Iris Device Management System

DEVICE MANAGER

Masimo

These operating instructions provide the necessary information for proper operation of the Iris Device Management System. There may be information provided in this manual that is not relevant for your system. Do not operate the Iris Device Management System without completely reading and understanding these instructions.

Notice: Purchase or possession of this device does not carry any express or implied license to use with replacement parts which would, alone or in combination with this device, fall within the scope of one of the relating patents.

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About This Manual

This manual explains how to set up and use Iris Device Management System. Important safety information relating to general use of Iris Device Management System appears in this manual. Read and follow any warnings, cautions, and notes presented throughout this manual. The following are explanations of warnings, cautions, and notes.

A *warning* is given when actions may result in a serious outcome (for example, injury, serious adverse effect, death) to the patient or user.

WARNING: This is an example of a warning statement.

A *caution* is given when any special care is to be exercised by the patient or user to avoid injury to the patient, damage to this device, or damage to other property.

CAUTION: This is an example of a caution statement.

A *note* is given when additional general information is applicable.

Note: This is an example of a note.

Product Description, Key Features, and Intended Use

Product Description and Key Features

The Iris Device Management System is a software application that facilitates the management of Masimo devices through secure network connections. Functionalities include but are not limited to; display of device information, device updates, and etc. The Iris Device Management System can be run on a server to serve as a web application.

Key features of the Iris Device Management System include:

- Web login with role based user account management.

- Remote device management including software upgrade and device configuration.

- Support for up to 1000 Masimo devices.

- Software upgrade file management.

Intended Use

The Iris Device Management System is intended to support management of the Masimo device software version and display device information through web browser. The Iris Device Management System can be used in hospital or hospital-like environments.

The Iris Device Management System does not display or store patient data from the Masimo device.

Safety Information, Warnings and Cautions

Note: Please refer to the Operator's Manual or Directions For Use for Iris Device Management System host device.

Safety Warnings and Cautions

WARNING: Do not to place equipment used with the Iris Device Management System where it may be accessible by patients.

WARNING: Do not use any equipment if it appears or is suspected to be damaged.

WARNING: Do not use unauthorized devices with the Iris Device Management System.

WARNING: Do not place the equipment in any position that might cause it to fall on the patient.

WARNING: Explosion hazard: Do not use equipment in the presence of flammable anesthetics or other flammable substance in combination with air, oxygen-enriched environments, or nitrous oxide.

WARNING: To protect against injury, follow the directions below:

- Avoid placing the equipment on surfaces with visible liquid spills.

- Do not soak or immerse the equipment in liquids.

- Use cleaning solutions only as instructed in this operator's manual

WARNING: Do not use the equipment during or near magnetic resonance imaging (MRI).

Performance Warnings and Cautions

WARNING: The Iris Device Management System does not support the management of alarms. The standalone device's audible and visual alarms, used in conjunction with clinical signs and symptoms, are the primary sources for determining that an alarm condition exists.

WARNING: Do not place containers with liquids on or near the equipment. Liquids spilled on the equipment may cause it to perform inaccurately or fail.

WARNING: After performing a software upgrade to a Masimo device using the Iris Device Management System, ensure the device operates properly before use.

WARNING: If an error occurs while the Iris Device Management System is communicating with the Masimo device, ensure the device is configured properly and operates properly before use.

CAUTION: The Iris Device Management System is intended to operate across the facility's network. Unanticipated failure or alteration of network components (including but not limited to: disconnection or malfunctioning of a networking device/switch/router/ethernet cable) may result in loss of connectivity of the Iris Device Management System. Altering or making changes to the Hospital Network should be done with proper knowledge.

CAUTION: The Quality of Service (QoS) of connectivity to the Masimo Devices may be affected by:

- Network Failure

- Increased number of connected devices on the Network

- Modifications to the Network

- Presence of devices provided with radio transmitters

- Improper network configuration on POC

- Signal Priorities of the Network

- Latency

CAUTION: Network performance may be affected by changes in the network including the addition of additional network devices.

CAUTION: Use redundant network connections to ensure reliable network connectivity to the Iris Device Management System equipment.

CAUTION: Utilize a back-up AC power source to minimize the interruption of service due to the loss of power to the equipment.

CAUTION: To prevent tampering, the equipment should be located in a secure location.

CAUTION: Carefully route power supply cords to minimize the accidental disconnection.

CAUTION: Do not place the equipment on electrical equipment that may affect the devices, preventing it from working properly.

Cleaning and Service Warnings and Cautions

WARNING: Do not adjust, repair, open, disassemble, or physically modify the equipment. Injury to personnel or equipment damage could occur. Return Iris Device Management System for servicing.

WARNING: If the equipment fails any part of the setup procedures or electrical safety tests, remove the device from operation until qualified service personnel have corrected the situation.

WARNING: Do not autoclave, pressure sterilize, or gas sterilize the equipment.

WARNING: Use cleaning solutions only as instructed in the operator's manual for the equipment.

Note: Modifications to the Iris Device Management System's settings, and those of any components connected thereto, should be made by qualified personnel only.

Note: Iris Device Management System installation must be completed by Masimo or an authorized service department.

Compliance Warnings and Cautions

WARNING: Do not attempt to repair or modify any part of the Iris Device Management System doing so may void the warranty or the authorization to use the Iris Device Management System components.

WARNING: Disposal of product - Comply with local laws in the disposal of the equipment and/or its accessories.

WARNING: When using devices with wireless features outside the United States, consideration should be taken to local government frequency allocations and technical parameters to minimize the possibility of interference to/from other wireless devices.

Chapter 1: Description

Iris Device Management System Screen

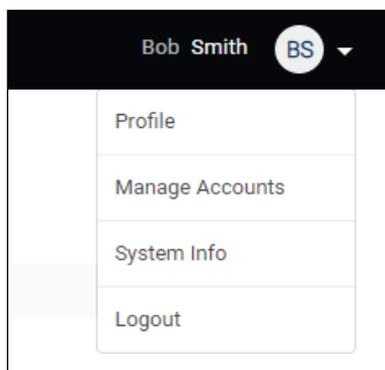The following information describes the features of the Iris Device Management System header and main screens.

Iris Device Management System Screen Header

The image and table below describe the features of the Iris Device Management System screen header.

Item	Feature	Description
1	Devices Selection	Select to display the device screen. See **Devices Screen** on page 12.
2	Software Selection	Select to display the software screen. See **Software Screen** on page 14.
3	User name and Initials	Displays the currently logged in user account/profile. See **User Management** on page 35.
4	Main Menu	Select the arrow to display the drop-down *Main Menu* options. See **Main Menu** on page 11.

Main Menu

The Main Menu allows the user to access the following features:

Profile   View user profile. See **User Management** on page 35.

Manage Accounts*   Manage user accounts. See **User Management** on page 35.

System Info*   View the Iris Device Management System information. See **Iris Device Management System Information** on page 42.

Logout   Logout of the Iris Device Management System. See *Logging Out of the Iris Device Management System* on page 18.

* Visible to user accounts with Administrator roles and above. See *User Roles* on page 36.

Devices Screen

The image and table below describe the features of the Iris Device Management System *Devices* screen.
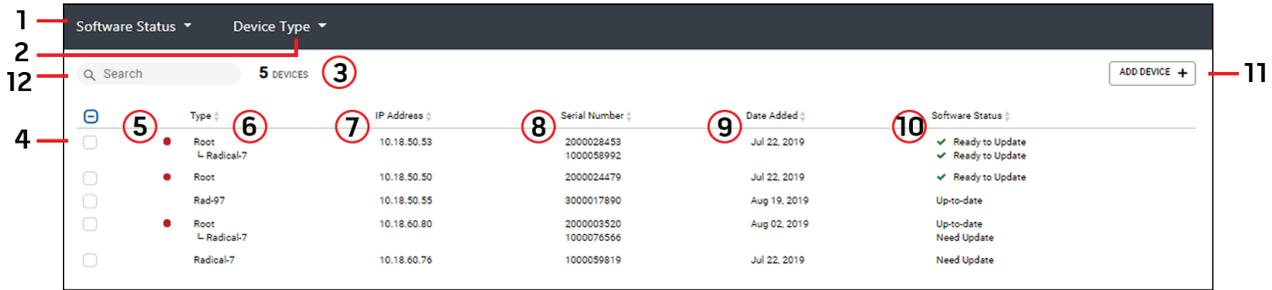

Item	Feature	Description
1	Software Status Menu	Displays devices based on software status (item 9). See *Device Software Status Menu* on page 13.
2	Device Type Menu	Displays devices based on device type (item 5). See *Device Type Menu* on page 13.
3	Available Devices	Displays number of active devices listed below based on the selections in the *Device Status Menu*. See *Device Software Status Menu* on page 13.
4	Select Device	Selecting a device displays additional information. See *Device Details* on page 23.
5	Heartbeat Status	Displays the device heartbeat status. See *Heartbeat Status* on page 13.
6	Device Type Column*	Displays the device type. Also displays devices docked to Root. See *Device Type Menu* on page 13.
7	IP Address Column*	Displays the device IP address. See *Device Details* on page 23.
8	Serial Number Column*	Displays the device serial number. See *Device Details* on page 23.
9	Date Added Column*	Displays the date the device was added to the Iris Device Management System.
10	Software Status Column*	Displays the software status for the device. See *Device Software Status* on page 14.
11	Add Device Button	Allows a device to be added to the Iris Device Management System. See *Adding a Device* on page 19.
12	Search Field	Allows the user the ability to search for a specific device by serial number and/or IP address

* This field can be viewed in ascending or descending order (numerically or alphabetically) by clicking on the header text.

