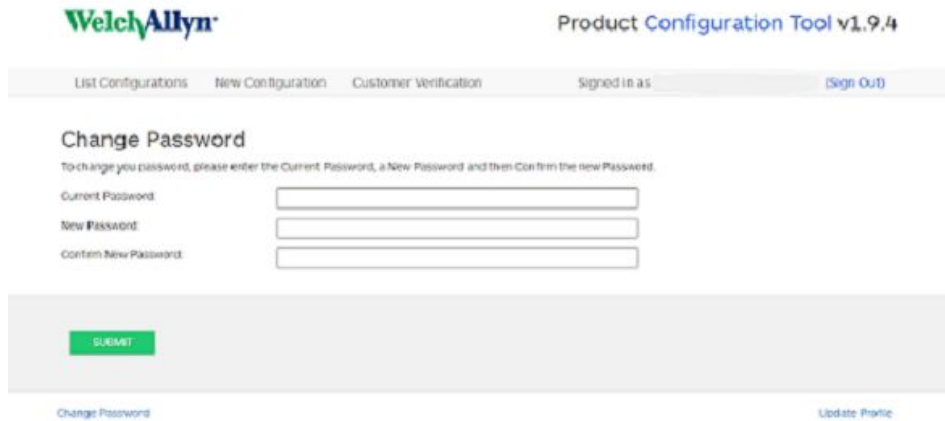
Upon successful registration an authentication email will be sent to you with a randomly generated password to use upon your first login.

CANCEL **REGISTER**

Enter your: *Email Address* and *Contact Name*, and then select a *Security Question* from the drop down menu. Type your answer into the *Security Answer* field. When done, click **REGISTER**. The website will return you to the sign-in page once the registration is complete. The email address must be a valid email address. An email will be sent to that email address with instructions and a temporary password for an initial login. After logging in with the temporary password, you must enter a new password that will be used for future logins.

Existing users: Enter your email address and password in the *Email Address* and *Password* fields of the Configuration Tool and then click **SIGN IN**. If you do not know, or have forgotten your password, click **Reset it here!**. From the *Forgot Password* screen, enter your Email Address and then click **CONTINUE**. From the *Forgot Password* screen, answer the security question that you chose during registration. Enter a new password and confirm the password and then click **SUBMIT**.

3. To change your password, click **Change Password**. The *Change Password* screen appears. Enter your: Current Password, New Password, and then Confirm New Password. When done, click **SUBMIT**.



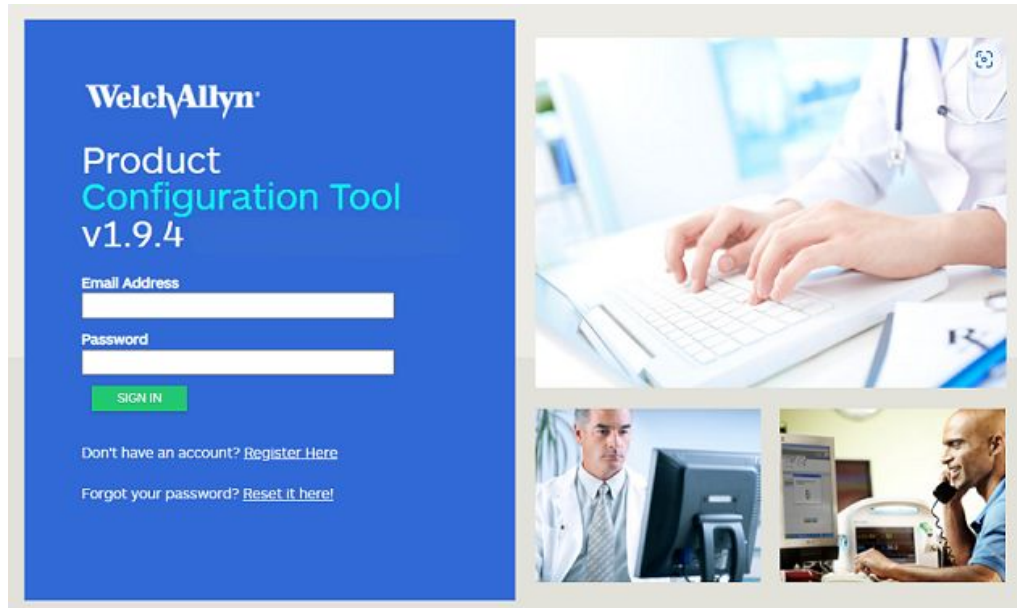
The image shows the 'Change Password' screen of the WelchAllyn Product Configuration Tool v1.9.4. The header includes the WelchAllyn logo and the product name. A navigation bar contains links for 'List Configurations', 'New Configuration', 'Customer Verification', 'Signed in as', and a '(Sign Out)' link. The main heading is 'Change Password', followed by a sub-instruction: 'To change your password, please enter the Current Password, a New Password and then Confirm the new Password.' There are three input fields: 'Current Password', 'New Password', and 'Confirm New Password'. A green 'SUBMIT' button is located below the fields. At the bottom, there are two links: 'Change Password' and 'Update Profile'.

Log in to the Configuration Tool

1. Log in to the Configuration Tool at this link:

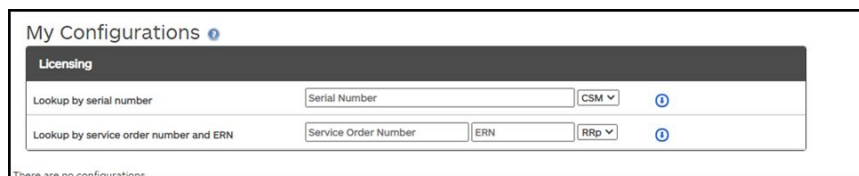
<https://config.welchallyn.com/configurator/>.

Enter your Email Address and Password and click **SIGN IN**.



The image shows the 'Sign In' screen of the WelchAllyn Product Configuration Tool v1.9.4. The header includes the WelchAllyn logo and the product name. The main heading is 'Product Configuration Tool v1.9.4'. There are two input fields: 'Email Address' and 'Password'. A green 'SIGN IN' button is located below the fields. Below the button, there are two links: 'Don't have an account? [Register Here](#)' and 'Forgot your password? [Reset it here!](#)'. To the right of the sign-in form, there are three images: a close-up of a doctor's hands typing on a laptop, a doctor looking at a computer monitor, and a doctor talking on a phone.

The *My Configurations* screen appears.



The image shows the 'My Configurations' screen. The header is 'My Configurations' with a help icon. Below the header, there is a 'Licensing' section. It contains two rows of input fields. The first row is 'Lookup by serial number' with a 'Serial Number' input field, a 'CSM' dropdown menu, and a help icon. The second row is 'Lookup by service order number and ERN' with a 'Service Order Number' input field, an 'ERN' input field, an 'RRp' dropdown menu, and a help icon. At the bottom, there is a message: 'There are no configurations.'

Passwords in the Configuration Tool



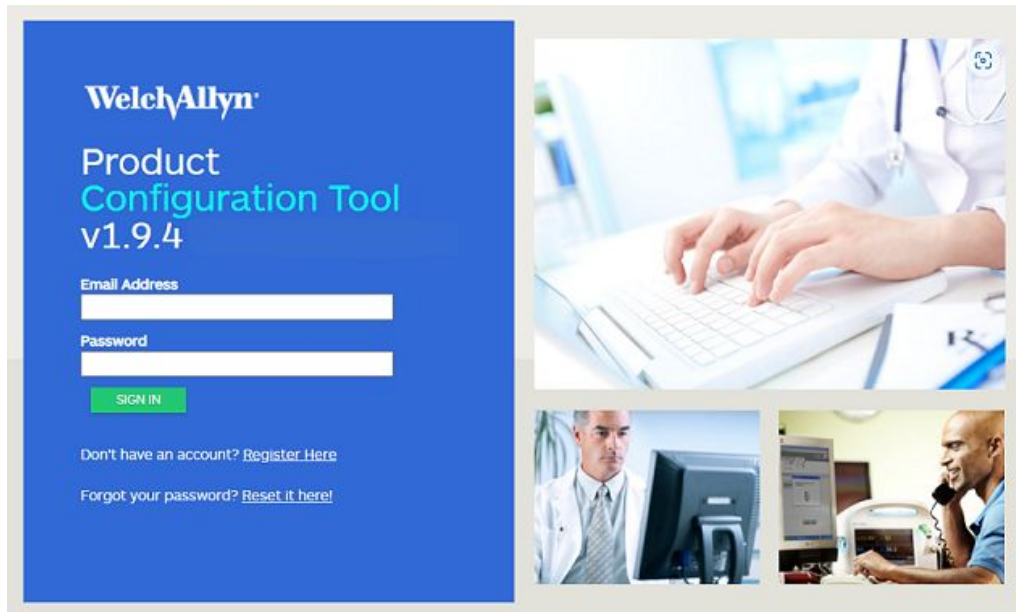
NOTE Passwords need to contain:

- a minimum of 8 characters
- a maximum of 20 characters
- at least 1 special character (examples include: @!#\$%)
- at least 1 numeric character
- at least 1 lower case letter
- at least 1 upper case letter




NOTE New users: Click **Register Here**. Existing users: Enter your Email Address and Password and click **SIGN IN** in the *Email Address* and *Password* fields of the Configuration Tool.

1. Use a web browser to navigate to the Welch Allyn Configuration Tool at: <https://config.welchallyn.com/configurator/>.



2. (Optional). To change your password, click **Change Password**. The *Change Password* screen appears. Enter your: Current Password, New Password, and then Confirm New Password. When done, click **SUBMIT**.



Product Configuration Tool v1.9.4

List Configurations

New Configuration

Customer Verification

Signed in as

[Sign Out](#)

Change Password

To change your password, please enter the Current Password, a New Password and then Confirm the new Password.

Current Password:

New Password:

Confirm New Password:

SUBMIT

[Change Password](#)

[Update Profile](#)

Features of the Configuration Tool

The following features are available in the Configuration Tool:

- New Configuration

WelchAllyn® Product Configuration Tool v1.9.4

List Configurations **New Configuration** Customer Verification Signed in as (Sign Out)

New Configuration

Select the product that you would like to configure.

Connex Spot Monitor ▼

Provide a user friendly name for your configuration.

North Wing

CONTINUE

Change Password Update Profile

- Select Product
- Select Product Use Location
- Select Custom Scoring
- Set Custom Parameters and Modifiers
- Data Management
- Set Alarms
- Add Modifiers
- Select CA Root Certificate
- List Configurations

12 Features of the Configuration Tool

My Configurations ⓘ

Licensing

Lookup by serial number Serial Number CSM ⓘ

Lookup by service order number and ERN Service Order Number ERN RRp ⓘ

CA Root certificate

Name	Created By	Created	Updated	
Cert	.com	11/18/2020 01:09:56	11/18/2020 01:49:34	ⓘ

Connex Spot Monitor

Name	Created By	Created	Updated	
BLE_Pair_Once Copy	.co...	11/18/2020 17:13:03	11/18/2020 17:17:06	ⓘ
Medical Center	.com	11/19/2020 20:12:37	11/19/2020 20:16:27	ⓘ
North Wing	.com	11/17/2020 23:02:38	11/18/2020 02:01:20	ⓘ

Connex Vital Signs Monitor v2.A1 or greater

Name	Created By	Created	Updated	
CVSM PCU	.com	11/16/2020 22:56:56	11/16/2020 23:44:24	ⓘ

- Licensing
 - Enter sales order number for licensing
 - Look up a service order number for Respiration rate (RRp) or Bluetooth Low Energy (BLE) if those features are purchased and enabled.
 - Download the serial number or service order number.
- Select CA Root Certificate
- Edit a configuration file
- Copy a configuration file
- Share a configuration file
- Delete a configuration file.
- Download a configuration file
- Customer Verification
 - A verified customer has the ability to associate a configuration with ordered products. This allows for the configuration to be added during the manufacturing process.

List Configurations New Configuration **Customer Verification** Signed in as

Customer Verification

Please enter the required information. A verified customer has the ability to associate configuration with ordered products. This allows for the configuration to be added during the manufacturing process.

Customer Number:

Select an option and enter the number in the text box below:

☒ Sales Order Number

☐ Purchase Order Number

VERIFY

Overview of List Configurations

From the *My Configurations* screen, the message appears that there are no configurations for new users.

WelchAllyn Product Configuration Tool v1.9.4

List Configurations New Configuration Customer Verification Signed in as (Sign Out)

My Configurations ?

Licensing

Lookup by serial number Serial Number CSM ⓘ

Lookup by service order number and ERN Service Order Number ERN RRp ⓘ

There are no configurations

Change Password Update Profile

From the *My Configurations Licensing* screen, the Licensing by product serial number appears first. Type in a serial number from the CSM device label.

Look up a service order number for Respiration rate (RRp) or Bluetooth Low Energy (BLE) if those features are purchased and enabled. Click ⓘ to download the serial number or service order number.

To view device configurations from the *My Configurations* screen, click **List Configurations**. The device configurations that have already been completed appear for existing users.

Connex Spot Monitor				
Name	Created By	Created	Updated	
BLE_Pair_Once Copy	.co...	11/18/2020 17:13:03	11/18/2020 17:17:06	
Medical Center	.com	11/19/2020 20:12:37	11/19/2020 20:16:27	
North Wing	.com	11/17/2020 23:02:38	11/18/2020 02:01:20	

- Click to edit a configuration file.
- Click to copy a configuration file.
- Click to share a configuration file.
- Click to delete a configuration file.
- Click to download a configuration file.

Share a configuration file

1. To share a configuration file, click  next to the configuration that you want to share.

Share Configuration

Select a name for the copy:

BLE_Pair_Once Copy










Enter the recipient's account name(email address) below:

Close

Share

2. Enter the recipient's account name (typically an email address) into the field: *Enter the recipient's account name (email address) below:* and optionally rename the file by typing a name for the configuration into the field: *Select a name for the copy.*
3. Click **Share**.

For the recipient to receive the shared file, they need to have access to the Configuration Tool with their own account. The shared file shows who created the file and the date it was created. Shared files also have the file name with "Copy" at the end of the file name. (See the example: BLE_Pair_Once Copy for a sample of a file received from a sender into your Configuration Tool account.)

Connex Spot Monitor				
Name	Created By	Created	Updated	
BLE_Pair_Once Copy	.co...	11/18/2020 17:13:03	11/18/2020 17:17:06	   
Medical Center	.com	11/19/2020 20:12:37	11/19/2020 20:16:27	   
North Wing	.com	11/17/2020 23:02:38	11/18/2020 02:01:20	   

In order to use a file that another user shares with you, the copy must be opened in the Configuration Tool and all the sections must appear green to be able to use the file.

Progress Summary

Section: Clinical (Required)

Select Version

Select Units

Select Patient Populations

Select Profiles

Section: Informatics

Data Management

Custom Scoring

Set Manual Parameters and Modifiers

Section: IT

EMR Selection

Date & Time Settings

Network Connectivity Settings

Section: Biomed (Required)

General Device Settings

Create a new configuration for Physician's Office or Clinic

As a new configuration is completed, the configuration:

- determines default profiles
 - determines whether the device will be set up for Wi-Fi, Bluetooth, Bluetooth Low Energy (BLE), or other connectivity such as Ethernet or USB
 - opens or limits functionality like Early Warning Scores (EWS) protocols or prescriptive workflow settings
1. From the main screen, click the **New Configuration** tab.

