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Product Manual

DM NVX Director[®] Network AV Switching Appliances

> DM-NVX-DIR-80 DM-NVX-DIR-160 DM-NVX-DIR-ENT

> > Crestron Electronics, Inc.

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The original language version of this document is U.S. English. All other languages are a translation of the original document.

Regulatory Model: DM-XIO-DIR-80, DM-XIO-DIR-160, DM-XIO-DIR-ENT

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Overview

DM NVX Director® network AV switching appliances facilitate configuration, control, and management of large-scale AV networks. The network appliances provide a means for managing large networks of DM NVX® encoder and decoder endpoints, routing AV signals, and simplifying integration with one or more Crestron® control systems. The network appliances eliminate the need for physical matrix switchers, replacing them with the virtual equivalent running on the AV network.

DM NVX Director network appliances consist of the following models:

- DM-NVX-DIR-80: Supports a maximum of 80 DM NVX endpoints and 1 domain
- DM-NVX-DIR-160: Supports a maximum of 160 DM NVX endpoints and 20 domains
- DM-NVX-DIR-ENT: Supports a maximum of 1000 DM NVX endpoints and 240 domains

Multiple DM NVX Director network appliances can be used in a system.

This section provides information about the following:

- Features
- Physical description

Features

Key features of DM NVX Director network appliances include:

- Network AV system configuration, management, and signal routing
- Compatible with DM NVX encoders and decoders
- Support of up to 80 endpoints and 1 domain (DM-NVX-DIR-80 only)
- Support of up to 160 endpoints and 20 domains (DM-NVX-DIR-160 only)
- Support of up to 1000 endpoints and 240 domains (DM-NVX-DIR-ENT only)
- Interdomain routing (DM-NVX-DIR-160 and DM-NVX-DIR-ENT only)
- Intuitive web-based graphical user interface
- Full programmable control of the virtual matrices and physical endpoints
- Automatic endpoint device discovery
- Multicast address control
- Credential management of DM NVX endpoints
- Custom naming and search tools
- Easy diagnostics and signal status display
- XML device map file import and export
- Built-in logging
- Multiple control system support
- Four 1000BASE-T RJ-45 ports (DM-NVX-DIR-80 and DM-NVX-DIR-160 only)

- Six 1000BASE-T RJ-45 ports (DM-NVX-DIR-ENT only)
- Six 10GBASE-X SFP+ ports, four of which are 1000BASE-T compatible (DM-NVX-DIR-ENT only)
- Fiber-optic connectivity with the use of SFP or SFP+ transceivers, sold separately (DM-NVX-DIR-ENT only)
- 1 RU 19-inch rack-mountable
- Universal 100-240V internal power supply (DM-NVX-DIR-80 and DM-NVX-DIR-160 only)
- Onboard 100-240V hot-swappable redundant power supplies (DM-NVX-DIR-ENT only)

Simple and Flexible Configuration

A DM NVX Director network appliance automatically discovers DM NVX endpoints on the network and enables each endpoint to be assigned as a logical input or output within a domain:

- The DM-NVX-DIR-80 supports a maximum of 80 DM NVX endpoints and 1 domain.
- The DM-NVX-DIR-160 supports a maximum of 160 DM NVX endpoints and 20 domains.
- The DM-NVX-DIR-ENT supports a maximum of 1000 DM NVX endpoints and 240 domains.

Multiple DM NVX Director network appliances can be used in a system. In addition to features supported by all DM NVX Director network appliances, the DM-NVX-DIR-ENT includes additional enterprise features.

Web-Based Setup and Control

A DM NVX Director network appliance provides an intuitive web interface to facilitate system configuration, signal routing, and diagnostics of the complete AV network. Each domain, endpoint, input, and output can be designated with a user-friendly name. The web interface enables easy navigation of the entire system. Domains, endpoints, inputs, and outputs can be quickly found by name or address. For each input and output, a signal routing map is also provided, showing video, audio, and USB signal status in a graphical layout.

Interdomain Routing (DM-NVX-DIR-160 and DM-NVX-DIR-ENT Only)

Video inputs can be routed to video outputs within a single domain. In addition, support of interdomain routing enables video inputs within a domain to be routed to video outputs of one or more other domains. Routing control of AV signals is accomplished by using the web interface or control system programming.

Multicast Address Control

A custom multicast range can optionally be assigned for DM NVX encoder endpoints within a domain. The custom multicast range is determined by the assignment of a starting multicast address, the number of multicast addresses assigned to each DM NVX endpoint, and the number of DM NVX endpoints assigned to a domain. Multicast address control is accomplished by using the web interface.

Credential Management of DM NVX Endpoints

Username and password credentials can be changed simultaneously for all DM NVX encoder and decoder endpoints within a domain. Username and password credential management is accomplished by using the web interface.

Multiple Control System Support (DM-NVX-DIR-160 and DM-NVX-DIR-ENT Only)

A DM NVX Director network appliance supports Crestron 3-Series® or later control systems. For the DM-NVX-DIR-160 and DM-NVX-DIR-ENT, a single control system, referred to as the Global Domain control system, can be assigned to all domains simultaneously. In addition, support of multiple control systems enables the Global Domain control system or another control system, referred to as a Domain control system, to be assigned to each domain on an individual basis. The Domain control system that is assigned on an individual basis must be different for each domain. Assignment of multiple control systems is accomplished by using the web interface or control system programming.

Copper or Fiber Ethernet Connectivity (DM-NVX-DIR-ENT Only)

The DM-NVX-DIR-ENT includes six 1000BASE-T RJ-45 ports and six 10GBASE-X SFP+ ports. Four of the 10GBASE-X SFP+ ports are 1000BASE-T compatible. Connection to a 1000BASE-T or 10GBASE-X fiber-optic network is facilitated by inserting an appropriate SFP or SFP+ transceiver module (Crestron SFP-1G or SFP-10G series, sold separately) into an SFP+ port. A selection of modules is offered to accommodate various multimode and single-mode fiber types.

NOTE: Ports 7 and 8 support 10GBASE-X only and are compatible with SFP-10G SFP+ transceivers only.

Redundant Power Supplies (DM-NVX-DIR-ENT Only)

Onboard dual redundant power supplies provide enhanced reliability for demanding applications. In the unlikely event of an individual power supply fault, the DM-NVX-DIR-ENT will continue to operate unhindered on only one functioning power supply. A modular, hot-swappable design allows either power supply to be replaced in seconds from the rear panel without powering down or rebooting the system. The DM-NVX-DIR-ENT ships complete with both power supply modules installed.

Physical Description

The following sections provide information about the connectors, controls, and indicators that are available on the front and rear panels of the <u>DM-NVX-DIR-80</u>, <u>DM-NVX-DIR-160</u>, and <u>DM-NVX-DIR-ENT</u>.

DM-NVX-DIR-80 and DM-NVX-DIR-160

The following illustration shows the front and rear panels of the DM-NVX-DIR-80 and DM-NVX-DIR-160.

NOTE: With the exception of the model name, the front panels of the DM-NVX-DIR-80 and DM-NVX-DIR-160 are identical to one another. The rear panel of the DM-NVX-DIR-80 is identical to the rear panel of the DM-NVX-DIR-160.

DM-NVX-DIR-80 and DM-NVX-DIR-160 Front and Rear Panels (DM-NVX-DIR-80 Model Name Shown)

0		
\circ		
	3 5	

Rear Panel

\bigcirc	
	(12)

(1) **MSG:** Blue LED, identifies the device when the unit identification process is initiated

NOTE: To be able to locate the device in a rack, use the web interface to initiate the unit identification process (refer to <u>Display</u> for information).

- (2) **Ethernet 2, 1:** Green LEDs, indicate Ethernet activity on the corresponding Ethernet port
- (3) **DISK:** Yellow LED, indicates SSD (solid-state drive) activity
- (4) **PWR:** Green LED, indicates that the unit is powered on
- (5) **RESET:** Recessed push button, initiates a hardware reset
- (6) Power Button: Push button, initiates boot up or shutdown

NOTE: If the device is powered on, pressing the Power button for less than 5 seconds enables a normal shutdown. Pressing the Power button for 5 seconds forces the device to shut down.

- (7) SERVICE: For factory use only
- (8) MGMT: 8-pin RJ-45 connector, shielded, female; 100BASE-TX/1000BASE-T Ethernet port for hardware management; Bicolor green/orange LED, green indicates 100 Mbps link status and orange indicates 1 Gbps link status;

Amber LED, indicates Ethernet activity

NOTE: The MGMT port connects to the management network and is used for management and monitoring of the DM NVX Director hardware. The MGMT port does not provide access to the DM NVX Director software and is independent of Ethernet ports 1-4.

- (9) USB 2.0: USB Type A connectors, female, black; USB 2.0 host ports for factory use only
- (1) **USB 3.0:** USB Type A connectors, female, blue; USB 3.0 host ports for factory use only
- Ethernet 1-4: 8-pin RJ-45 connectors, shielded, female;
 100BASE-TX/1000BASE-T Ethernet ports for web browser, endpoint, and control traffic;
 Bicolor green/orange LED, green indicates 100 Mbps link status and orange indicates 1
 Gbps link status;

Amber LED, indicates Ethernet activity

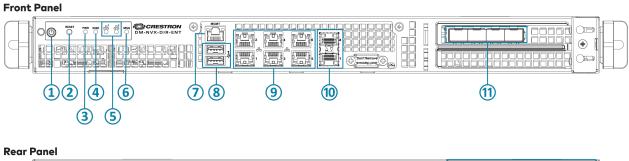
NOTE: Ethernet ports 1-4 connect to video or control networks. The ports provide access to the DM-NVX-DIR-80/DM-NVX-DIR-160 software and allow configuration of the software. The ports are independent of each other and have different network settings.

100-240V~2-4A 50/60Hz: IEC 60320 C14 mains power inlet; Mates with removable power cord, included

DM-NVX-DIR-ENT

The following illustration shows the front and rear panels of the DM-NVX-DIR-ENT.

DM-NVX-DIR-ENT Front and Rear Panels



-	(12)	

(1) **Power Button:** Push button, initiates boot up or shutdown

NOTE: If the device is powered on, pressing the Power button for less than 5 seconds allows a normal shutdown. Pressing the Power button for 5 seconds forces the device to shut down.

- (2) **RESET:** Recessed push button, initiates a hardware reset
- (3) **PWR:** Green LED, indicates that the unit is powered on
- (4) **DISK:** Yellow LED, indicates SSD activity
- (5) **Ethernet 1-2:** Green LEDs, indicate Ethernet activity on the corresponding Ethernet port
- 6 **MSG:** Bicolor blue/red LED, blue identifies the device when the unit identification process is initiated, red indicates a power supply fault

NOTE: To be able to locate the device in a rack, use the web interface to initiate the unit identification process (refer to Display for information).

MGMT: 8-pin RJ-45 connector, shielded, female;
 100BASE-TX/1000BASE-T Ethernet port for hardware management;
 Bicolor green/orange LED, green indicates 100 Mbps link status and orange indicates 1
 Gbps link status;
 Amber LED, indicates Ethernet activity

NOTE: The MGMT port connects to the management network and is used for management and monitoring of the DM NVX Director hardware. The MGMT port does not provide access to the DM NVX Director software and is independent of RJ-45 Ethernet ports 1-6 and SFP+ Ethernet ports 7-12. (8) USB 3.0: USB Type A connectors, female, blue; USB 3.0 host ports for factory use only

(9) Ethernet 1-6: 8-pin RJ-45 connectors, shielded, female;

100BASE-TX/1000BASE-T Ethernet ports for web browser, endpoint, and control traffic; Bicolor green/orange LED, green indicates 100 Mbps link status and orange indicates 1 Gbps link status;

Amber LED, indicates Ethernet activity

NOTE: Ethernet ports 1-6 connect to video or control networks. The ports provide access to the DM-NVX-DIR-ENT software and allow configuration of the software. The ports are independent of each other and SFP+ Ethernet ports 7-12 and have different network settings.

(1) Ethernet 7-8: SFP+ ports;

10GBASE-X Ethernet ports for web browser, endpoint, and control traffic; Accept Crestron SFP-10G Series SFP+ transceiver modules

NOTE: Ethernet ports 7-8 connect to video or control networks. The ports provide access to the DM-NVX-DIR-ENT software and allow configuration of the software. The ports are independent of each other and SFP+ Ethernet ports 9-12. The ports are also independent of RJ-45 Ethernet ports 1-6. Each of the Ethernet ports has different network settings.

(1) Ethernet 9-12: SFP+ ports;

1000BASE-X/10GBASE-X Ethernet ports for web browser, endpoint, and control traffic; Accept Crestron SFP-1G or SFP-10G series SFP/SFP+ transceiver modules

NOTE: Ethernet ports 9-12 connect to video or control networks. The ports provide access to the DM-NVX-DIR-ENT software and allow configuration of the software. The ports are independent of each other and SFP+ Ethernet ports 7-8. The ports are also independent of RJ-45 Ethernet ports 1-6. Each of the Ethernet ports has different network settings.

100-240~3-6A 50/60Hz: IEC 60320 C14 mains power inlets; Each mates with removable power cord, included

Specifications

For product specifications of DM NVX Director network appliances, refer to the following product pages on the Crestron website:

- DM-NVX-DIR-80
- <u>DM-NVX-DIR-160</u>
- DM-NVX-DIR-ENT

Installation

For information about installing DM NVX Director network appliances, refer to the following documentation on the Crestron website:

- DM-NVX-DIR-80/DM-NVX-DIR-160 Quick Start
- DM-NVX-DIR-ENT Quick Start

Configuration

NOTE: Prior to configuration, ensure that the latest firmware is running on the device. For instructions to update the firmware, refer to Updating Firmware.

DM NVX Director network appliances include an integrated web server that provides a web interface for viewing device status and managing DM NVX encoders/decoders in an AV network.

This section provides information about the following:

- Accessing the web interface
- Navigating the web interface
- Saving configuration changes
- Viewing status information
- <u>Configuring network settings</u>
- Managing certificates
- <u>Configuring device settings</u>
- Using the dashboard
- Adding a domain
- Global domain routing
- Modifying a domain

Accessing the Web Interface

The following table lists the supported operating system and corresponding web browsers that can be used to access the web interface.

Supported Operating System and Corresponding Web Browsers

Operating System	Supported Web Browsers
Windows® operating system	Chrome™ web browser, version 114.0.5735.199 or later
	Firefox® web browser, version 115.0.2 or later
	Microsoft Edge® web browser, version 114.0.1823.82 or later
macOS [®] operating system	Safari® web browser, version 16.6 or later

To access the web interface:

- 1. Open a web browser.
- 2. Go to the IP address of one of the connected Ethernet ports:

NOTE: The Ethernet port that is used to configure the DM NVX Director software must be accessible from the network of the device running the web browser, the network of the associated DM NVX devices, and the network of the control system (if present).

• For the DM-NVX-DIR-80 and DM-NVX-DIR-160, RJ-45 Ethernet ports 1-4 provide access to the DM NVX Director software and enable configuration of the software.

By default, DHCP is enabled for ports 1-3, enabling each port to be assigned a different IP address automatically. The IP address of port 4 defaults to a link-local address in the 169.254.*xxx.xxx* (refer to RFC 3927 for information about link-local addressing).

• For the DM-NVX-DIR-ENT, RJ-45 Ethernet ports 1-6 and SFP+ Ethernet ports 7-12 provide access to the DM NVX Director software and enable configuration of the software.

By default, DHCP is enabled for ports 1-5 and 7-12, enabling each of those ports to be assigned a different IP address automatically. The IP address for port 6 defaults to a link-local address in the 169.254.*xxx.xxx* range (refer to RFC 3927 for information about link-local addressing).

To find the IP address of any of the connected Ethernet ports, use the Device Discovery Tool in the Crestron Toolbox™ software.

- 3. Do either of the following:
 - If no user account has been created, the Create User page opens. Continue with step 4 to create an account.
 - If an account has already been created, the Sign-In page opens. Omit step 4 and proceed to step 5.
- 4. If no user account has been created, create an account on the Create User page.

Create User Page

@PCRESTRON	
DM NVX Director	
Administration	
Username	
Password	
Confirm Password	
Oreste User	
© 2023 Crestron Electronics. In: Privacy Statisment Crestron Solvane End-User Leone Agreement	
Cristron Software Like User & Agreement	

To create a user account:

- a. In the **Username** text box, enter a username. The username is not case sensitive.
- b. In the **Password** text box, enter a password using a minimum of 8 characters. The password is case sensitive.
- c. In the **Confirm Password** text box, reenter the password for confirmation.
- d. Click Create User.

The Sign In page opens. Continue with step 5.

5. Sign in to the device on the Sign In page.

Sign In Page

@ CRESTRON		
	DM NVX Director	
	Administration	
	Username	
	Password	
	۹ _t Sign In	
	© 2023 Crestron Electronics, Inc	
	Privacy Statement Crestron Software End-User License Agreement	

To sign in to the device:

- a. In the **Username** text box, enter the username. The username is not case sensitive.
- b. In the **Password** text box, enter the password. The password is case sensitive.
- c. Click **Sign In**. The web interface opens.

Navigating the Web Interface

After signing in to the web interface, the web interface appears as shown in the sample screen below.

Web Interface (Sample DM-NVX-DIR-ENT Screen Shown)

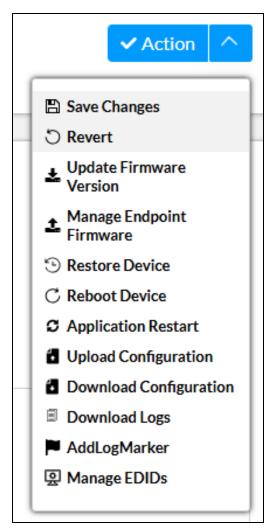
CRESTRON.		8
DM NVX DIRECTOR Status Network Device Dashboard Add Domain	DM-NVX-DIR-ENT	✓ Action ✓
GLOBAL DOMAIN Routing	Model	DM-NVX-DIR-ENT
	Serial Number	20815040
	Firmware Version	4.0.94
	Hostname	DM-NVX-DIR-ENT-AC1F6B7C8516
	- Network Adaptor 1	
	Link State	ON
	MAC Address	AC:1F:6B:7C:85:16
	IPv4 Address	10.253.57.151
	IPv4 Subnet Mask	255.255.255.0
	IPv4 Default Gateway	10.253.57.1
	IPv4 DNS Server 1	10.253.31.12
	IPv4 DNS Server 2	
	Domain Name Suffix	
	- Network Adaptor 2	
	Link State	
	MAC Address	AC:1F:6B:7C:85:17

The web interface provides a navigation bar that consists of a list of links to enable access to embedded web pages. By default, the following items are listed in the navigation bar:

- Status (refer to Viewing Status Information)
- Network (refer to Configuring Network Settings)
- Device (refer to Configuring Device Settings)
- Dashboard (refer to Using the Dashboard)
- Add Domain (refer to Adding a Domain)
- GLOBAL DOMAIN, Routing (refer to Global Domain Routing)

In addition to the navigation bar, an **Action** menu is provided in the upper-right corner of the web interface.