Device Software Status Menu

The *Device Status Menu* allows devices to be filtered based on current software status. To view this menu, click on the down arrow to the right of the text. The *Software Status* text reflects the item(s) selected in the menu. The number of available devices displays at the top of the *Device Screen* based on selections in this menu. In the example below, based on *All Statuses* being selected, 7 devices are available.
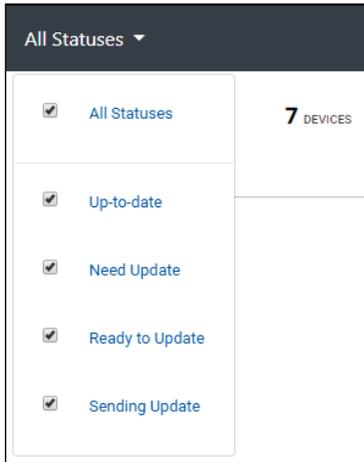
All Statuses	When selected in the *View by Device* menu, displays all devices with any of the statuses listed above (not displayed in the device status column).
Up-to-date	Indicates the software for the device is current and requires no action. When selected in the *View by Device* menu, displays only devices with the software status of *Up-to-date*.
Need Upgrade	Indicates there is an upgrade available for the device. When selected in the *View by Device* menu, displays only devices with the software status of *Need Upgrade*.
Ready to Upgrade	Indicates an upgrade has been sent to the device through the Iris Device Management System and the device is ready for upgrading. When selected in the *View by Device* menu, displays only devices with the software status of *Ready to Upgrade*.
Sending Upgrade	Indicates an upgrade is currently being sent to the device through the Iris Device Management System. When selected in the *View by Device* menu, displays only devices with the software status of *Sending Upgrade*.

For information on updating device software, go to **Device Software Management** on page 28.

Device Type Menu

The *Device Type Menu* allows devices to be filtered based on the type of device. To view this menu, click on the down arrow to the right of the text. The *Type* text reflects the item(s) selected in the menu. The number of available devices displays at the top of the *Device Screen* based on selections in this menu. *All Device Types* can be selected to view all available devices that are currently connected to Iris Device Management System.

In the example below, with only *Root* selected, 3 devices are displayed.

Heartbeat Status

The device Heartbeat is the periodic signal that the Iris Device Management System sends to the device to check its operational status. The *Heartbeat Status* indicator displays in the *Type* column as a colored dot next to the device name on the *Devices* screen. See **Devices Screen** on page 12.

Indicator (Dot) Color	Heartbeat Status
None	The last heartbeat was successful.
Yellow	The last heartbeat was unsuccessful.

Indicator (Dot) Color	Heartbeat Status
Orange	The last 2 heartbeats were unsuccessful.
Red	The last 3 or more heartbeats were unsuccessful.

The device Heartbeat Interval can be modified in the device detail screen under the **Configuration** tab. See **Device Detail Screen** on page 24.

Device Software Status

Device software status displays on the *Device* screen in the *Software Status* column and on the *Device Information* bar. See **Devices Screen** on page 12 or **Device Details** on page 23.

Up-to-Date	Indicates the software on the device is the latest available for this device.
Need Upgrade	Indicates there is new software available for this device. See **Upgrading Device Software** on page 30.
Sending Upgrade	Indicates software is being sent to the device.
Ready to Upgrade	Indicates there is a software image available on the device ready to be installed.
Upgrade in Progress	Indicates the device software is currently being upgraded.
Waiting to Upgrade	Indicates that the device has a pending upgrade that is not yet in progress.
Failed	Indicates that the device upgrade was attempted but did not complete.

Software Screen

The software screen displays all software currently available for all devices in Iris Device Management System. The image and table below describe the features of the Iris Device Management System *Software* screen. Only Upgrade Manager roles and above can view the *Software* screen. See **User Roles** on page 36.

Item	Feature	Description
1	Device Icon	Displays Masimo device name, image of device and number of software upgrades enabled.
2	Minimize/expand arrow	Minimize and expand the device specific software information. When minimized, only the device name displays.
3	Software Version Column	Displays the software version.
4	Status Column	Displays the status of the software.*
5	Description Column	Displays the software description.
6	Edit Software Icon	Allows software properties to be changed. See **Edit Software** on page 29.
7	Upload Button	Allows software to be uploaded to the Iris Device Management System. See **Upload Software** on page 28.

* Software status of *Enabled* **can** be used to upgrade a device. Software status of *Disabled* **cannot** be used to upgrade a device.

Chapter 2: Operation

Logging In to the Iris Device Management System

Follow the instructions below to log in to the Iris Device Management System. If a user does not have an account, or if they have forgotten their login credentials, they will not be able to log in to the Iris Device Management System and must contact the system administrator to setup an account or set a new password. See **User Management** on page 35.

- A default account is available used to access the Iris Device Management System for the ability to setup user accounts. For default account credentials, see **Default Account Information** on page 47.

1. Open a web browser. See **Supported Browsers** on page 47.

2. Enter the Iris Device Management System address into the browser address bar and select Enter. Refer to the system administrator for the address for Iris Device Management System.

3. The Device Manager login screen displays. In the *Sign In* screen, enter the following credentials:

   - **Username**

   - **Password**

4. Press/Select the **Sign In** button.

DEVICE MANAGER

Sign In

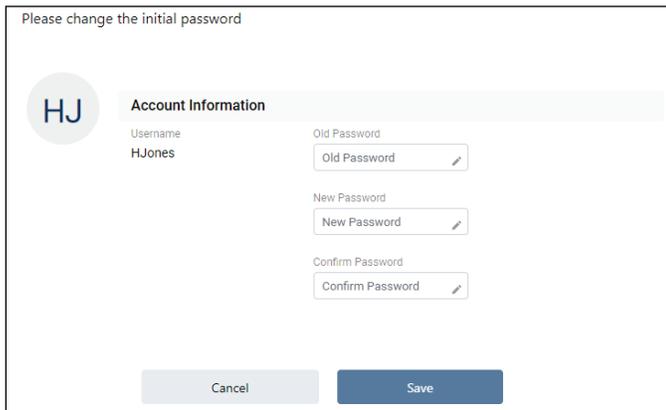Username

Password

Sign In
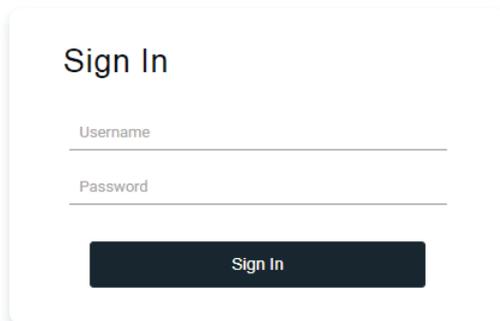
Note: A prompt to enter a new password may display. See **Change Password at First login** on page 18.

5. After successful login, the devices screen appears by default. See **Devices Screen** on page 12.

   - To log out of an Iris Device Management System user account, see **Logging Out of the Iris Device Management System** on page 18.

Change Password at First login

When a new user logs in for the first time after a new account has been created for that user, a new password is required during the login process before access to the system is granted.

1. On the *Please change the initial password* screen, fill in the old and new password information as shown. When complete, click the **Save** button.

    -   The new password should be 1 to 10 characters long.

   -   The new password should contain at least one of each: *Uppercase, lowercase, digits, and special characters*

2. Confirmation displays when the password has been successfully changed.

3. After changing the password, the login screen displays and the user must now login with the new password.

Logging Out of the Iris Device Management System

Follow the instructions below to log out of a user account.

1. While viewing the Iris Device Management System display, press/select the drop-down arrow icon next to the user name in the upper-right corner of the screen.
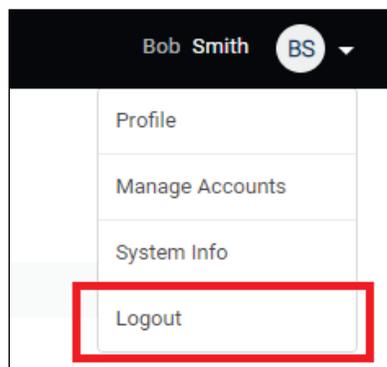
2. Press/select **Logout**.

3. After successfully logging out, the **Login** screen will appear. To log in to a user account, see *Logging In to the Iris Device Management System* on page 17.

Device Management

The following information applies to management of devices within the connected system using the Iris Device Management System. Ability to view content is dependent on the user's assigned role. See *User Roles* on page 36.

- To add a device to the Iris Device Management System, see *Adding a Device* on page 19.

- To remove a device from the Iris Device Management System, see *Delete a Device* on page 21.

- To view device software status, see *Device Software Status* on page 14.

- To view device information, see *Device Details* on page 23.

- To manage device software, see *Device Software Management* on page 28.

Adding a Device

This ability to add devices is restricted to Administrator roles and above. See *User Roles* on page 36. Only supported devices can be added to the Iris Device Management System. See *Supported Devices* on page 47.

Devices can be added two ways:

- *Individual IP Search* - Add one device at a time using the device IP address.

- *Range IP Search* - Add multiple devices at one time within an IP address range.

Note: If the maximum number of devices has already been reached, when trying to add an additional device, a popup notifies that the Enabled Device Limit has reached the maximum.

To add a device, select the **Add Device** button on the screen and select to add one or multiple devices.
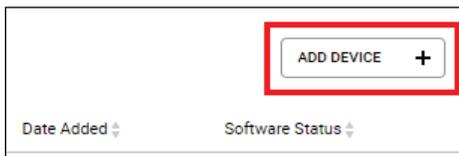
Individual IP Search

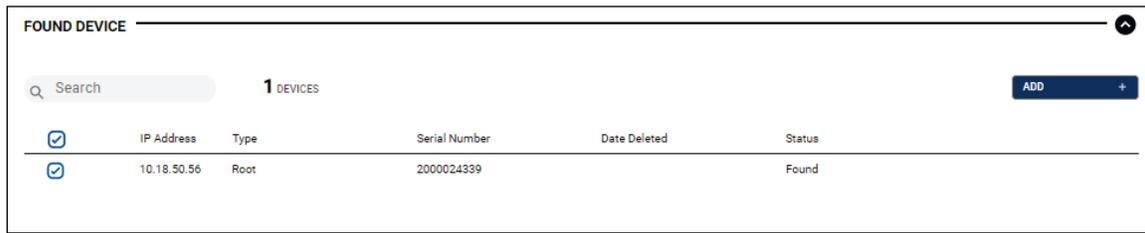1. To add a single device, select the *Individual IP Search* option at the top of the screen.