WelchAllyn Product Configuration Tool v1.9.4

List Configurations **New Configuration** Customer Verification Signed in as (Sign Out)

New Configuration

Select the product that you would like to configure.

Connex Spot Monitor

Provide a user friendly name for your configuration.

North Wing

CONTINUE

Change Password Update Profile

2. Use the drop down menu to select a product. Provide a name for the configuration by typing in field and click **CONTINUE**.

New Configuration

Select the product that you would like to configure.

Select Product

- Select Product
- CA Root certificate
- Connex Spot Monitor
- Connex Vital Signs Monitor v2.41 or greater
- Licensing

ion.

3. Select the **Physicians Office or Clinic** Product Use Location. (Choices include: Hospital or Physicians Office or Clinic.)

16 Create a new configuration for Physician's Office or Clinic

Select the Product Use Location

☐ Hospital

☒ Physicians Office or Clinic

SAVE AND CONTINUE

- Click **SAVE AND CONTINUE**.
- Click **Select Version**.
- Use the drop down menu to select a software version.

Select Version Select Units Select Patient Populations Select Profiles

Select Version

Choose the software version of the CSM device you would like to configure. ?

Select a version:

1.53.00

1.20.00-A0003

1.22.00

1.23.00

1.30.00

1.32.00

1.41.00

1.51.00

1.52.00

1.53.00

BACK SAVE

The default selection is the latest software version available.

- Click **SAVE AND CONTINUE**.



NOTE As the configuration tool is updated the Progress Summary view updates to show completed sections in green.

List Configurations New Configuration Customer Verification

Progress Summary

Section: Clinical

Select Version
Select Units
Select Patient Populations
Select Profiles
Set Manual Parameters and Modifiers
General Device Settings
EMR Selection
Date & Time Settings

As the configuration tool is updated the screen moves to the **Select Units** tab.

- Click the radio button next to the unit to select the unit.

Choose a unit system or select **Custom** to set up a combination of different systems. To configure a Pro 6000 thermometer, select **Custom**. Choices include: **English**, **Metric**, and **Custom**. The default choice is English.

9. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **Select Patient Populations** tab.

10. Click the radio button next to the Patient type to select the **Patient Population**. Choose the patient type that will be used most frequently with the device. Choices include: **Adult**, **Pediatric**, **Neonatal**, and **Custom**. The default choice is **Adult**.

11. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **Select Profiles** tab.

12. Click the checkbox next to the Profile type to select the clinical profile. If the Product Use Location selected was Physicians Office or Clinic, the default selection for Profile type will be set to **Office** for the Primary Profile. (If the Product Use Location selected was Hospital, the default selection for Profile type will be set to **Spot** for the Primary Profile with Intervals enabled. The three choices for Profile types include: **Intervals**, **Office**, and **Spot**.)

Profile Types	Primary Profile	Custom Profile Name
<input type="checkbox"/> Intervals	<input type="radio"/>	
<input checked="" type="checkbox"/> Office	<input checked="" type="radio"/>	
<input type="checkbox"/> Spot	<input type="radio"/>	

- Use **Office** to enable Blood Pressure Averaging and Bluetooth connectivity.
 - (Optional) Use **Intervals** to enable alarms and timed NIBP and SpO2, or just one or the other.
 - (Optional) Use **SPOT** to enable spot check vitals without alarms.
- a. Click the radio button in the Primary Profile column across from the Profile Types to select that profile as the Primary Profile.

18 Create a new configuration for Physician's Office or Clinic

- b. (Optional). Add a Custom Profile Name to any or all of the profiles by typing into the *Custom Profile Name* field.

Select Profiles

Select and rename one or more clinical profiles. Enabling a profile allows a user to select it for use on the device.

Profile Types	Primary Profile	Custom Profile Name
<input checked="" type="checkbox"/> Intervals	<input type="radio"/>	<input type="text" value="Intervals I"/>
<input checked="" type="checkbox"/> Office	<input type="radio"/>	<input type="text" value="Custom Office"/>
<input checked="" type="checkbox"/> Spot	<input checked="" type="radio"/>	<input type="text" value="Spot Profile North Wing"/>

BACK

SAVE AND CONTINUE

- c. See "Configure the Office Profile" for additional details about creating blood pressure averaging programs.

13. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **Set Manual Parameters and Modifiers** tab.

14. Configure the manual parameters and modifiers settings.

Configuration Name: Care Center Clinic

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles **Set Manual Parameters and Modifiers** General Device Settings EMR Selection

Date & Time Settings

Set Manual Parameters and Modifiers

Set Manual Parameters

Select or hide the devices standard manual entries.

☒ Default
☐ Custom

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifiers	Unit	Size
<input type="button" value="Add Modifier"/>						

Prevent Skip Required Modifiers

The default settings are: Select or hide the devices standard manual entries = **Default**, Prevent Skip Required Modifiers = No. See the "(Optional) Select Custom Parameters and Modifiers" for additional details on customizing the Manual Parameters.

15. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **General Device Settings** tab.

16. Click the radio button next to one of the choices to select that choice: **Mobile**, **Wall Mounted**, or **Custom**.

Configuration Name: Care Center Clinic

Summary Clinical (Required) Informatics IT **Biomed (Required)**

General Device Setting

Select "Custom" to modify default power, language, and other general settings.

☒ **Mobile**
☐ Wall Mounted
☐ Custom

Select an optional splash screen image.

Bluetooth Low Energy (BLE) Settings

Turn on BLE by default? (license required) No ▾

Virtual Network Computing (VNC) Settings

Allow VNC connection? No ▾

Universal Serial Bus (USB) Settings

USB Ports Enable Yes ▾

Admin Settings

Admin Access Code (required 6 digits):

Enable Access Code For USB Configuration: No ▾

BACK SAVE AND CONTINUE

- a. (Optional). Select **Custom** to modify default power, language, and other general settings. The default selection is: **Mobile**. Choices include: **Mobile**, **Wall Mounted**, and **Custom**. See: "(Optional) Select Custom General Device Settings" for additional instructions to modify the General Device Settings.
 - b. (Optional). Click **Select an optional splash screen image** and follow the on screen instructions to upload a custom Splash Screen Image onto the device. To create your facility's custom Splash Screen Image, the image must be in the Windows BMP file format. It must be 800 pixels wide by 480 pixels tall and have 24 bits of color using 3 bytes per pixel. The image must not contain color space information. Failure to abide by these restrictions will cause the device to ignore the image.
 - c. (Optional). Enable Bluetooth Low Energy (BLE), Virtual Network Computing (VNC) Settings, and Universal Serial Bus (USB) Settings. Use the drop down menu to change any the default settings. The default settings for Bluetooth Low Energy (BLE) are: Turn on BLE by default? (license required) = No. The default setting for Virtual Network Computing (VNC) Settings is: Allow VNC connection? = No. The default setting for Universal Serial Bus (USB) is: USB Ports Enable = Yes.
 - d. (Required). Admin Settings. Select an Admin Access Code that is exactly 6 digits long.
 - e. (Optional). Admin Settings. The default setting for Enable Access Code for USB Configuration is No.
17. Click **SAVE AND CONTINUE**.
- As the configuration tool is updated the screen moves to the **EMR Selection** tab.
18. If your facility is using an Electronic Medical Records (EMR) system, select the EMR settings. Use the drop down menu to answer Yes or No at the prompt: Would you like to configure an EMR?.

20 Create a new configuration for Physician's Office or Clinic

Configuration Name: Care Center Clinic

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles Set Manual Parameters and Modifiers General Device Settings **EMR Selection**

Date & Time Settings

EMR Selection

Would you like to configure an EMR? Yes

Select an EMR:

BACK SAVE AND CONTINUE

The default settings for the EMR Selection are: Would you like to configure an EMR? = Yes. Select an EMR: Blank. Select the Connection Type: = Blank.

- If Yes is selected, use the drop down menu to select your EMR. Choices include: Allscripts Professional, Allscripts Touchworks, Amazing Charts, Aprima, Athena Health, Cerner, Epic, GE Centricity, Greenway, McKesson Practice Choice, McKesson Practice Partner, Medent, Meditab, Next Gen, Practice Fusion, Vitera (Greenway, Success EHS), e-MDs, eClinicalWorks.

List Configurations New Configuration

Configuration Name: Care Center Clinic

Select Version Select Units Select Patient Populations Select Profiles Set Manual Parameters and Modifiers General Device Settings **EMR Selection**

Date & Time Settings

EMR Selection

Would you like to configure an EMR?

Select an EMR:

BACK SAVE AND CONTINUE

Allscripts Professional
Allscripts Touchworks
Amazing Charts
Aprima
Athena Health
Cerner
Epic
GE Centricity
Greenway
McKesson Practice Choice
McKesson Practice Partner
Medent
Meditab
Next Gen
Practice Fusion
Vitera (Greenway, Success EHS)
e-MDs
eClinicalWorks

- Use the drop down menu to select the Connection Type: Bluetooth or USB.
- Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves from the **EMR Selection** section to the **Date and Time Settings** section and the view is updated to show completed sections in green.

Configuration Name: Care Center Clinic

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles Set Manual Parameters and Modifiers General Device Settings **EMR Selection**

Date & Time Settings

Date And Time Settings

Configure date and time settings.

Display Date & Time? Yes

Date Format: MM/DD/YYYY

Prevent Date & Time Changes No

Time Zone: (GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London

Enable Daylight Saving Time? Yes

Enable NTP: No

BACK SAVE AND CONTINUE

- Click **Date And Time Settings** to continue.

- a. Use the drop down menu to select Display Date & Time. The default settings for Display Date & Time = Yes.
- b. Use the drop down menu to select Date Format. The default settings = MM/DD/YYYY. Choices include: MM/DD/YYYY, YYYY/MM/DD, DD/YYYY/MM, or DD.MM.YYYY.
- c. Use the drop down menu to select Prevent Date & Time Changes. The default setting = No.
- d. Use the drop down menu to select the Time Zone.
- e. Use the drop down menu to select Enable Daylight Savings Time?. The default setting = Yes.
- f. Use the drop down menu to select Enable NTP?. The default setting = No.

20. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to configuration complete. When all the sections appear green, the configuration file can be downloaded or shared.

List Configurations	New Configuration	Customer Verification
<h3>Progress Summary</h3>		
Section: Clinical		
Select Version		
Select Units		
Select Patient Populations		
Select Profiles		
Set Manual Parameters and Modifiers		
General Device Settings		
EMR Selection		
Date & Time Settings		

22 Create a new configuration for Physician's Office or Clinic

Create a new configuration for a Hospital setting

As a new configuration is completed, the configuration:

- determines default profiles
 - determines whether the device will be set up for Wi-Fi, Bluetooth, Bluetooth Low Energy (BLE), or other connectivity such as Ethernet or USB
 - opens or limits functionality like Early Warning Scores (EWS) protocols or prescriptive workflow settings
1. From the main screen, click the **New Configuration** tab.

WelchAllyn Product Configuration Tool v1.9.4

List Configurations **New Configuration** Customer Verification Signed in as (Sign Out)

New Configuration

Select the product that you would like to configure.

Connex Spot Monitor

Provide a user friendly name for your configuration.

North Wing

CONTINUE

Change Password Update Profile

2. Use the drop down menu to select a product. Provide a name for the configuration by typing in the field and click **CONTINUE**.

New Configuration

Select the product that you would like to configure.

Select Product

Select Product
CA Root certificate
Connex Spot Monitor
Connex Vital Signs Monitor v2.41 or greater
Licensing

3. Select the **Hospital** Product Use Location. (Choices include: Hospital or Physicians Office or Clinic.) See: "Create a new configuration for Physician's Office or Clinic" for instructions on setting up a device for a Physician's Office or Clinic.

24 Create a new configuration for a Hospital setting

List Configurations **New Configuration** Customer Verification

Select the Product Use Location

☒ Hospital
☐ Physicians Office or Clinic

SAVE AND CONTINUE

4. Click **SAVE AND CONTINUE**.
5. Click **Select Version**.
6. Use the drop down menu to select a software version.

Select Version **Select Units** **Select Patient Populations** **Select Profiles**

Select Version

Choose the software version of the CSM device you would like to configure. ?

Select a version:

1.53.00

- 1.20.00-A0003
- 1.22.00
- 1.23.00
- 1.30.00
- 1.32.00
- 1.41.00
- 1.51.00
- 1.52.00
- 1.53.00**

BACK **SAVE AND CONTINUE**

The default selection is the latest software version available.

7. Click **SAVE AND CONTINUE**.



NOTE As the configuration tool is updated the Progress Summary view updates to show completed sections in green.

Progress Summary

Section: Clinical (Required)

Select Version

Select Units

Select Patient Populations

Select Profiles

Section: Informatics

Data Management

Custom Scoring

Set Manual Parameters and Modifiers

Section: IT

EMR Selection

Date & Time Settings

Network Connectivity Settings

Section: Biomed (Required)

General Device Settings

As the configuration tool is updated the screen moves to the **Select Units** tab.

8. Click the radio button next to the unit to select the unit.

Configuration Name:
North Wing

Summary Clinical (Required) Informatics IT Biomed (Required)

Select Version Select Units Select Patient Populations Select Profiles

Select Units

Choose a unit system or choose "Custom" to set-up a combination of different systems. To configure a Braun Pro 6000 thermometer, choose custom.

☒ English
☐ Metric
☐ Custom

BACK SAVE AND CONTINUE

Choose a unit system or select **Custom** to set up a combination of different systems. To configure a Pro 6000 thermometer, select **Custom**. Choices include: **English**, **Metric**, and **Custom**. The default choice is English.

9. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **Select Patient Populations** tab.

10. Click the radio button next to the Patient type to select the **Patient Population**. Choose the patient type that will be used most frequently with the device. Choices include: **Adult**, **Pediatric**, **Neonatal**, and **Custom**. The default choice is **Adult**.

26 Create a new configuration for a Hospital setting

Configuration Name:
North Wing

Select Version Select Units **Select Patient Populations** Select Profiles Set Manual Parameters and Modifiers

Date & Time Settings

Select Patient Populations

Choose the patient type that will be used most frequently with the device.

☒ Adult
☐ Pediatric
☐ Neonatal
☐ Custom

BACK SAVE AND CONTINUE

11. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **Select Profiles** tab.

12. Click the checkbox next to the Profile type to select the clinical profile. The three choices for Profile types include: **Intervals**, **Office**, and **Spot**. The default selection for Profile type is set to **Spot** for the Primary Profile with **Intervals** enabled. (The example shown is for the **Office** profile.)

Configuration Name:
North Wing

Select Version Select Units Select Patient Populations **Select Profiles** Set Manual Parameters and Modifiers General Device Settings EMR Selection

Date & Time Settings Summary Clinical

Select Profiles

Select and rename one or more clinical profiles. Enabling a profile allows a user to select it for use on the device.

Profile Types	Primary Profile	Custom Profile Name
<input type="checkbox"/> Intervals	<input type="radio"/>	
<input checked="" type="checkbox"/> Office	<input checked="" type="radio"/>	
<input type="checkbox"/> Spot	<input type="radio"/>	

BACK SAVE AND CONTINUE

- Use **Intervals** to enable alarms and timed NIBP and SpO2, or just one or the other.
 - Use **Office** to enable Blood Pressure Averaging and Bluetooth connectivity.
 - Use **SPOT** to enable spot check vitals without alarms.
- a. Click the radio button in the Primary Profile column across from the Profile Types to select that profile as the Primary Profile.
 - b. (Optional). Add a Custom Profile Name to any or all of the profiles by typing into the *Custom Profile Name* field.