Action Menu



The **Action** menu enables configuration changes to be saved (refer to <u>Saving Configuration Changes</u> for information).

The **Action** menu also enables several device management functions to be performed. Refer to the Management on page 101 section for the functions available in the **Action** menu.

Saving Configuration Changes

Depending on the configuration change being made, the change is either saved automatically or must be saved manually. Various changes to configuration settings on the **Network**, **Device**, **Add Domain**, and **Endpoint Map** pages must be saved manually.

By default, the **Action** menu provides **Save Changes** and **Revert** (undo) menu items that are disabled prior to configuration settings being changed.

Action Menu - Save Changes and Revert Menu Items Disabled

DM NVX DIRECTOR Status Network Manage Certificates	DM-NVX-DIR-ENT	✓ Action ∧
Device Dashboard Add Domain		Save Changes Revert Update Firmware Version
Add Domain GLOBAL DOMAIN Routing	Host Name DM-NVX-DIR-ENT-AC1F681D389C	▲ Manage Endpoint Firmware ③ Restore Device
DOMAIN 1 (001) Routing	Synchronization	C Reboot Device C Application Restart Upload Configuration
Endpoint Map Control System DOMAIN 2 (125)	Time Synchronization	Download Configuration Download Logs AddLogMarker D Manage EDIDs
Routing Endpoint Map Control System	NTP Source DHCP First 27 Synchronize Now	Ser manage CDIDS
	DHCP Provided NTP Servers Address	

After one or more configuration settings are changed and the changes must be saved manually, the **Save Changes** menu item is enabled.

Action Menu - Save Changes Menu Item Enabled

DM NVX DIRECTOR	
Status	
Network	DM-NVX-DIR-ENT
Manage Certificates	
Device	
Dashboard	
Add Domain	Host Name DM-NVX-DIR-ENT-AC1F681D389C
GLOBAL DOMAIN	Host Name DM-NVX-DR-ENT-AC1F6B10389C
Routing	- Date & Time
DOMAIN 1 (001)	
Routing	Synchronization
Endpoint Map	- grice in Onitation
Control System	Time Synchronization

Do either of the following:

- To save one or more configuration changes, click **Save Changes**.
- To undo the newly entered configuration changes and revert to the previously saved settings, click the drop-down arrow to the right of the **Save Changes** menu item and then click **Revert**.

Action Menu - Revert Menu Item Enabled

DM NVX DIRECTOR Status Network Manago Certificates Device	DM-NVX-DIR-ENT	Save Changes
		ට Revert
Dashboard		Lipdate Firmware Version
Add Domain	Host Name DM-NVX-DIR-ENT-AC1F6B1D389C	
GLOBAL DOMAIN	How Name	Manage Endpoint Firmware
Routing	- Date & Time	3 Restore Device
-		C Reboot Device
DOMAIN 1 (001)		C Application Restart
Routing	Synchronization	Upload Configuration
Endpoint Map		Download Configuration
Control System	Timo Sunch control in a	B Download Logs

Viewing Status Information

By default, the **Status** page is displayed after the web interface is accessed. To access the Status page if it is not displayed, click **Status** in the navigation bar.

Sample Status Page (DM-NVX-DIR-ENT Shown)

CRESTRON.		? 🙁
DM NVX DIRECTOR Status Network Manage Certificates Device	DM-NVX-DIR-ENT	Action 🔽
Dashboard		
Add Domain	Mod	I DM-NVX-DIR-ENT
GLOBAL DOMAIN	Serial Numbo	r 22995482
Routing	Firmware Versic	5.0.157 (development)
DOMAIN 1 (001) Routing	Host Nam	e DM-NVX-DIR-ENT-AC1F6B1D389C
Endpoint Map	- Network Adapter 1	
Control System	Link Stat	
DOMAIN 2 (125)		s AC:1F:6B:1E:54:FC
Routing Endpoint Map	IPv4 Addre	
Control System		
	IPv4 Subnet Mac	
	IPv4 Default Gatewa	
	IPv4 DNS Server	
	IPv4 DNS Server	
	Domain Name Suff	

The **Status** page displays the model name, serial number, firmware version, and hostname of the DM NVX Director network appliance.

Information about each of the Ethernet ports on the device is also displayed:

- For the DM-NVX-DIR-ENT, the Status page displays information about Ethernet ports 1-12 in the Network Adaptor 1-12 sections.
- For the DM-NVX-DIR-160 and DM-NVX-DIR-80, the Status page displays information about Ethernet ports 1-4 in the Network Adaptor 1-4 sections.

The **Status** page also displays information about the control system connection to the DM NVX Director network appliance.

Configuring Network Settings

The **Network** page enables network settings to be configured for Ethernet ports of the device.

NOTES:

- For the DM-NVX-DIR-ENT, RJ-45 Ethernet ports 1-6 and SFP Ethernet ports 7-12 are independent of each other and require different network settings.
- For the DM-NVX-DIR-80 and DM-NVX-DIR-160, RJ-45 Ethernet ports 1-4 are independent of each other and require different network settings.

Select **Network** in the navigation menu to configure network settings. The **Network** page opens.

Sample Network Page (DM-NVX-DIR-ENT Shown)

CRESTRON.								? ©
DM NVX DIRECTOR Status								
Network	DM-NVX-DIR-ENT							✓ Action 🛛 ✓
Manage Certificates								
Device								
Dashboard								
Add Domain				Host Name				
GLOBAL DOMAIN				Host Name	DM-NVX-DIR-ENT-AC1F6B	1D389C		
Routing	- Date & Time							
DOMAIN 1 (001)								
Routing	Synchronization							
Endpoint Map								
Control System								
DOMAIN 2 (125)	Time Synchronization							
Routing	NTP Source	DHCP Fir	rst ~					
Endpoint Map		_						
Control System		🛛 🖨 Syn	chronize Now					
	DHCP Provided NTP Servers							
			Address					
		-						
	NTP Time Servers		Address	Port	Authentication Method	Authentication Key	Key ID	
			pool.ntp.org	123	NONE ~	Authentication Key	0	
		+ 4	Add — Remove					

Refer to the configuration guidelines that follow:

• Host Name: In the text box, enter the desired host name to identify the device on the network. The host name is restricted to the letters a to z (not case sensitive), the digits 0 to 9, and the hyphen.

The default host name consists of the model name followed by a hyphen and the MAC address of the device. For example, if the model name is DM-NVX-DIR-ENT and the MAC address is ac.1f.6b.7c.85.16, the default host name is DM-NVX-DIR-ENT-AC1F6B7C8516.

- Date & Time: Configure date and time settings for the device:
 - **Time Synchronization:** Set the toggle to the right to enable or to the left to disable time synchronization via Network Time Protocol (NTP).
 - NTP Source: Select an NTP synchronization source type from among Static Only, DHCP Only, Static First, DHCP First, or None.
 - Synchronize Now: With Time Synchronization enabled, click Synchronize Now to synchronize the device with the DHCP time server or the primary NTP server entered in the NTP Time Servers table.
 - **DHCP Provided NTP Servers:** Populates with NTP servers discovered by the device from the network DHCP server. This field is read-only. Copy the server address and paste it as an entry in the **NTP Time Servers** table below if desired.
 - **NTP Time Servers:** Use the provided table to enter information regarding the NTP server(s) used for time synchronization:
 - Click **+Add** to add a new NTP server entry into the table.
 - Enter the following information for each entry:
 - Enter the NTP server address into the **Address** text field.
 - Enter the NTP server port into the **Port** text field.
 - Use the Authentication Method drop-down to select the authentication method used to access the NTP server (if one exists).
 - If an authentication method is selected, enter the key used to authenticate against the NTP server into the Authentication Key text field.
 - If an authentication method is selected, enter the ID for the key used to authenticate against the NTP server into the Key ID text field.
 - To remove an entry, select the checkbox to the left of the table entry, then click **-Remove**.

NOTE: NTP servers are configured in discrete rows of the table. The server configured in the top table row will be the primary server used for time synchronization. The servers configured in the lower rows will be used as secondary servers.

- **Time Zone:** Select a time zone for the device using the drop-down.
- Date Format: Select a date format from the drop-down.
- **Time Format:** Select whether the time is displayed in a 12-hour or 24-hour format.
- **Date:** Select the date for the device using the pop-up calendar that is displayed.
- **Time:** Select the time for the device using the pop-up menu that is displayed.

- Network Adapters: Configure network settings for Ethernet ports:
 - For the DM-NVX-DIR-ENT, configure network settings for Ethernet ports 1-12 in the Network Adapter 1-12 sections.
 - For the DM-NVX-DIR-160 and DM-NVX-DIR-80, configure network settings for Ethernet ports 1-4 in the Network Adapter 1-4 sections.

In each **Network Adapter** section, configure the following as required for each Ethernet port:

- **Domain Name Suffix**: In the text box, enter the appropriate domain name suffix.
- **Arrangement:** Click the appropriate radio button to select the desired method by which the IP address is to be specified for the device:
 - **Obtain an IP address automatically**. An IP address is assigned by a DHCP server on the network for a predetermined period of time.

NOTES:

- For the DM-NVX-DIR-ENT, DHCP is enabled by default for Ethernet ports 1-5 and 7-12, enabling each of the ports to be automatically assigned a different IP address.
- For the DM-NVX-DIR-80 and DM-NVX-DIR-160, DHCP is enabled by default for Ethernet ports 1-3, enabling each of the ports to be automatically assigned a different IP address.
- Obtain a Link-Local IP address automatically. The IPv4 address uses a link-local address in the 169.254.xxx.xxx range (refer to RFC 3927 for detailed information about link-local addressing).

NOTES:

- For the DM-NVX-DIR-ENT, the IP address of Ethernet port 6 defaults to a link-local address in the 169.254.xxx.xxx range.
- For the DM-NVX-DIR-80 and DM-NVX-DIR-160, the IP address of Ethernet port 4 defaults to a link-local address in the 169.254.xxx.xxx range.
- Use the following IP address. If a static IP address is desired, enter the IP address and related network information in the corresponding text boxes:
 - IPv4 Address: Enter a unique static IPv4 address for the DM NVX Director network appliance.
 - IPv4 Subnet Mask: Enter the IPv4 subnet mask that is set on the network.
 - IPv4 Default Gateway: Enter the IPv4 IP address that is to be used as the default gateway.
 - IPv4 DNS Server 1: Enter an IPv4 IP address for the primary static DNS server.
 - IPv4 DNS Server 2: Enter an IPv4 IP address for the secondary static DNS server.

Managing Certificates

Select **Manage Certificates** in the navigation menu to manage certificates for the DM NVX Director device. The **Manage Certificates** page opens.

CRESTRON					? 🙁
DM NVX DIRECTOR Status Network Manage Certificates Device	DM-NVX-DIR-ENT				✓ Action
Dashboard Add Domain GLOBAL DOMAIN Routing DOMAIN 1 (001) Routing	Manage Certificates Web Server • System Self Generated Cert				+ Generate CSR + Add Certificate Key Pair
Endpoint Map	Subject	Issuer	Not After	Cert Chain	Actions
Control System DOMAIN 2 (125) Routing Endpoint Map Control System		No Records F	Found		

NOTE: The **Manage Certificates** page only applies to certificates loaded on the DM NVX Director device itself. The certificates for other DM NVX devices on the network are not managed on this page.

The **Manage Certificates** table displays all currently-loaded certificates present on the DM NVX Director device. The table includes two tabs - the **Web Server** tab and the **System Self-Generated Cert** tab.

Web Server

The **Web Server** tab is open by default, and provides functions for generating a certificate signing request (CSR) or adding a certificate key pair. The **Web Server** tab also houses the **Web Server** certificate table.

To generate a CSR:

1. Select + Generate CSR. The Generate CSR window appears.

♀ Generate CSR	×
5	
Site/Domain Name *	
Organization	This field is mandatory Organization
Country	Country
State	State
City	City
Email Address	Email Address
Subject Alternative Names	Subject alternative name
	+ Add Another
	Done Cancel

- 2. Enter all available information into the fields as required by the Certificate Authority (CA). Only the **Site/Domain Name** field is mandatory.
- 3. Select **Done** to finish generating the CSR.

The CSR now appears in the **Web Server** certificate table on its own table row.

				+ Generate CSR + Add Certificate Key Pair	
Subject	Issuer	Not After	Cert Chain	Actions	
Example CSR					
≪					

Perform the following functions for a CSR in the **Actions** column:

- Select the **Download CSR** icon *±* to download the CSR as a .csr file. Use this function to send the CSR to a CA.
- Select the **Duplicate CST** icon 🙆 to duplicate the CSR as a new table row.
- Select the **Upload Cert** icon 👌 to upload the certificate returned by the CA.
- Select the **Delete Cert** icon it to delete the CSR from the DM NVX Director device and its row in the **Web Server** table.

To add a certificate key pair:

Select + Add Certificate Key Pair from above the Web Server table or the Upload Cert icon 1 in the table. The Add Certificate Key Pair window appears.

🗟 Add Certificate Key Pair			×
PFX Format PEM F	ormat		
PFX Format			
Browse for PFX File/Key	No file selected.		Browse fx only
Password (Optional)	Password		
		Add	Cancel

- 2. Select either the **PFX Format** or **PEM Format** tab depending on the format of the key file being added. The **PFX Format** tab is selected by default.
- 3. If the **PFX Format** tab is selected:
 - a. Select **Browse** to locate a .pfx file and upload it to the DM NVX Director device. Select the .pfx file from the file browser, then select **Open**.

						•	
^	Name	^	Date modified	Туре	Size		
	🏂 digital-sign.pfx		12/26/2024 12:38 PM	Personal Informati	0 KB		
- 1							
~							
digital-sign.pfx				~ Pers	onal Information	n Exchang	e >
					Open	Cancel	

- b. Enter a password in the **Password (Optional)** field if one is available.
- c. Select **Add** to add the key pair.

4. If the **PEM Format** tab is selected:

🖾 Add Certificate Key Pair				
PFX Format	Format			
PEM Format				
Browse for PEM File	No file selected.	Browse *.pem only		
Browse for PEM Key	No key selected.	Browse		
Password (Optional)	Password			
		dd Cancel		

- a. Select **Browse** in line with **Browse for PEM File** to locate the certificate .pem file and upload it to the DM NVX Director device. Select the .pem file from the file browser, then select **Open**.
- b. Select **Browse** in line with **Browse for PEM Key** to locate the key .pem file and upload it to the DM NVX Director device. Select the .pem file from the file browser, then select **Open**.
- c. Enter a password in the **Password (Optional)** field if one is available.
- d. Select **Add** to add the key pair.

System Self-Generated Cert

The **System Self-Generated Cert** tab provides the **Certificate List** and **Trust List** for the self-generated certificate of the DM NVX Director device.

	System Self Generated Cert						
ertificate List							
							CREGENERATE C
		Subject		Not Aft	er	Cert Chain	Actions
N = DM-NVX-DIR	-ENT-AC1F6B1E54FC.KD-DMPS.crestron, O =	Crestron Electronics, Inc., C = N/A		2025-12-10T20:	58:13.000Z	~	• 🛃
rust List							
dot Libt							Download Trust
	6 11 1	Issuer	Serial Number		No	t After	Actions
	Subject						

The self-generated certificate can be either regenerated or downloaded:

- To regenerate the certificate, select **Regenerate Cert**.
- To download the certificate to local storage as a .cert.pem file, select the 🛃 download icon from the **Certificate List** table.

The **Trust List** can be downloaded to local storage as a .tl.pem file. To download the **Trust List**, select **Download Trust List**.

Configuring Device Settings

Select **Device** in the navigation menu to configure device settings. The **Device** page opens.

Device Page (DM-NVX-DIR-ENT Shown)

CRESTRON		? (8)
DM NVX DIRECTOR Status Network Manage Certificates Device	DM-NVX-DIR-ENT	✓Action ⊻
Dashboard Add Domain	- Firmware	
GLOBAL DOMAIN Routing	Main Firmware Version	5.0.157 (development) DM-NVX-DIR-ENT
DOMAIN 1 (001) Routing	Serial Number	
Endpoint Map Control System	View Update Certificate	View Certificates
DOMAIN 2 (125) Routing	- Auto-Discovery	
Endpoint Map Control System	Auto-Discovery	
	- Display Unit Identification	OFF ON

The **Device** page consists of the following sections:

- Firmware
- Auto-Discovery
- Display
- Control System
- Application Management

Firmware

The **Device** page provides a **Firmware** section, which displays the firmware version, model name, and serial number of the DM NVX Director network appliance. The **Firmware** section also enables display of encryption and authentication certificate information.

Device Page - Firmware

CRESTRON.		? 🔕
DM NVX DIRECTOR Status Network Device	DM-NVX-DIR-ENT	- Action
Dashboard Add Domain GLOBAL DOMAIN	- Firmware	
Routing	Main Firmware Version Model	4.0.94 DM-NVX-DIR-ENT
	Serial Number View Update Certificate	S303786X7A25018

To view certificate information related to firmware security, click the **View Certificates** button. The **View Update Certificates** dialog box opens, displaying encryption and authentication certificate information.

View Updates Certificates Dialog Box

CRESTRON		? 🙁
	- Firmware Main Firmware Version 3.1:180 (development) Model DM-NVX-DIR-ENT	
GLOBAL DOMAIN Routing	View Update Certificates	
	Encryption Certificate Issuer: O = Crestron Electronics Inc., CN = Crestron Firmware Encryption CA Subject: O = Crestron Electronics Inc., CN = NVX Director Firmware Encryption Certificate Authentication Certificate Issuer: O = Crestron Electronics Inc., CN = Crestron Firmware Signing CA Subject: O = Crestron Electronics Inc., CN = NVX Director Firmware Signing Certificate	
	✓ OK	
	Control System IPID None Address Address Status OFFLINE	

The **View Update Certificates** dialog box displays the following information:

- The **Encryption Certificate** section displays the following:
 - Issuer's Organization (O), which is Crestron Electronics, Inc., and Common Name (CN), which is Crestron Firmware Encryption CA
 - Subject's Organization (O), which is Crestron Electronics, Inc., and Common Name (CN), which is NVX Director Firmware Encryption Certificate.
- The Authentication Certificate section displays the following:
 - Issuer's Organization (O), which is Crestron Electronics, Inc., and Common Name (CN), which is Crestron Firmware Signing CA
 - Subject's Organization (O), which is **Crestron Electronics, Inc.**, and Common Name (CN), which is **NVX Director Firmware Signing Certificate**.