2. Enter the IP address of the desired device in to the IP address field and click **Search**. The Iris Device Management System will search for the device on the network and display *locating device*.
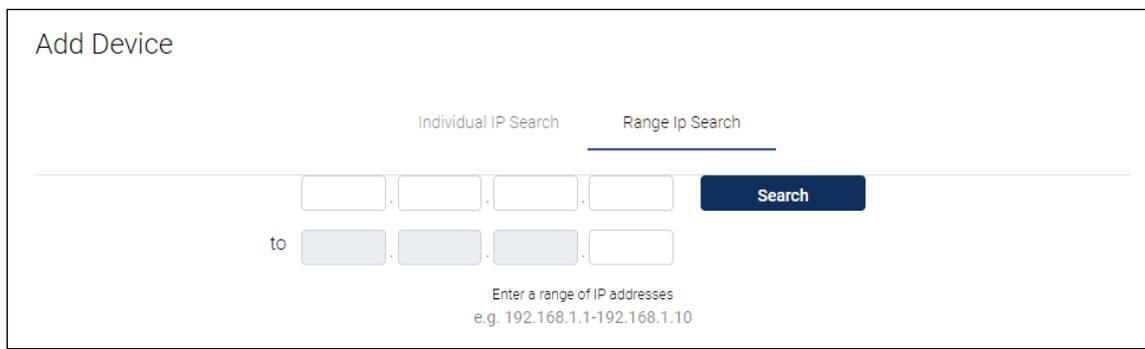
3. After the device is located, confirm the correct device to be added is displayed. A device that can be added displays a status of *Found*. If this is the correct device, select the device by placing a checkmark in the row for the device, then select the *Add* button to add the device.

FOUND DEVICE						
Q Search	**1** DEVICES					ADD +
☑	IP Address	Type	Serial Number	Date Deleted	Status	
☑	10.18.50.56	Root	2000024339		Found	

4. When complete, the *Device* screen displays, showing the newly added device in the list of devices.

Range IP Search

1. To add multiple devices, select the *Range IP Search* option at the top of the screen.

Add Device

Individual IP Search   Range Ip Search

[ ] . [ ] . [ ] . [ ]   **Search**

to [ ] . [ ] . [ ] . [ ]

Enter a range of IP addresses
e.g. 192.168.1.1-192.168.1.10

2. Enter the starting and ending IP address for the range of the desired devices in to the IP address fields and click **Search**. The Iris Device Management System will search for the devices on the network and display *locating device*.

3. After the devices are located, multiple device types and statuses may be displayed, and some IP addresses may not even show a device, as shown in the example. Devices that can be added displays a status of *Found*.

    If the devices that can be added are the correct devices, select the devices by placing a checkmark in the row for each device, then select the *Add* button to add the devices.

FOUND DEVICE						
Q Search	**3** DEVICES					ADD +
☑	IP Address	Type	Serial Number	Date Deleted	Status	
	10.18.50.51	Root	2000024479		Device Already Exists	*i* See Details
	10.18.50.51	n/a	n/a	n/a	Device Not Found	
☑	10.18.50.52	Root	2000024395		Found	
	10.18.50.53	Root	2000028453		Device Already Exists	*i* See Details
	10.18.50.54	n/a	n/a	n/a	Device Not Found	
	10.18.50.55	Rad-97	3000017890		Device Already Exists	*i* See Details
☑	10.18.50.56	Root	2000024339		Found	
	10.18.50.57	n/a	n/a	n/a	Device Not Found	
	10.18.50.58	n/a	n/a	n/a	Device Not Found	
	10.18.50.59	n/a	n/a	n/a	Device Not Found	
☑	10.18.50.60	Root	2000036675		Found	

4. When complete, the *Device* screen displays, showing the newly added devices in the list of devices.

Device Not Found

If a device IP address cannot be found on the network, under the *Found Device* information, *0 Devices* displays along with the status of *Device Not Found*. Contact the network administrator for assistance in confirming the device is on the network and can be added.
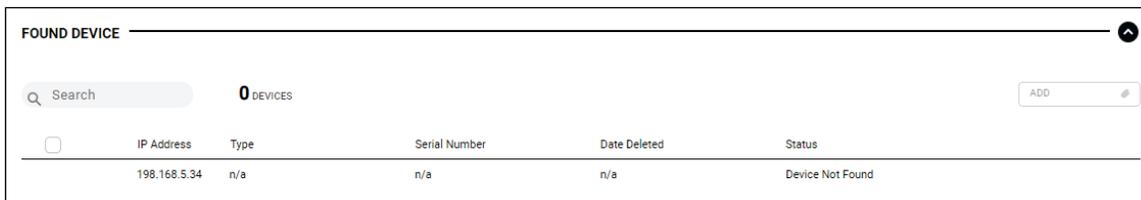
	IP Address	Type	Serial Number	Date Deleted	Status
	198.168.5.34	n/a	n/a	n/a	Device Not Found

Device Already Exists

If a device IP address has already been added to the Iris Device Management System, under the *Found Device* information, *1 Devices* displays along with the status of *Device Already Exists*. Confirm the correct IP address was entered. Select *See Details* to view information about the existing device. See **Device Detail Screen** on page 24.
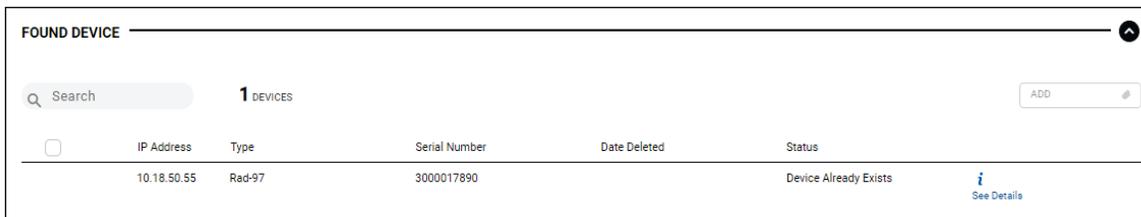
	IP Address	Type	Serial Number	Date Deleted	Status	
	10.18.50.55	Rad-97	3000017890		Device Already Exists	*i* See Details

Delete a Device

Follow the instructions below to remove (delete) a device from the Iris Device Management System. This ability is restricted to Administrator roles and above. See **User Roles** on page 36.
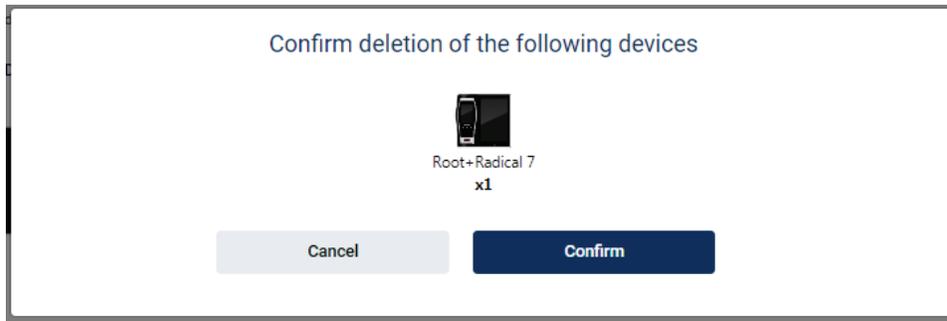
Note: A deleted device can be re-added to the Iris Device Management System using the restore function. See **Restore Deleted Device** on page 22.

1. Select a device from the *Devices* screen to access the *Device Detail* screen. See **Device Details** on page 23.

2. Select the **Delete Device** button at the top right corner of the screen.

DELETE DEVICE ─
Serial Number	IP Address
200003520	**10.18.50.55**
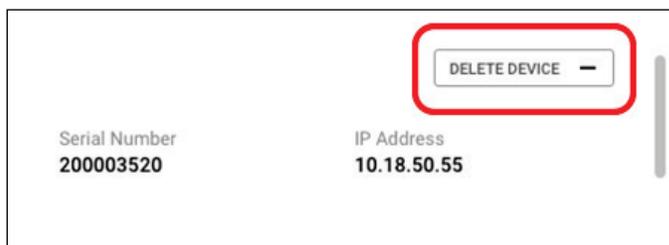
3. Verify the information is correct in the popup and select **Confirm** to delete the device from the Iris Device Management System.

- Select **Cancel** to NOT delete the device.

4. When complete, the Iris Device Management System returns to the *Device* screen.

Restore Deleted Device

After a device is deleted, it can be added back to Iris Device Management System using the Restore feature. This ability is restricted to Administrator roles and above. See *User Roles* on page 36.
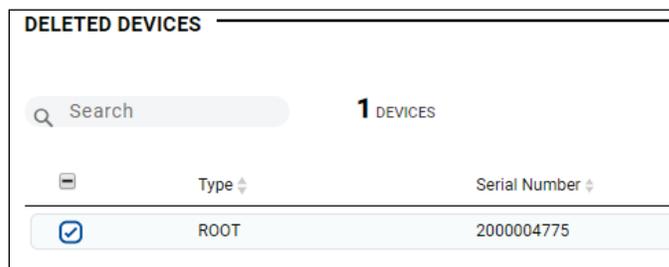
1. Select the **Add Device** button on the screen.

   Note: If the maximum number of devices has already been reached, when trying to add an additional device, a popup notifies that the Enabled Device Limit has reached the maximum.