Select Profiles

Select and rename one or more clinical profiles. Enabling a profile allows a user to select it for use on the device.

Profile Types	Primary Profile	Custom Profile Name
<input checked="" type="checkbox"/> Intervals	<input type="radio"/>	Intervals 1
<input checked="" type="checkbox"/> Office	<input type="radio"/>	Custom Office
<input checked="" type="checkbox"/> Spot	<input checked="" type="radio"/>	Spot Profile North Wing

BACK SAVE AND CONTINUE

- c. See *"Configure the Interval Profile"* for additional details about configuring Auto Intervals settings or to create Custom intervals programs.



NOTE To accept the default settings for the **Intervals** profile click **SAVE AND CONTINUE**.

- d. If the Intervals profile was previously selected, follow the instructions in the *"Configure the Interval Profile"* section to complete that profile.

If the Intervals profile was previously selected, configure the general alarm settings. See *"Set Alarms"* for additional details to configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, Respiration Rate, and Temperature.

- e. See *"Configure the Office Profile"* for additional details about creating blood pressure averaging programs.

13. Click **SAVE AND CONTINUE**.

14. Click **Data Management** to continue.

Configuration Name: North Wing

Summary Clinical (Required) Informatics

Data Management Custom Scoring Set Manual Parameters and Modifiers

Data Management

Select "Yes", "Single Sign On" or "Custom" to enable sending readings to the EMR.

☒ No

☐ Yes, by answering a few simple questions.

☐ Single Sign On.

☐ Custom

BACK SAVE AND CONTINUE

- a. The default setting is to not send readings to an EMR. To change the default setting, use the radio button to select **Yes, by answering a few simple questions, Single Sign On,** or **Custom** to enable sending readings to the EMR. See the *"Data Management"* section for further details.
- b. Click **SAVE AND CONTINUE**.
- c. (Optional). Select a Custom Scoring Setup. For: Enable custom scoring? Use the drop down menu to select Yes or No. The default choice = No. For further information about enabling Custom Scoring see the section *"(Optional) Select Custom Scoring Setup (Connex Spot Monitor)"*.



NOTE An authentication code is required.

- d. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to the **Set Manual Parameters and Modifiers** tab.

15. Configure the Manual Parameters and Modifiers settings.

28 Create a new configuration for a Hospital setting

Configuration Name: North Wing

Summary Clinical (Required) **Informatics** IT Biomed (Required)

Data Management Custom Scoring **Set Manual Parameters and Modifiers**

Set Manual Parameters and Modifiers

Set Manual Parameters

Select or hide the devices standard manual entries.

☒ Default
☐ Custom

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifies	Unit	Size
Add Modifier						

Prevent Skip Required Modifiers

The default settings are: Select or hide the devices standard manual entries = **Default**, Prevent Skip Required Modifiers = No. See the "(Optional) Select Custom Parameters and Modifiers" for additional details on customizing the Manual Parameters.

16. Click **SAVE AND CONTINUE**.
17. Click **EMR Selection** to continue.

Configuration Name: North Wing

Summary Clinical (Required) Informatics **IT** Biomed (Required)

EMR Selection Date & Time Settings Network Connectivity Settings

EMR Selection

Select the vendor of the electronic record system the device will communicate with.

Would you like to configure an EMR?

Allow manual patient entry?

Set device patient mode using Patient Date of Birth?

Select an EMR:

The default settings for the EMR Selection are: Would you like to configure an EMR? = Yes . Allow manual patient entry? = Yes. Set device patient mode using Patient Date of Birth? = No. Select an EMR: = Blank.

18. If your facility is using an Electronic Medical Records (EMR) system, select the EMR settings. Use the drop down menu to answer Yes or No at the prompt: Would you like to configure an EMR?.
 - a. If Yes is selected, use the drop down menu to select your EMR. Choices include: Allscripts Sunrise 6.1 and higher, Cerner, I will customize my selection, EPIC, McKesson Horizon, McKesson Paragon, Medhost (HMS), Meditech 6.X, Meditech Client/Server, Meditech Magic, Siemens Invision, Siemen's Sorian, VA - VistA/CPRS. If prompted, select an Integrator from the drop down menu for each EMR.

EMR Selection

Select the vendor of the electronic record system the device will communicate with.

Would you like to configure an EMR?

Allow manual patient entry?

Set device patient mode using Patient Date of Birth?

Select an EMR:

[Change Password](#)

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- Allscripts Sunrise 6.1 and higher
- Cerner
- I will customize my selection.
- EPIC
- McKesson Horizon
- McKesson Paragon
- Mednost (HMS)
- Meditech 6.X
- Meditech Client/Server
- Meditech Magic
- Siemens Invision
- Siemens Sorian
- VA - Vista/CPRS

- b. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves from the **EMR Selection** section to the **Date and Time Settings** section and the view is updated to show completed sections in green.

Configuration Name: North Wing

[Summary](#) [Clinical](#)

[Select Version](#) [Select Units](#) [Select Patient Populations](#) [Select Profiles](#) [Set Manual Parameters and Modifiers](#) [General Device Settings](#) [EMR Selection](#)

[Date & Time Settings](#)

Date And Time Settings

Configure date and time settings.

Display Date & Time?

Date Format:

Prevent Date & Time Changes

Time Zone:

Enable Daylight Saving Time?

Enable NTP:

19. Click **Date & Time Settings** to continue.
 - a. Use the drop down menu to select Display Date & Time. The default settings for Display Date & Time = Yes.
 - b. Use the drop down menu to select Date Format. The default settings = MM/DD/YYYY. Choices include: MM/DD/YYYY, YYYY/MM/DD, DD/YYYY/MM, or DD.MM.YYYY.
 - c. Use the drop down menu to select Prevent Date & Time Changes. The default setting = No.
 - d. Use the drop down menu to select the Time Zone.
 - e. Use the drop down menu to select Enable Daylight Savings Time?. The default setting = Yes.
 - f. Use the drop down menu to select Enable NTP?. The default setting = No.
20. Click **SAVE AND CONTINUE**.

The configuration tool is updated the screen moves to the **Network Connectivity Settings** tab.

Network Connectivity Settings

Enter the settings the device require to communicate on the network. If the device will operate on a WiFi network, set "Enable WiFi" to Yes.

Please select an EMR connection type:	Network ▼
Enable HL7?	No ▼
Please select a network connectivity method:	DNS ▼
Enable WiFi 802.11?	Yes ▼
Enable data encryption?	No ▼
Enable Server Authentication?	No ▼
Select an optional CA Root certificate.	
Enable Client Authentication?	No ▼
Enable service host encryption?	No ▼

DNS Settings

DNS Name:	<input type="text"/>
DNS Port:	7711

[BACK](#)
[SAVE AND CONTINUE](#)

Enter the settings the device requires to communicate on the network. If the device will operate on a WiFi network, set Enable WiFi to Yes. Default settings include: Please select an EMR connection type: = Network. Enable HL7? = No. Please select a network connectivity method: = DNS. Enable WiFi 802.11? = Yes. Enable data encryption? = No. Enable Server Authentication? = No. Enable Client Authentication? = No. Enable service host encryption? = No.

(Optional). Click **Select an optional CA root certificate.**



NOTE CA root certificate must be in PEM or DER formats. Failure to abide by these restrictions will cause the certificate to be ignored by the device.

Click **Add Certificate to Library** and upload a previously created PEM or DER format file (ex: cacert.pem). Click **DONE**.

DNS Settings

DNS Name: Click within the *DNS Name*: field and enter a DNS name.

DNS Port: = 7711

21. Click **SAVE AND CONTINUE**.

The configuration tool is updated and the screen moves to the **Radio Settings** tab.

Radio Settings

Configure the devices radio to communicate on the wireless network.

Enable Radio Alarms:	Yes ▼
ESSID:	<input type="text"/>
Radio Mode:	802.11g/n ▼
Enable Dynamic Frequency:	Yes ▼
WiFi Power Save Poll Mode:	Max ▼
Authentication/Encryption:	WPA2/Personal ▼
Pre-shared Key:	<input type="text"/>
Roam Type:	One ▼
Enable PPS:	No ▼

[BACK](#)
[SAVE AND CONTINUE](#)

Configure the device's radio to communicate on the wireless network.

Default settings include:

Enable Radio Alarms: = Yes

ESSID: = Blank.

Radio Mode: = a/b/g/n

Enable Dynamic Frequency: = Yes

Wifi Power Save Poll Mode: = Max

Authentication/Encryption: = WPA2-Personal

Pre-shared Key: =

Roam Type: = OKC

Enable FIPS: = No

Use the drop down menu to change any of the default settings.

22. Click **SAVE AND CONTINUE**.

23. Click **General Device Settings**.

Configuration Name: Care Center Clinic

Summary Clinical (Required) Informatics IT **Biomed (Required)**

General Device Setting

Select "Custom" to modify default power, language, and other general settings.

☒ Mobile
☐ Wall Mounted
☐ Custom

Select an optional splash screen image.

Bluetooth Low Energy (BLE) Settings

Turn on BLE by default? (license required) No ▾

Virtual Network Computing (VNC) Settings

Allow VNC connection? No ▾

Universal Serial Bus (USB) Settings

USB Ports Enable Yes ▾

Admin Settings

Admin Access Code (required 6 digits):

Enable Access Code For USB Configuration: No ▾

BACK SAVE AND CONTINUE

- a. (Optional). Select **Custom** to modify default power, language, and other general settings. The default selection = **Mobile**. Choices include: **Mobile**, **Wall Mounted**, and **Custom**. See: "(Optional) Select Custom General Device Settings" for additional instructions to modify the General Device Settings.
- b. (Optional). Click **Select an optional splash screen image** and follow the on screen instructions to upload a custom Splash Screen Image onto the device. To create your facility's custom Splash Screen Image, the image must be in the Windows BMP format file. It must be 800 pixels wide by 480 pixels tall and have 24 bits of color using 3 bytes per pixel. The image must not contain color space information. Failure to abide by these restrictions will cause the image to be ignored by the device.

32 Create a new configuration for a Hospital setting

- c. (Optional). Use the drop down menu to change any of the default settings.
- d. (Required). Admin Settings. Select an Admin Access Code that is exactly 6 digits long.

The default settings for Bluetooth Low Energy (BLE) are: Turn on BLE by default? (license required) = No. The default setting for Virtual Network Computing (VNC) Settings is: Allow VNC connection? = No. The default setting for Universal Serial Bus (USB) is: USB Ports Enable = Yes. The default setting for Enable Access Code for USB Configuration is No.

24. Click **SAVE AND CONTINUE**.

As the configuration tool is updated the screen moves to Configuration complete. When all the sections appear green, the configuration file can be downloaded or shared.

Progress Summary

Section: Clinical (Required)

Select Version

Select Units

Select Patient Populations

Select Profiles

Section: Informatics

Data Management

Custom Scoring

Set Manual Parameters and Modifiers

Section: IT

EMR Selection

Date & Time Settings

Network Connectivity Settings

Section: Biomed (Required)

General Device Settings

(Optional) Select Custom Units

1. Select the device units. Click **Select Units**.
2. Click the radio button next to **Custom** to select the Custom unit.

The screenshot shows the 'Customize Unit Selection' dialog box in the Welch Allyn software. The background shows the 'Select Units' screen with the 'Custom' radio button selected. The dialog box has the following sections:

- NIBP**: Units (mmHg), Primary Display (Systolic / Diastolic (MAP)).
- Temperature**: Units (Celsius), Display Temp Conversion (Yes), Default Temp Site (Oral), Configure a Braun Pro 6000 (No).
- Manual Parameter Units**: Height (Centimeters), Weight (Kilograms).

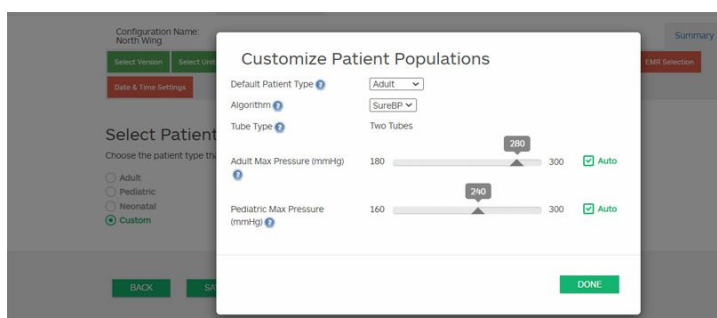
Choose Custom to set up a combination of different systems or to configure a Pro 6000 thermometer.

3. For Non-Invasive Blood Pressure (NIBP), use the drop down menu to choose mmHg or kPa. For Primary Display use the drop down menu to choose Systolic/Diastolic with Mean Arterial Pressure (MAP), MAP (Systolic/Diastolic), or Systolic/Diastolic.
4. For Temperature, use the drop down menu to choose Celsius or Fahrenheit. For Display Temp Conversion, use the drop down menu to choose Yes or No. For Default Temp Site use the drop down menu to choose Oral, Pediatric Axillary, Adult Axillary, or Last Site. For Configure a Braun Pro 6000, use the drop down menu to choose Yes or No.
5. For Manual Parameter Units, Height, use the drop down menu to choose Centimeters or Inches. For Manual Parameter Units, Weight, use the drop down menu to choose Kilograms or Pounds.
6. When finished, click **DONE**.
7. Click **SAVE AND CONTINUE**.

(Optional) Select Custom Patient Populations

1. Select the device default Patient type.
2. Click the radio button next to **Custom** to select the Custom patient type. Choices include: **Adult, Pediatric, Neonatal, or Custom.**

The default settings are: Default Patient Type = Adult, Algorithm = SureBP, and Tube Type = Two Tubes. The adult maximum cuff pressure is set to 280 mmHg and the pediatric maximum cuff pressure is set to 240 mmHg with the default Auto settings.



3. (Optional). For Customize Patient Populations, Default Patient Type, use the drop down menu to choose **Pediatric**. The default settings are: Default Patient Type = Pediatric, Algorithm = Step, and Tube Type = Two Tubes. The adult maximum cuff pressure is set to 280 mmHg and the pediatric maximum cuff pressure is set to 240 mmHg with the default Auto settings. The adult cuff inflation target is set to 160 mmHg. The pediatric cuff inflation target is set to 140 mmHg. The neonatal cuff inflation target is set to 90 mmHg.

Customize Patient Populations

Default Patient Type ? Pediatric

Algorithm ? Step

Tube Type ? Two Tubes

Adult Max Pressure (mmHg) ? 180 280 300 ☒ Auto

Pediatric Max Pressure (mmHg) ? 160 240 300 ☒ Auto

Adult Cuff Inflation Target (mmHg) ? 80 160 280

Pediatric Cuff Inflation Target (mmHg) ? 80 140 280

Neonatal Cuff Inflation Target (mmHg) ? 50 90 130

DONE

- To change the default values for the adult maximum cuff pressure or the pediatric maximum cuff pressure, uncheck the Auto settings and use the slider, or use the arrow keys on your computer keyboard, to set the value.
- To change the default values for the adult, pediatric, or neonatal cuff inflation target use the slider, or use the arrow keys on your computer keyboard, to set the value.