To close the dialog box, click **OK**.

Auto-Discovery

The **Auto-Discovery** section controls whether DM NVX endpoints on the network can automatically be discovered by the DM NVX Director network appliance.

Device Page - Auto-Discovery

CRESTRON	?	0
DM NVX DIRECTOR Status Network Device	DM-NVX-DIR-ENT	Î
Dashboard Add Domain GLOBAL DOMAIN Routing	+ Firmware - Auto-Discovery	
	Auto-Discovery	

To control automatic discovery of DM NVX endpoints, do either of the following:

- Set the toggle switch in the On position to enable automatic discovery of the endpoints (default setting).
- Set the toggle switch in the Off position to disable automatic discovery of the endpoints.

Display

The MSG LED on the DM NVX Director network appliance is used to identify the location of the device in a rack. When turned on, the LED lights blue.

To turn the MSG LED on or off:

In the navigation bar, click **Device** and then go to **Display**.

Device Page - Display

@ CRESTRON	? (8)
DM NVX DIRECTOR Status Network Device	DM-NVX-DIR-ENT
Dashboard Add Domain GLOBAL DOMAIN	- + Firmware
Routing	+ Auto-Discovery Display
	Unit Identification OFF ON

For **Unit Identification**, do either of the following:

- Click the **ON** button to turn on the MSG LED. The LED lights blue.
- Click the **OFF** button to turn off the MSG LED (default setting).

Control System

A single control system, referred to as the Global Control System, can be assigned to all domains simultaneously.

NOTE: The Global Control System will be used as the default control system for all domains unless a different control system is assigned at the domain level. For additional information, refer to <u>Domain</u> <u>Control System</u>.

To assign a Global Control System:

In the navigation bar, click **Device** and then go to **Control System**.

Device Page - Control System

- Control System				
IP Table				
	IP ID	IP Address/Hostname	Room ID	Status
	None 🗸	Address	Room Id	OFFLINE

Refer to the configuration guidelines that follow.

- IPID: In the drop-down list, click the desired IP ID for all domains.
- Address: Enter the IP address of the control system.
- RoomID: If using Crestron Virtual Control, enter the RoomID.

Status indicates whether the control system is ONLINE or OFFLINE.

Application Management

To change the username and password of the DM NVX Director network appliance:

In the navigation bar, click **Device** and then go to **Application Management**.

Device Page - Application Management

CRESTRON.		? 🕲
DM NVX DIRECTOR Status Network Device Dashboard	DM-NVX-DIR-ENT	✓ Action ✓
Add Domain		
GLOBAL DOMAIN Routing	+ Firmware + Auto-Discovery + Display + Control System - Application Management	
	Username	admin
	Password	Password
	Confirm Password	Confirm Password

Change the username and password as follows:

- In the **Username** text box, enter the desired username. The maximum number of characters is 128. The username is not case sensitive.
- In the **Password** text box, enter the desired password. The minimum number of characters is 8, and the maximum number of characters is 128. The password is case sensitive.
- In the **Confirm Password** text box, reenter the new password for confirmation.

Using the Dashboard

The **Dashboard** page enables settings management and firmware upgrades for DM NVX endpoints assigned to domains using the DM NVX Director network appliance.

NOTE: The available settings and options for each will depend on the endpoint capabilities.

Dashboard Page

ettings	Stream S	ettings	Video Settings	Audio Settings	USB	Display Contro	ol Firmwa	ire					
evice N	Model All		~										
	Domain *	# \$	Name 🛊		Status 🛊			Settings					Stream Setti
	All ~	All	✓ Q Search	×		IGMP	Discovery TTL	Image Preview	LED	Control System	Stream Type	Bitrate Type	Bitrate
	Domain 1	TX 1	Input 1		~	v2 ~	5	On \vee	On ~	-	Pixel Perf ~	Adaptive \vee	
	Domain 1	TX 2	Input 2		~	v2 ~	5	On ~	On V		Pixel Perf V	Adaptive \checkmark	
	Domain 1	TX 3	Input 3		~	v2 ~	5	On ~	On ~	-	Pixel Perf V	Adaptive \vee	-
	Domain 1	TX4	Input 4		~	v2 ~	5	On ~	On ~	-	Pixel Perf V	Adaptive 🗸	-
	Domain 1	TX 5	Input 5		~	v2 ~	5	On ~	On ~	-	Pixel Perf V	Adaptive \vee	-
	Domain 1	TX 6	Input 6		~	v2 ~	5	On ~	On ~	-	Pixel Perf V	Adaptive \vee	-
	Domain 1	TX 7	Input 7		~	v2 ~	5	On ~	On ~	-	Pixel Perf ~	Adaptive \checkmark	-
	Domain 1	TX 8	Input 8		~	v2 ~	5	On 🗸	On v	-	Pixel Perf V	Adaptive \vee	-
	Domain 1	TX 9	Input 9		~	v2 ~	5	-	On ~	-	DM-NVX- D10/D20 Series	Adaptive \vee	-
	Domain 1	RX 1	Temp Outpu	+1	~	v2 ~	5	On V	On V				0

Receivers and receiver placeholders are denoted by RX. Transmitter and transmitter placeholders are denoted by TX. Both are numbered consecutively based on the order in which the receivers, placeholders, and transmitters are added to the domain.

Note the following information about each endpoint listed in the table:

- Name: Indicates the name assigned to the endpoint.
- **Device Status:** Provides one of the following symbols to indicate the status of a DM NVX endpoint connection to the DM NVX Director network appliance:
 - •: A network connection exists between the endpoint and the DM NVX Director network appliance.
 - Z: The device mode (transmitter or receiver) configured on the endpoint is being reconfigured to match the device mode selected when the endpoint was added to the domain.

- **X**: No network connection exists between the endpoint and the DM NVX Director network appliance due to reasons such as the following:
 - The DM NVX Director network appliance cannot access the endpoint with the provided credentials.
 - The endpoint is not connected to the network.
- - (hyphen): The endpoint is a placeholder.

Sorting the List

There are a number of ways to sort the list of connected DM NVX endpoints.

- In the drop-down list below the **Domain** heading, click **ALL** to view the endpoints in all domains (default setting) or click the desired domain number to view the endpoints within a particular domain. Transmitters, receivers, transmitter placeholders, and receiver placeholders are listed based on the domain number.
- To view the endpoints based on the ascending or descending numeric order of the domain, use the scroll arrows to the right of the **Domain** heading.
- Use the Search box or the **Device Model** drop-down list on the Dashboard page to find specific endpoints. By default, all endpoints corresponding to the desired model or model family appear in the table.

NOTE: The **Device Model** drop-down list provides a listing of all DM NVX endpoint models and model families (for example, DM-NVX-36x) in the same network as the DM NVX DIR device. If the desired model or a particular endpoint corresponding to that model or model family is not part of a domain, that endpoint will not appear in the dashboard.

- Use the drop-down list below the **#** heading to filter as follows:
 - **ALL:** (Default setting) View transmitters, receivers, transmitter placeholders, and receiver placeholders
 - Receiver: View receivers and receiver placeholders only
 - Transmitter: View transmitters and transmitter placeholders only
- To view the endpoints based on the ascending or descending alphanumeric order of the designations in the **#** column, use the scroll arrows to the right of the **#** heading.
- To view the endpoints based on the ascending or descending order of the **Device Status** symbol, use the scroll arrows to the right of the **Device Status** heading.
- To view the endpoints based on the ascending or descending alphanumeric order of the names, use the scroll arrows to the right of the **Name** heading.

Settings Column

Depending on the endpoint capabilities, the following options may be configurable in the **Settings** column:

			Setti	ngs			
IGMP		Discovery TTL	Image Preview		LE	D	Control System
v2	~	5	Off	~	On	~	OFFLINE
v2	~	5	On	~	On	~	ONLINE
v2	~	5	On	~	On	~	ONLINE
v2	~	5	On	~	On	~	ONLINE

- IGMP
- Discovery TTL
- Image Preview
- LED
- Control System

These functions are described in the endpoint product manual.

Stream Settings Column

Depending on the endpoint capabilities, the following options may be configurable in the **Stream Settings** column:

		Stream Setting	is	
Stream Type	Bitrate Type	Bitrate	Stream Status	Stream TTL
Pixel Per Y	Adaptive ~	-	-	-
Pixel Per Y	Adaptive ~	-	-	-
Pixel Per Y	Adaptive Y	-	Stream started	5
Pixel Per Y	Adaptive 💙	-	Stream started	5

- Stream Type
- Bitrate Type
- Bitrate
- Stream Status
- Stream TTL

These functions are described in the endpoint product manual.

Video Settings Column

Depending on the endpoint capabilities, the following options may be configurable in the **Video Settings** column:

Video Settings										
Video Source	Active Video Source	Video Resolution	Scaler Resolution	EDID Input 1	EDID Input 2	HDCP Input 1	HDCP Input 2			
Input 1 Y	Input 1	1920×1080 @60	-	DM Defa ⊻	-	Disabled 🗸	-			
Input 1 Y	Input 1	1920x1080 @60	-	DM Defa Y	-	Disabled ~	-			
Input 1	Input 1	1920x1080 @60	-	DM Defa Y	-	Disabled ~	-			
Input 1	Input 1	1920x1080 @60	-	DM Defa Y	-	Disabled ~	-			

- Video Source
- Active Video Source
- Video Resolution
- Scaler Resolution
- EDID Input 1
- EDID Input 2
- HDCP Input 1
- HDCP Input 2

These functions are described in the endpoint product manual.

Audio Settings Column

Depending on the endpoint capabilities, the following options may be configurable in the **Audio Settings** column:

			Audio Settings			
Audio Source	Active Audio Source	Audio Status	NAX TX Source	NAX TX Active Source	NAX Mode	Analog Audio
Audio Fo Y	Input 1	LPCM 2ch	Audio Fo ∨	Input 1	Automatic ~	Insert V
Audio Fo Y	Input 1	LPCM 2ch	Audio Fo Y	Input 1	Automatic ~	Insert V
Audio Fo Y	Input 1	LPCM 2ch	Input 1	NRP	Automatic Y	Extract
Audio Fo Y	Input 1	LPCM 2ch	Input 1	NRP	Automatic ~	Extract

- Audio Source
- Active Audio Source

- Audio Status
- NAX TX Source
- NAX TX Active Source
- NAX Mode
- Analog Audio

These functions are described in the endpoint product manual.

USB Column

Depending on the endpoint capabilities, the following options may be configurable in the **USB** column:

USB								
Mode	Transport	Multi-device support						
Local Y	Layer2 Y	Off Y						
Local Y	Layer2 ∽	Off Y						
-	-	-						

- Mode
- Transport
- Multi-device support

These functions are described in the endpoint product manual.

Display Control Column

The Display Control column includes the command interface and power settings for displays connected to each endpoint. Test commands can also be issued to verify control functionality. Configure the following display control settings:

		Display Control		
Automatic Power	Command Interface	Command Types	Output Timeouts (seconds)	Turn Off Output
On ~	CEC 🗸	🕸 Setup	-	-
On v	CEC 🗸	Setup	-	-

1. **Automatic Power:** Select **On** or **Off** from the drop-down to set whether automatic power commands are sent to the display.

- 2. **Command Interface:** Select **CEC** or **None** from the drop-down. Refer to the display manufacturer's documentation to determine if CEC controls are supported.
- 3. **Command Types:** With a **Command Interface** other than **None** selected, click the **Setup** button to configure and test the power commands that will be issued to the connected display:

TX 1 - Display Control Setup (DM-NVX-360C)	×
Power Off Settings	
CEC Commands	Power Off: RCP and SS ~
Power On Settings	
CEC Commands	Power On: RCP and IVO ~
	er iest
	Close

- Under Power Off Settings, select a command type from the CEC Commands drop-down. Consult the display manufacturer's documentation to determine whether RCP and SS, RCP Only, or SS Only should be selected. Click the Test button to test the selected power off command.
- Under Power On Settings, select a command type from the CEC Commands drop-down. Consult the display manufacturer's documentation to determine whether RCP and IVO, RCP, or Image View On should be selected. Click the Test button to test the selected power on command.
- Click **Close** to close the **Display Control Setup** window.
- 4. **Output Timeouts (seconds):** Select a time from the drop-down. Several options are available from 5 to 90 seconds. This setting determines how long the endpoint will wait to send a power off command after video signal to the display is stopped.
- 5. **Turn Off Output:** Select **On** from the drop-down to send a Power Off command to the connected display when the **Output Timeout** elapses.

Firmware Column

The Firmware column displays information about the current firmware version. The firmware can be updated on individual or multiple DM NVX endpoints. The following information is displayed:

• **Version:** Indicates the current firmware version of the endpoint. A - (hyphen) is displayed for an endpoint placeholder.

To view the endpoints based on the ascending or descending numerical order of the firmware version, use the scroll arrows to the right of the **Firmware Version** heading.

• Update Status: Indicates the current status of the firmware upgrade process when using the Dashboard page to upgrade the firmware: Uploading, Upgrading, Rebooting, Connecting, and Completed. A - (hyphen) is displayed for a placeholder.

To view the endpoints based on the ascending or descending alphabetical order of the firmware upgrade status, use the scroll arrows to the right of the **Firmware Upgrade** heading.

• Last Updated: Indicates the date when the firmware was last upgraded using the Dashboard page. A - (hyphen) is displayed when the firmware was not upgraded using the Dashboard page or when the endpoint is a placeholder.

To view the endpoints based on the ascending or descending numerical order of the firmware update date, use the scroll arrows to the right of the **Last Updated** heading.

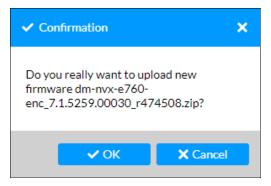
• **Update File Version:** Indicates the firmware version the endpoint will use if the firmware is updated.

To update firmware:

- 1. Download the latest firmware file (*.zip) of the DM NVX endpoints to your computer. The firmware file can be found at www.crestron.com/firmware.
- 2. Select the endpoints for which firmware is to be upgraded:
 - If all endpoints for the desired model are to be upgraded, click the topmost checkbox in the first column of the table. The corresponding endpoints are selected in the table.
 - If only one or a limited number of endpoints for the desired model are to be upgraded, click the checkbox of the desired endpoints on an individual basis. The corresponding endpoints are selected in the table.
- 3. If updating a single endpoint, click the **Upgrade** button. If updating multiple endpoints, click the **Upgrade Selected** button. File Explorer opens.
- 4. Navigate to the firmware file on the computer, select the file, and then click **Open**.

A **Confirmation** dialog box opens, prompting for confirmation to upload the firmware file.

Confirmation Dialog Box for Uploading Firmware File



5. Click OK.

The **Uploading file** dialog box opens, indicating the progress of the upload of the firmware file. When the file upload process has completed, the **Uploading file** dialog box indicates that the file has been uploaded.

oploading the Blalog Box	
Uploading file	

Uploading File Dia	log Box - File	Uploaded
--------------------	----------------	----------

Uploading file		×
	100%	
File unles de d	100%	
File uploaded		
		✓ ОК

6. Click OK.

The selected firmware file appears in the **Select Firmware File** text box on the Dashboard page.

7. Click the Load button.

The Firmware Upgrade column for the selected endpoints indicates the progression of the firmware upgrade process as applicable to each DM NVX device: Uploading, Waiting, Upgrading, Rebooting, Connected, and Completed.

NOTE: The firmware file is uploaded to 10 DM NVX endpoints at a time. Starting with the eleventh device, the Firmware Upgrade column on the Dashboard page indicates Waiting. When one of the 10 devices completes the upload process, the eleventh device will start uploading the firmware file and the Firmware Upgrade column for the corresponding device will change from Waiting to Uploading.

Alternatively, use the Manage Endpoint Firmware function in the Action menu to load firmware files directly to the DM NVX Director, then push loaded firmware files to devices using the Upgrade button. Refer to the Management on page 101 section for information on this feature.

Adding a Domain

A domain is a logical grouping of DM NVX endpoints that operate as a single switching entity, enabling individual subsystems to be arranged and controlled independently on the AV network. A DM NVX Director network appliance automatically discovers each DM NVX endpoint on the network.

NOTE: In order for the DM NVX Director network appliance to be able to automatically discover DM NVX endpoints, Auto-Discovery must be enabled in the Device > Auto-Discovery section of the web interface (for additional information, refer to Auto-Discovery). In addition, one of the Ethernet ports (excluding the MGMT port) must be connected to the VLAN associated with the endpoints.

A DM NVX Director network appliance enables each endpoint to be assigned as a logical input or output within a domain:

- The DM-NVX-DIR-80 supports a maximum of 80 DM NVX endpoints and 1 domain.
- The DM-NVX-DIR-160 supports a maximum of 160 DM NVX endpoints among 20 domains.
- The DM-NVX-DIR-ENT supports a maximum of 1000 DM NVX endpoints among 240 domains.

NOTE: To simplify SIMPL programming of domains, it is recommended that domains be added in the DM NVX Director web interface before being added in the SIMPL program. The domain configuration in the web interface can then be referenced when adding domains in the SIMPL program.

To add a domain using the DM NVX Director web interface:

In the navigation bar, click Add Domain. The Add Domain page opens.

Add Domain Page

NVX DIRECTOR				
etwork evice	DM-NVX-DIR-ENT			Save Changes
ashboard				
dd Domain				
BAL DOMAIN Duting	- Endpoint Map			
			Domain Name	
			Domain Number	1
			Multicast Offset	0 Custom Multicast Range
			Multicast Range	239.8.0.0 - 239.8.127.255
			Import Device Map	▲ Import
	Inputs Outputs	All		
	Device Type NVX Transmitter v	Replace Device		
	Available Inputs		Ø Refresh	Input Assignments
	# Capability Model *	Hostname 🕈	IP Address 🛊	# * Capability Model \$ Name \$ IP Address \$
	1 🕅 🖂 🗠 DM-NVX-3500	DM-NVX-350C-00107F9B70AF	192.168.1.54	
	2 🔀 🗠 DM-NVX-351C	DM-NVX-351C-00107F8B7725	<u>192.168.1.124</u>	
	3 🕅 🖬 🌝 DM-NVX-352C	DM-NVX-352C-00107F9C214C	<u>192.168.1.14</u>	
	4 🕅 🖾 DM-NVX-3520	DM-NVX-352C-00107F9C1771	192.168.1.176	To populate this list, do any of the following from the left column:
	5 🕅 🖾 DM-NVX-3600	DM-NVX-360C-00107F9CC304	192.168.1.110	Double-click or left-click an item to add it to the end of the list Drag and drop an endpoint anywhere on this table
	6 🕅 🔤 🛜 DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	<u>192.168.1.8</u>	Shift + left click to add multiple endpoints in order and drop them anywhere on this page
	7 🕅 📼 🗠 DM-NVX-E20-:	2G ILLYA-NVX-E20-2G-00107FF476A0	192.168.1.228	Control + left click to pick specific endpoints, any order and drop them anywhere on this page
	8 🕅 📼 🗠 DM-NVX-E300	DM-NVX-E30C-00107F9C03D6	192.168.1.17	
	9 🕅 🖾 🗠 DM-NVX-E760	C DM-NVX-E760C-00107FB55EC8	192.168.1.82	
		<< (1-9 v > >>		
	Endpoints In-Use: 98 Available Endpoints: 902 Total Endpoints: 1000			NAX 🖸 NVX 🛃 NUX
			Physical A	Assignment
			Assign via Setup Button	For 5 C Minutes

The Add Domain page provides an **Endpoint Map** section, enabling configuration of the domain.