2. The lower half of the screen displays deleted devices that have been removed from Iris Device Management System. Select the deleted device to restore.

   Note: Multiple devices can be selected by pressing the Cntl key on the keyboard and selecting multiple devices.

3. Select the **Restore Device** button on the right side of the screen.

4. Verify the information is correct in the popup and select **Confirm** to restore the device to Iris Device Management System.

- Select **Cancel** to NOT restore the device.

Confirm   ✕

Are you sure you want to restore device with serial numbers?

2000004775

Cancel   **Confirm**
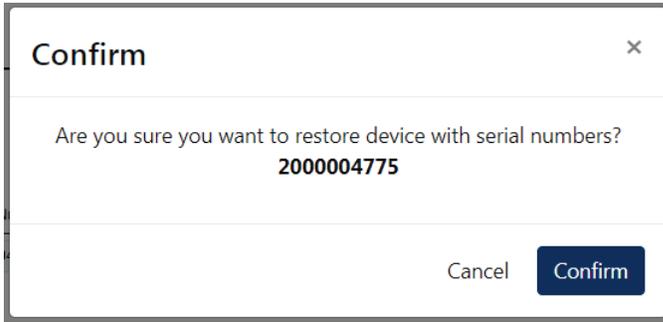
Note: When multiple devices are selected to be restored, the serial number for each device displays in the popup.

5. When complete, Iris Device Management System returns to the *Device* screen, showing the device in the list of devices.

Device Details

The following procedure instructs how the current user can view and edit device information as well as access the ability to upgrade the device software.

Select the desired device on the *Devices* screen. See **Devices Screen** on page 12. Information about the selected device appears at the right side of the Iris Device Management System *Devices* screen as shown. Select the **Detail** button at the bottom to view the detail screen. See **Device Detail Screen** on page 24.

Note: Radius-7 and Rad-67 are currently not supported for device management or software upgrades and are shown for informational purposes only.

1 DEVICE SELECTED

Device Type

Root

Software Version
V2.1.0.0-INT-014
Ready For Update:
Trigger OS Upgrade
On Instrument

IP Address
10.18.50.51

Serial Number
2000024479

Connected Channels
Optical

Heartbeat
● **265 missed**

Detail

Device Type

Displays an image and name of the connected device.

Software Version

Displays the current software version along with the status of any available software for updating the device.

IP Address

Connected device IP address

Serial Number

Connected device serial number

Connected Device

Devices connected to this device - including the current software version along with the status of any available software for updating the device (not shown in this example).

Connected Channels

Connected channels used with this connected device.

Missed Heartbeat

Number of total missed heartbeats for this device.

Selecting Multiple Devices

Multiple devices can be selected by pressing the Cntl key on the keyboard and selecting multiple devices. When multiple devices are selected, details are not shown. Only the device type and number of selected devices displays (four (4) Roots are selected in the example).
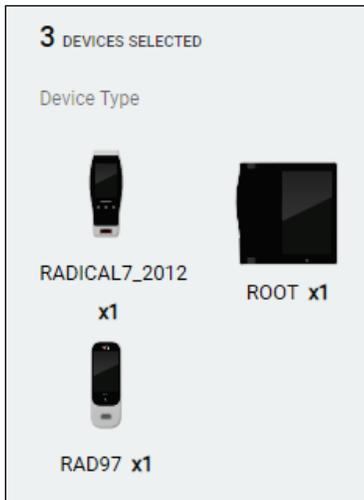
Device Detail Screen

At the top of the device detail screen, basic information for the device are shown similar to the information bar mentioned above. For information on the device *Heartbeat*, see **Heartbeat Status** on page 13. The displayed device can also be removed (deleted) from this screen. See **Delete a Device** on page 21. In the example shown, Radical-7 is docked to Root.

Information Tab

The Information shows info about the device and devices connected to this device. For Root devices, the status of the Iris ports also display. Select the minimize and expand arrow on the right of the titles to minimize and expand the information. When minimized, only the title displays. In the example shown, Radical-7 is docked to Root.

| INFORMATION | CONFIGURATION | UPGRADE |

Last updated Aug 22, 2019 | 4:55 PM ↻

MAIN DEVICE ⌃

Device Info

Type	IP Address	Serial Number
Root	10.18.50.53	2000028453

Software Version	Registered On	
V2.1.0.0-INT-013	Jul 22, 2019	1:19 PM	

Channels

Connected Channels	System Alarm Status
Optical	n/a

MAC Address

Wifi MAC Address	Ethernet MAC Address	Bluetooth MAC Address
00:00:00:00:00:00	e0:c2:b7:00:58:a8	n/a

DIAGNOSTICS

Battery Temperature	Battery Voltage	Battery Remaining Capacity
86.27 °F	11.63 V	3614 mAh

Battery Full Charge Capacity	Battery Cycle Count	Battery State of Health
3740 mAh	4	4%

Network Interface Connection		
n/a		

CONNECTED DEVICES ⌃

Radical-7

Device info

Type	Serial Number	Software Version
Radical-7	1000058992	V1.5.8.4-INT

Connection Status	Hosting Port	Available Channels
CONNECTED	Main Dock	Optical

Versions

DSP Version	Board Type
7e23	0501

IRIS ⌃

Iris Port 1

Connection Status
UNKNOWN

Iris Port 2

Item	Description
Last Updated	Date and time the device information was last upgraded.
Device Info	Device information along with when the device was registered with the Iris Device Management System and current version of software.
Channels	Channels that are currently connected to the device.
MAC Address	Wi-Fi, Ethernet and Bluetooth MAC address of the device.
Diagnostics	Technical information about the device.
Connected Devices*	Information about Masimo devices currently connected to this device including type, serial number, and software version.
IRIS	Information about 3rd party devices currently connected to this device through the IRIS port.

* Connected devices can be upgraded but they must be selected from the *Devices Screen*. See **Upgrading Device Software** on page 30.

Configuration Tab

The *Configuration* tab allows the server and device to be modified. Multiple devices can be selected from the *Device* screen and configured at the same time.

Note: When Radical-7 is docked to Root, only the Root can be configured under the *Configuration* tab. Radical-7 can only be configured when in a stand alone configuration, such as in a docking station.
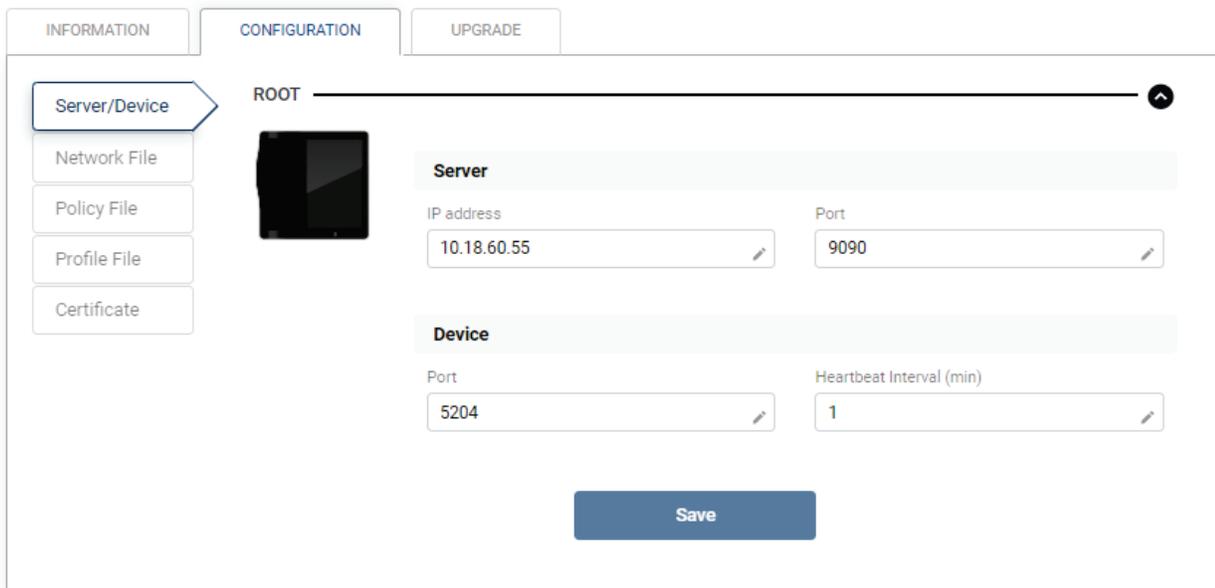
Item	Description
Server/Device	Allows customization of the following items: • Server IP address and Port • Device Port and Heartbeat Interval (min). See **Heartbeat Status** on page 13.
Network File*	Allows network files to be uploaded to the device.
Policy File*	Allows a policy file to be uploaded to the device.

Item	Description
Profile File*	Allows profile files to be uploaded to the device.
Certificate*	Allows certificates to be uploaded to the device.

* Only valid file types can be uploaded.

Configuration Status

File or Certificate configuration upload status displays on the *Configuration* screen.

Status	Description
Config pending	Displays when a configuration is waiting to be sent to a device.
Config in progress	Displays when a configuration is being sent to a device.
Config success	Displays when a configuration is successfully sent to a device.
Config fail	Displays when a configuration failed to be sent to a device.

Upgrade Tab

The Upgrade tab allows the device software to be upgraded. Multiple devices can be selected from the *Device* screen and upgraded at the same time. For complete information, see **Device Software Management** on page 28.