Customize Patient Populations

Default Patient Type ? Pediatric

Algorithm ? Step

Tube Type ? Two Tubes

Adult Max Pressure (mmHg) ? 180 250 300 ☐ Auto

Pediatric Max Pressure (mmHg) ? 160 222 300 ☐ Auto

Adult Cuff Inflation Target (mmHg) ? 80 141 280

Pediatric Cuff Inflation Target (mmHg) ? 80 114 280

Neonatal Cuff Inflation Target (mmHg) ? 50 81 130

DONE

- For Customize Patient Populations, Pediatric Default Patient Type, the default settings for Algorithm can be changed from Step to SureBP, and the default settings for Tube Type can be changed from Two Tubes to One Tube. For Sure BP, the default Tube Type remains Two Tubes and the maximum cuff pressures remain at 280 mmHg for adult and 240 mmHg for pediatric with the default Auto settings.

Customize Patient Populations

Default Patient Type [?] Pediatric

Algorithm [?] SureBP

Tube Type [?] Two Tubes

Adult Max Pressure (mmHg) [?] 180 280 300 ☒ Auto

Pediatric Max Pressure (mmHg) [?] 160 240 300 ☒ Auto

DONE

- To change the default values for the adult maximum cuff pressure or the pediatric maximum cuff pressure, uncheck the Auto settings and use the slider, or use the arrow keys on your computer keyboard, to set the value.
 - To change the default values for Step, Tube Type, use the drop down menu to select One Tube.
4. (Optional). For Customize Patient Populations, Default Patient Type, use the drop down menu to choose **Neonatal**. The default settings are: Default Patient Type = Neonatal, Algorithm = Step, and Tube Type = One Tube. The adult maximum cuff pressure is set to 280 mmHg and the pediatric maximum cuff pressure is set to 240 mmHg with the default Auto settings. The adult cuff inflation target is set to 160 mmHg. The pediatric cuff inflation target is set to 140 mmHg. The neonatal cuff inflation target is set to 90 mmHg.

Customize Patient Populations

Default Patient Type [?] Neonatal

Algorithm [?] Step

Tube Type [?] One Tube

Adult Max Pressure (mmHg) [?] 180 280 300 ☒ Auto

Pediatric Max Pressure (mmHg) [?] 160 240 300 ☒ Auto

Adult Cuff Inflation Target (mmHg) [?] 80 160 280

Pediatric Cuff Inflation Target (mmHg) [?] 80 140 280

Neonatal Cuff Inflation Target (mmHg) [?] 50 90 130

DONE

- To change the default values for the adult maximum cuff pressure or the pediatric maximum cuff pressure, uncheck the Auto settings and use the slider, or use the arrow keys on your computer keyboard, to set the value.
 - To change the default values for the adult, pediatric, or neonatal cuff inflation target use the slider, or use the arrow keys on your computer keyboard, to set the value.
- When finished, click **DONE**.
 - Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Select Profiles** tab.

Configure the Interval Profile

The Interval Profile allows you to choose which interval profile appears as the default on the device. You can configure auto interval settings or create custom interval programs.

- Create up to 5 unique programs
 - Create specific intervals
 - Program 6 remains available for customization on the device
1. Configure the Interval Profile.

Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Population **Select Profiles** Set Manual Parameters and Modifiers General Device Settings EMR Selection

Date & Time Settings

Configure the Interval Profile

Configure auto interval settings or create custom interval programs.

Default Auto Interval Time (minutes): 1 15 240

Default Intervals Mode: Automatic


Default Interval Parameters: NIBP

Silence Send Successful Audio: No

Program Name	Total Monitoring Time
+ Add a program	

BACK SAVE AND CONTINUE

The default settings are: Default Auto Interval Time (minutes) = 15, Default Intervals Mode = Automatic, Default Interval Parameters = NIBP, and Silence Send Successful Audio = No.

2. (Optional). To change the Default Auto Interval Time, use the slider, or use the arrow keys on your computer keyboard, to set the value. Values range from 1 minute to 240 minutes.
3. (Optional). To change the Default Intervals Mode, use the drop down menu to select Automatic or STAT.
4. (Optional). To change the Default Interval Parameters, use the drop down menu to select NIBP, SpO2, or Both.
5. (Optional). To change the Silence Send Successful Audio, use the drop down menu to select No or Yes.
6. (Optional). Click  to add a program.

Add a program

Program Name:

Number of Intervals:

Interval 1(min):

Frequency 1:




Interval 2(min):

Frequency 2:

Interval 3(min):

Frequency 3:

- a. Click within the *Program Name* field and enter the name as you want it to appear on the device.
- b. Accept the default values or use the slider, or use the arrow keys on your computer keyboard, to set the value for Intervals. Values range from 1 minute to 120 minutes.
- c. Accept the default values or use the slider, or use the arrow keys on your computer keyboard, to set the value for Frequency. Values range from 1 to 25.
 - Use the drop down menu to set the number of Intervals from 1 to 5.
 - Set each Frequency. Values range from 1 to 25.
7. When finished, click **DONE**.
8. As programs are added, the Total monitoring time appears and the edit and delete buttons are available for modifications.

Program Name	Total Monitoring Time	
North Wing Intervals	88 minutes	 
 Add a program		

9. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Set Manual Parameters and Modifiers** tab.

Configure the Office Profile

The Office Profile allows you to add one or more blood pressure averaging programs.

- Create up to 6 readings
- Set delays before starting readings
- Set length of time in between readings

1. Configure the Office Profile.

Configuration Name:
North Wing

Summary Clinical

Select Version Select Units Select Patient Populations **Select Profile** Set Manual Parameters and Modifiers General Device Settings EMR Selection

Date & Time Settings

Configure the Office Profile

Add one or more blood pressure averaging programs.


Default Intervals Mode:

Enable Pulse Rate Averaging:

Program Name	Readings	Delay	Time Between Readings	Keep If + or -
<input type="button" value="+"/> Add a program				

BACK SAVE AND CONTINUE

The default settings are: Default Intervals Mode = blank and Enable Pulse Rate Averaging = No.


2. (Optional). To change the Enable Pulse Rate Averaging, use the drop down menu to select Yes or No.
3. (Optional). Click  to add a program. The default settings are: Number of Readings to take = 1, Readings to Include in Average = 1, Delay To Start (minutes) = 0, Time Between Readings (minutes) = 1, and Keep If + or - (mmHg) = 20.


Add An Averaging Program


Program Name:

Number of Readings to Take:




Readings to Include in Average: ☒ 1 ☒ 2 ☒ 3 ☒ 4 ☒ 5 ☒ 6

Delay To Start (minutes): 

Time Between Readings (minutes): 

Keep If + or - (mmHg): 

- a. Click within the *Program Name* field and enter the name as you want it to appear on the device.
 - b. Accept the default values or use the slider, or use the arrow keys on your computer keyboard, to set the value for Delay to Start (minutes). Values range from 0 minute to 240 minutes.
 - c. Accept the default values or use the slider, or use the arrow keys on your computer keyboard, to set the value for Time Between Readings (minutes). Values range from 1 minute to 240 minutes.
 - d. Accept keep the reading if the reading falls within + or - 20 mmHg of the default value, or use the slider, or use the arrow keys on your computer keyboard, to change the value and keep the readings if the mmHg value is + or - of the newly set value. For example: Keep if + or - 13 (mmHg). Values range from 1 mmHg to 100 mmHg.
4. When finished, click **DONE**.
 5. As programs are added, the Delay and Time Between Readings appear and the edit and delete buttons are available for modifications.

Program Name	Readings	Delay	Time Between Readings	Keep If + or -	
North Wing Averaging	<input checked="" type="checkbox"/>	0 minutes	1 minutes	20 mmHg	 
 Add a program					

6. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Set Manual Parameters and Modifiers** tab.

Configure the Spot Profile

1. Configure the Spot Profile.

Configuration Name:
North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles Set Manual Parameters and Modifiers General Device Settings EMR Selection

Date & Time Settings

Select Profiles

Select and rename one or more clinical profiles. Enabling a profile allows a user to select it for use on the device.

Profile Types	Primary Profile	Custom Profile Name
<input type="checkbox"/> Intervals	<input type="radio"/>	
<input type="checkbox"/> Office	<input type="radio"/>	
<input checked="" type="checkbox"/> Spot	<input checked="" type="radio"/>	NWSP

BACK SAVE AND CONTINUE

2. (Optional). Click with the Custom Profile Name field and enter the name as you want it to appear on the device.
3. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Set Manual Parameters and Modifiers** tab.

Set Manual Parameters

Select or hide the devices standard manual entries.

1. Configure the manual parameters and modifiers settings.

Configuration Name: North Wing

Summary Clinical (Required) **Informatics** IT Biomed (Required)

Data Management Custom Scoring **Set Manual Parameters and Modifiers**

Set Manual Parameters and Modifiers

Set Manual Parameters

Select or hide the devices standard manual entries.

☒ Default
☐ Custom

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifies	Unit	Size
Add Modifier						

Prevent Skip Required Modifiers No

The default settings are: Select or hide the devices standard manual entries = Default, Prevent Skip Required Modifiers = No.

2. See the "(Optional) Select Custom Parameters and Modifiers" for additional details on customizing the Manual Parameters.
3. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **EMR Selection** tab.

(Optional) Select Custom Scoring Setup (Connex Spot Monitor)

This section describes how to set up Bedside Protocols that can be replicated on a Connex Spot Monitor device. You can pre-select from a list of clinical protocols. All scoring protocols are completely customizable to meet user requirements.

You may add up to 6 Scoring Systems. Select a predefined Scoring System template, enter a unique Name, and click the button labeled ADD THIS SCORING SYSTEM. Your Scoring System will be added to the bottom of the page. You may then Edit or Delete your Scoring System.

Click the **Custom Scoring** tab.

1. (Optional). Use the drop down menu to select Yes to Enable custom scoring. (The default Enable custom scoring = No).

Configuration Name:
North Wing

Data Management Custom Scoring Set Manual Parameters and Modifiers

Custom Scoring Setup

Enable custom scoring? No ▾

Do you want to view a condensed total score page as your default? Yes ▾

2. (Optional). To change the default selection for Do you want age ranges associated with scoring protocols for pre-selection based on patient age?, use the drop down menu to select Yes or No. (The default choice = No).
3. (Optional). To change the default selection for Do you want to view a condensed total score page as your default?, use the drop down menu to select Yes or No. (The default choice = Yes).
4. Click within the *Please enter the authentication code:* field and enter a valid code in format of [YY]CSM[MM] with the current year and month.
5. Click **SAVE AND CONTINUE**.
6. Select a Scoring System template. Choices include:
 - Bedside PEWS <3 months
 - Bedside PEWS 3 to <12 months
 - Bedside PEWS 1 to 4 years
 - Bedside PEWS 5 to <12 years
 - Bedside PEWS >=12 years
 - Braden
 - BTF SAGO
 - BTF ED
 - BTF SPOC <3 months
 - BTF SPOC 3 to 12 months
 - BTF SPOC 1 to 4 years
 - BTF SPOC 5 to 11 years
 - BTF SPOC 12 years
 - Falls Risk Assessment Tool
 - Glasgow Coma Scale
 - Modified Early Obstetric Warning
 - Modified Early Warning Score
 - MEWS for General Surgical Ward
 - Morse Fall Score
 - National Early Warning Score
 - National Early Warning Score 2
 - NEWS2 Scale 1
 - NEWS2 Scale 2
 - Norton
 - Pediatric Early Warning Score
 - Rapid Emergency Medicine Score
 - Triage Early Warning System
 - Walsall
 - Blank Scoring System
7. To enter a name for the Scoring System, click within the *Enter a Name for the Scoring System:* field and type a name for the scoring system as you want it to appear on the device.
8. When finished, click **ADD THIS SCORING SYSTEM**.

After a successful addition, the following message appears: *The scoring System has been successfully added.*

Custom Scoring Selection

• The Scoring System has been successfully added.

You may add up to 6 Scoring Systems. To do so, please select a predefined Scoring System template, enter a unique Name, and click the button labeled ADD THIS SCORING SYSTEM. Your Scoring System will be added to the bottom of the page. You may then Edit or Delete your Scoring System.

Select a Scoring System template:

Enter a Name for the Scoring System:

ADD THIS SCORING SYSTEM

The name for the scoring system also appears at the bottom of the **Custom Scoring Selection** screen.

Name: BP12

Label: Bedside PEWS >=12 years

Age Range: 144 to 215 months

Score Labels

- Pulse Rate
- Systolic Blood Pressure
- Capillary Refill Time
- Respiration Rate
- Respiratory Effort
- PTCO2
- Oxygen Therapy

Severity Ranks

White	Normal
Yellow	Low
Orange	Medium
Red	Severe



NOTE The Custom Scoring Selection can be used as is or modified to meet facility requirements.



NOTE The Name of the Custom Scoring system defines how the scoring protocol will appear on the device. The HIS ID information for the EMR can be applied here too. Configure the capability for Single Parameter Scoring by itself or as part of an Aggregate Score.

- (Optional). To edit the Scoring system, click (edit). Click within the fields to enter changes or use the drop down menu to change the Configure Aggregate score or Single Parameter Triggers.

Edit Scoring System

You may edit the Scoring System information contained on this page.

Name:

Label:

Abbreviation:

HIS ID:

Configure Aggregate Score:

Single Parameter Triggers:

CANCEL

CONTINUE




- (Optional). To delete the Scoring system, click (delete).
- Click **SAVE AND CONTINUE**.
- To continue to edit the Scoring System, configure the minimum or maximum age ranges (in months).



Edit Scoring System

Configure the age ranges.

Clinical Parameter: Age in months

Parameter Type: Integer

Min (# months)	Max (# months)	
<input type="text" value="144"/>	<input type="text" value="215"/>	
<input type="text" value="160"/>	<input type="text" value="240"/>	
 Add Range Row		



13. (Optional). To add a Range Row , click  (add). To delete a row, click  (delete).
14. Click **SAVE AND CONTINUE**.
15. (Optional). To continue editing the Scoring system, check or uncheck the Enable settings. Default settings include: Rank Normal = Enable, Rank Low = Enable, Rank Medium = Enable, Rank High = Disable, Rank Severe = Enable.

Edit Scoring System

You may enable or disable the predefined Rank assignments. You can edit individual Rank values by clicking the edit icons.
















Enable	Rank	Value	Color
<input checked="" type="checkbox"/>	Normal		<input type="text" value="White"/> 
<input checked="" type="checkbox"/>	Low		<input type="text" value="Yellow"/> 
<input checked="" type="checkbox"/>	Medium		<input type="text" value="Orange"/> 
<input type="checkbox"/>	High		
<input checked="" type="checkbox"/>	Severe		<input type="text" value="Red"/> 

**NOTE** Severity rankings color can modified based on protocol.**NOTE** Rankings can either be omitted or added based on protocol.

16. Click  (edit) to change the rank information.
17. Click **SAVE AND CONTINUE**.
18. (Optional). To continue editing the Scoring system, click  (edit) to change the values.


Edit Scoring System

You may edit or delete a particular Parameter Score by clicking on the icons in the Scores row. You may also add additional Parameter Scores based on the Parameters in the provided list. Up to 12 Parameter Scores are allowed. To continue, all Parameter Scores must be marked as Complete.

Score Name	Score Label	Clinical Parameter	Filter By	Complete
PulseRateScore1	Pulse Rate	Pulse Rate	Yes	 
NIbP:SystolicScore2	Systolic Blood Pressure	Systolic Blood Pressure	Yes	 
Capillary Refil TimeScore3	Capillary Refil Time	Capillary Refil Time	Yes	 
Respiration RateScore4	Respiration Rate	Respiration Rate	Yes	 
Respiratory EffortScore5	Respiratory Effort	Respiratory Effort	Yes	 
PTCO2Score6	PTCO2	PTCO2	Yes	 
Oxygen TherapyScore7	Oxygen Therapy	Oxygen Therapy	Yes	 
Add a Score based on an existing Parameter or Modifier.  <input type="text" value="Activity"/>				

BACK

CONTINUE

QUICK TIP: If you want to disassociate a parameter from the score, click  (delete), if you want to add a new parameter associated with the score either select an existing one from the drop down list, or create a custom parameter in the next tab.