To add a domain, configure the endpoint map as follows:

- Enter domain identification and multicast information.
- Assign endpoints to the domain.

To save the domain, refer to <u>Saving a New Domain</u>.

Entering Domain Identification and Multicast Information

Enter the following domain identification and multicast information:

- **Display Name:** Enter a meaningful domain name to identify the domain on the network. The default domain names are numbered consecutively as **DOMAIN 1**, **DOMAIN 2**, and so on.
- **Domain Number:** In the scrollable text box, enter or select a domain number:
 - For the DM-NVX-DIR-80, the domain number must be set to **1**.
 - For the DM-NVX-DIR-160, the domain number must be set to a number ranging from **1** to **20**.
 - For the DM-NVX-DIR-ENT, the domain number must be set to a number ranging from **1** to **240**.

NOTE: The Domain Number must correspond to the XIO Domain slot number used in the SIMPL program. For example, if the Domain Number is assigned to **1** in the web interface, the corresponding XIO Domain slot number in the SIMPL program must be **Slot-O1 : XIO-Domain : XIO Domain**.

• **Multicast Offset:** Enter or select a Multicast Offset only when multiple DM NVX Director network appliances exist on the same network and a **Custom Multicast Range** (discussed below) is not set. The Multicast Offset is required to prevent multicast collisions on the network.

NOTES:

The total of the Domain Number and the Multicast Offset must be less than or equal to 240.

Examples:

- If the Domain Number is 1, valid Multicast Offset values range from 0 to 239.
- If the Domain Number is 2, valid Multicast Offset values range from 0 to 238.
- If the Domain Number is **20**, valid Multicast Offset values range from **0** to **220**.
- The combination of Domain Number and Multicast Offset determines the **Multicast Range**, which must be unique for each domain.

• Custom Multicast Range: (Optional) Specifies a Custom Multicast Range when the checkbox is selected and Start Address, Per Device Allocation, and Device are set under Custom Multicast Assignment.

Example of Custom Multicast Assignment

Display Name	DOMAIN 3
Domain Number	3
Multicast Offset	0 Custom Multicast Range
Custom Multica	ast Assignment
Start Address	239.100.100.0
Per Device Allocation	4
Transmitter Device Count	16
Multicast Range	239.100.100.0 - 239.100.100.63

Refer to the configuration guidelines that follow.

• **Start Address:** Enter the starting multicast address of the Custom Multicast Range. The starting address must end with **0** or an even number (**2**, **4**, **6**, or **8**).

NOTE: Multicast addresses can start at 224.0.2.0 and end at 239.255.255.254, excluding 239.255.255.250 and 239.255.255.253.

The first DM NVX endpoint in the domain is assigned the starting address.

• **Per Device Allocation:** Enter or select the number of multicast addresses to be assigned to each DM NVX endpoint. Values range from **2** to **256** and must be an even number.

NOTE: If a value of **2** is entered, a message appears indicating that DM NVX endpoints can use 3 or more multicast addresses depending on the device configuration.

- **Transmitter Device Count:** Enter or select the number of DM NVX endpoints to be assigned to the domain:
 - For the DM-NVX-DIR-80, values range from **2** to **80**.
 - For the DM-NVX-DIR-160, values range from **2** to **160**.
 - For the DM-NVX-DIR-ENT, values range from **2** to **1000**.

The **Multicast Range** is displayed. For example, if **Start Address** is set to 239.100.100.0, **Per Device Allocation** is set to 4, and **Device** is set to 16, the custom multicast range will result in 64 multicast addresses (4 x 16) ranging from 239.100.100.0 to 239.100.100.63.

Assigning Endpoints to a Domain

To assign endpoints to a domain, do any of the following:

- Assign endpoints in the endpoint map.
- Assign endpoints using the Setup button.
- Import a device map.

While assigning endpoints, perform any of the following tasks as required:

- <u>Remove an endpoint</u>.
- Replace an endpoint.
- View input and output assignments simultaneously.
- <u>View endpoint statistics</u>.

Assigning Endpoints in the Endpoint Map

In the endpoint map, assign the desired discovered endpoints as transmitters (inputs) or receivers (outputs). Endpoint placeholders can also be assigned as transmitter placeholders (inputs) or receiver placeholders (outputs).

NOTE: Transmitter placeholders and receiver placeholders are available for addition to a domain and can later be replaced by actual transmitters and receivers, respectively, when appropriate.

To assign transmitters or receivers to a domain, refer to <u>Assigning Discovered Endpoints to a Domain</u> for information. To assign transmitter or receiver placeholders to a domain, refer to <u>Assigning Endpoint</u> <u>Placeholders to a Domain</u> for information.

Assigning Discovered Endpoints to a Domain

Assign discovered endpoints to a domain based on the desired operating mode (transmitter or receiver).

To obtain a list of inputs (transmitters) available for addition to the domain:

- 1. Click the **Inputs** button (default setting).
- 2. In the **Device Type** drop-down list, click **NVX Transmitter** (default setting). Available DM NVX models that can function as transmitters are listed in the **Available Inputs** table.

Add Domain Page - Example of Available Inputs for Discovered Transmitters

CRESTRON												?	0
DM NVX DIRECTOR Status Network	Device Ty		Outputs smitter v	All Replace Device									-
Device	Available	Inputs			S Refresh		Input Ass	ignments				Remove	
Dashboard	#	Capability	Model *	Hostname 🕈	IP Address 💲		# *	Capability	Model 🛊	Name 🛊	IP Address 💲		
Add Domain GLOBAL DOMAIN	1	W 💽 🤟	DM-NVX-350C	DM-NVX-350C-00107F9B70AF	192.168.1.54								
Routing	2	1X1 💽 🦟	DM-NVX-351C	DM-NVX-351C-00107F8B7725	192.168.1.124								
	3	3 🕅 📴 🚭 DM-NVX-352C DM-NVX-352C-00107F9C214C <u>192168.1</u>	<u>192.168.1.14</u>										
	4 👯	W 💽 🔸	DM-NVX-352C	DM-NVX-352C-00107F9C1771	<u>192.168.1.176</u>	To populate this list, do any of the following fro							
	5	W 💽 🤝	DM-NVX-360C	DM-NVX-360C-00107F9CC304	192.168.1.110	Double-click or left-click an item to add it Drag and drop an endpoint anywhere on t		here on this table	table				
	6	¹ X ⁰	DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	<u>192.168.1.8</u>			page	ind drop them anywhere on this der and drop them anywhere on				
	7	W 💽 🗠	DM-NVX-E20-2G ILLYA-NVX-E20-2G-00107FF476A0 <u>192.168.1.228</u> this page										
	8	W 💼 🤝											
	9	W 💷 🦇	DM-NVX-E760C	DM-NVX-E760C-00107FB55EC8	192.168.1.82								
			~~	< 1.9 × > >>									
	Available	s In-Use: 98 Endpoints: 902 Ipoints: 1000								2	🗙 NAX 🖸 NVX 🍝 I	łUX	
	Physical Assignment Assign via Setup Button 🕨 🛄 for S 😴 Minutes					Minutes							

To obtain a list of outputs (receivers) available for addition to the domain:

- 1. Click the **Outputs** button.
- 2. In the **Device Type** drop-down list, click **NVX Receiver.** Available DM NVX models that can function as receivers are listed in the **Available Outputs** table.

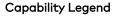
Device Dashboard	Device	Inputs	Outputs eiver v	All Replace Device										
Add Domain		le Outputs			C Refresh		Output	Assignments					🗍 Remove	
GLOBAL DOMAIN Routing		Capability	Model *	Hostname 🕈	IP Address 💲		# *	Capability	Model 🛟	Name 🛊		IP Addr	ess 🛊	
	1	X 🖸 🔶	DM-NVX-350C	DM-NVX-350C-00107F9B70AF	<u>192.168.1.54</u>									
	2	% 💽 🤝	DM-NVX-351C	DM-NVX-351C-00107F8B7725	<u>192.168.1.124</u>									
	3	W 💷 🔶	DM-NVX-352C	DM-NVX-352C-00107F9C214C	<u>192.168.1.14</u>									
	4	* 🗆 🔜	DM-NVX-352C	DM-NVX-352C-00107F9C1771	<u>192.168.1.176</u>				this list, do any of th			in:		
	5	* 🗉 🔶	DM-NVX-360C	DM-NVX-360C-00107F9CC304	<u>192.168.1.110</u>				or left-click an item op an endpoint anyw					
	6	% 💽 🤝	DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	<u>192.168.1.8</u>			page	ick to add multiple e					
	7	₩	DM-NVX-D30	DM-NVX-D30-00107FB5569D	<u>192.168.1.37</u>			Control + lef this page	it click to pick specifi	c endpoints,	any order and dro	p them anywher	reon	
	8	₩ 🗆 🗠	DM-NVX-D30	DM-NVX-D30-00107FB556A8	<u>192.168.1.48</u>									
	9	* •	DM-NVX-D30C	DM-NVX-D30C-00107F9C061E	<u>192.168.1.25</u>									
			<<	((1 +9 - v)))										11
	Availat	nts In-Use: 98 le Endpoints: 902 ndpoints: 1000	2								W NAX	I NVX	NUX NUX	
					Physical	l Assi	ignment							
					Assign via Setup Button	n		for 5 🛟 I	Minutes					

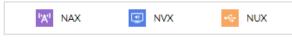
Add Domain Page - Example of Available Outputs for Discovered Receivers

The corresponding Available Inputs or Available Outputs table provides the following information:

- **#:** Indicates the number of the device based on the order in which the device was added to the **Available Inputs** or **Available Outputs** list.
- **Capability:** Provides icons representing the capabilities of the device:
 - ° ⊠: Purple icon represents DM NAX™ audio.
 - 🖪 : Blue icon represents DM NVX audio/video, which consists of HDMI® or analog audio and HDMI video.
 - In the DEVICE or HOST port on a DM NUX (USB) data from the DEVICE or HOST port on a DM NVX endpoint. If the DM NUX icon is shaded gray (I), DM NUX capability is not supported by the endpoint.

A Capability legend is provided below the **Input Assignments** and **Output Assignments** tables indicating the meaning of the icons.





• Model: Indicates the model name of the DM NVX endpoint.

To view the devices based on the ascending or descending alphanumeric order of the model name, use the scroll arrows to the right of the **Model** heading.

• **Hostname:** Indicates the hostname of the DM NVX endpoint. The default hostname is the model name followed by a hyphen and the MAC address of the device.

To view the devices based on the ascending or descending alphanumeric order of the hostname, use the scroll arrows to the right of the **Name** heading.

• **IP Address:** Indicates the IP address of the DM NVX endpoint. Clicking the IP address provides access to the web interface of the endpoint.

To view the devices based on the ascending or descending numerical order of the IP address, use the scroll arrows to the right of the **IP Address** heading.

Up to 10 available endpoints can be displayed in the table simultaneously. If more than 10 endpoints are available, use the scroll arrows at the bottom of the table to navigate through the list of endpoints.

NOTES:

• For a DM NVX endpoint that can function as either a transmitter or receiver, the endpoint is available for addition to the domain as a transmitter or receiver. If the endpoint is added to the **Input Assignments** table but the operating mode of the endpoint is configured as a receiver, the operating mode will automatically be reconfigured as a transmitter when the domain is saved.

If the endpoint is added to the **Output Assignments** table but the operating mode of the endpoint is configured as a transmitter, the operating mode will automatically be reconfigured as a receiver when the domain is saved.

- For a transmitter-only endpoint, the endpoint is available for addition to the domain as a transmitter only and can only be added the **Input Assignments** table.
- For a receiver-only endpoint, the endpoint is available for addition to the domain as a receiver only and can only be added to the **Output Assignments** table.

To assign an endpoint to a domain on an individual basis, do either of the following:

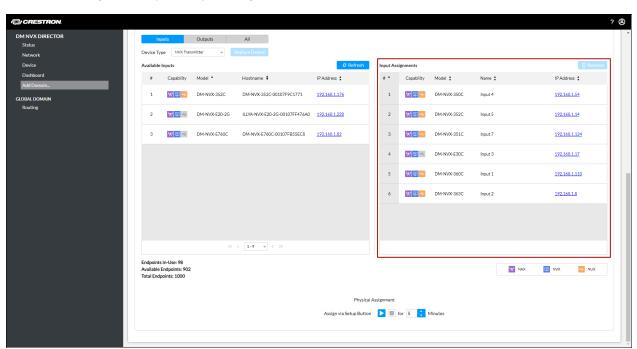
• Drag and drop the desired endpoint into any location—including an existing row—of the corresponding **Input Assignments** or **Output Assignments** table.

If the assignments table was originally empty, the desired endpoint is added to the beginning of the table. If the endpoint was dragged into an existing row within the table, the endpoint is added to the desired row and all remaining rows are automatically renumbered. If the endpoint was not dragged into an existing row, the endpoint is added to the end of the table.

• Double-click the desired endpoint. The endpoint is added to the end of the corresponding **Input** Assignments or **Output Assignments** table. To assign multiple endpoints simultaneously:

- Shift + click the desired consecutive endpoints and then drag and drop them into any location including an existing row—of the corresponding Input Assignments or Output Assignments table.
- **Control** + **click** to select multiple endpoints on an individual basis in any order (ascending or descending) and then drag and drop them into any location—including an existing row—of the corresponding **Input Assignments** or **Output Assignments** table.

If the assignments table was originally empty, the selected endpoints are added to the beginning of the table. If the endpoints were dragged into an existing row within the table, the endpoints are added starting at the desired row location and all remaining rows are automatically renumbered. If the endpoints were not dragged into an existing row, the endpoints are added to the end of the table.



Add Domain Page - Example of Input Assignments for Transmitters

CRESTRON.										? 🕲
DM NVX DIRECTOR Status Network Device	Inputs	Outputs	All	Multicast Range) - 239.9.127.255 mport				*
Dashboard Add Domain	Device Type NVX Rece Available Outputs	iver v	Replace Device	2 Refresh	Output	Assignments			🗐 Remove	1
GLOBAL DOMAIN Routing	# Capability	Model * DM-NVX-D30	Hostname 🕈 DM-NVX-D30-00107FB5569D	IP Address \$	# * 1	Capability	Model \$	Name 🛟 Output 1	IP Address \$	
					2	* 0 ~	DM-NVX-D30C	Output 2	<u>192.168.1.25</u>	
			< 1.9 v > >>							
	Endpoints In-Use: 98 Available Endpoints: 902 Total Endpoints: 1000							X N	AX 🖸 NVX 🔁 NUX	
				Physical A	Assignment					
				Assign via Setup Button		for 5	Minutes			

Add Domain Page - Example of Output Assignments for Receivers

The Input Assignments and Output Assignments tables provide the following information:

• **#:** Indicates the number of the device based on the order in which the device was added to the **Input Assignments** or **Output Assignments** table.

To view the devices based on ascending or descending numerical order, use the scroll arrows to the right of the **#** heading.

- **Capability:** Provides the same icons as the **Available Inputs** and **Available Outputs** tables to represent the capabilities of the device (DM NAX, DM NVX, and DM NUX as applicable).
- **Name:** Indicates the device name assigned to the endpoint. Clicking the name enables the endpoint name to be changed.

nput Assignr	ments			関 Remove
# *	Capability	Model 🛟	Name 🛟	IP Address 💲
1	w 🗢 😽	DM-NVX-350C	Input 4	<u>192.168.1.54</u>

Renaming Input or Output Assignment (Input Shown)

To view the devices based on the ascending or descending alphanumeric order of the name, use the scroll arrows to the right of the **Name** heading.

• **IP Address:** Indicates the IP address of the device. Clicking the IP address provides access to the web interface of the device.

To view the devices based on the ascending or descending numerical order of the IP address, use the scroll arrows to the right of the **IP Address** heading.

If desired, assign endpoint placeholders to the domain. Refer to <u>Assigning Endpoint Placeholders to a</u> <u>Domain</u> for information.

Assigning Endpoint Placeholders to a Domain

Assign endpoint placeholders to a domain based on the desired operating mode (transmitter or receiver).

NOTE: Placeholders can be added to a domain that also contains discovered endpoints. If desired, a domain consisting of placeholders only can be added.

To obtain a list of transmitter placeholders available for addition to the domain:

- 1. Click the **Inputs** button (default setting).
- 2. In the **Device Type** drop-down list, click **NVX Placeholder**. By default, a placeholder for every DM NVX model that can function as a transmitter is listed in the **Available Inputs** table.

To obtain a list of receiver placeholders available for addition to the domain:

- 1. Click the **Outputs** button.
- 2. In the **Device Type** drop-down list, click **NVX Placeholder**. By default, a placeholder for every DM NVX model that can function as a receiver is listed in the **Available Outputs** table.