Note: When Radical-7 is docked to Root, both Root and Radical-7 software can be upgraded from this screen. The example shows Root without a device docked.
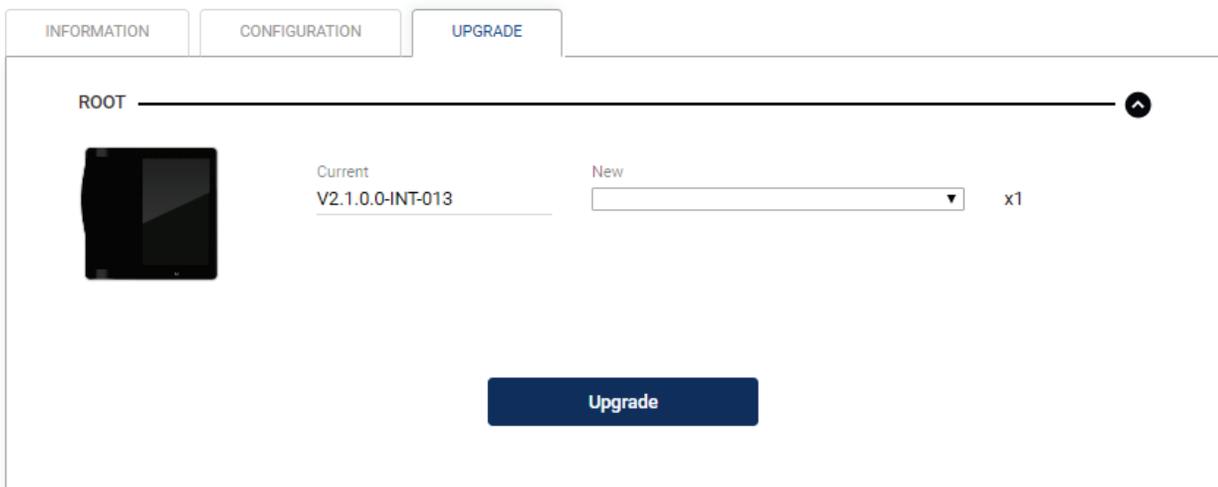
Item	Description
Current	Current software version of the device.
New	Software upgrades available for the device.

Multiple Device Details

When multiple devices are selected on the *Devices* screen, the *Information* tab is not available and the screen defaults to display only the *Configuration* and *Upgrade* tabs. When multiple devices are selected, the *Configuration* and *Upgrade* tabs operate the same as when a single device is selected, however, instead of configuring and upgrading a single device at a time, multiple devices can be configured and upgraded at one time.

Note: In the case when a Radical-7 stand-alone and a Root with a Radical-7 docked are both selected, two (x2) Radical-7 devices are displayed.
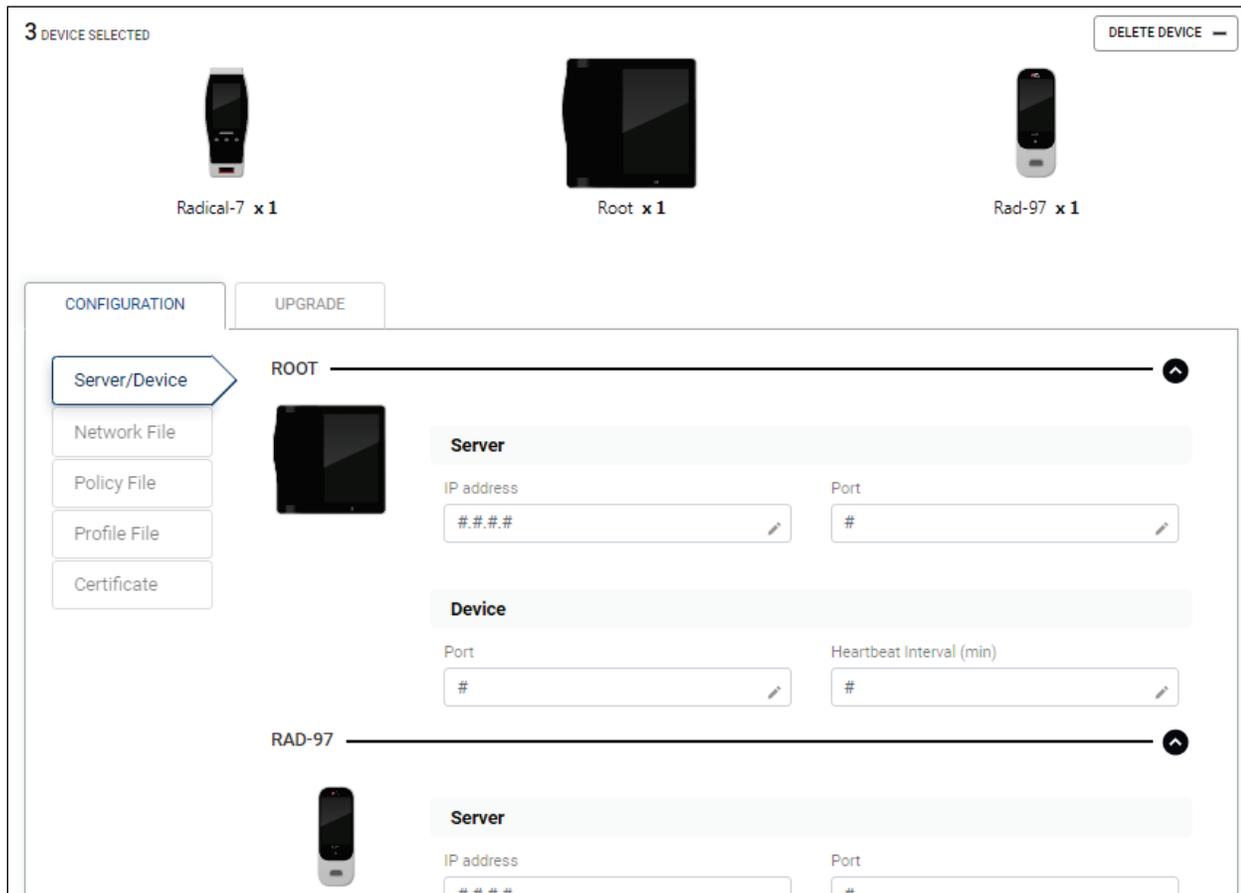
Device Software Management

The following information discusses device software related information. This ability is restricted to Administrator roles and above.

Upload Software

The following information provides instructions for uploading software to the Iris Device Management System for upgrading masimo devices. This ability is restricted to Super Admin roles ONLY. See **User Roles** on page 36.

Software .zip files can be uploaded to the Iris Device Management System for upgrading Masimo devices on the network.

1. To upload software to the Iris Device Management System, from the *Software* screen, click on the **Upload** button.

2. Click in the *Select a Software File* field.

3.   When prompted, navigate to the location of the software and select the desired software .zip file.

4.   Click the Upload button to upload the file to the Iris Device Management System. A status bar displays as the file is uploaded.
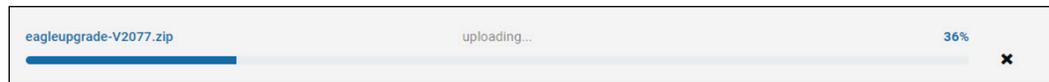
5.   After the file is uploaded, the uploaded software appears in the software list, and can be used to upgrade the device software.
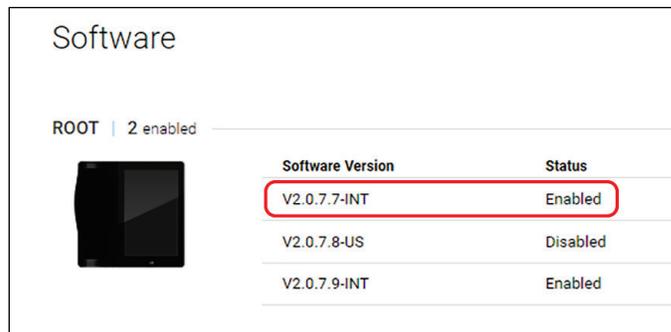
Edit Software

Software properties can be modified through the edit feature on the *Software Screen*. See **Software Screen** on page 14.

Only two (2) items on the screen can be modified:

- Description

- Enable/Disable software for use to upgrade device (under device image). See **Software Screen** on page 14.

1.   Click on the *Edit* icon next to the software filename.

2.   Click the **Edit** button at the bottom of the screen.

- Change the Description field.

- Enable or Disable the software for upgrading.

- Delete the software from Iris Device Management System. See **Delete Software** on page 30.
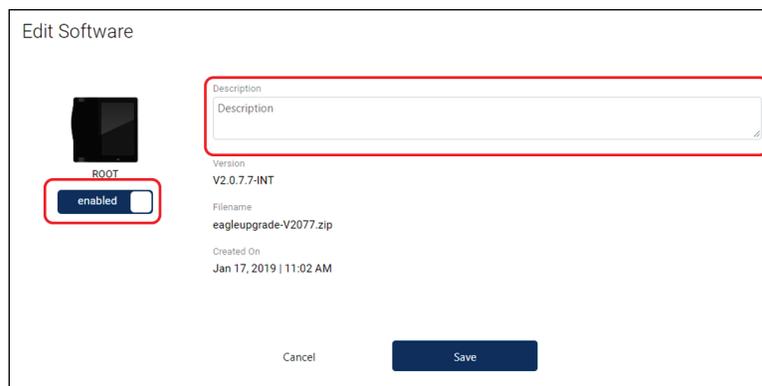
3.   When changes are completed, click the **Save** button.

     Note: To exit without saving changes, select the **Cancel** button.

4.   The *Confirm Changes* popup appears showing the current and new information. Accept the changes by clicking the **Confirm** button.

- To discard the changes, select the **Cancel** button.
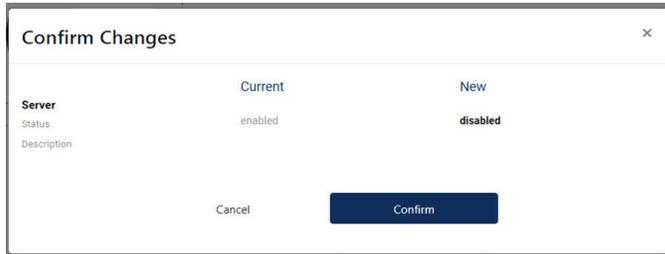
5. When complete, the Iris Device Management System returns to the *Software* screen.