19. Click **CONTINUE**.

20. Click **SAVE AND CONTINUE**.
21. As the Configuration Tool is updated the screen moves to the **Set Custom Parameters and Modifiers** tab.

(Optional) Select Custom Parameters and Modifiers

Select or hide the device standard manual entries.

Click the **Set Manual Parameters and Modifiers** tab.

1. Use the radio button to select **Default** or **Custom** Parameters and Modifiers.

Configuration Name: North Wing

Summary Clinical (Required) **Informatics** IT Biomed (Required)

Data Management Custom Scoring **Set Manual Parameters and Modifiers**

Set Manual Parameters and Modifiers

Set Manual Parameters

Select or hide the devices standard manual entries.

☒ Default ☐ Custom

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifiers	Unit	Size	
Capillary Refill Time	Capillary Refill Time	No	Integer	None	s	1	Part of Score
Respiratory Effort	Respiratory Effort	No	List	None		2	Part of Score
PTCO2	PTCO2	No	Integer	None	percent	1	Part of Score
Oxygen Therapy	Oxygen Therapy	No	Integer	None	Limin	1	Part of Score

[Add Modifier](#)

Prevent Skip Required Modifiers: **No**

BACK **SAVE AND CONTINUE**

The following are part of the default score based on the previous example when selecting the Bedside Protocol of "Bedside PEWS 3 to <12 months" in the **Custom Scoring Selection**: Capillary Refill Time, Respiratory Effort, PTCO2, and Oxygen Therapy. Prevent Skip Required Modifiers = No.



NOTE Default scores vary based on the Bedside Protocol chosen in the **Custom Scoring Selection**.

2. (Optional). Select the Custom radio button to change the Manual Parameters.

Set Manual Parameters

Show pain in home screen: **No**

Show respiration in home screen: **No**

Show height in home screen: **No**

Show weight in home screen: **No**

Show BMI in home screen: **No**

Override NIBP: **Yes**

Override Temperature: **Yes**

Override SpO2: **Yes**

Override Pulse Rate: **Yes**

Override Respiration Rate: **Yes**

CANCEL **DONE**

The default settings are: Show pain in home screen = No, Show respiration in home screen = No, Show height in home screen = No, Show BMI in home screen = No, Override NIBP = Yes,

Override Temperature = Yes, Override SpO2 = Yes, Override Pulse Rate = Yes, Override Respiration Rate = Yes.

3. (Optional). To change Show pain in home screen, use the drop down menu to select No, Yes, or Hide.
4. (Optional). To change Show respiration in home screen, use the drop down menu to select No, Yes, or Hide.
5. (Optional). To change Show height in home screen, use the drop down menu to select No, Yes, or Hide.
6. (Optional). To change Show BMI in home screen, use the drop down menu to select No, Yes, or Hide.
7. (Optional). To change Override NIBP, use the drop down menu to select Yes or No.
8. (Optional). To change Override Temperature, use the drop down menu to select Yes or No.
9. (Optional). To change Override SpO2, use the drop down menu to select Yes or No.
10. (Optional). To change Override Pulse Rate, use the drop down menu to select Yes or No.
11. (Optional). To change Override Respiration Rate, use the drop down menu to select Yes or No.
12. Click **DONE**.


13. (Optional). Click  to add a Modifier.

Add Modifier

Name	<input type="text"/>
Label	<input type="text"/>
Abbreviation	<input type="text"/>
Required	<input type="button" value="Yes"/>
Modifies	<input type="button" value="None"/>
Type	<input type="button" value="Integer"/>
Minimum Value	<input type="text"/>
Maximum Value	<input type="text"/>
Unit	<input type="text"/>
HIS ID	<input type="text"/>
Unit HIS ID	<input type="text"/>

- a. Click in the *Name* field and type in a name for the modifier.
- b. Click in the *Label* field and type in a label for the modifier.
- c. Click in the *Abbreviation* field and type in an abbreviation for the modifier.
- d. Use the drop down menu to select whether the modifier is required.
- e. Use the drop down menu to select whether the modifier modifies: NIBP, SpO2, Temperature, Pulse Rate, Respiration Rate, or None.
- f. Use the drop down menu to select the type of modifier: Integer, Decimal, Alphanumeric, or List.

If List is selected, click in the *Name* field and type in a name, click in the *Label* field and type in a label, click in the *Abbreviation* field and type in an abbreviation, click in the *Item HIS ID* field and type in a HIS ID.

(Optional). Click  to add another List Item.

- g. Click in the *Name* field and type in a name for the modifier.
- h. Click in the *Minimum Value* field and type in a value. (Values must be within -32768 and 32767 and be an integer. The Minimum Value must be less than the Maximum Value.)

- i. Click in the *Maximum Value* field and type in a value. (Values must be within -32768 and 32767.)
 - j. When finished, click **SAVE**.
14. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **EMR Selection** tab.

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, Respiration Rate, and Temperature.

1. Configure the general alarm settings.

Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles **Set Manual Parameters and Modifiers** General Device Settings EMR Selection

Date & Time Settings

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, and Temperature.

Allow user to disable alarms: Yes

Allow user to turn off general audio: No

Default alarm volume: Low

Minimum alarm volume: Low

Nurse call threshold: Medium Priority

Audio pause time: 2 min

The default settings are: Allow user to disable alarms = Yes, Allow user to turn off general audio = No, Default alarm volume = Low, Minimum alarm volume = Low, Nurse call threshold = Medium Priority, and Audio pause time = 2 min.

2. (Optional). To change Allow user to disable alarms, use the drop down menu to select Yes or No.
3. (Optional). To change Allow user to turn off general audio, use the drop down menu to select No or Yes.
4. (Optional). To change the Default alarm volume, use the drop down menu to select Low, Medium, or High.
5. (Optional). To change the Minimum alarm volume, use the drop down menu to select Low, Medium, or High.
6. (Optional). To change the Nurse call threshold, use the drop down menu to select Medium Priority, Low Priority, or High Priority.
7. (Optional). To change the Audio pause time, use the drop down menu to select 2 min (minutes), Disable, 2 min 30 sec (seconds), 3 min, 5 min, 10 min, or 15 min.

Refer to the individual parameters for instructions on changing alarm limits.

8. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Set Manual Parameters and Modifiers** tab.

NIBP Alarms (mmHg)

Configure general alarm settings as well as alarm settings for NIBP.

1. Configure the general alarm settings.

Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles **Set Manual Parameters and Modifiers** General Device Settings EMR Selection

Date & Time Settings

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, and Temperature.

Allow user to disable alarms: Yes

Allow user to turn off general audio: No

Default alarm volume: Low

Minimum alarm volume: Low

Nurse call threshold: Medium Priority

Audio pause time: 2 min

2. (Optional). To change NIBP alarms, use the sliders, or use the arrow keys on your computer keyboard, to set the lower and upper values. See the next steps for specific values for each alarm.

NIBP Alarms (mmHg)

Adult Systolic Limits:	<input checked="" type="checkbox"/> Enable SYS/DIA	28	75:220	258
Adult Diastolic Limits:		20	35:110	235
Adult MAP Limits:	<input type="checkbox"/> Enable	20	50:120	255
Pediatric Systolic Limits:	<input checked="" type="checkbox"/> Enable SYS/DIA	30	75:145	160
Pediatric Diastolic Limits:		15	35:100	130
Pediatric MAP Limits:	<input type="checkbox"/> Enable	15	50:110	140
Neonatal Systolic Limits:	<input checked="" type="checkbox"/> Enable SYS/DIA	25	50:100	120
Neonatal Diastolic Limits:		10	30:70	105
Neonatal MAP Limits:	<input type="checkbox"/> Enable	10	35:80	110

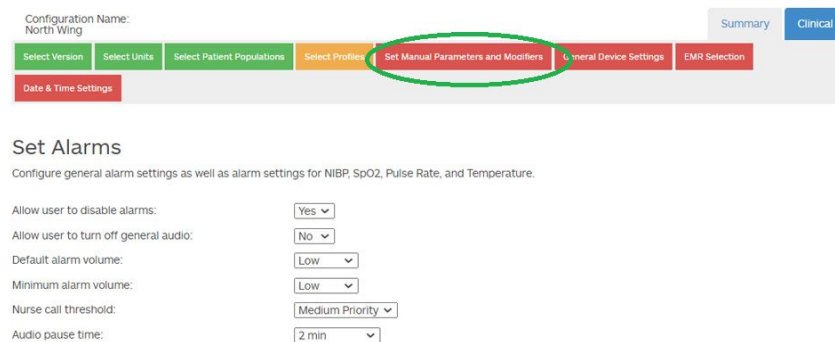
- The default settings are Enable SYS/DIA, Adult Systolic Limits 75:220, Adult Diastolic Limits 35:110, and Adult MAP Limits 50:120 is disabled.
 - The default settings are Enable SYS/DIA, Pediatric Systolic Limits 75:145, Pediatric Diastolic Limits 35:100, and Pediatric MAP Limits 50:110 is disabled.
 - The default settings are Enable SYS/DIA, Neonatal Systolic Limits 50:100, Neonatal Diastolic Limits 30:70, and Neonatal MAP Limits 35:80 is disabled.
3. (Optional). To change NIBP alarms, use the sliders, or computer arrow keys, to set the values for Adult Systolic Limits. Values range from 28 to 258.
 4. (Optional). To change NIBP alarms, use the sliders, or computer arrow keys, to set the values for Adult Diastolic Limits. Values range from 20 to 235.
 5. (Optional). To change NIBP alarms, check the Enable box and then use the sliders, or computer arrow keys, to set the value for Adult MAP Limits. Values range from 20 to 255.
 6. (Optional). To change NIBP alarms, use the sliders, or computer arrow keys, to set the value for Pediatric Systolic Limits. Values range from 30 to 160.

7. (Optional). To change NIBP alarms, use the sliders, or computer arrow keys, to set the value for Pediatric Diastolic Limits. Values range from 15 to 130.
8. (Optional). To change NIBP alarms, check the Enable box and then use the sliders, or computer arrow keys, to set the value for Pediatric MAP Limits. Values range from 15 to 140.
9. (Optional). To change NIBP alarms, use the sliders, or computer arrow keys, to set the values for Neonatal Systolic Limits. Values range from 25 to 120.
10. (Optional). To change NIBP alarms, use the sliders, or computer arrow keys, to set the values for Neonatal Diastolic Limits. Values range from 10 to 105.
11. (Optional). To change NIBP alarms, check the Enable box and then use the sliders, or computer arrow keys, to set the values for Neonatal MAP Limits. Values range from 10 to 110.
12. Click **SAVE AND CONTINUE**.

SpO2 Alarms (Percent)

Configure general alarm settings as well as alarm settings for SpO2.

1. Configure the general alarm settings.



Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles Set Manual Parameters and Modifiers General Device Settings EMR Selection

Date & Time Settings

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, and Temperature.

Allow user to disable alarms: Yes

Allow user to turn off general audio: No

Default alarm volume: Low

Minimum alarm volume: Low

Nurse call threshold: Medium Priority

Audio pause time: 2 min

2. Use the drop down menu to select the SpO2 Alarm Delay Condition. Choices include: 10 seconds (default), Off, or SatSec.

For SatSec settings, choices include: 25 (default), 0, 10, 50, or 100.

3. (Optional). To change SpO2 Alarms, use the sliders, or use the arrow keys on your computer keyboard, to set the lower and upper limit values. See the next steps for specific values for each alarm.



SpO2 Alarms (Percent)

SpO2 Alarm Delay Condition: 10 Seconds

Adult Alarm Limits: ☒ Enable 50 90:100 100

Pediatric Alarm Limits: ☒ Enable 50 90:100 100

Neonatal Alarm Limits: ☒ Enable 50 90:100 100

The default settings are Enable Adult Alarm Limits 90:100, Pediatric Alarm Limits 90:100, and Neonatal Alarm Limits 90:100.

4. (Optional). To change SpO2 alarms, use the sliders, or computer arrow keys, to set the values for Adult Alarm Limits. Values range from 50 to 100.
5. (Optional). To change SpO2 alarms, use the sliders, or computer arrow keys, to set the values for Pediatric Alarm Limits. Values range from 50 to 100.

6. (Optional). To change SpO2 alarms, use the sliders, or computer arrow keys, to set the values for Neonatal Alarm Limits. Values range from 50 to 100.
7. (Optional). To disable SpO2 alarms, click within the checkbox next to each limit to disable the alarm limit.



NOTE When an alarm limit is disabled in the Configuration Tool, the limits are grayed out and *Enable* turns from green to gray.

SPO2 Alarms (Percent)

SPO2 Alarm Delay Condition: 10 Seconds ▼

Adult Alarm Limits:	<input type="checkbox"/> Enable	50		100
Pediatric Alarm Limits:	<input type="checkbox"/> Enable	50		100
Neonatal Alarm Limits:	<input type="checkbox"/> Enable	50		100

8. Click **SAVE AND CONTINUE**.

Pulse Rate Alarms (Beats per Minute)

Configure general alarm settings as well as alarm settings for Pulse Rate.

1. Configure the general alarm settings.

Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles **Set Manual Parameters and Modifiers** General Device Settings EMR Selection

Date & Time Settings

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, and Temperature.

Allow user to disable alarms:	Yes ▼
Allow user to turn off general audio:	No ▼
Default alarm volume:	Low ▼
Minimum alarm volume:	Low ▼
Nurse call threshold:	Medium Priority ▼
Audio pause time:	2 min ▼

2. (Optional). To change Pulse Rate Alarms, use the sliders, or use the arrow keys on your computer keyboard, to set the lower and upper limit values. See the next steps for specific values for each alarm.

Pulse Rate Alarms (Beats per Minute)

Adult Alarm Limits:	<input checked="" type="checkbox"/> Enable	25		300
Pediatric Alarm Limits:	<input checked="" type="checkbox"/> Enable	25		300
Neonatal Alarm Limits:	<input checked="" type="checkbox"/> Enable	25		300

The default settings are Enable Adult Alarm Limits 50:120, Pediatric Alarm Limits 50:150, and Neonatal Alarm Limits 100:200.

3. (Optional). To change Pulse Rate Alarm Limits, use the sliders, or computer arrow keys, to set the values for Adult Alarm Limits. Values range from 25 to 300.
4. (Optional). To change Pulse Rate Alarm Limits, use the sliders, or computer arrow keys, to set the values for Pediatric Alarm Limits. Values range from 25 to 300.

5. (Optional). To change Pulse Rate Alarm Limits, use the sliders, or computer arrow keys, to set the values for Neonatal Alarm Limits. Values range from 25 to 300.
6. (Optional). To disable Pulse Rate Alarm Limits, click within the checkbox next to each limit to disable the alarm limit.



NOTE When an alarm limit is disabled in the Configuration Tool, the limits are grayed out and *Enable* turns from green to gray.

7. Click **SAVE AND CONTINUE**.

Temperature Alarms (Fahrenheit)

Configure general alarm settings as well as alarm settings for Temperature.

1. Configure the general alarm settings.

2. (Optional). To change Temperature Alarms, use the sliders, or use the arrow keys on your computer keyboard, to set the lower and upper limit values. See the next steps for specific values for each alarm and how to enable the alarm limits.