Add Domain Page - Default DM NVX Placeholders for Available Inputs (Transmitters)

CRESTRON												?
NVX DIRECTOR atus etwork	Device Type NVX Pla	Outputs	All teplace Device									
evice	Available Inputs				In	put Assi	gnments				0 R	emove
shboard	# Capability	Model *	Hostname 🕈	IP Address 💲		¢ \$	Capability	Model \$	Name *		IP Address 💲	
Domain	1 1 10 10	DM-NVX-350-Place holder	DM-NVX-350-Placeholder			4	W 💽 🤫	DM-NVX-360C	Input 1		192.168.1.110	
าย	2	DM-NVX-350C-Plac eholder	DM-NVX-350C-Placeholder			6	W 💽 🦘	DM-NVX-363C	Input 2		<u>192.168.1.8</u>	
	3 14 10 14	DM-NVX-351-Place holder	DM-NVX-351-Placeholder			1	W 💽 🗠	DM-NVX-350C	Input 4		<u>192.168.1.54</u>	
	4 🕅 🗇 🕾	DM-NVX-351C-Plac eholder	DM-NVX-351C-Placeholder			5	W .	DM-NVX-352C	Input 5		192.168.1.14	
	5 ⁶ X ⁶ 🗉 🗠	DM-NVX-352-Place holder	DM-NVX-352-Placeholder			3	¥ 💽 🤝	DM-NVX-352C	Input 6		<u>192.168.1.176</u>	
	6 ^b A ^d 🖾 🗠	DM-NVX-352C-Plac eholder	DM-NVX-352C-Placeholder			2	W 💽 🦘	DM-NVX-351C	Input 7		<u>192.168.1.124</u>	
	7 🕅 🗇 🗠	DM-NVX-360-Place holder	DM-NVX-360-Placeholder									
	8 ⁰ A ⁰	DM-NVX-360C-Plac eholder	DM-NVX-360C-Placeholder	-								
	9 🕅 🗇 🕾	DM-NVX-361-Place holder	DM-NVX-361-Placeholder									
	10 🕅 🗇 🗢	DM-NVX-361C-Plac eholder	DM-NVX-361C-Placeholder									
		(((1-9 v > >>									
	Endpoints In-Use: 98 Available Endpoints: 90	2								M NAX	💷 NVX 🛃 N	ux
	Total Endpoints: 1000			Physic	al Assign	iment						
				Assign via Setup Butto	on ▶	i fi	or 5 🛟	Minutes				

CRESTRON ? 🕲 DM NVX DIRECTOR Inputs O All Statu Device Type Network Available Outputs lutnut Assie Capability Model * IP Address # ***** Capability Model \$ Hostname 🛊 IP Address M C - DM-NVX-350-Place DM-NVX-350-Placeholder M 🖸 🗠 🛛 DM-NVX-D30 192.168.1.48 DM-NVX-350C-Plac DM-NVX-350C-Placeholder M 🖸 🐇 🛛 DM-NVX-D30C °№ ⊡ ~~ Output 2 192.168.1.25 2 DM-NVX-351-Place DM-NVX-351-Placeholde W E ---DM-NVX-351C-Plac DM-NVX-351C-Placeholde °№ ⊡ ~~ DM-NVX-352-Place DM-NVX-352-Placeholder °№ ⊡ ~ DM-NVX-352C-Plac DM-NVX-352C-Placeholder W E ~ W E -6 DM-NVX-360-Place DM-NVX-360-Placeholder DM-NVX-360C-Plac DM-NVX-360C-Placeholder °N° 🖻 🗠 DM-NVX-361-Place DM-NVX-361-Placeholde °A° 🖭 🗠 M C - DM-NVX-361C-Plac DM-NVX-361C-Placeholder (< < 1.9 v > >> nts In-Use: 98 vailable Endpoints: 9 otal Endpoints: 1000 NUX MAX NAX 902 Physical Assignmen ssign via Setup Button 下 🔳 for 5 🛟 Minutes

Add Domain Page - Default DM NVX Placeholders for Available Outputs (Receivers)

The corresponding **Available Inputs** or **Available Outputs** table provides the following information:

- **#:** Indicates the number of the placeholder based on the alphanumeric order of the placeholder name.
- **Capability:** For each capability (DM NAX, DM NVX, and DM NUX), the icon is shaded gray to indicate that the placeholder provides no capability (
- Model: For transmitter placeholders, indicates the model name of all DM NVX endpoints that can function as a transmitter. For receiver placeholders, indicates the model name of all DM NVX endpoints that can function as a receiver. The model name is appended by a hyphen and the word Placeholder, for example, DM-NVX-350-Placeholder. A Generic-Transmitter-Placeholder and Generic-Receiver-Placeholder are also provided. By default, the generic placeholders are provided at the end of the lists.

To view the devices based on the ascending or descending alphanumeric order of the model name, use the scroll arrows to the right of the **Model** heading.

• **Name:** Indicates the same name listed as the model name.

To view the placeholders based on the ascending or descending alphanumeric order of the name, use the scroll arrows to the right of the **Name** heading.

• IP Address: Displays a hyphen to indicate that the placeholder does not have an IP address.

Up to 10 placeholders can be displayed in the table simultaneously. Use the scroll arrows at the bottom of the table to navigate through more than 10 placeholders.

To assign placeholders to a domain, refer to the following sections:

- Assigning a Specific DM NVX Endpoint Model Placeholder to a Domain
- Assigning Different DM NVX Endpoint Model Placeholders to a Domain Simultaneously

Assigning a Specific DM NVX Endpoint Model Placeholder to a Domain

To assign a specific DM NVX endpoint model placeholder to a domain:

- 1. Do either of the following:
 - Drag and drop the desired placeholder into any location—including an existing row—of the corresponding assignments table.
 - Double-click the desired placeholder.

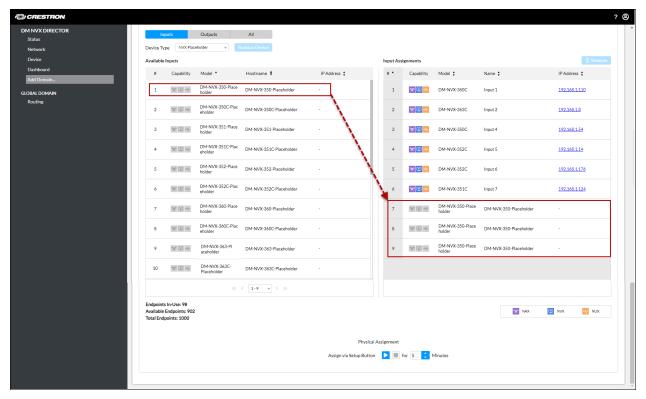
The **Adding Multiple Placeholders** dialog box opens, prompting for the number of placeholders you wish to add to the domain.

Adding Multiple Placeholders Dialog Box

C Adding Multiple Placeholders	×
Please specify the number of placeholder devices you wish to add to the domain	
1 🗘 placeholders	
✓ Done X Cance	ł

2. In the scrollable text box, enter or select the desired number of placeholders (the default setting is
1), and then click **Done**. Depending on the number of placeholders selected, one or more placeholders are added to the corresponding **Input Assignments** or **Output Assignments** table.

Example of Three DM-NVX-350 Placeholders Simultaneously Added to Input Assignments Table



If the assignments table was originally empty, the desired number of placeholders are added to the beginning of the table. If the placeholder was dragged to an existing row within the table, the desired number of placeholders are added starting at the desired row location and all remaining rows are automatically renumbered. If the placeholder was dragged to the end of the table, the desired number of placeholders are added to the end of the table.

The **Input Assignments** and **Output Assignments** tables provide the same information for the placeholders as the information provided in the **Available Inputs** and **Available Outputs** tables, respectively: **#**, **Capability**, **Name**, and **IP Address**. However, in the **Name** column of the **Input Assignments** and **Output Assignments** tables, clicking the placeholder name enables the name to be changed.

Assigning Different DM NVX Endpoint Model Placeholders to a Domain Simultaneously

To assign different DM NVX endpoint model placeholders to a domain simultaneously, do either or both of the following:

- **Shift** + **click** the desired consecutive endpoint model placeholders and then drag and drop them into any location—including an existing row—of the corresponding assignments table.
- **Control** + **click** to select multiple endpoints on an individual basis in any order (ascending or descending) and then drag and drop them into any location—including an existing row—of the corresponding assignments table.

Example of Six Different DM NVX Endpoint Model Placeholders Simultaneously Added to Input Assignments Table

Device T	nputs	Outputs								
Device T			All							
		eholder v R	eplace Device							
Availabl	e Inputs Capability	Model *	Name 🛊	IP Address		Input As:	ignments Capability	Model \$	Name 🛊	IP Address
		DM-NVX-350-Place		IP Address 🤤						
1	°%° ⊡ +%	holder	DM-NVX-350-Placeholder	•		1	'X' 🖸 <	DM-NVX-350C	Input 4	<u>192.168.1.54</u>
2	${}^{0}\!X_{0} \ \textcircled{\ } = {}^{0}\!\cdot {}^{0}$	DM-NVX-350C-Plac eholder	DM-NVX-350C-Placeholder			2	W 🖸 😽	DM-NVX-351	Placeholder	<u>192.168.1.90</u>
3	${}^{b}\!\!\mathcal{M}_{0} \equiv {}^{b}\!\!\mathcal{M}_{0}$	DM-NVX-351-Place holder	DM-NVX-351-Placeholder		N	3	W 🖸 😽	DM-NVX-351C	Input 7	<u>192.168.1.124</u>
4	${}^{b}\!X_{0} \ \textcircled{\ } = {}^{b}\!X_{0}$	DM-NVX-351C-Plac eholder	DM-NVX-351C-Placeholder	-		4	1×1 = ++	DM-NVX-350-Place holder	DM-NVX-350-Placeholder	
5	24 () = 10	DM-NVX-352-Place holder	DM-NVX-352-Placeholder			5	°%ª ⊡ ≪	DM-NVX-350C-Plac eholder	DM-NVX-350C-Placeholder	
6	$\mathcal{J}_0 \ \textcircled{\oplus} \ \mathcal{J}_0$	DM-NVX-352C-Plac eholder	DM-NVX-352C-Placeholder			6	17 E 15	DM-NVX-351-Place holder	DM-NVX-351-Placeholder	
7	$\mathcal{N} = \mathcal{N}$	DM-NVX-360-Place holder	DM-NVX-360-Placeholder		1	7	W 🗉 🄝	DM-NVX-352-Place holder	DM-NVX-352-Placeholder	
8	× •	DM-NVX-360C-Plac eholder	DM-NVX-360C-Placeholder			8	W 3 40	DM-NVX-360-Place holder	DM-NVX-360-Placeholder	-
9	24 (m) = 44	DM-NVX-363-PI aceholder	DM-NVX-363-Placeholder			9	1×1	DM-NVX-360C-Plac eholder	DM-NVX-360C-Placeholder	
10	${}^{0}\!X_{0} \ \textcircled{\ } = {}^{0}\!Z_{0}$	DM-NVX-363C- Placeholder	DM-NVX-363C-Placeholder							
		<<	(1-10 v > >>					<< •	1-9 v > >>	
Available	ts In-Use: 824 Endpoints: 176								W NAX	💷 NVX 🥌 NUX
TOTALER										
					Physical A	ssignment				
				Assign via Se	tup Button		for 5 🛟 f	Minutes		

If the assignments table was originally empty, the desired placeholders are added to the beginning of the table. If the placeholders were dragged to an existing row within the table, the placeholders are added starting at the desired row location and all remaining rows are automatically renumbered. If the placeholders were dragged to the end of the table, the placeholders are added to the end of the table.

The **Input Assignments** and **Output Assignments** tables provide the same information for the placeholders as the information provided in the **Available Inputs** and **Available Outputs** tables, respectively: **#**, **Capability**, **Name**, and **IP Address**. However, in the **Name** column of the **Input Assignments** and **Output Assignments** tables, clicking the placeholder name enables the name to be changed.

Assigning Endpoints Using the Setup Button

The **Physical Assignment** section located at the bottom of the Add Domain page controls the total number of minutes the Setup button can be used on the desired endpoints listed in the **Available Inputs** and **Available Outputs** tables to assign the endpoints to a domain.

CRESTRON.														? 🙁
DM NVX DIRECTOR Status Network	Inp Device Typ	outs De NVX Tran	Outputs	All Replace Device										Î
Device	Available I	Inputs			C Refresh	Inp	ut Assign	iments					🗊 Remove	
Dashboard		Capability	Model *	Hostname 🛊	IP Address 🛊	#	•	Capability	Model 🛊	Name 🛊		IP Addres	s 🛊	
Add Domain	1	'X' 🖸 <	DM-NVX-350C	DM-NVX-350C-00107F9B70AF	192.168.1.54									
GLOBAL DOMAIN Routing	2	W 🖸 🔶	DM-NVX-351C	DM-NVX-351C-00107F8B7725	192.168.1.124									
	3	W 🖸 🍝	DM-NVX-352C	DM-NVX-352C-00107F9C214C	192.168.1.14									
	4	'X' 🗉 🐟	DM-NVX-352C	DM-NVX-352C-00107F9C1771	192.168.1.176						rom the left column:			
	5	W 🗉 🗠	DM-NVX-360C	DM-NVX-360C-00107F9CC304	<u>192.168.1.110</u>		C	Drag and dro	or left-click an item op an endpoint anyw	here on this	table			
	6	W 🙂 👳	DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	<u>192.168.1.8</u>		P	bage			order and drop them , any order and drop			
	7	W 🙂 🗠	DM-NVX-E20-2G	ILLYA-NVX-E20-2G-00107FF476A0	<u>192.168.1.228</u>			his page	concerco procopocin	ic enupoints,	any order and drop	and in any where		
	8	W 💽 🗠	DM-NVX-E30C	DM-NVX-E30C-00107F9C03D6	<u>192.168.1.17</u>									
			<<	< 1+9 · · > >>										
		In-Use: 98 Endpoints: 902 points: 1000									🕅 NAX	I NVX	NUX	
					Physical J Assign via Setup Button			5	Minutes					

Add Domain Page - Physical Assignment

To set the number of minutes that the Setup button can be used to assign the desired endpoints to a domain:

- Ensure that the Start button (□), which is located to the right of Assign via Setup Button, is enabled (blue). By default, the Start button is enabled and the Stop (□) button is disabled (gray). To enable the Start button if it is disabled (▷), click the blue enabled Stop button (□). The Stop button is then disabled, and the Start button is enabled.
- In the Minutes drop-down list, select the total number of minutes in which the Setup button on the desired available endpoints can be used to assign the endpoints to the domain. Values range from O to 30 minutes. A value of O prevents the Setup button from be used for endpoint assignment.
- 3. For each desired endpoint listed under **Available Inputs** and **Available Outputs**, press the Setup button on all endpoints within the number of minutes set in step 2.

After the Setup button is pressed on an endpoint, the endpoint is assigned to the corresponding **Input Assignments** or **Output Assignments** table depending on the operating mode.

Importing a Device Map

A device map consists of a DM NVX Director domain configuration that can be imported or exported as an .xml file. A device map that was exported from a DM NVX Director network appliance being replaced can be imported into the replacement DM NVX Director network appliance. (For information about exporting a device map, refer to <u>Exporting a Device Map</u>.)

To import a device map:

1. In the Add Domain page, click the **Import** button.

Add Domain Page, Import Device Map

CRESTRON.		? 🕲
DM NVX DIRECTOR Status Network Device Davhboard	DM-NVX-DIR-ENT	Save Changes
Add Domain GLOBAL DOMAIN Routing	- Endpoint Map	
	Domain Number 1 Multicast Offset 0 Custom Multicast Range	
	Multicast Range 299.8.0.0 - 239.8.127.255 Import Device Map	
	Input Outputs All Device Type INXX Transmitter v Register Device Available Inputs Ø Refresh Input Assignments	2 Remove
	# Capability Model Hostname 1PAddress # Capability Model Name :	IP Address
	1 Image: DM-NVX-350C DM-NVX-350C	

File Explorer opens.

2. Navigate to the location of the device map file that is to be imported, and then click **Open**.

The device map is imported into the domain. DM NVX transmitter endpoints are automatically added to the **Input Assignments** table, and DM NVX receiver endpoints are automatically added to the **Output Assignments** table.

NOTE: If the device map file is formatted incorrectly, it will not be accepted by the DM NVX Director network appliance.

For information about saving the device map to the domain, refer to Saving a New Domain.

Replacing Endpoints in a Domain

Endpoints assigned to a domain can be replaced with available endpoints if required. An endpoint in the **Input Assignments** table can be replaced with an endpoint in the **Available Inputs** table. Similarly, an endpoint in the **Output Assignments** table can be replaced with an endpoint in the **Available Outputs** table. Examples of reasons for replacing endpoints are as follows:

- Replacing an assigned endpoint with a newer available model.
- Replacing an assigned placeholder endpoint with an available discovered endpoint
- Replacing an assigned endpoint with a placeholder endpoint

To replace an assigned endpoint with an available endpoint:

1. In the **Available Inputs** or **Available Outputs** table, click the endpoint that is to be used to replace an assigned endpoint. The endpoint is shaded blue.

Selection of Available Endpoint

NVX DIRECTOR atus		– Endpoint Map)							
etwork evice					Domain Name	DOMA	IN 4			
ashboard dd Domain					Domain Number	4	2			
ad Domain					Multicast Offset	0	🗧 🗆 Cus	tom Multicast Rang	2	
outing					Multicast Range	239.9.1	28.0 - 239.9.25	5.255		
					Import Device Map	2	Import			
		Inputs	Outputs	All						
	Dev	rice Type NV	(Transmitter v	Replace Device						
	Ava	ilable Inputs			C Refresh	Input A	Assignments			📋 Remove
		# Capability	Model *	Hostname 🕈	IP Address 🛊	# *	Capability	Model 🕻	Name 🛊	IP Address 🛊
		1 🕅 🔍 😽	DM-NVX-360C	DM-NVX-360C- 00107F9CC304	<u>192.168.1.110</u>	1	'X' 🗉 🤫	DM-NVX-350C	Input 4	<u>192.168.1.54</u>
		2 🕅 🖸 🍯	DM-NVX-363C	DM-NVX-363C- 00107F9CB7A0	<u>192.168.1.8</u>	2	'X' 💷 🔫	DM-NVX-351C	Input 7	<u>192.168.1.124</u>
		3 🕅 🔍 🗠	DM-NVX-E20-2 G	ILLYA-NVX-E20-2G- 00107FF476A0	<u>192.168.1.228</u>	3	'X' 💷 🕓	DM-NVX-352C	Input 5	<u>192.168.1.14</u>
		4 🕅 🖳 🗠	DM-NVX-E30C	DM-NVX-E30C- 00107F9C03D6	<u>192.168.1.17</u>	4	(X) 🔳 🤜	DM-NVX-352C	Input 6	<u>192.168.1.176</u>
		5 🕅 🔍 🗠	DM-NVX-E760C	DM-NVX-E760C- 00107FB55EC8	<u>192.168.1.82</u>					

2. In the corresponding **Input Assignments** or **Output Assignments** table, click the endpoint that is to be replaced. The endpoint is shaded blue.