Delete Software

Software can be deleted (removed) from Iris Device Management System through the *Edit Software* screen.

1. From the *Software* screen, click on the *Edit* icon next to the software filename to be deleted. See **Software Screen** on page 14.

2. From the *Edit Software* screen, set the software to *Disabled*. See **Edit Software** on page 29.

3. Click the **Save** button. Iris Device Management System returns to the *Software* screen.

4. Open the *Edit Software* screen again and select the **Delete Software** button at the top of the screen.

5. Verify the information is correct in the popup and select **Confirm** to delete the software from Iris Device Management System.

   - Select **Cancel** to NOT delete the software.

6. When complete, a popup displays confirming the deletion. Select **Confirm** to close.

7. Iris Device Management System returns to the *Software* screen.

Upgrading Device Software

When viewing the device screen, if a device has an available software upgrade, this is indicated in the device software status column as *Need Upgrade*. See **Device Software Status** on page 14. This upgrade can be confirmed by viewing the device details. *New Version Available* displays under the Software Version. See **Device Details** on page 23.

Software can be upgraded on a single device or on multiple devices at the same time.

Note: Radius-7 and Rad-67 are currently not supported for device management or software upgrades and are shown for informational purposes only.
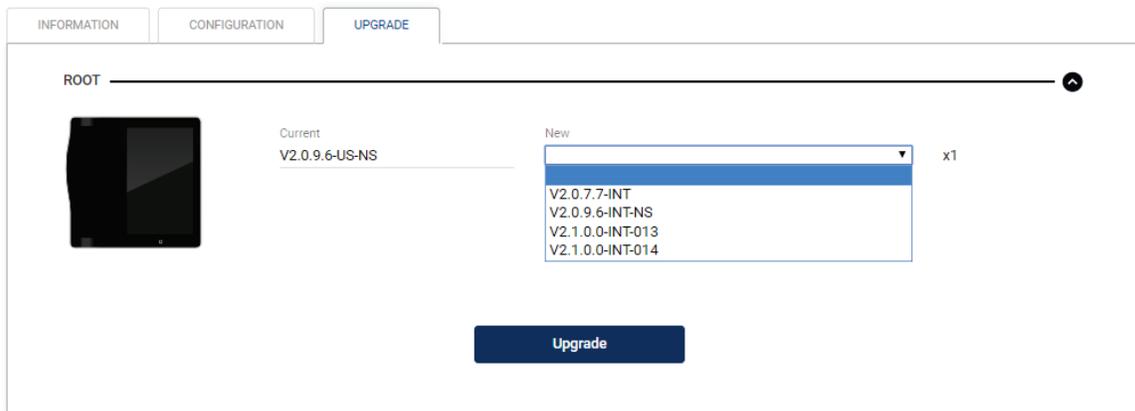
Single Device

1. To upgrade software on a single device, select the desired device from the *Device* screen. See **Devices Screen** on page 12.

2. When the *Device Detail* displays, click the **Detail** button at the bottom to view the device detail screen. See **Device Details** on page 23 and **Device Detail Screen** on page 24.

3. At the top of the device detail screen, devices with available software upgrades are shown. Root with Radical-7 docked shown in the following examples.
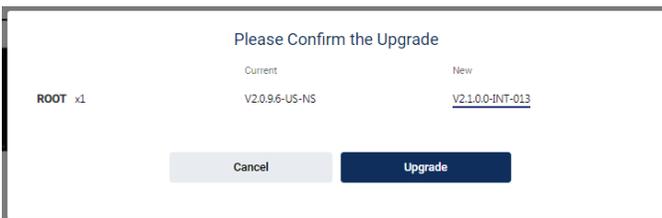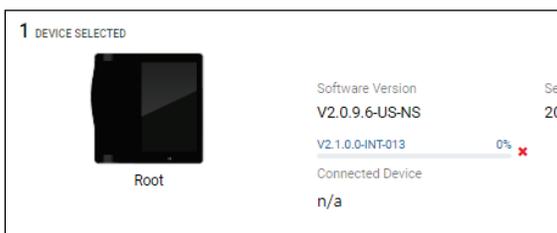
4.   Select the **Upgrade** tab.

| INFORMATION | CONFIGURATION | UPGRADE |

ROOT

Current
V2.0.9.6-US-NS

New
[▼]   x1

Upgrade

5.   From the *New* drop down, select the desired software version.

| INFORMATION | CONFIGURATION | UPGRADE |

ROOT

Current
V2.0.9.6-US-NS

New
[▼]   x1

V2.0.7.7-INT
V2.0.9.6-INT-NS
V2.1.0.0-INT-013
V2.1.0.0-INT-014
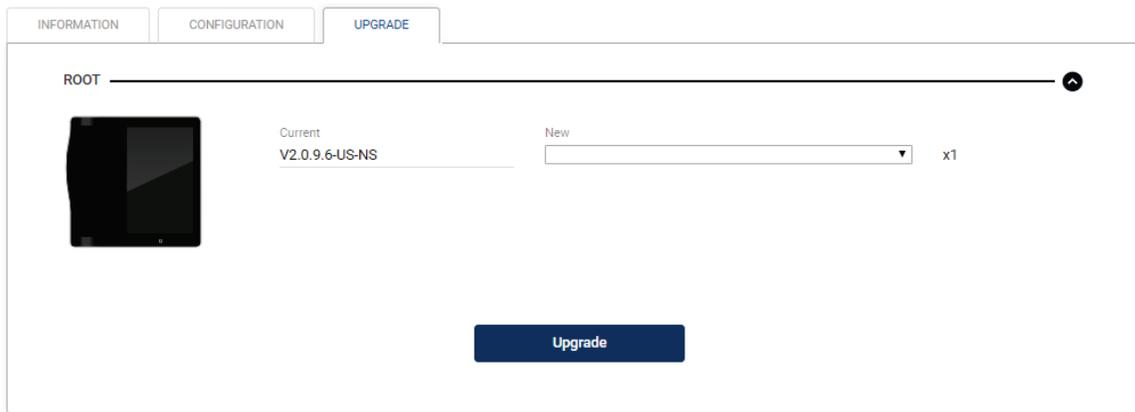
Upgrade

6.   Select the **Upgrade** button to send the upgrade software to the device.

7.   Review the *Current* and *New* software versions in the popup. If these are correct, select **Upgrade**.

   •   To exit without upgrading the device software, select the **Cancel** button.

Please Confirm the Upgrade

| | Current | New |
| ROOT x1 | V2.0.9.6-US-NS | V2.1.0.0-INT-013 |

Cancel   Upgrade

8.   The *Device Detail* displays the status of the upgrade. See **Device Software Status** on page 14. The Upgrade tab displays *Upgrade In Progress*.

1 DEVICE SELECTED

Software Version   Se
V2.0.9.6-US-NS   20

V2.1.0.0-INT-013   0% ✖

Connected Device

Root

n/a

- To stop the device software upgrade, select the Red **X** next to the progress bar and **Confirm** in the popup. To continue with the upgrade, select **Cancel**.
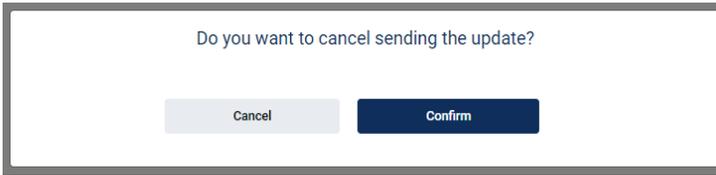
9. The *Devices* screen also displays with the status of *Sending Upgrade* for the device. See **Device Software Status** on page 14. Select the device to see the progress of the upgrade in the *Device Detail* at the right of the screen.

10. When the software is loaded and the device is ready to be upgraded:

   - On the Iris Device Management System: On the *Devices* screen, the *Software Status* column displays *Ready to Upgrade*. See **Device Software Status Menu** on page 13.

   - On the device: Device displays *Upgrade Image VX.X.X.X Available* on the screen.

11. When safe to do so, perform the upgrade installation at the device to complete the upgrade procedure. See **Software Upgrade Management at Device** on page 35.

Multiple Devices

1. To upgrade software on multiple devices, hold the Ctrl button on the computer keyboard and select the desired devices on the *Device* screen, or select the box at the top of the first column to select all devices. See **Devices Screen** on page 12.

   - This procedure also applies when upgrading Root with Radical-7 docked.

2. Devices with available software upgrades are displayed. The device type of the number of selected devices appears at the right side of the Iris Device Management System window in the *Device Details*. See **Device Details** on page 23. Click the **Detail** button at the bottom to view the device detail screen.

   Note: When multiple devices are selected (with the exception of Root with Radical-7 docked), only the *Configuration* and *Upgrade* tab appear on the *Device Details* screen.

3. At the top of the device detail screen, devices with available software upgrades are shown. Root with Radical-7 docked shown in the following examples.