The default settings are Disable Adult Alarm Limits 94:101, Pediatric Alarm Limits 94:101, and Neonatal Alarm Limits 86.6:101.

3. (Optional). To change Temperature Alarm Limits, click within the checkbox next to each limit to enable the alarm limit and then use the sliders, or computer arrow keys, to set the values for Adult Alarm Limits. Values range from 85.1 to 110.
4. (Optional). To change Temperature Alarm Limits, click within the checkbox next to each limit to enable the alarm limit and then use the sliders, or computer arrow keys, to set the values for Pediatric Alarm Limits. Values range from 85.1 to 110.
5. (Optional). To change Temperature Alarm Limits, click within the checkbox next to each limit to enable the alarm limit and then use the sliders, or computer arrow keys, to set the values for Neonatal Alarm Limits. Values range from 85.1 to 110.
6. Click **SAVE AND CONTINUE**.

Temperature Alarms (Celsius)

Configure general alarm settings as well as alarm settings for Temperature.

1. Configure the general alarm settings.

Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles **Set Manual Parameters and Modifiers** General Device Settings EMR Selection

Date & Time Settings

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, and Temperature.

Allow user to disable alarms: Yes

Allow user to turn off general audio: No

Default alarm volume: Low

Minimum alarm volume: Low

Nurse call threshold: Medium Priority

Audio pause time: 2 min

2. (Optional). To change Temperature Alarms, use the sliders, or use the arrow keys on your computer keyboard, to set the lower and upper limit values. If the Units selected are set to Metric, the Temperature Alarms appear in Celsius. See the next steps for specific values for each alarm and how to enable the alarm limits.

Temperature Alarms (Celsius)

Adult Alarm Limits: ☐ Enable 29.5 34.7-38.3 43.3

Pediatric Alarm Limits: ☐ Enable 29.5 34.4-38.3 43.3

Neonatal Alarm Limits: ☐ Enable 29.5 34.4-38.3 43.3

The default settings are Disable Adult Alarm Limits 29.5 : 43.3, Pediatric Alarm Limits 29.5 : 43.3, and Neonatal Alarm Limits 29.5 : 43.3.

3. (Optional). To change Temperature Alarm Limits, click within the checkbox next to each limit to enable the alarm limit and then use the sliders, or computer arrow keys, to set the values for Adult Alarm Limits. Values range from 29.5 to 43.3.
4. (Optional). To change Temperature Alarm Limits, click within the checkbox next to each limit to enable the alarm limit and then use the sliders, or computer arrow keys, to set the values for Pediatric Alarm Limits. Values range from 43.3 to 43.3.
5. (Optional). To change Temperature Alarm Limits, click within the checkbox next to each limit to enable the alarm limit and then use the sliders, or computer arrow keys, to set the values for Neonatal Alarm Limits. Values range from 43.3 to 43.3.
6. Click **SAVE AND CONTINUE**.

Respiration Alarms

Configure general alarm settings as well as alarm settings for Respiration Rate.

1. Configure the general alarm settings.

Configuration Name: North Wing

Summary Clinical

Select Version Select Units Select Patient Populations Select Profiles **Set Manual Parameters and Modifiers** General Device Settings EMR Selection

Date & Time Settings

Set Alarms

Configure general alarm settings as well as alarm settings for NIBP, SpO2, Pulse Rate, and Temperature.

Allow user to disable alarms: Yes

Allow user to turn off general audio: No

Default alarm volume: Low

Minimum alarm volume: Low

Nurse call threshold: Medium Priority

Audio pause time: 2 min

- (Optional). To change Respiration Alarms, use the sliders, or use the arrow keys on your computer keyboard, to set the lower and upper limit values. See the next steps for specific values for each alarm and how to enable the alarm limits.

Respiration Alarms

Enable RR Parameter: Yes

Adult Alarm Limits: ☒ Enable 5 6:30 69

Pediatric Alarm Limits: ☒ Enable 5 6:30 69

Neonatal Alarm Limits: ☒ Enable 1 12:68 98

The default settings are Enable RR Parameter, Adult Alarm Limits 6:30, Pediatric Alarm Limits 6:30, and Neonatal Alarm Limits 12:68.

- (Optional). To change Respiration Alarm Limits, use the sliders to set the values for Adult Alarm Limits. Values range from 5 to 69.
- (Optional). To change Respiration Alarm Limits, use the sliders to set the values for Pediatric Alarm Limits. Values range from 5 to 69.
- (Optional). To change Respiration Alarm Limits, use the sliders to set the values for Neonatal Alarm Limits. Values range from 12 to 98.
- (Optional). To disable Respiration Alarms, use the drop down menu to set the Enable RR Parameter to No.

Respiration Alarms

Enable RR Parameter: No

Alternatively, click within the checkbox next to each limit to disable the alarm limit.

Respiration Alarms

Enable RR Parameter: Yes

Adult Alarm Limits: ☐ Enable 5 6:30 69

Pediatric Alarm Limits: ☐ Enable 5 6:30 69

Neonatal Alarm Limits: ☐ Enable 1 12:68 98



NOTE When an alarm limit is disabled in the Configuration Tool, the limits are grayed out and *Enable* turns from green to gray.

- Click **SAVE AND CONTINUE**.

(Optional) Select Custom General Device Settings

Select **Custom** to modify the general settings.

1. Click the radio button next to **Custom**. (Choices include: **Mobile**, **Wall Mounted**, or **Custom**).

WelchAlly

List Configurations

Configuration Name: Care Center Clinic

General Device Settings

Select "Custom" to modify

☐ Mobile
☐ Wall Mounted
☒ Custom

Select an optional splash screen

Bluetooth Low Energy (BLE)

Turn on BLE by default? (If on, the device will attempt to connect to the network.)

Virtual Network Computer (VNC)

Allow VNC connection?

Universal Serial Bus (USB)

USB Ports Enable

Admin Settings

Admin Access Code (required for some settings)

Enable Access Code For USB

General Device Settings

Display Settings

Display Brightness: 6

Allow User To Lock Screen: Yes

Enable PHI Safe Mode From Lock Screen: No

Touch Screen Lock-out Interval (minutes): 2

Allow Auto Sleep Mode: Yes

Sleep Mode Timeout (minutes): 2

Allow Auto Shutdown: Yes

Auto Shutdown Timeout (minutes): 20

Other

Power Line Frequency (Hz): 60

Device Location ID:

Device Location:

Display Device Location: Yes

Asset Tag:

Language

Please select your language: English

Software Upgrades

Automatic: Yes

BACK **SA** **DONE**

For Custom General Device Settings, the default settings are: Display Brightness = 6, Allow User To Lock Screen = Yes, Enable PHI Safe Mode From Lock Screen = No, Touch Screen Lock-out Interval (minutes) = 2, Allow Auto Sleep Mode = Yes, Sleep Mode Timeout (minutes) = 2, Allow Auto Shutdown = Yes, Auto Shutdown Timeout (minutes) = 20. Power Line Frequency (Hz) =

60, Device Location ID = blank, Device Location = blank, Asset Tag = blank. Language = English. Software Upgrades Automatic = Yes.

2. (Optional). To change the default values for Display Brightness use the slider to set the value. Values range from 1 to 10.
3. (Optional). To change the default values for Allow User to Lock Screen, use the drop down menu to select Yes or No.
4. (Optional). To change the default values for Enable PHI Safe Mode From Lock Screen, use the drop down menu to select Yes or No.
5. (Optional). To change the default values for Touch Screen Lock-out Interval (minutes) use the slider to set the value. Values range from 1 to 30.
6. (Optional). To change the default values for Allow Auto Sleep Mode, use the drop down menu to select Yes or No.
7. (Optional). To change the default values for Sleep Mode Timeout (minutes), use the slider to set the value. Values range from 1 to 30.
8. (Optional). To change the default values for Allow Auto Shutdown, use the drop down menu to select Yes or No.
9. (Optional). To change the default values for Auto Shutdown Timeout (minutes), use the slider to set the value. Values range from 1 to 30.
10. (Optional). To change the default values for Power Line Frequency (Hz), use the drop down menu to select 60 or 50.
11. (Optional). To add a Device Location ID to the device, click within the *Device Location ID* field and type in an ID.
12. (Optional). To add a Device Location to the device, click within the *Device Location* field and type in a user-friendly location name.
13. (Optional). To display the Device Location on the device, use the drop down menu to select Yes or No.
14. (Optional). To add an Asset Tag to the device, click within the *Asset Tag* field and type in an Asset tag identifier.
15. (Optional). To change the default language on the device, use the drop down menu to select the desired language. Choices include English, French, German, Swedish, Dutch, Danish, Finnish, Greek, Italian, Norwegian, Spanish, Portuguese, Polish, Simplified Chinese, Thai, or Traditional Chinese.
16. (Optional). To set the device to perform a software update when a new software version is available, use the drop down menu to select Yes or No.
17. When finished, click **DONE**.
18. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **EMR Selection** tab.

Data Management

This section is where clinical workflow settings are established. Allows you to define additional modifications to clinician and patient authentication and how the authenticated data will be displayed on the device.

1. Click **Data Management** to continue.

Configuration Name: North Wing

Summary Clinical (Required) Informatics

Data Management Custom Scoring Set Manual Parameters and Modifiers

Data Management

Select "Yes", "Single Sign On" or "Custom" to enable sending readings to the EMR.

☒ No

☐ Yes, by answering a few simple questions.

☐ Single Sign On.

☐ Custom

BACK SAVE AND CONTINUE

The default setting is set to not send readings to an EMR. To change the default setting, use the radio button to select **Yes, by answering a few simple questions**, **Single Sign On**, or **Custom** to enable sending readings to the EMR.

2. (Optional). Use the radio button to select **Yes, by answering a few simple questions**.

Clinician ID Settings

Do you want to require a Clinician to scan or enter their ID in order to send vitals to your EMR? Yes

Do you want the device to prevent sending vitals records to the EMR until the Clinician's ID has been verified by the EMR? Yes

Do you want to further validate the Clinician's ID by requiring them to enter a password? Yes

Patient ID Settings

Do you want to require a Clinician to scan or enter the Patient's ID in order to send vitals to your EMR? Yes

Do you want the device to prevent sending vitals records to the EMR until the Patient's ID has been verified by the EMR? No

DONE

- a. Set up the Clinician ID Settings and the Patient ID Settings. Use the drop down menus to select Yes or No to answer the following questions:

Do you want to require a Clinician to scan or enter their ID in order to send vitals to your EMR? Default = Yes, Do you want the device to prevent sending vitals records to the EMR until the Clinician's ID has been verified by the EMR? = Yes, Do you want to further validate the Clinician's ID by requiring them to enter a password? = Yes, Do you want to require a Clinician to scan or enter the Patient's ID in order to send vitals to your EMR? = Yes, Do you

want the device to prevent sending vitals records to the EMR until the Patient's ID has been verified by the EMR? = No.



NOTE changes made in data management CAN BE overridden by certain EMR selections in later screens.

- b. Click **DONE**.
- c. (Optional). Use the radio button to select **Single Sign On**.

Single Sign On Data Management Settings

Single Sign On Settings	
Clinician ID Required for save:	Yes
Retrieve Clinician information from EMR:	Yes
Require password with Clinician ID:	Yes
Clinician ID match required for save:	Yes

Clinician ID Settings	
Clinician ID display format:	Abbreviated ▼
Clear Clinician information on manual save:	No ▼
Show Clinician log in screen:	No ▼

Patient ID Settings	
Patient name format:	Full Name ▼
Primary Patient ID:	Name ▼
Secondary Patient ID:	ID ▼
Search EMR by Patient ID:	No ▼
Patient ID required for save:	No ▼
Clear Patient information on manual save:	Yes ▼

DONE

Single Sign On Settings/Clinician ID Required for save = Yes. Retrieve Clinician information from EMR = Yes. Require password with Clinician ID = Yes. Clinician ID match required for save = Yes. **Clinician ID Settings**/Clinician ID display format: = Abbreviated. Clear Clinician information on manual save = No. Show Clinician log in screen = No. **Patient ID Settings**/Patient name format = Full Name. Primary Patient ID = Name. Secondary Patient ID = ID. Search EMR by Patient ID = No. Patient ID required for save = No. Clear Patient information on manual save = Yes.

- d. Use the drop down menu to change the default values.
- e. (Optional). Use the radio button to select **Custom**.

Custom Data Management Settings

Clinician ID Settings

Clinician ID display format:	Abbreviated ▼
Clinician ID Required for save:	Yes ▼
Clear Clinician information on manual save:	No ▼
Retrieve Clinician information from EMR:	Yes ▼
Require password with Clinician ID:	Yes ▼
Show Clinician log in screen:	No ▼

Patient ID Settings

Patient name format:	Full Name ▼
Primary Patient ID:	Name ▼
Secondary Patient ID:	ID ▼
Search EMR by Patient ID:	No ▼
Patient ID required for save:	No ▼
Clear Patient information on manual save:	Yes ▼

DONE

3. Click **SAVE AND CONTINUE**.

Licensed features

Create a new configuration for the Bluetooth Low Energy (BLE) features

To configure the CSM device, use the Configuration Tool to create a new configuration file and add the Bluetooth Low Energy (BLE) option.



NOTE You are required to enter the sales order number and all of the device serial numbers that you want to activate.



NOTE The CSM device requires software version 1.52, or later, and a Bluetooth radio.

1. From the main screen, click the **New Configuration** tab.
2. Use the drop down menu to select the **Licensing** product.

3. Click within the *Enter the sales order number* field, enter the sales order number that you received, and click **SEARCH**.



NOTE As the Configuration Tool is updated the Progress Summary view updates to show completed sections in green and the screen moves to the **Biomed (Required)** tab.

- Click **BLE Licensing (CSM)**.
- Click within the *Enter serial number* field and enter the serial number from the CSM device and then click **LICENSE**.

Configuration Name: 809012345 Summary Biomed (Required)

RRp Licensing (CSM) | **BLE Licensing (CSM)**

BLE Licensing (CSM) - Sales Order #809012345

This order is for 2 licenses, you have 2 licenses remaining.

Enter the serial number

BACK LICENSE

The screen indicates the number of licenses available.

- To install a second license, click within the *Enter serial number* field again and enter the second serial number from the CSM device and then click **LICENSE**.

Configuration Name: 809012345 Summary Biomed (Required)

RRp Licensing (CSM) | **BLE Licensing (CSM)**

BLE Licensing (CSM) - Sales Order #809012345

This order is for 2 licenses, you have 1 licenses remaining.

Serial Number	Device Type
1001212909	CSM

Enter the serial number

BACK LICENSE

- To view or use licenses, click the **List Configurations** tab. The Licensing appears at the top of *My configurations*.

My Configurations ⓘ

Licensing					
Lookup by serial number <input type="text" value="10001212909"/> (CSM) ⓘ					
Lookup by service order number and ERN <input type="text" value="Service Order Number"/> <input type="text" value="ERN"/> (RRp) ⓘ					
Name	Created By	Created	Updated	Download	
8090123	.com	11/20/2020 00:12:11	11/20/2020 00:12:11		
80901234	.com	11/20/2020 00:58:43	11/20/2020 00:58:43		
809012345	.com	11/20/2020 01:11:27	11/20/2020 01:11:27		

- Click **Download** or enter the device serial number into the *Lookup by serial number* field to download the configuration file. (When the file is downloaded to a computer it will contain a file name like:
"licenses_(youraccountnamefirst)_(youraccountnamelast)_(youremailaddress)_com - signed.waconfig". Ex: "licenses_keith_abbit_carecenter_com-signed.waconfig".)
- To complete the installation on a device, follow the instructions in the section: "Install a configuration file".