CRESTRON				? 🕲
DM NVX DIRECTOR Status	— Endpoint Map			
Network Device Dashboard		Doma	in Name DOMAIN 4	
Add Domain		Domain Multica	Number 4 C	
GLOBAL DOMAIN Routing			st Range 239.9.128.0 - 239.9.255.255	
	Inputs Outputs	Import De	vice Map 🔔 Import	
	Device Type NVX Transmitter v	Replace Device		
	Available Inputs	C Re	fresh Input Assignments	🗎 Remove
	# Capability Model *	Hostname 🗘 IP Address 🕏	# * Capability Model \$ Name \$	IP Address 🛊
	1 🕅 🖳 😽 DM-NVX-360C	DM-NVX-360C- 00107F9CC304 192.168.1.110	1 🕅 🖙 🗢 DM-NVX-350C Input 4	<u>192.168.1.54</u>
	2 🕅 😽 DM-NVX-363C	DM-NVX-363C- 00107F9CB7A0	2 🕅 🖳 😁 DM-NVX-351C Input 7	<u>192.168.1.124</u>
	3 ₩ 🖸 🛹 DM-NVX-E20-2 G	ILLYA-NVX-E20-2G- 00107FF476A0 192.168.1.228	3 🕅 💀 DM-NVX-352C Input 5	<u>192.168.1.14</u>
	4 🕅 🐨 DM-NVX-E30C	DM-NVX-E30C- 00107F9C03D6 192.168.1.17	4 🕅 🔤 😽 DM-NVX-352C Input 6	<u>192.168.1.176</u>
	5 🕅 💷 🖘 DM-NVX-E760C	DM-NVX-E760C- 00107FB55EC8 192.168.182		
<u></u>				

Selection of Endpoint Assignment

3. Click the **Replace Device** button.

Replacement of Endpoint Assignment with Available Endpoint

CRESTRON.												?	0
DM NVX DIRECTOR Status Network	— — En	dpoint Map —											Î
Network Device Dashboard					Domain Name Domain Number			1					l
Add Domain					Multicast Offset	t (Multicast Range				
Routing					Multicast Range Import Device Map		39.8.0.0 -						
	Ir Device Ty	ype NVXTra	Outputs nsmitter ~	All Replace Device									
	Available	Inputs			S Refresh		Input Assi	ignments			🔋 🗍 Remov	re	
		Capability	Model *	Hostname 🕈	IP Address 💲		# *	Capability	Moději 🛊	Name 🛊	IP Address 💲		
	1	W 🗉 🤝	DM-NVX-360C	DM-NVX-360C-00107F9CC304	192.168.1.110		1	W 💷 🤝	DM-NVX-350C	Input 4	<u>192.168.1.54</u>		
	2	X C ~	DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	<u>192.168.1.8</u>	•	2	W 🕘 🤝	DM-NVX-351C	Input 7	192.168.1.124		
	3	X 	DM-NVX-E20-2G	ILLYA-NVX-E20-2G-00107FF476A0	<u>192.168.1.228</u>		3	* • •	DM-NVX-352C	Input 5	<u>192.168.1.14</u>		
	4	* •	DM-NVX-E30C	DM-NVX-E30C-00107F9C03D6	<u>192.168.1.17</u>		4	W 🙂 🔸	DM-NVX-352C	Input 6	<u>192.168.1.176</u>		
	5		DM-NVX-E760C	DM-NVX-E760C-00107FB55EC8	192.168.1.82						 		

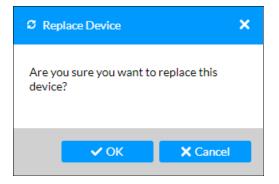
The **Replace Device** dialog box opens. If the replacement device is a different DM NVX model than the device being replaced, the dialog box indicates that the replacement device may not support all features and functionality of the device being replaced and prompts for confirmation that the device be replaced.

Replace Dialog Box - Replacing DM NVX Device with Different DM NVX Model

C Replace Device	×
The device you are replacing support all features and func Do you want to continue?	
✓ ОК	× Cancel

If the replacement device is the same DM NVX model as the device being replaced, the dialog box prompts for confirmation that the device be replaced.

Replace Dialog Box - Replacing DM NVX Device with Same DM NVX Model



4. Click **OK** to replace the device.

The endpoint selected in step 1 replaces the endpoint selected in step 2. The endpoint selected in step 2 is removed from the domain and becomes an available endpoint.

Removing Endpoints from a Domain

Endpoints can be removed from the **Input Assignments** or **Output Assignments** table of a domain. Refer to <u>Removing a Single Endpoint</u> or <u>Removing Multiple Endpoints Simultaneously</u> for instructions.

Removing a Single Endpoint

To remove a single endpoint from a domain:

- 1. Do either of the following:
 - Click the endpoint to be removed. After the endpoint is shaded blue, click the **Remove** button.

VX DIRECTOR										
tus		Endpoint Map								
twork vice					Domain Name	DOMA	N 1			
shboard										
d Domain					Domain Number	1	0			
L DOMAIN					Multicast Offset	0	🗧 🗆 Cus	tom Multicast Rang	e	
iting					Multicast Range	239.8.0.	0 - 239.8.127.2	255		
					Import Device Map	1	Import			
			0 1 1							
		Inputs	Outputs	All						
	Dev	ce Type NVX	Transmitter ~	Replace Device						
	Ava	lable Inputs			🖉 Refresh	Input A	ssignments			Remove
		Capability	Model *	Hostname 🛊	IP Address 💲	# *	Capability	Model 🛊	Name 🛊	IP Address 🗘
		% 🗉 🔸	DM-NVX-363C	DM-NVX-363C- 00107F9CB7A0	<u>192.168.1.8</u>	1	X O 	DM-NVX-350C	Input 4	<u>192.168.1.54</u>
		₩ 🗉 🤝	DM-NVX-E20-2 G	ILLYA-NVX-E20-2G- 00107FF476A0	<u>192.168.1.228</u>	2	'X' 🙂 🔸	DM-NVX-352C	Input 5	<u>192.168.1.14</u>
		% 💽 🦟	DM-NVX-E30C	DM-NVX-E30C- 00107F9C03D6	<u>192.168.1.17</u>	з	W 🙂 🔫	DM-NVX-351C	Input 7	<u>192.168.1.124</u>
		₩ 💷 🦟	DM-NVX-E760C	DM-NVX-E760C- 00107FB55EC8	<u>192 168 1.82</u>	4	₩ 😐 🔫	DM-NVX-360C	Input 1	192.168.1.110
						5	W 💷 🔫	DM-NVX-352C	Input 6	192.168.1.176

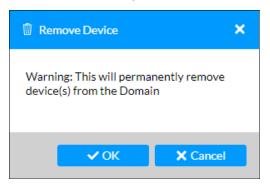
Removal of Endpoint by Clicking and Using the Remove Button

• Double-click the endpoint. The endpoint is shaded blue. Removal of Endpoint by Double-Clicking

Status	- Endpoint Map								
Network	Спаротеттар								
Device				Domain Name	DOMAI	IN 1			
Dashboard				Domain Number	1	0			
dd Domain				Multicast Offset	0	Custo	om Multicast Range	2	
BAL DOMAIN				Multicast Range	220.0.0	0 - 239.8.127.2			
outing									
				Import Device Map	2	Import			
	Inputs	Outputs	All						
	Device Type NVX	Transmitter v	Replace Device						
	Available Inputs			🗢 Refresh	Innut A	ssignments			1 Remove
	# Capability	Model *	Hostname 🕈	IP Address 🛊	# *	Capability	Model 🗘	Name 🛊	IP Address 💲
	1 🕅 💷 🐟	DM-NVX-363C	DM-NVX-363C- 00107F9CB7A0	<u>192.168.1.8</u>	1	X 🗆 <table-cell></table-cell>	DM-NVX-350C	Input 4	<u>192.168.1.54</u>
	2 🕅 🗐 🖘	DM-NVX-E20-2 G	ILLYA-NVX-E20-2G- 00107FF476A0	<u>192.168.1.228</u>	2	'X' 🙂 🔸	DM-NVX-352C	Input 5	<u>192.168.1.14</u>
	3 🕷 💷 🤟	DM-NVX-E30C	DM-NVX-E30C- 00107F9C03D6	<u>192.168.1.17</u>	з	W 💷 🔫	DM-NVX-351C	Input 7	<u>192.168.1.124</u>
	4 🕅 🖳 🗠	DM-NVX-E760C	DM-NVX-E760C- 00107FB55EC8	192.168.1.82	4	W 💭 🔫	DM-NVX-360C	Input 1	192.168.1.110
					5	1X° 💷 🔫	DM-NVX-352C	Input 6	<u>192.168.1.176</u>

The **Remove Device** dialog box opens, indicating that the device will permanently be removed from the domain.

Remove Device Dialog Box



2. Click **OK**.

The selected device is removed from the domain and becomes an available endpoint listed in the **Available Inputs** or **Available Outputs** table as appropriate.

Removing Multiple Endpoints Simultaneously

To remove multiple endpoints simultaneously from a domain:

- 1. Do either of the following:
 - **Shift** + **click** the desired consecutive endpoints. The endpoints are shaded blue, click the **Remove** button.

Removal of Multiple Consecutive Endpoints Using Shift + Click and Remove Button

VX DIRECTOR	- Endpo	oint Map								
work ice					Domain Name	DOMAIN 1				
hboard Domain					Domain Number	1				
LOOMAIN					Multicast Offset	0	Custom Mi	ulticast Range		
ling					Multicast Range	239.8.0.0 - 2	39.8.127.255			
					Import Device Map	🔔 İmp	ort			
· · · · · · · · · · · · · · · · · · ·	Available Inj	puts			C Refresh	Input Assig				🔒 Remove
		Capability	Model *	Hostname 🕈	IP Address \$	2.4	Capability	Model \$	Name \$	IP Address 🗘
	1	% •	DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	192.168.1.8	1	× • •	DM-NVX-350C	Input 4	192.148.1.54
	2	* e ~	DM-NVX-E20-2G	ILLYA-NVX-E20-2G-00107FF476A0	192.168.1.228	2	X -	DM-NVX-352C	Input 5	<u>192.168.1.14</u>
	3	X = ~	DM-NVX-E30C	DM-NVX-E30C-00107F9C03D6	<u>192.168.1.17</u>	з	X 🗆 🔸	DM-NVX-351C	Input 7	192.168.1.124
	4	* •	DM-NVX-E760C	DM-NVX-E760C-00107FB55EC8	192.168.1.82	4	X 🗆 🍝	DM-NVX-360C	Input 1	192.148.1.110
							× •	DM-NVX-352C	Input 6	192.168.1.176

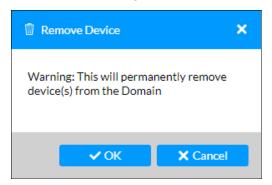
• **Control** + **click** to select multiple endpoints on an individual basis in any order (ascending or descending). After the endpoints are shaded blue, click the **Remove** button.

Removal of Multiple Endpoints Using Control + Click and Remove Button

	— Endpo	int Map								
work					Domain Name	DOMAIN 1	ı			
Iboard Domain					Domain Number	1				
DOMAIN					Multicast Offset Multicast Range	0		ilticast Range		
ling					Import Device Map	1. Imp				
	Device Type Available Inp		tter v Repla	e Device	Ø Refresh	Input Assig	gnments			👔 Remove
		Capability	Model *	Hostname 🛊	IP Address 🛊	**	Capability	Model \$	Name \$	IP Address 🗘
	1	* •	DM-NVX-363C	DM-NVX-363C-00107F9CB7A0	192.168.1.8	1	X 🗆 😽	DM-NVX-350C	Input 4	192168134
	2	* •	DM-NVX-E20-2G	ILLYA-NVX-E20-2G-00107FF476A0	192.168.1.228	2	× 🗆 🔸	DM-NVX-352C	Input 5	192.168.1.14
	з	* •	DM-NVX-E30C	DM-NVX-E30C-00107F9C03D6	192.168.1.17	з	X 🗆 😽	DM-NVX-351C	Input 7	<u>192.168.1.124</u>
	4	X 🗉 🔶	DM-NVX-E760C	DM-NVX-E760C-00107#855EC8	192.168.1.82	4	X 🗆 🔶	DM-NVX-360C	Input 1	192.168.1.110
						5	🕅 🗉 😽	DM-NVX-352C	Input 6	192 168 1.176

The **Remove Device** dialog box opens, indicating that the devices will permanently be removed from the domain.

Remove Device Dialog Box



2. Click OK.

The desired devices are removed from the domain and become available endpoints listed in the **Available Inputs** or **Available Outputs** table as appropriate.

Viewing Input and Output Assignments Simultaneously

The **Input Assignments** and **Output Assignments** tables on an endpoint map can be displayed simultaneously, enabling both input and output assignments to be viewed. In addition, an input can be reassigned as an output or an output can be reassigned as an input for endpoints that can function as either a transmitter or a receiver.

To view input and output assignments simultaneously, click the **All** button. The **Input Assignments** and **Output Assignments** tables are displayed.

CRESTRON.													0
DM NVX DIRECTOR Status Network Device	DM-NV	/X-DIR-EN	IT								✓ Save Ch	nanges 🗡	
Dashboard													
Add Domain		point Map											
GLOBAL DOMAIN Routing	- enop	onit Map											
						Domain Name	DOMAIN 4						
DOMAIN 1 (001) Routing						Domain Number	4						
Endpoint Map						Multicast Offset	0	Custom Multi					
Control System									ast Kange				
DOMAIN 2 (002)						Multicast Range	239.9.128.0 -	239.9.255.255					
Routing					Im	nport Device Map	🔔 İmpor	t					
Endpoint Map	Inpu	uts Out	puts All										
Control System													
DOMAIN 3 (003) Routing	Input Assig	oments				Select All	Output Assig	inments				Select All	
Endpoint Map		Capability	Model \$	Name 1	IP Address \$	_		Capability	Model :	Name \$	IP Address \$		
Control System													
	1	W 🖾 🔫	DM-NVX-350C	Input 4	192.168.1.54		1	W 🗉 🛰	DM-NVX-363C	Output 1	192.168.1.48		
	2) 🐨 🔫	DM-NVX-352C	Input 5	192.168.1.14		2	W 🗉 🔶	DM-NVX-D30	Output 2	<u>192.168.1.37</u>		
	3	W 🗉 🔫	DM-NVX-351C	Input 7	192.168.1.124								
	4	₩ 🗉 🍝	DM-NVX-360C	Input 1	<u>192.168.1.110</u>								
	5	双回 🍝	DM-NVX-352C	Inputó	<u>192.168.1.176</u>								
											~~~~~		

#### Simultaneous Display of Input and Output Assignments

If desired, reassign an input as an output or an output as an input by doing the following:

• To reassign a single endpoint, drag and drop the desired endpoint into any location—including an existing row—of the **Input Assignments** or **Output Assignments** table.

- To reassign multiple endpoints simultaneously, do either of the following:
  - To select consecutive endpoints, Shift + click the first and last endpoint in the series and then drag and drop them into any location—including an existing row—of the Input Assignments or Output Assignments table.
  - To select multiple endpoints on an individual basis in any order (ascending or descending),
     Control + click to select each desired endpoint, and then drag and drop them into any location—including an existing row—of the corresponding Input Assignments or Output Assignments table.

### **Viewing Endpoint Statistics**

Endpoint statistics are provided on an endpoint map.

### **Endpoint Statistics Example**

ESTRON.				
Y DIRECTOR Is Ionk Se	DM-NVX-DIR-ENT			✓Addon   ∨
board Domain				
DOMAIN	- Endpoint Map			
ing			Domain Name	DOMAIN 1
1 (1995) •			Domain Number	
nt Map I System			Multicast Offset	
(202) LMae			Multicast Range	239.8.0.0 - 239.8.127.255
System (2021			Save Domain	器 Save
t Map			Delete Domain	Delete
lysten			Import Device Map	1 Import
			Export Device Map	± Export
			Credential Management	9, Managa
		LIA II		
	Device Type NVX Transmitter • Ropt	ce Device		
	Available Inputs # Capability Model *		C Refresh	Input Assignments
		Hostname 🕏	IP Address 💲	# * Capability Model * Name * IP Address *
	1 🕅 💷 💀 DM-NVX-350C	DM-NVX-350C-00107F9B79CF	192.168.1.152	
	2 🕅 🖾 DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	192168.1.104	
	3 🕅 🖾 😽 DM-NVX-350C	DM-NVX-350C-00107F9B70C4	192168.1.75	
	4 🗰 📴 💀 DM-NVX-350C	DM-NVX-350C-00107F9B7040	192.168.1.198	
	5 🕅 🖾 🔂 DM-NVX-350C	DM-NVX-350C-00107F886C5E	192.168.1.242	To populate this list, do any of the following from the left column: Double-click or left-click an item to add it to the end of the list
	6 🕅 🖾 😽 DM-NVX-350C	DM-NVX-350C-00107F986551	<u>192.168.1.21</u>	Drag and drop an endpoint anywhere on this table Shift+left click to add multiple endpoints in order and drop them anywhere on this
	7 🕅 🖾 DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	<u>192168.1.132</u>	page Control + left click to pick specific endpoints, any order and drop them anywhere on this page
	7 🕅 🖾 DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	<u>192168.1.132</u>	
	8 1 🔂 🔂 DM-NVX-351	DM-NVX-351-00107F8B98BA	192.168.1.90	
	9 🔤 🔤 DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	192.168.1.129	
	10 🔤 💁 DM-NVX-351C	DM-NVX-351C-00107F8B6691	192168.1.164	
		(( 1-10 - ) ))		(( ( <u>1-10</u> ) ) ))
	Endpoints In-Use: 98 Available Endpoints: 902 Total Endpoints: 1000			NAX 💽 NAX 🌄 NAX
			Physical J	Assignment
			Assign via Setup Button	For 5 C Minutes

The statistics indicate the following information:

• **Endpoints in Use:** Indicates the total number of transmitters, transmitter placeholders, receivers, and receiver placeholders that have been assigned among existing domains.

- Available Endpoints: Indicates the total number of transmitters, transmitter placeholders, receivers, and receiver placeholders that are available for assignment among all domains supported by the DM NVX Director network appliance.
- Total Endpoints: Indicates the total number of endpoints that is supported by the DM NVX Director network appliance: 80 for the DM-NVX-DIR-80, 160 for the DM-NVX-DIR-160, and 1000 for the DM-NVX-DIR-ENT.

# Saving a New Domain

To save a new domain:

1. In the Action menu, click Save Changes. The Create Domain Password dialog box opens.

**NOTE:** If a domain is added by importing a device map, the **Create Domain Password** dialog box does not appear. The **Confirmation** dialog box for saving the domain appears as shown at the end of step 2 below. When the **Confirmation** dialog box appears, proceed to step 3 to save the device map.