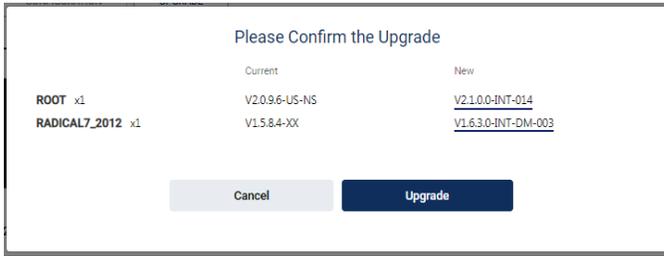4.   Select the **Upgrade** tab on the *Device Details* screen.
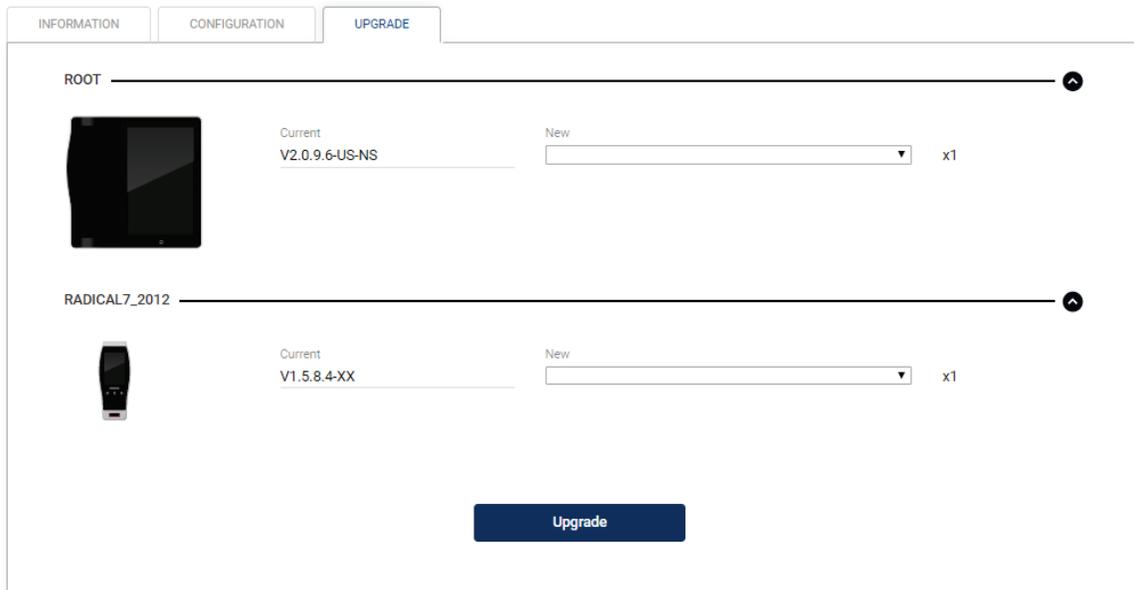
5.   From the *New* drop down, select the desired software version.

Note: Devices are grouped by type, then by current software version (Root with Radical-7 docked shown). An upgrade version should be selected for each device (or group of devices). Not all devices require upgrading, only select a desired device, or devices with available software to perform an upgrade.
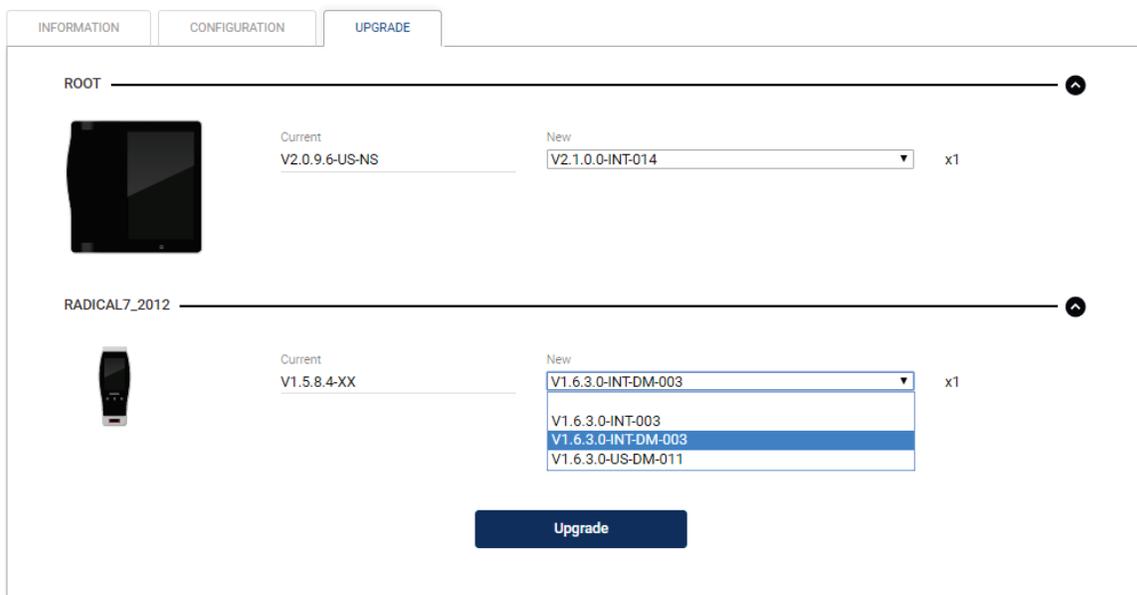

6.   Select the **Upgrade** button to send the upgrade software to the devices.

7.   Review the *Current* and *New* software versions in the popup. If these are correct, select **Upgrade**.

- To exit without upgrading the devices software, select the **Cancel** button.

8. The upgrade starts and a progress bar displays in the device detail area of the screen. *Upgrade in Progress* displays in the *Upgrade* tab area.
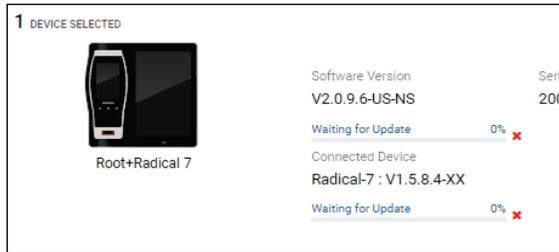
- To stop the device software upgrade, select the Red **X** next to the progress bar and **Confirm** in the popup. To continue with the upgrade, select **Cancel**.
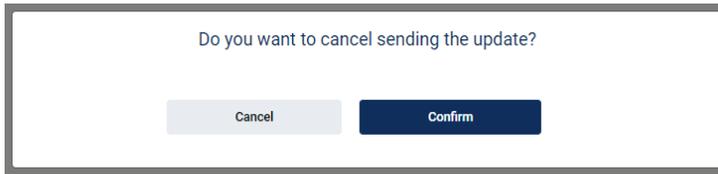
9. The *Devices* screen also displays with the status of *Sending Upgrade* for the selected devices. See *Device Software Status* on page 14. Select an individual device to see the progress of the upgrade in the *Device Detail* at the right of the screen.

10. When the software is loaded and the device is ready to be upgraded:

    - On the Iris Device Management System: On the *Devices* screen, the *Software Status* column displays *Ready to Upgrade*. See **Device Software Status Menu** on page 13.

    - On each device: Devices display *Upgrade Image VX.X.X.X Available* on the screen.

11. When safe to do so, perform the upgrade installation at each device directly to complete the upgrade procedure. See **Software Upgrade Management at Device** on page 35.

Downgrading Device Software

Device software can also be be downgraded to an earlier version on a single device or on multiple devices at the same time.

Note: Radius-7 and Rad-67 are currently not supported for device management or software upgrades and are shown for informational purposes only.

When an earlier software version is selected, Iris Device Management System displays ***Warning: Downgrading version*** as shown. The downgrade procedure is performed the same as upgrading the software, with the difference being, when selecting software, select an earlier version. See ***Upgrading Device Software*** on page 30.
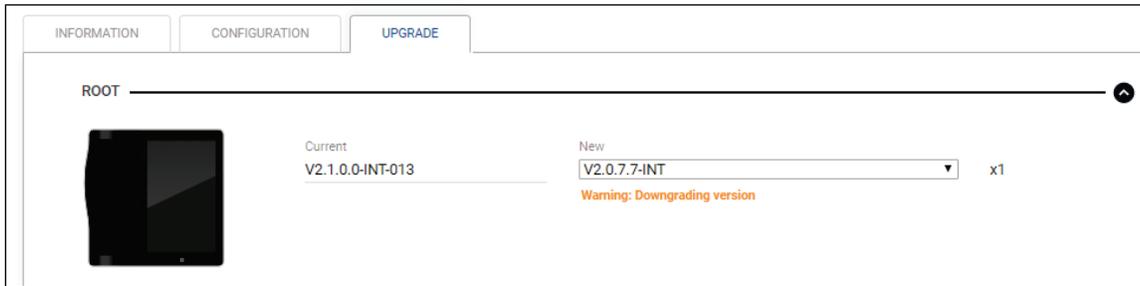
Software Upgrade Management at Device

After upgrading device software using Iris Device Management System, the software must be manually installed at each device.

Before the device can be manually upgraded, the device must not be currently monitoring a patient. When safe to do so, disconnect the sensor from the patient/device and perform the software upgrade.

Note: The same process also applies when performing a software downgrade.

To upgrade the device software, perform the following steps:

1. At the top of the device screen, the *Upgrade Image VX.X.X.X Available* message displays, indicating a software upgrade has been sent to the device from Iris Device Management System. Touch this message to open the *About* screen.

2. On the *About* screen under the *Upgrade Image* information, select the **Install** button next to the *Install Upgrade* field to begin the software upgrade.

    Note: If patient monitoring is still active, the **Install** button is grayed out and the software upgrade cannot be performed. Before the software can be upgraded, the device must not be monitoring a patient.

3. When prompted to enter a *PIN* in the *Authenticate* pop-up, enter **6274** and select the **OK** button. The upgrade software will automatically install on the device.

4. When the software upgrade is complete, the device will power OFF and back ON. When the device powers back ON, the software upgrade is complete.

WARNING: After performing a software upgrade to a Masimo device using the Iris Device Management System, ensure the device operates properly before use.

User Management

The following information applies to the management of users and user roles for accessing the Iris Device Management System. Access to these features is determined by the user role. See ***User Roles*** on page 36.

*   Create new user accounts. See ***Create User Account (Admin)*** on page 35.

*   User Level - View and edit user account. See ***View Account (User)*** on page 37.

*   Administrator Level - View, edit and delete user accounts. See ***View Account (Admin)*** on page 39.

Create User Account (Admin)

The following procedure instructs how to create a new user and assign roles for that user. This ability is restricted to Administrator roles and above.