Create a new configuration for RRp Licensing features

To configure the CSM device, use the Configuration Tool to create a new configuration file and add the RRp Licensing option.



NOTE You are required to enter the sales order number and all of the device serial numbers that you want to activate.



NOTE The CSM device requires software version 1.51, or later, and the device requires the Masimo SpO2 sensor hardware to be installed for the RRP parameter. Use the Welch Allyn Service Tool version 1.9, or later, to confirm that the device contains a Masimo SpO2 sensor firmware version of 7.14.6.2, or later.

1. From the main screen, click the **New Configuration** tab.
2. Use the drop down menu to select the **Licensing** product.

3. Click within the *Enter the sales order number* field and enter the sales order number that you received.



NOTE As the Configuration Tool is updated the Progress Summary view updates to show completed sections in green and the screen moves to the **Biomed (Required)** tab.

4. Click **RRp Licensing (CSM)**.
5. Click within the *Enter serial number* field and enter the serial number from the CSM device and then click **LICENSE**.

The screen indicates the number of licenses available.

6. To install a second license, click within the *Enter serial number* field again and enter the second serial number from the CSM device and then click **LICENSE**.

Configuration Name:
80901234

Summary **Biomed (Required)**

RRp Licensing (CSM) **BLE Licensing (CSM)**

RRp Licensing (CSM) - Sales Order #80901234

This order is for 2 licenses, you have 1 licenses remaining.

Serial Number	Device Type
1001212909	CSM

Enter the serial number

BACK **LICENSE**

7. To view or use licenses, click the **List Configurations** tab. The Licensing appears at the top of *My configurations*.

My Configurations ⓘ

Licensing

Lookup by serial number (CSM ▼) ⓘ

Lookup by service order number and ERN (ERN) (RRp ▼) ⓘ

Name	Created By	Created	Updated	Download
8090123	.com	11/20/2020 00:12:11	11/20/2020 00:12:11	ⓘ
80901234	.com	11/20/2020 00:58:43	11/20/2020 00:58:43	ⓘ
809012345	.com	11/20/2020 01:11:27	11/20/2020 01:11:27	ⓘ

8. Click **Download** or enter the device serial number into the *Lookup by serial number* field to download the configuration file. (When the file is downloaded to a computer it contains a file name like:
"licenses_(youraccountnamefirst)_(youraccountnamelast)_(youremailaddress)_com-signed.waconfig". Ex: "licenses_keith_abbit_carecenter_com-signed.waconfig".
9. To complete the installation on a device, follow the instructions in the section: "*Install a configuration file*".

Configure a CA Root certificate

Select the product that you would like to configure.

You can now load self-signed security certificates onto the Connex Spot Monitor (CSM) to ensure secure communication with an authenticated server on the network.

CSM is also pre-loaded with the following certificates:

Go_Daddy_Class_2_Certification_Authority.pem
 Symantec_Class_3_Public_Primary_Certification_Authority_-_G6.pem
 VeriSign_Class_3_Public_Primary_Certification_Authority_-_G4.pem
 VeriSign_Class_3_Public_Primary_Certification_Authority_-_G5.pem
 VeriSign_Class_3_Public_Primary_Certification_Authority_-_G3.pem
 COMODO_ECC_Certificate_Authority.pem
 COMODO_Certificate_Authority.pem
 Symantec_Class_3_Public_Primary_Certification_Authority_-_G4.pem
 Go_Daddy_Root_Certificate_Authority_-_G2.pem
 COMODO_RSA_Certificate_Authority.pem
 VeriSign_Universal_Root_Certification_Authority.pem

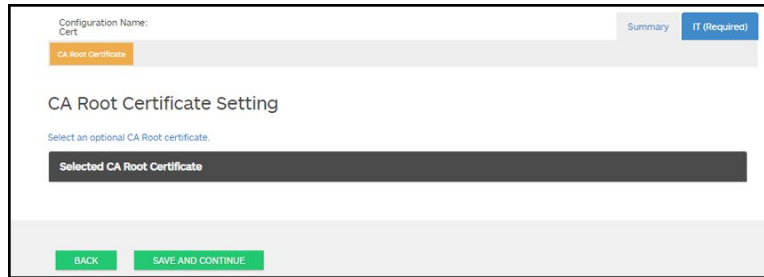
To add a certificate from your computer:

1. From the main screen, click the **New Configuration** tab.
2. Use the drop down menu to select **CA Root certificate**.
3. Provide a name for the configuration by typing in the field to enter a user friendly name and then click **CONTINUE**.

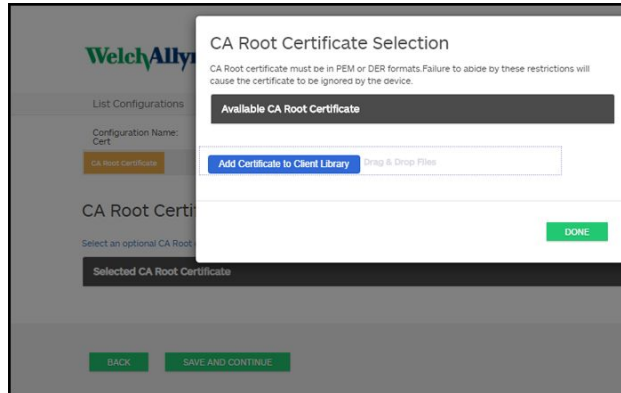
The screenshot shows a web application interface with three tabs: 'List Configurations', 'New Configuration' (which is selected and circled), and 'Customer Verification'. Under the 'New Configuration' tab, the heading 'New Configuration' is displayed. Below the heading, there is a prompt 'Select the product that you would like to configure.' followed by a dropdown menu with 'CA Root certificate' selected. Below that is another prompt 'Provide a user friendly name for your configuration.' followed by a text input field containing the text 'Certs'. At the bottom of the form is a green button labeled 'CONTINUE'.

4. Select the Product Use Location. (Choices include: Hospital or Physicians Office or Clinic.)
5. Click **SAVE AND CONTINUE**.
6. Click **CA Root Certificate**.

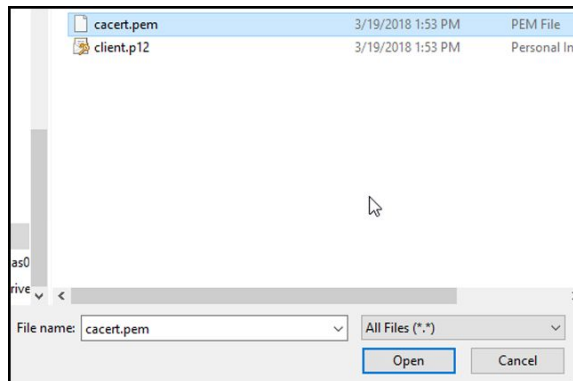
72 Configure a CA Root certificate



7. Click **Select an optional CA Root Certificate.**

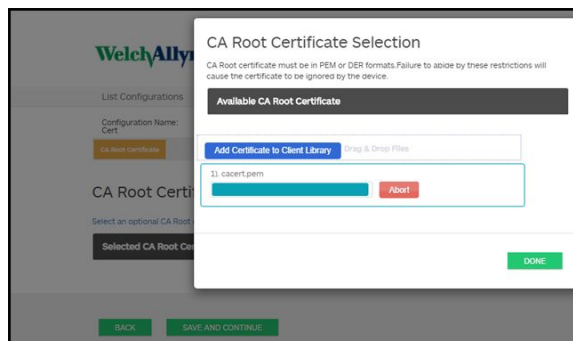


8. Click **Add Certificate to Client Library.**
9. Navigate to the .pem file, or .der file, location using your computer's Windows File Explorer window. (The sample screen shows a .pem file type.)



Select the file and click **Open.**

10. Select **DONE.**



11. Click **SAVE AND CONTINUE.**

Device configuration and setup

Configuration overview

A configuration file can be created that specifies preferences for Connex Spot Monitor options. When powered on, the monitor recognizes all available options and features and applies the associated configuration file preferences.

If no customized configuration file has been loaded onto the device, the device applies factory defaults to all available options.




NOTE The device does not support configuration filenames that include parentheses. If these are present in the filename, the device will not recognize the file. This is a common issue if you've downloaded the same file multiple times from your web browser. For example, the web browser may automatically rename "MyFile.config" to "MyFile.config(2)" if you download it a second time. If this happens, rename the file by deleting the parentheses; then it will appear in the list on the CSM.

The remainder of this section instructs you how to do the following:

- Edit a configuration file
- Copy a configuration file
- Download a configuration file to install on another device
- Create a new configuration file
- Install a configuration file

Edit a configuration file

To edit a saved configuration file, complete the following steps:

1. Access the Configuration Tool at <http://config.welchallyn.com>.
2. Log in with a username and password.
3. Click **List Configurations** on the navigation bar.
4. Locate the configuration file to be edited in the list, and click the  on the right side of the table to launch the editor.
5. Under Progress Summary, locate the section you want to edit (Clinical, Informatics, IT, or Biomed) and click the specific step you want to edit.
6. Review the selections in each step and modify them as desired.


- Click **SAVE AND CONTINUE** to accept the changes or **BACK** to return to the previous screen without saving.

Clicking **SAVE AND CONTINUE** automatically moves you to the next step in that section of the Progress Summary. When you reach the last step in a section, clicking **SAVE AND CONTINUE** returns you to the Progress Summary.

- Repeat steps 5 through 7 until you complete all desired edits.
- Click **List Configurations** on the navigation bar to see a new date stamp in the Updated column for your configuration file.

Copy a configuration file


To copy a saved configuration file, complete the following steps:

- Access the Configuration Tool at <http://config.welchallyn.com>.
- Log in with a username and password.
- Click **List Configurations** on the navigation bar.
- Locate the configuration file to be copied in the list, and click the  on the right side of the table.
- Either accept or enter a new name for the copied file in the Copy Configuration dialog, then click **Copy**.
- Observe your new configuration file on the List Configurations tab.

Download a configuration file to install on another device

To download a saved configuration file, complete the following steps:

From the Configuration Tool

- Access the Configuration Tool at <http://config.welchallyn.com>.
- Log in with a username and password.
- Click **List Configurations** on the navigation bar.
- Locate the configuration file to be downloaded in the list, and click the  on the right side of the table.
The configuration file downloads to the tray on your PC.
- Using the dropdown menu on the right side of the downloaded file, select **Show in folder**.
Windows Explorer opens the Downloads folder with the most recent download selected.
- Copy the downloaded configuration file to a USB flash drive.
- See "Install a configuration file" for instructions to load this configuration on another device.

Install a configuration file

To install a configuration file, you must first download the configuration file to a USB flash drive. If you have not done so already, complete the steps in "Download a configuration file to install on another device," then complete the following steps:

- Insert the flash drive into the device which needs to have the configuration loaded onto it.

A pop-up dialog appears listing the configuration file(s) on your flash drive.

2. Select the desired configuration file and touch **Load**.
3. Repeat this process on as many devices as you wish.

Custom scoring (Early Warning Scores) on the Connex Spot Monitor

Custom scoring is defined through the Configuration tool. The order in which the custom score parameters are entered in the Configuration tool is the order in which they will appear in the custom scoring on the device.

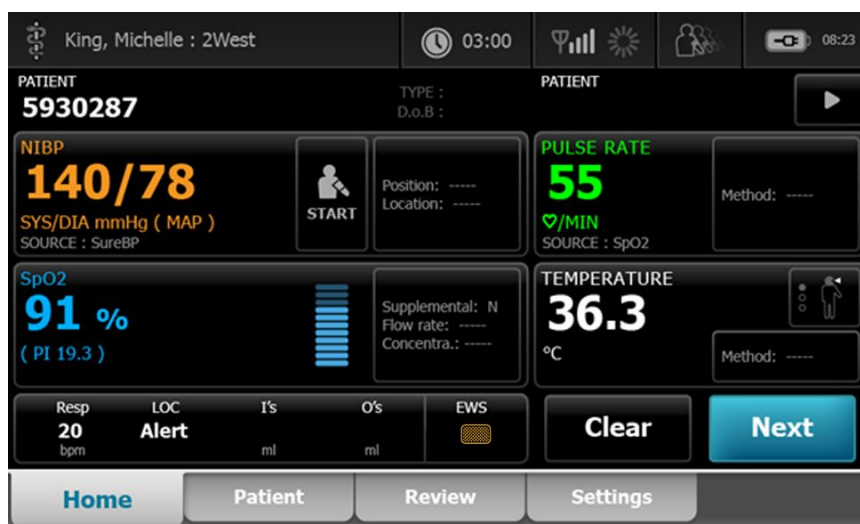
Custom scoring enables you to configure specific parameters, based on your institution's practice standards, that calculate scores for patient monitoring. These scores generate messages regarding the patient status, based on the parameters chosen. These messages are provided only as reminders.

See the "*Install a configuration file*" for additional details. This sections shows examples of Custom scoring/Early Warning Scores (EWS) after the configuration file is installed on the Connex Spot Monitor.

Each Single Parameter Trigger can have its own associated message.

In the following example of a CSM Screen, shown is a Single Parameter Score that is triggered, but an Aggregate Score is not triggered.

Single Parameter messages shown in the message screen are similar to Aggregate Scoring today.



A list of up to 8 options will appear as buttons on the interface:



Options 9-19 appear as a drop-down menu on the device:



Labels created in the Configuration Tool for the Modifiers determine how the modifier will appear on the device:



Abbreviations created in the Configuration Tool for the Modifiers determine how the modifier will appear on the device on home screen ribbon:



Configuration Name: North Wing

Summary Clinical (Required) **Information** IT Biomed (Required)

Data Management Custom Scoring **Set Manual Parameters and Modifiers**

Set Manual Parameters and Modifiers

Set Manual Parameters

Select or hide the devices standard manual entries.

☒ Default
☐ Custom

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifies	Unit	Size	
Capillary Refill Time	Capillary Refill Time	No	Integer	None	s	1	Part of Score
Respiratory Effort	Respiratory Effort	No	List	None		2	Part of Score
PTCO2	PTCO2	No	Integer	None	percent	1	Part of Score
Oxygen Therapy	Oxygen Therapy	No	Integer	None	L/min	1	Part of Score

[Add Modifier](#)

Prevent Skip Required Modifiers:

[BACK](#) [SAVE AND CONTINUE](#)

If you wish to edit a parameter that is part of a score you must first delete the parameter from all scores in the EWS scoring system.

In the newest version of the configuration tool, Parameters and Modifiers that are not part of the score can be manually re-ordered by using the button on the list.

Planning a Workflow Layout

The CSM screen is divided into 16 customizable cells.

09:04

(60%)

NIBP

mmHg

110/73

SpO2

%

100

PR

bpm

55

Temp

°F

98.9

Location

R Arm

L Arm

R Leg

L Leg

Position

Lying

Sitting

Standing

O2 Delivery

Room Air

Nasal Cannula

Simple mask

Venti mask

Flow Rate

L

Conc

%

Method

Ascultate

Monitor

Palpated

Doppler

Method

Oral

Tympan.

Axillary

Tempor.

Additional parameters

OK

Cancel

Lists occupy 2 cells.

Integers, decimals and alpha-numerics occupy 1 cell.

Custom cells can cross cells and occupy up to 2 cells, but they must start as left as possible.