#### Create Domain Password Dialog Box

Create Domain Password							
	e NVX product line require a new 8-character password. will update the administrator password for all the NVX						
Username	admin						
Password							
Confirm Password							
	OK Cancel						

- 2. Assign domain credentials as follows:
  - a. If desired, change the current username that is displayed in the **Username** text box.
  - b. In the **Password** text box, enter a password using a minimum of 8 characters. The password is case sensitive.
  - c. In the **Confirm Password** text box, reenter the password for confirmation.
  - d. Click OK.

A **Confirmation** dialog box opens, prompting for confirmation that the domain be saved.

### Confirmation Dialog Box for Saving the Domain

<ul> <li>Confirmation</li> </ul>	×
Are you sure you want to [id=1, name=DOMAIN 1]	
✓ ОК	X Cancel

3. Click **OK** to save the domain.

The saved domain is added to the navigation bar.

If DM NVX endpoints have been assigned to the domain, the **Manage Device Credentials** dialog box opens.

🏽 Manage D	evice Cred	lentials			×
		I	urrent credentials for all new endpoints Name word Default credentials (admin/admir account	) ) or no user	
		IP Address	Host Name	Status	
		<u>192.168.1.8</u>	DM-NVX-363C-00107F9CB7A0	ONLINE	
		<u>192.168.1.110</u>	DM-NVX-360C-00107F9CC304	ONLINE	
		<u>192.168.1.39</u>	DM-NVX-E760C-00107F9CE2F4	ONLINE	
		<u>192.168.1.103</u>	DM-NVX-351C-00107F8B6CD2	ONLINE	-
		М	🖣 1 of 3 🕨 🕅		
				ОК	Cancel

### Manage Device Credentials Dialog Box

By default, the **Default credentials (admin/admin) or no user account** checkbox is selected. The checkboxes of all DM NVX endpoints in the domain are also selected.

Four DM NVX endpoints are listed at a time. All endpoints in the table can be viewed by using the scroll arrows at the bottom of the table. The IP address, host name, and status (ONLINE or OFFLINE) of each DM NVX endpoint is displayed. Clicking the IP address provides access to the web interface of the endpoint.

**NOTE:** Do not deselect the checkbox of any of the DM NVX endpoints listed in the table. The same credentials must be used for all DM NVX endpoints in the domain.

- 4. To be able to use the current credentials for all DM NVX endpoints listed in the table, do either of the following:
  - For DM NVX endpoints using **admin/admin** as the default credentials or no user account, ensure that the **Default credentials (admin/admin) or no user account** checkbox is selected (default setting), and then continue with step 5.

- For DM NVX endpoints with an existing user account, deselect the **Default credentials** (admin/admin) or no user account checkbox, enter the username and password, and then continue with step 5.
- 5. Click **OK** to assign the credentials to the DM NVX endpoints.

**NOTE:** If, for some reason, an error occurs relating to credentials for a particular DM NVX endpoint, click the IP address of the endpoint and set the username and password using the web interface of the endpoint. The DM NVX Director network appliance is blocked from accessing the endpoint for 24 hours. To remove the block and enable the DM NVX Director network appliance to access the endpoint, issue the following console command from the endpoint:

remblockedip all

The **Save Domain** dialog box opens, indicating that the devices are being configured and assigned. A progress indicator bar is also provided.

🕼 Save Domain			×
Configuring and assigning devices			
	60%		
			_
		ОК	

Save Domain Dialog Box - Configuration and Assignment Progress Indicator

When the process is complete, the dialog box indicates that the configuration is complete.

### Save Domain Dialog Box - Configuration Complete

Save Domain		×
Configuration complete.		
	100%	
		ОК

6. Click **OK** to close the dialog box.

In the navigation bar, the added domain is indicated by the domain name followed by the domain number in parentheses. In addition, the endpoint map of the domain is displayed.

Not           Charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach charach char char	DIRECTOR											
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6       Image: DM-MOX-3DC       DM-MOX-3DC-00107788551       122.163.121         7       Image: DM-MOX-3DC       DM-MOX-3DC-00107788551       122.163.122         7       Image: DM-MOX-3DC       DM-MOX-3DC-00107788578       122.163.122         7       Image: DM-MOX-3DC       DM-MOX-3DC-00107788578       122.163.122         7       Image: DM-MOX-3DC       DM-MOX-3DC-00107788578       122.163.122         8       Image: DM-MOX-3DC       DM-MOX-3DC-00107788578       122.163.122         9       Image: DM-MOX-3DC       DM-MOX-3DC-00107788588       122.163.122         9       Image: DM-MOX-3DC       DM-MOX-3DC-00107788587       122.163.122         10       Image: DM-MOX-3DC-00107788567       122.163.122       10         10       Image: DM-MOX-3DC-00107788567       122.163.122       10         11       Image: DM-MOX-3DC-00107788567       122.163.122       10         12       Image: DM-MOX-3DC-00107788567       122.163.122       10         13       Image: DM-MOX-3		4	17 🖸 🔫	DM-NVX-350C	DM-NVX-350C-00107F9B7040	<u>192168.1.198</u>	4	<b>X</b> 💿 🗠	DM-NVX-E20-2G	Input (2G)	<u>192.168.1.228</u>	
7       Image: Control (Control (Control (Co		5	17 🗊 🔦	DM-NVX-350C	DM-NVX-350C-00107F8B6C5E	<u>192168.1.242</u>	5	<b>*</b> 🖸 🗠	DM-NVX-E760C	Input 2 (E760)	<u>192.168.1.82</u>	
7       Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Ima		6	11 🖾 🐟	DM-NVX-350C	DM-NVX-350C-00107F9B6551	192168.1.21	6	🛒 💷 🐟	DM-NVX-363C	Input 2	192.168.1.8	
8       004-NVX.351		7		DM-NVX-350C	DM-NVX-350C-00107F987A78	192.168.1.132						
9       10       DM-NVX-531C       DM-NVX-531C-00107788427C       1121 141 132       10       10       DM-NVX-531C-Placeholder       -       10         10       DM-NVX-531C       DM-NVX-531C-00107788429T       1521 141 132       10       10       DM-NVX-531C-Placeholder       -       10         10       DM-NVX-531C-00107788429T       1521 141 142       10       DM-NVX-531C-Placeholder       -       -         10       DM-NVX-531C-Placeholder       -       -       -       -       -       -         10       DM-NVX-531C-Placeholder       -       -       -       -       -       -         10       DM-NVX-531C-Placeholder       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       - <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>192.168.1.14</u></td> <td></td>											<u>192.168.1.14</u>	
10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10 <t< td=""><td></td><td>8</td><td>w 🗉 😽</td><td>DM-NVX-351</td><td>DM-NVX-351-00107F88988A</td><td>192.168.1.90</td><td>8</td><td></td><td></td><td></td><td></td><td></td></t<>		8	w 🗉 😽	DM-NVX-351	DM-NVX-351-00107F88988A	192.168.1.90	8					
(( ( 1+20 → ) )) Endpairle 1+ Use 10 Analable Endpairle 190		9	w 💿 🍝	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	192.168.1.129					-	
Endpoints In-Use: 10 Available Endpoints: 190		10	y 🖸 🔸	DM-NVX-351C		192168.1164	10	7 O *			•	
Available Endpoints: 990					(( 1-10 - ) ))					· · · 1 · 10 · · · · · · · · · · · · · ·		
		Available End	points: 990								NAX 💽 NVX	NUX 😽
Physical Assignment Assign to Setup Button 🕨 🔲 for 3 🔹 Minutes												

#### Addition of New Domain

## **Global Domain Routing**

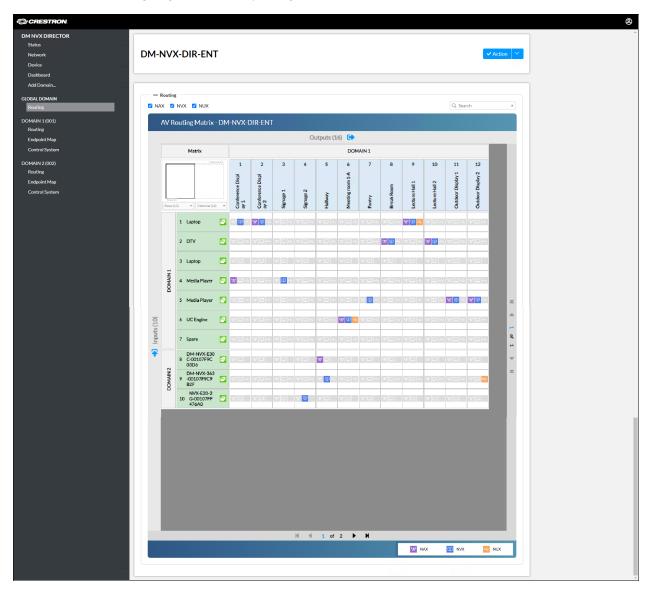
Global domain routing supports interdomain routing, which enables inputs (transmitters) within a single domain to be routed to outputs (receivers) of one or more other domains. Inputs within a single domain can also be routed to outputs within the same domain.

## NOTES:

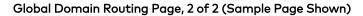
- If interdomain routing is not desired, routing inputs to outputs within a single domain can also be accomplished by going to the desired domain in the navigation bar and clicking **Routing**. For additional information, refer to Domain Routing.
- The DM-NVX-DIR-160 and DM-NVX-DIR-ENT support interdomain routing. Because the DM-NVX-DIR-80 supports only a single domain, interdomain routing is not applicable.

To route inputs to outputs using the global domain:

In the navigation bar, go to **GLOBAL DOMAIN** and then click **Routing**. The Global Domain Routing page opens, providing an AV routing matrix for all domains within the network. Depending on the number of inputs and outputs being viewed simultaneously, multiple Global Domain Routing pages may result. In the example shown below, Global Domain Routing spans two pages.



Global Domain Routing Page, 1 of 2 (Sample Page Shown)



M-NV	X-DIR-E	ENT				
- Routir						
	🛛 NVX 🗹				_	
AV ŀ	Routing Ma	atrıx - Di	M-NVX-	DIR-EN	•	O
	Matrix		DO	MAIN 1	DO	MAIN 2
Ross	10 (12) • Colu	Columne 16	Spare Display 1 Et	Spare Display 2 t	DM-NVX-D30-00 12 107FB556A8	DM-NVX-D30-00 107FB5569D 9
	1 Laptop				xo	* •
	2 DTV				*	*
1	3 Laptop		xo	× 🗆		* 🗆
DOMAIN 1	4 Media Pl	layer 🖻			×□	×□
	5 Media Pl	layer 📄		* * 🖵		*
Inputs (10)	6 UC Engir		_	- X 0	*	<b>%</b> 🗆
ndul	7 Spare					
	8 C-00107 03D6 DM-NVX	7F9C 🔁	×	저모	썼모	치모
DOMAIN 2	9 DM-NVX -00107F B2F 10 G-0010 476A0					
	10 G-0010 476A0	07FF 📑				

The Global Domain Routing provides an AV routing matrix consisting of inputs and outputs for one or more domains. The inputs are shaded green and are listed vertically on the left side of the matrix. The inputs are identified by the domain number and the name assigned to the input. The total number of inputs is labeled on the left side of the routing matrix.

The outputs are shaded blue and are listed horizontally at the top of the matrix. The outputs are identified by the domain number and the name assigned to the output. The total number of outputs is labeled at the top of the AV routing matrix.

To scroll through the list of inputs on multiple Routing pages, use the scroll arrows on the right side of the AV routing matrix. To scroll through the list of outputs on multiple Routing pages, use the scroll arrows at the bottom of the AV routing matrix.

A Search box is provided in the upper-right corner above the AV routing matrix. Inputs and outputs can be found by searching for input names, output names, and other data related to the endpoints.

The Routing page provides the following routing controls:

 Signal type checkboxes: NAX (AES67 audio), NVX (HDMI or analog audio and HDMI video), and NUX (USB) checkboxes control whether the associated signal type can be routed or unrouted. If a signal type is to be routed or unrouted, the corresponding checkbox must be selected. If a checkbox is not selected, the associated signal type cannot be routed or unrouted. By default, the NVX checkbox is selected, enabling only audio/video to be routed or unrouted.

To route the signal types independently, select one checkbox at a time. To route more than one signal type at a time, select the checkboxes of all desired signal types.

## NOTES:

- At least one signal type checkbox must be selected.
- NUX (USB) data is supported by certain DM NVX endpoints only.
- **Matrix:** Navigation matrix located in the upper-left corner of the AV routing matrix. Enables quick navigation to a group of inputs and outputs within the global domain. The total number of rows (inputs) in the global domain is labeled in the lower-left corner below the navigation matrix, for example, Rows 10. The total number of columns (outputs) in the global domain is labeled in the upper right corner of the navigation matrix, for example, Columns 16.

Below the navigation matrix are **Rows** and **Columns** drop-down lists that specify the number of rows (inputs) and number of columns (outputs) to be displayed simultaneously on the Routing page.

By default, the **Rows** and **Columns** drop-down lists are set to **12**. To change the number of rows and columns that can be displayed on the Routing page simultaneously, click the corresponding drop-down list and then click one of the following: **12** (default setting), **16**, **24**, **36**, **48**, or **Custom**. If **Custom** is selected, enter the desired number of rows or columns.

A black outlined box in the navigation matrix represents the number of rows and columns currently displayed in the AV routing matrix. Clicking a white area outside of the black outlined box navigates to another group of rows and columns (if any) within the global domain.

• **Signal type icon buttons:** Represent the three signal types to be routed: **NAX**, **NVX**, and **NUX**. By default, the icon buttons are shaded gray indicating that the signal types are not routed.

When the signal types are routed, the icon buttons appear as follows:

 Solid purple icon represents routed DM NAX audio. The NAX checkbox at the top of the Routing page must be selected in order to route or unroute DM NAX audio. If the signal is unrouted, the icon is shaded gray (2).

**NOTE:** If the DM NAX audio icon continuously flashes purple, a routing problem exists, for example, a DM NVX endpoint is offline. The route cannot be made until the problem is resolved.

Isolid blue icon represents routed DM NVX audio/video, which consists of HDMI or analog audio and HDMI video. The NVX checkbox at the top of the Routing page must be selected in order to route or unroute HDMI or analog audio and HDMI video. If the signal is unrouted, the icon is shaded gray (I).

**NOTE:** If the DM NVX icon continuously flashes blue, a routing problem exists, for example, a DM NVX endpoint is offline. The route cannot be made until the problem is resolved.

• Solid orange icon represents routed DM NUX (USB) data from the DEVICE or HOST port of a DM NVX endpoint. The **NUX** checkbox at the top of the Routing page must be selected in order to route or unroute USB data. If the signal is unrouted, the icon is shaded gray (...).

## NOTES:

- If the DM NUX icon continuously flashes orange, a routing problem exists, for example, a DM NVX endpoint is offline. The route cannot be made until the problem is resolved.
- If a DM NVX endpoint does not provide USB data capability, the DM NUX icon is shaded gray and is empty—the icon does not include the USB symbol (
  ).
   Although the NUX checkbox may be selected, USB data cannot be routed for that DM NVX endpoint.

For each input and associated output, the three icon buttons are arranged horizontally in a single cell. Selecting the cell will route the signals based on the selected signal type checkboxes (discussed above). If the same signal type checkboxes are selected, selecting the cell a second time will unroute the corresponding signal types. If the same signal type checkboxes are not selected, selecting the cell a second time will unroute only the signal types whose checkboxes are selected.

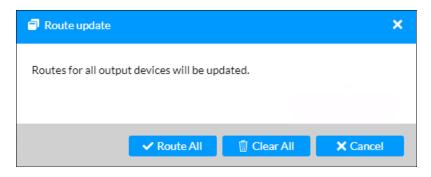
After any of the signal types have been unrouted in a cell and need to be routed again or for the first time, select the signal type checkboxes corresponding to the signal types and then select the cell.

• Route Update icon button (E): Green icon button that is located to the right of each input name, which is also shaded green.

**NOTE:** The Route Update icon button applies to DM NVX and DM NAX signal types only and does not apply to the DM NUX signal type.

When the **Route Update** icon button is selected, the **Route update** dialog box opens.

Route Update Dialog Box



To route signals based on the selected signal types (excluding **NUX**), clicking **Route All** routes the associated signal types from the input to all outputs. To clear the signal types for all outputs, click **Clear All**.

If the **NUX** signal type checkbox is selected, **NUX** is ignored when the **Route Update** dialog box is used to route or clear signals for all outputs.

The AV routing matrix also enables a signal routing map to be viewed for each input and output. To view the signal routing map for an input, click the input (shaded green). The signal routing map for the input is displayed.

#### Signal Routing Map Example for an Input

Routing	×
Input 1 - Laptop - Connected Receiver(s) (3 o	outputs)
Q. Search ×	
	Conference Display 1
	Conference Display 2
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	Lecture Hall 1
	✓ Close

To view the signal routing map for an output, click the output (shaded blue). The signal routing map for the output is displayed.

#### Signal Routing Map Example for an Output

© Routing			×
Output 1 - Confere Transmitter(s)	nce Display 1 - Co	onnected	
Q, Search ×			
1 Laptop —	DM-NVX-363C	O1920x1080 @ 60/Lpcm 2 Ch	-
4 Media Player —	DM-NVX-351C	- AE567	-
			✓ Close

To search for an input or output, enter the input or output name in the Search box located in the upperleft corner above the map. To close the signal routing map for an input or output, click **Close**.

# Modifying a Domain

After a domain is added to the DM NVX Director network appliance, the following links are provided for each domain in the navigation bar:

- Routing (refer to **Domain Routing**)
- Endpoint Map (refer to <a href="mailto:Domain Endpoint Map">Domain Endpoint Map</a>)
- Control System (refer to Domain Control System)

#### DM NVX Director Navigation Bar (Three Domains Shown)

CRESTRON.		? 🔕
DM NVX DIRECTOR Status Network Device Dashboard	DM-NVX-DIR-ENT	✓ Action ∨
Add Domain GLOBAL DOMAIN Routing		DM-NVX-DIR-ENT \$303786X7A25018
DOMAIN 1 (001) Routing Endpoint Map Control System	Firmware Version	
DOMAIN 2 (002) Routing Endpoint Map Control System	Link State	AC:1F:6B:1D:38:9C
DOMAIN 3 (003) Routing Endpoint Map Control System	IPv4 Subnet Mask IPv4 Default Gateway IPv4 DNS Server 1 IPv4 DNS Server 2	
	Domain Name Suffix	

Each of the links enables changes to be made to a domain on an individual basis.