1. From the *Main Menu*, select *Manage Accounts*. See ***Main Menu*** on page 11.

2. Click on the **Create Account** button at the top of the screen.

    Note: If the maximum number of accounts has already been reached, when trying to add an additional account, a popup notifies that the Enabled Account Limit has reached the maximum.

3. Enter the required information as displayed on the screen. Note the following when creating a password:

- The password should be 1 to 10 characters long.
- The password should contain at least one of each: *Uppercase, lowercase, digits, and special characters*

Create Account

Account Information

Username
Username

New Password
New Password

Confirm Password
Confirm Password

Personal Info

First Name
First name

Lastname Name
Last name

Role

4. Select an available user role. See **User Roles** on page 36.

5. Click the **Save** button to create the new user.

- To exit without creating a new user, select the **Cancel** button.

Note: When a new user logs in for the first time after a new account has been created for that user, a new password is required during the login process before access to the system is granted.

User Roles

Roles are assigned to user when the user account is created. Roles dictate what a user can and cannot do within the Iris Device Management System environment.

- Only an Administrator and above can create a new user account.
- A Super Admin can grant Super Admin roles, as well as any account role below.
- An Administrator can only grant Administrator roles and below.
- An Upgrade Manager and above can update device software.

Roles/Privilege	User	Device Manager	Upgrade Manager	Administrator	Super Admin
View Devices	X	X	X	X	X
User account management				X	X
Device configuration			X	X	X
Configuration file upload					X
Device upgrade		X	X	X	X
Software image management				X	X
System Info				X	X
Delete Device				X	X

View Account (User)

The following procedure instructs how the current user can view their profile, edit the profile and change the password.

From the *Main Menu*, select *Profile*. See **Main Menu** on page 11. The account info, personal info and role for the logged in user displays on the *My Account* screen.

- To edit the user profile, click the **Edit** button. See **Edit Account Information (User)** on page 38.

- To change the user password, click the **Change Password** button. See **Change Password (User)** on page 38.

My Account

BS

Account Infomration

Username
BSmith

[Change Password]

Created On
Dec 12, 2018 | 8:53 AM

Update On
Dec 12, 2018 | 3:28 PM

Personal Info

First Name
Bob

Lastname Name
Smith

Role

Super Admin

ViewDevices
UserManagement
DeviceConfiguration
ConfigFileUpload
SoftwareUpgrade
SoftwareManagement
SystemInfo
DeleteDeviceManagement

[Cancel]   [Edit]

Edit Account Information (User)

The first and last name for the logged in user can be manually changed through the *My Account* screen. The following procedure instructs how a user can change their name.

1. On the *My Account* screen, select the **Edit** button.

2. On the *Edit my Account* screen, change the first and/or last name on the account. When complete, click the **Save** button.

3. The *Confirm Changes* screen appears showing the current and new information. Accept the changes by clicking the **Confirm** button.

    *   To discard the changes, select the **Cancel** button.

4. When complete, the Iris Device Management System returns the *My Account* screen.

Change Password (User)

The password for the logged in user can be manually changed through the user Profile screen. The following procedure instructs how a user can change their own password.

1. On the *My Account* screen, select the **Change Password** button.

2. On the *Change my Password* screen, fill in the old and new password information as shown. When complete, click the **Save** button.

    *   The new password should be 1 to 10 characters long.

- The new password should contain at least one of each: *Uppercase, lowercase, digits, and special characters*

3. Verify the information to confirm changes and select **Save**.

4. When complete, the Iris Device Management System returns to the login screen to require sign in with the new password.

View Account (Admin)

The following procedure instructs how Administrator roles and above can view and modify existing user accounts.

1. From the *Main Menu*, select *Manage Accounts*. See **Main Menu** on page 11. All users display on the *Accounts* screen as shown.

   - Users are grouped by the assigned role. See **User Roles** on page 36.

   - The status of the account is in the **Enabled** column. An *Enabled* account shows *true*, a *Disabled* account shows *false*.

   - The minimize/expand arrow at the opposite end of the role allows the users for that role to be minimized and expanded. When minimized, only the role name displays.

2. Click the Edit icon [icon] next to a user to display the account info, personal info and role for that user in the *View Account* screen.

- To edit the account or change the user password, click the **Edit** button. See *Edit Account Information (Admin)* on page 40.

- To remove the user account, select the **Delete User** button. See *Delete Account (Admin)* on page 42.

Edit Account Information (Admin)

The first and last name for the logged in user can be manually changed through the user Profile screen. The following procedure instructs how a user can change their name.

1. On the *View Account* screen, select the **Edit** button.

2. On the *Edit Account* screen, the following items can be changed:

   - Disable or Enable the user account.

   - Edit the first and/or last name on the account.

   - Change the user's password.

- Modify the user role. See **User Roles** on page 36.

3. Make the desired changes to the users account.

- The user's new password should be at least 10 characters long. The user's new password should have at least 3 out of 4 character groups: *Uppercase, lowercase, digits, special*

4. When complete, enter the password of the administrator making the changes (required) and click the **Save** button.

5. The *Confirm Changes* screen appears showing the current and new information. Accept the changes by clicking the **Confirm** button.

- To discard the changes, select the **Cancel** button.

6. When complete, the Iris Device Management System returns to the *View Account* screen.

Delete Account (Admin)

The following procedure instructs how to delete an account (remove an existing user). This ability is restricted to Administrator roles and above.

1. An administrator or above must login and edit the users account. See **Edit Account Information (Admin)** on page 40.

2. Select the *Delete Account* button in the upper right corner of the screen.

3. Confirm to delete the account by selecting Confirm in the popup. The account (user) will be deleted from the Iris Device Management System.

    • Select **Cancel** to NOT delete the user.

4. When complete, the Iris Device Management System returns to the *Accounts* screen.

Iris Device Management System Information

The *System Info* screen displays the following information about the Iris Device Management System. These fields are read-only. Viewing is restricted to Administrator roles and above.

Chapter 3: Messages

Messages

Message	Potential Causes	Next Steps
Incorrect username or password	Attempting to login and the user id and/or password are incorrect.	Verify user id and/or password are correct and try again.
User already exists	Attempting to create a new user with the same username as a current user.	Use a modified user name.
User not found	• Attempting to view a user that does not exist based on user id. • Attempting to view a user that the current user does not have access to, based on role hierarchy.	• Verify user id is correct and try again. • A different user with advanced roles is required to view user.
Incorrect admin password	Displays when attempting to change a user's password and the admin password is incorrect.	Ensure the correct admin password is used.
Incorrect password	Displays when attempting to change a user's password and the old password is incorrect.	Ensure the correct user password is used.
Error while uploading software	Attempting to upload an invalid file.	Only upload valid files.
Software image version already exists	Uploading a file that is already loaded into the system.	Verify the correct file is being uploaded.
No software image found	Attempting to view a software version based on version id that is not in the system.	Verify software version id is correct and try again.
No Device Added	• A software status is not selected under the *Software Status* menu. • A device is not selected under the *Device Type* menu. • No devices have been added to Iris Device Management System.	• Ensure a software type is selected under the *Software Status* menu to view devices with the selected status. See **Device Software Status Menu** on page 13. • Ensure a device type is selected under the *Device Type* menu to view devices. See **Device Software Status Menu** on page 13. • Add devices to Iris Device Management System. See **Adding a Device** on page 19.
Confirm deletion of the following device	Displays when deleting a device.	Confirm to delete the device.
Device already exists	Displays when creating a device, which already exists in the system, based on the serial number field.	Verify device serial number is correct and try again.
Are you sure you want to cancel?	Displays when attempting to cancel a software image upload to the system or cancel sending a software image to the device.	Confirm to cancel the upload.
Low disc space. Please contact your administrator.	Displays when attempting to cancel a software image upload to the system or cancel sending a software image to the device.	Contact the network administrator to resolve.
Maximum number of devices reached.	Displayed when the number of active, managed devices exceeds the system limit.	Contact the network administrator to resolve.

Chapter 4: Troubleshooting

Troubleshooting the Iris Device Management System

The following section lists possible symptoms, the potential cause, and next steps.

Symptom	Potential Causes	Next Steps
Cannot login	• User not found • Incorrect Password • No network connection	• Verify user id is correct and try again. • Ensure the correct user password is used. • Ensure the Iris Device Management System equipment is connected to a network and communicating. • If the issue continues, contact the network administrator.
Device does not display on the Device screen	• Device is disconnected from the network • Device is Off • Incorrect configuration • Device not compatible	• Determine device status and attempt to accessing device again.
Device detail view does not display	• Device details are being modified by another user • Device software is currently updating • Incorrect configuration • Device not compatible	• Determine device status and attempt to accessing device again.

Chapter 5: Specifications

Default Account Information

Username	Password	Role
serviceadmin	MasimoDMS2018!	Super Admin

Minimum System Requirements

Requirement	Details
Operating System	Red Hat 7.6
CPU	Quad-Core CPU, 1.80 GHz
RAM	8 GB
HDD	512 GB

Supported Devices

Device	Specifications
Root	Software greater than v2.0.9.6
	Software greater than v2.1.0.0 (to support upgrade of Radical-7 when docked)
Radical-7*	Software greater than v1.6.3.0
Rad-97	Software greater than v1.5.3.7

* Radical-7 can be upgraded when docked to Root as long as both devices meet the minimum software requirements.

Supported Browsers

Browser	Minimum Version
Google Chrome	70
Internet Explorer	11

Symbols

Symbols	Definition
	Follow Instructions for use
	Non-Sterile
	Not made with natural rubber latex
	Instructions/Directions for Use/Manuals are available in electronic format @http://www.Masimo.com/TechDocs **Note:** eIFU is not available in all countries.

Chapter 6: Warranty Information

Masimo Technical Services

To contact Masimo Technical Services, refer to the Masimo Technical Services web page:

http://www.masimo.co.uk/company/global-services/technical-services/

Contacting Masimo

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