09:04

(60%)

NIBP

mmHg

110/73

SpO2

%

100

PR

bpm

55

Temp

°F

98.9

Location

R Arm

L Arm

R Leg

L Leg

Position

Lying

Sitting

Standing

O2 Delivery

Room Air

Nasal Cannula

Simple mask

Venti mask

Flow Rate

L

Conc

%

Method

Ascultate

Monitor

Palpated

Doppler

Method

Oral

Tympan.

Axillary

Tempor.

Additional parameters

OK

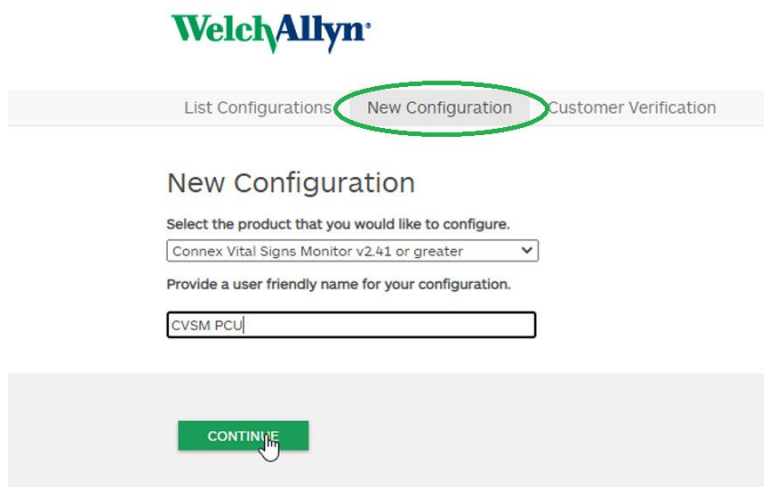
Cancel

In the example shown, the blue-colored cells are acceptable, however the salmon-colored cells are unacceptable.

Create a new Connex Vital Signs Monitor configuration

This section applies to a Connex Vital Signs Monitor with software version 2.41 or greater.

1. From the main screen, click the **New Configuration** tab.



Welch Allyn

List Configurations **New Configuration** Customer Verification

New Configuration

Select the product that you would like to configure.

Connex Vital Signs Monitor v2.41 or greater

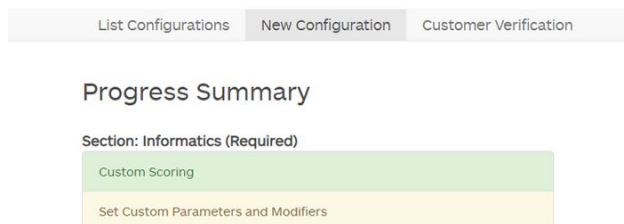
Provide a user friendly name for your configuration.

CVSM PCU

CONTINUE

2. Use the drop down menu to select Connex Vital Signs Monitor v2.41 or greater. Provide a name for the configuration by typing in field and click **CONTINUE**.
3. Select the Product Use Location: Hospital.
4. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Custom Scoring** tab. As the Configuration Tool is updated the Progress Summary view updates to show completed sections in green.



List Configurations **New Configuration** Customer Verification


Progress Summary

Section: Informatics (Required)

Custom Scoring

Set Custom Parameters and Modifiers

5. (Optional). Use the drop down menu to select Enable custom scoring. Choices include: No or Yes. No is the default setting.



List Configurations
New Configuration
Customer Verification

Configuration Name:
CVSM PCU

Custom Scoring
Set Custom Parameters and Modifiers

Custom Scoring Setup

Enable custom scoring? No

BACK
SAVE AND CONTINUE

6. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Set Custom Manual Parameters and Modifiers** tab. Configure the manual parameters and modifiers settings.

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifies	Unit	Size
<div> + Add Modifier </div>						

7. (Optional). Click  to add a Modifier.


Add Modifier

Name	<input type="text"/>
Label	<input type="text"/>
Abbreviation	<input type="text"/>
Required	Yes
Modifies	None
Type	Integer
Minimum Value	<input type="text"/>
Maximum Value	<input type="text"/>
Unit	<input type="text"/>
HIS ID	<input type="text"/>
Unit HIS ID	<input type="text"/>

CANCEL
SAVE

- Click in the *Name* field and type in a name for the modifier.
- Click in the *Label* field and type in a label for the modifier.
- Click in the *Abbreviation* field and type in an abbreviation for the modifier.
- Use the drop down menu to select whether the modifier is required.
- Use the drop down menu to select whether the modifier modifies: NIBP, SpO2, Temperature, Pulse Rate, Respiration Rate, or None.
- Use the drop down menu to select the type of modifier: Integer, Decimal, Alphanumeric, or List.

If List is selected, click in the *Name* field and type in a name, click in the *Label* field and type in a label, click in the *Abbreviation* field and type in an abbreviation, click in the *Item HIS ID* field and type in a HIS ID.

- (Optional). Click  to add another List Item.
- g. Click in the *Name* field and type in a name for the modifier.
 - h. Click in the *Minimum Value* field and type in a value. (Values must be within -32768 and 32767 and be an integer. The Minimum Value must be less than the Maximum Value.)
 - i. Click in the *Maximum Value* field and type in a value. (Values must be within -32768 and 32767.)
 - j. When done, click **SAVE**.
8. Click **SAVE AND CONTINUE**.

(Optional) Select Custom Scoring Setup (Connex Vital Signs Monitor)

This section describes how to set up Bedside Protocols that can be replicated on a Connex Vital Signs Monitor device. You can pre-select from list of clinical protocols. All scoring protocols are completely customizable to meet user requirements.

You may add up to 6 Scoring Systems. Select a predefined Scoring System template, enter a unique Name, and click the button labeled ADD THIS SCORING SYSTEM. Your Scoring System will be added to the bottom of the page. You may then Edit or Delete your Scoring System.

Click the **Custom Scoring** tab.

1. (Optional). Use the drop down menu to select Yes to Enable custom scoring. (The default Enable custom scoring = No).

Configuration Name:
CVSM PCU

Custom Scoring
Set Custom Parameters and Modifiers

Custom Scoring Setup

Enable custom scoring? Yes ▼

Do you want age ranges associated with scoring protocols for pre-selection based on patient age? Yes ▼

BACK
SAVE AND CONTINUE

2. (Optional). To change the default selection for Do you want age ranges associated with scoring protocols for pre-selection based on patient age?, use the drop down menu to select Yes or No. (The default choice = No).
3. (Optional). To change the default selection for Do you want to view a condensed total score page as your default?, use the drop down menu to select Yes or No. (The default choice = Yes).
4. Click within the *Please enter the authentication code:* field and enter a valid code in format of [YY]CSM[MM] with the current year and month.
5. Click **SAVE AND CONTINUE**.
6. Select a Scoring System template. Choices include:

Bedside PEWS <3 months
 Bedside PEWS 3 to <12 months
 Bedside PEWS 1 to 4 years
 Bedside PEWS 5 to <12 years
 Bedside PEWS >=12 years
 Braden
 BTF SAGO
 BTF ED
 BTF SPOC <3 months
 BTF SPOC 3 to 12 months
 BTF SPOC 1 to 4 years
 BTF SPOC 5 to 11 years
 BTF SPOC 12 years
 Falls Risk Assessment Tool
 Glasgow Coma Scale
 Modified Early Obstetric Warning
 Modified Early Warning Score
 MEWS for General Surgical Ward
 Morse Fall Score
 National Early Warning Score
 National Early Warning Score 2
 NEWS2 Scale 1
 Norton
 Pediatric Early Warning Score
 Rapid Emergency Medicine Score
 Triage Early Warning System
 Walsall
 Blank Scoring System

7. To enter a name for the Scoring System, click within the *Enter a Name for the Scoring System:* field and type a name for the scoring system as you want it to appear on the device.
8. When finished, click **ADD THIS SCORING SYSTEM**.

After a successful addition, the following message appears: *The scoring System has been successfully added.*

Custom Scoring Selection

- The Scoring System has been successfully added.

You may add up to 6 Scoring Systems. To do so, please select a predefined Scoring System template, enter a unique Name, and click the button labeled ADD THIS SCORING SYSTEM. Your Scoring System will be added to the bottom of the page. You may then Edit or Delete your Scoring System.

Select a Scoring System template:

Enter a Name for the Scoring System:

ADD THIS SCORING SYSTEM

The name for the scoring system also appears at the bottom of the **Custom Scoring Selection** screen.

Name: BP12

Label: Bedside PEWS >=12 years

Age Range: 144 to 215 months

Score Labels

- Pulse Rate
- Systolic Blood Pressure
- Capillary Refill Time
- Respiratory Rate
- Respiratory Effort
- PTCO2
- Oxygen Therapy

Severity Ranks

White	Normal
Yellow	Low
Orange	Medium
Red	Severe


 



NOTE The Custom Scoring Selection can be used as is or modified to meet facility requirements.



NOTE The Name of the Custom Scoring system defines how the scoring protocol will appear on the device. The HIS ID information for the EMR can be applied here too. Configure the capability for Single Parameter Scoring by itself or as part of an Aggregate Score.

9. (Optional). To edit the Scoring system, click  (edit). Click within the fields to enter changes or use the drop down menu to change the Configure Aggregate score or Single Parameter Triggers.

Edit Scoring System

You may edit the Scoring System information contained on this page.

Name:

Label:

Abbreviation:




HIS ID:

Configure Aggregate Score:

Single Parameter Triggers:

CANCEL

CONTINUE

10. (Optional). To delete the Scoring system, click  (delete).
11. Click **SAVE AND CONTINUE**.
12. (Optional). To add a Range Row , click  (add). To delete a row, click  (delete).
13. Click **CONTINUE**.
14. (Optional). To continue editing the Scoring system, check or uncheck the Enable settings. Default settings include: Rank Normal = Enable, Rank Low = Enable, Rank Medium = Enable, Rank High = Disable, Rank Severe = Enable.

Edit Scoring System

You may enable or disable the predefined Rank assignments. You can edit individual Rank values by clicking the edit icons.



Enable	Rank	Color	
<input checked="" type="checkbox"/>	Normal	<input type="text" value="White"/>	
<input checked="" type="checkbox"/>	Low	<input type="text" value="Yellow"/>	
<input type="checkbox"/>	Medium		
<input checked="" type="checkbox"/>	High	<input type="text" value="Red"/>	
<input type="checkbox"/>	Severe		



NOTE Severity rankings color can modified based on protocol.



















NOTE Rankings can either be omitted or added based on protocol.

15. Click  (edit) to change the rank information and then click **DONE**.
16. Click **CONTINUE**.
17. (Optional). To continue editing the Scoring system, click  (edit) to change the values.

Edit Scoring System

You may edit or delete an particular Parameter Score by clicking on the icons in the Scores row. You may also add additional Parameter Scores based on the Parameters in the provided list. Up to 12 Parameter Scores are allowed. To continue, all Parameter Scores must be marked as Complete.



Score Name	Score Label	Clinical Parameter	Complete
Level of ConsciousnessScore1	Level of Consciousness	Level of Consciousness	Yes  
Mobility AmbulationScore2	Mobility Ambulation	Mobility Ambulation	Yes  
Skin ConditionScore3	Skin Condition	Skin Condition	Yes  
Nutritional StatusScore4	Nutritional Status	Nutritional Status	Yes  
Bladder IncontinenceScore5	Bladder Incontinence	Bladder Incontinence	Yes  
Bowel IncontinenceScore6	Bowel Incontinence	Bowel Incontinence	Yes  
Carer InputScore7	Carer Input	Carer Input	Yes  
Add a Score based on an existing Parameter or Modifier.  Activity ▼			

QUICK TIP: If you want to disassociate a parameter from the score, click  (delete), if you want to add a new parameter associated to the score either select an existing one from the drop down list, or create a custom parameter in the next tab.

18. Click **CONTINUE**.
19. Configure the Aggregate Scoring.

Edit Scoring System

Please configure the Aggregate Scoring.

Min [#]	Max [#]	Rank	Message
0	5	Normal ▼	(Edit) 
6	14	Low ▼	(Edit) 
15	31	High ▼	(Edit) 
 Add Range Row			

20. Click **CONTINUE**.
21. Click **SAVE AND CONTINUE**.
22. As the Configuration Tool is updated the screen moves to the **Set Custom Parameters and Modifiers** tab.

(Optional) Select Custom Parameters and Modifiers

Select or hide the device standard manual entries.

Click the **Set Manual Parameters and Modifiers** tab.

1. Use the radio button to select **Default** or **Custom** Parameters and Modifiers.

Configuration Name: CYSM PCU

Custom Scoring **Set Custom Parameters and Modifiers** Summary Informatics (Required)

Set Custom Parameters and Modifiers

Custom Parameters and Modifiers

Add custom data entry fields.

Name	Label	Required	Type	Modifies	Unit	Size	
Capillary Refill Time	Capillary Refill Time	No	Integer	None	s	1	Part of Score
Mobility Ambulation	Mobility Ambulation	No	List	None		2	Part of Score
Bowel Incontinence	Bowel Incontinence	No	List	None		2	Part of Score
Bladder Incontinence	Bladder Incontinence	No	List	None		2	Part of Score
PTCO2	PTCO2	No	Integer	None	percent	1	Part of Score
Skin Condition	Skin Condition	No	List	None		2	Part of Score
Oxygen Therapy	Oxygen Therapy	No	Integer	None	L/min	1	Part of Score
Level of Consciousness	Level of Consciousness	No	List	None		2	Part of Score
Carer Input	Carer Input	No	List	None		2	Part of Score
Nutritional Status	Nutritional Status	No	List	None		2	Part of Score
Respiratory Effort	Respiratory Effort	No	List	None		2	Part of Score
+ Add Modifier							

BACK

SAVE AND CONTINUE

2. The default settings are: Capillary Refill Time = No, Mobility Ambulation = No, Bowel Incontinence = No, Bladder Incontinence = No, PTCO2 = No, Skin Condition = No, Oxygen Therapy = No, Level of Consciousness = No, Carer Input = No, Nutritional Status = No, Respiratory Effort = No.

3. (Optional). Click  to add a Modifier.

Add Modifier

Name

Label

Abbreviation

Required ☐ Yes ☐ No

Modifies

Type

Minimum Value

Maximum Value

Unit

HIS ID

Unit HIS ID


CANCEL

SAVE

- a. Click in the *Name* field and type in a name for the modifier.
- b. Click in the *Label* field and type in a label for the modifier.
- c. Click in the *Abbreviation* field and type in an abbreviation for the modifier.
- d. Use the drop down menu to select whether the modifier is required.
- e. Use the drop down menu to select whether the modifier modifies: NIBP, SpO2, Temperature, Pulse Rate, Respiration Rate, or None.
- f. Use the drop down menu to select the type of modifier: Integer, Decimal, Alphanumeric, or List.

If List is selected, click in the *Name* field and type in a name, click in the *Label* field and type in a label, click in the *Abbreviation* field and type in an abbreviation, click in the *Item HIS ID* field and type in a HIS ID.



(Optional). Click  to add another List Item.

- g. Click in the *Name* field and type in a name for the modifier.
 - h. Click in the *Minimum Value* field and type in a value. (Values must be within -32768 and 32767 and be an integer. The Minimum Value must be less than the Maximum Value.)
 - i. Click in the *Maximum Value* field and type in a value. (Values must be within -32768 and 32767.)
 - j. When finished, click **SAVE**.
4. Click **SAVE AND CONTINUE**.

As the Configuration Tool is updated the screen moves to the **Progress Summary** tab for completion.