## **Domain Routing**

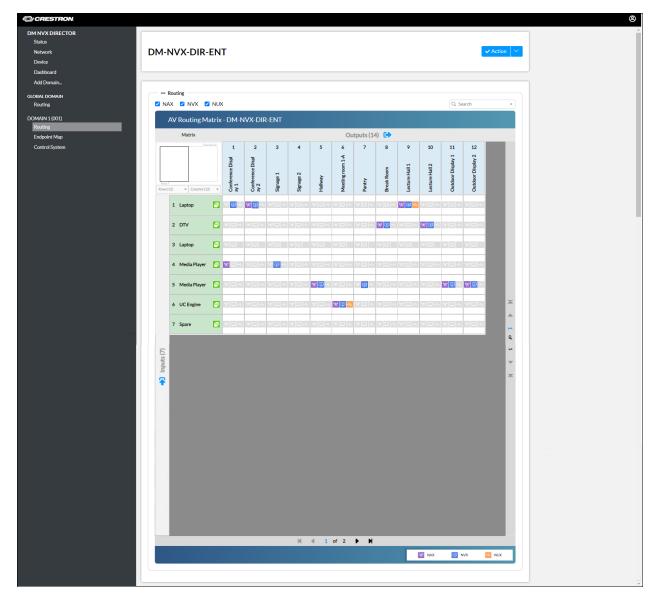
Domain routing enables inputs within a domain to be routed to outputs within the same domain only. Routing is accomplished for each domain on an individual basis.

**NOTE:** For information about interdomain routing, which enables inputs within a single domain to be routed to the outputs of one or more other domains, refer to Global Domain Routing.

To route inputs to outputs within a single domain:

In the navigation bar, go to the desired domain, and then click **Routing**. The Domain Routing page opens, providing an AV routing matrix for the desired domain within the network. Depending on the number of inputs and outputs being viewed simultaneously, multiple Domain Routing pages may result. In the example shown below, Domain Routing spans two pages.

**NOTE:** If Global Domain Routing is used for both routing within a single domain and interdomain routing, the Domain Routing page for a particular domain will only display the routes within that domain.



Domain Routing Page, 1 of 2 (Sample Page Shown)

#### Domain Routing Page, 2 of 2 (Sample Page Shown)

CRESTRON.						8
DM NVX DIRECTOR Status	AV Routing Matrix	- DM-NVX-DIR-ENT				^
Status Network	Matrix		Outputs (14) 🕞			
Device	Columna 14	13 14				
Dashboard						
Add Domain		play 1 play 2				
GLOBAL DOMAIN	Rows 7	Spare Display 1 Spare Display 2				
Routing	Rows (12) 👻 Columns (12) 💌	Ś Ś				
DOMAIN 1 (001) Routing	1 Laptop 📑	*				
Endpoint Map	2 DTV 📄	* - * -				
Control System						
	3 Laptop 📄					
	4 Media Player 🔁	* . * .				
	5 Media Player 📄					
	6 UC Engine 📑				×	
	7 Spare				-	
					of 1	
	(7) 2					
	J Inputs (7)				~	
	<b>*</b>				×	_
			H			
				NAX 💷 NVX 🔤 NU		
						Ŧ

Domain Routing provides an AV routing matrix consisting of inputs and outputs for a single domain. The inputs are shaded green and are listed vertically on the left side of the matrix. The inputs are identified by the domain number and the name assigned to the input. The total number of inputs is labeled on the left side of the routing matrix.

The outputs are shaded blue and are listed horizontally at the top of the matrix. The outputs are identified by the domain number and the name assigned to the output. The total number of outputs is labeled at the top of the AV routing matrix.

To scroll through the list of inputs on multiple Routing pages, use the scroll arrows on the right side of the AV routing matrix. To scroll through the list of outputs on multiple Routing pages, use the scroll arrows at the bottom of the AV routing matrix.

A Search box is provided in the upper-right corner above the AV routing matrix. Inputs and outputs can be found by searching for input names, output names, and other data related to the endpoints.

The Routing page provides the following routing controls:

 Signal type checkboxes: NAX(AES67 audio), NVX (HDMI or analog audio and HDMI video), and NUX (USB) checkboxes control whether the associated signal type can be routed or unrouted. If a signal type is to be routed or unrouted, the corresponding checkbox must be selected. If a checkbox is not selected, the associated signal type cannot be routed or unrouted. By default, the NVX checkbox is selected, enabling only audio/video to be routed or unrouted.

To route the signal types independently, select one checkbox at a time. To route more than one signal type at a time, select the checkboxes of all desired signal types.

## NOTES:

- At least one signal type checkbox must be selected.
- NUX (USB) data is supported by certain DM NVX endpoints only.
- Matrix: Navigation matrix located in the upper-left corner of the AV routing matrix. Enables quick
  navigation to a group of inputs and outputs within the domain. The total number of rows (inputs)
  in the domain is labeled in the lower-left corner below the navigation matrix, for example, Rows 7.
  The total number of columns (outputs) in the domain is labeled in the upper-right corner of the
  matrix, for example, Columns 14.

Below the navigation matrix are **Rows** and **Columns** drop-down lists that specify the number of rows (inputs) and number of columns (outputs) to be displayed simultaneously on the Routing page.

By default, the **Rows** and **Columns** drop-down lists are set to **12**. To change the number of rows and columns that can be displayed on the Routing page simultaneously, click the corresponding drop-down list and then click one of the following: **12** (default setting), **16**, **24**, **36**, **48**, or **Custom**. If **Custom** is selected, enter the desired number of rows or columns.

A black outlined box in the navigation matrix represents the number of rows and columns currently displayed in the AV routing matrix. Clicking a white area outside of the black outlined box navigates to another group of rows and columns (if any) within the domain.

• **Signal type icon buttons:** Represent the three signal types to be routed: **NAX**, **NVX**, and **NUX**. By default, the icon buttons are shaded gray indicating that the signal types are not routed.

When the signal types are routed, the icon buttons appear as follows:

• 🛛 : Solid purple icon represents DM NAX audio. The **NAX** checkbox at the top of the Routing page must be selected in order to route or unroute DM NAX audio. If the signal is unrouted, the icon is shaded gray (...).

**NOTE:** If the DM NAX audio icon continuously flashes purple, a routing problem exists, for example, a DM NVX endpoint is offline. The route cannot be made until the problem is resolved.

• E: Solid blue icon represents routed DM NVX audio/video, which consists of HDMI or analog audio and HDMI video. The **NVX** checkbox at the top of the Routing page must be selected in order to route or unroute HDMI or analog audio and HDMI video. If the signal is unrouted, the icon is shaded gray (E).

**NOTE:** If the DM NVX icon continuously flashes blue, a routing problem exists, for example, a DM NVX endpoint is offline. The route cannot be made until the problem is resolved.

Solid orange icon represents DM NUX (USB) data from the DEVICE or HOST port of a DM NVX endpoint. The NUX checkbox at the top of the Routing page must be selected in order to route or unroute USB data. If the signal is unrouted, the USB icon is shaded gray (
 ).

## NOTES:

- If the DM NUX icon continuously flashes orange, a routing problem exists, for example, a DM NVX endpoint is offline. The route cannot be made until the problem is resolved.
- If a DM NVX endpoint does not provide USB data capability, the DM NUX icon is shaded gray and is empty—the icon does not include the USB symbol (
  ). Although the **NUX** checkbox may be selected, USB data cannot be routed for that DM NVX endpoint.

For each input and associated output, the three icon buttons are arranged horizontally in a single cell. Selecting the cell will route the signals based on the selected signal type checkboxes (discussed above). If the same signal type checkboxes are selected, selecting the cell a second time will unroute the corresponding signal types. If the same signal type checkboxes are not selected, selecting the cell a second time will unroute only the signal types whose checkboxes are selected.

After any of the signal types have been unrouted in a cell and need to be routed again or for the first time, select the signal type checkboxes corresponding to the signal types and then select the cell.

• **Route Update icon button (**): Green icon button that is located to the right of each input name, which is also shaded green.

**NOTE:** The Route Update icon button applies to DM NVX and DM NAX signal types only and does not apply to the DM NUX signal type.

When the **Route Update** icon button is selected, the **Route update** dialog box opens.

#### Route Update Dialog Box

Route update		×
Routes for all output devices will be up	dated.	
		M Court
✓ Route All	🗊 Clear All	X Cancel

To route signals based on the selected signal types (excluding **NUX**), clicking **Route All** routes the associated signal types from the input to all outputs. To clear the signal types for all outputs, click **Clear All**.

If the **NUX** signal type checkbox is selected, **NUX** is ignored when the **Route Update** dialog box is used to route or clear USB signals for all outputs.

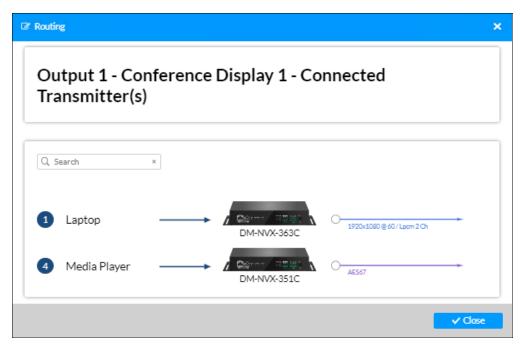
The AV routing matrix also provides a signal routing map for each input and output. To view the signal routing map for an input, select the input (shaded green). The signal routing map for the input is displayed.

#### Signal Routing Map Example for an Input

( Routing		×
Input 1 - Laptop - Conne	ected Receiver(s)	(3 outputs)
Q, Search ×		
O	1920x1080 @ 60 / Lpom 2 Ch	Conference Display 1
DM-NVX-350C	1920x1080 @ 60 / Lpcm 2 Ch	2 Conference Display 2
O	1920x1080 @ 60 / Lpcm 2 Ch	Lecture Hall 1
		✓ Close

To view the signal routing map for an output, select the output (shaded blue). The signal routing map for the output is displayed.

#### Signal Routing Map Example for an Output



To search for an input or output, enter the input or output name in the Search box located in the upperleft corner above the map. To close the signal routing map for an input or output, click **Close**.

## Domain Endpoint Map

After a domain is added and saved, the domain endpoint map can be modified as necessary for each domain on an individual basis. The domain can also be deleted if required.

**NOTE:** To simplify SIMPL programming of domains, it is recommended that domains be modified in the DM NVX Director web interface before being modified in the SIMPL program. The domain configuration in the web interface can then be referenced when modifying domains in the SIMPL program.

To modify a domain endpoint map using the DM NVX Director web interface:

In the navigation bar, go to the desired domain, and then click **Endpoint Map**. The Domain Endpoint Map page opens, providing the current configuration of the domain endpoint map.

ESTRON											
/X DIRECTOR # work ce	DM-NVX	(-DIR-EN	іт								✓ Action
~ board											
lomain_	- Endpoin	t Man									
XOMAIN 18											
1 (001)						e DOMAIN					
8 int Map					Domain Numb	er 1 : et 0 📫	Custom Mult				
l System						e 239.8.0.0-:		icot narge			
					Save Doma		we				
					Delete Doma	n 🕘 De	lete				
					Import Device M	p 🕹 Imp	port				
					Export Device M	p 📥 Exp	port				
					Credential Manageme	at 🧠 Mar	nage				
	Inputs	Out									
	Device Type Available Input	NVX Transmitter	<ul> <li>Replace De</li> </ul>	wice	Ø Refresh	Input Assi					0.0
	#	Capability	Model *	Hostname 🕈	IP Address \$	# *	Capability	Model \$	Name 🕻	IP Address 💲	w remove
	1	W 🗊 😽	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	192168.1.152	1	w 🖸 😽	DM-NVX-350C	Input 4	192.168.1.54	
	2	W 🕑 🔶	DM-NVX-350C	DM-NVX-350C-00107F9BaCE1	192168.1.104	2	9 🖸 <del>«</del>	DM-NVX-351C	Input 7	<u>192.168.1.124</u>	
	3	19 🐨 🍝	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.1.75</u>	3	97 C 🔶	DM-NVX-360C	Input 1	<u>192.168.1.110</u>	
	4	W 🖸 😽	DM-NVX-350C	DM-NVX-350C-00107F9B7040	<u>192168.1.198</u>	4	<b>*</b> 💿 🖘	DM-NVX-E20-2G	Input (2G)	<u>192.168.1.228</u>	
	5	17 🗉 🔦	DM-NVX-350C	DM-NVX-350C-00107F886C5E	<u>192168.1242</u>	5	<b>*</b> 🕘 🗠	DM-NVX-E760C	Input 2 (E760)	<u>192.168.1.82</u>	
	6	1 C	DM-NVX-350C	DM-NVX-350C-00107F9B6551	192168.1.21	6	* 💷 🔷	DM-NVX-363C	Input 2	192.168.1.8	
	7	18 🗉 🦘	DM-NVX-350C	DM-NVX-350C-00107F987A78	192168.1.132	7	<b>X</b> 🗆 🐟	DM-NVX-352C	Input 5	192.168.1.14	
	7	w 🗉 🍝	DM-NVX-350C	DM-NVX-350C-00107F987A78	<u>192.168.1.132</u>	7	× 🗊 <table-cell></table-cell>	DM-NVX-352C	Input 5	<u>192.168.1.14</u>	
	8	w 🗉 🔶	DM-NVX-351	DM-NVX-351-00107F8B98BA	<u>192.168.1.90</u>	8	10 10	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
	9	w 💿 🔶	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	<u>192.168.1.129</u>	9	7 I 4	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
	10	w 💿 🝝	DM-NVX-351C	DM-NVX-351C-00107F886691	192.168.1.164	10	7 E *	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
				<< ( 1+10 >> >>>>>>>>>>>>>>>>>>>>>>>>					( 1-10 v ) ))		
	Endpoints In-U Available Endpoints Total Endpoints	oints: 990								NAX 🖸 NVX	NUX
					Physic Assign via Setup Butte	i Assignment n 下 🔳 fi	or 5 🗘 Minut	es			

## Domain Endpoint Map Page (Sample Screen Shown for Domain 1)

**NOTE:** To save certain changes on the Endpoint Map page, a **Save** button is provided. Depending on the change that is being made, a message appears in red below the **Save** button, indicating that the change must be saved. To save one or more changes, click the **Save** button. Alternatively, **Save Changes** in the **Action** menu can be selected to save the changes.

Using the Domain Endpoint Map page, perform any of the following tasks as required:

- Modify domain identification and multicast information.
- Delete a domain.
- Import a device map.
- Export a device map.
- Manage credentials.
- Assign endpoints.

For information about saving changes, refer to <u>Saving Changes to an Existing Domain</u>.

## Modifying Domain Identification and Multicast Information

If required, modify any of the current domain identification and multicast information settings.

In the navigation bar, go to the domain for which domain identification or multicast information is to be modified, and then click **Endpoint Map**. The Domain Endpoint Map page opens.

Domain Endpoint Map Page - Sample Domain Identification and Multicast Information Settings

STRON												
IDIRECTOR	DM-NV	X-DIR-EN	IT									✓ Action
oard omain_												
OMAIN	- Endpol	int Map										
a a a a a a a a a a a a a a a a a a a					Dor	nain Name	DOMAIN 1			1		
1 (001) 8					Doma	in Number	1					
nt Map					Multic	cast Offset	0	Custom Multi	cast Range			
l System					Multi	cast Range	239.8.0.0 - 23	9.8.127.255				
					Sa	ve Domain	🔡 Save					
					Dele	te Domain	🕘 Deleb	e				
					Import D	levice Map	🏩 🥼 Impor	t				
						levice Map	📥 Expor	t				
					Credential Ma	anagement	9 ₄ Manag	je				
	Input: Device Type		puts All	an in								
	Available Inp		Kepistelo	ievite:	ØR	tefresh	Input Assign	ments				🗊 Remove
		Capability	Model *	Hostname \$	IP Address 💲		# *	Capability	Model \$	Name \$	IP Address 💲	
	1	17 🗉 🔫	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	192.168.1.152		1	W 🛛 🔶	DM-NVX-350C	Input 4	192.168.1.54	
	2	W 🗇 🍝	DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	192168.1.104		2	w 🛛 🍝	DM-NVX-351C	Input 7	192.168.1.124	
	3	W 🖸 🤫	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.1.75</u>		з	w 🖸 🍝	DM-NVX-360C	Input 1	<u>192.168.1.110</u>	
	4	W 🗉 🍝	DM-NVX-350C	DM-NVX-350C-00107F9B7040	<u>192168.1.198</u>		4	W 🖸 🌩	DM-NVX-E20-2G	Input (2G)	<u>192.168.1.228</u>	
	5	1 a a a a a a a a a a a a a a a a a a a	DM-NVX-350C	DM-NVX-350C-00107F8B6C5E	<u>192168.1242</u>		5	w 💽 🗠	DM-NVX-E760C	Input 2 (E760)	<u>192.168.1.82</u>	
	6	18 🗉 🐟	DM-NVX-350C	DM-NVX-350C-00107F9B6551	192.168.1.21		6	1 C 1	DM-NVX-363C	Input 2	<u>192.168.1.8</u>	
	7	18 🗉 🦘	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192.168.1.132		7	8	DM-NVX-352C	Input 5	<u>192.168.1.14</u>	
	7	w 🗉 😽	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	<u>192.168.1.132</u>		7	W 🗉 🗠	DM-NVX-352C	Input 5	<u>192.168.1.14</u>	
	8	w 🖸 🔶	DM-NVX-351	DM-NVX-351-00107F8B98BA	<u>192168.1.90</u>		8	21日ま	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
	9	w 💿 🔶	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	<u>192.168.1.129</u>		9	W 🗉 🗢	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
	10	w 💿 🍝	DM-NVX-351C	DM-NVX-351C-00107F8B6691	<u>192.168.1.164</u>		10	7 I +	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
				(( 1-10 - ) ))						( 1+10 - v ) >>>		
	Endpoints In- Available End Total Endpoin	points: 990									NAX 🗊 NVX	NUX
						Physical A		_				
					Assign via Set	tup Button	🔰 🔳 for	5 🛟 Minute	s			

For information about domain identification and multicast settings, refer to <u>Entering Domain</u> Identification and Multicast Information in the Adding a Domain section of this manual.

## Deleting a Domain

To delete a domain:

1. In the navigation bar, go to the domain to be deleted and then click **Endpoint Map**. The Domain Endpoint Map page opens.

CRESTRON										
MINVX DIRECTOR Status Network Device	DM-NVX-DIR-I	ENT								✓ Action
Dashboard										
Add Domain										
LOBAL DOMAIN	- Endpoint Map									
Routing				Domain Nan	ne DOMAI	N 1				
OMAIN 1 (001) Routing				Domain Numb	er 1					
Endpoint Map						Custom Mi				
Control System							iocast Kange			
						- 239.8.127.255				
				Save Doma	in 8	Save				
				Delete Doma	ein 👘 🛈 I	Delete				
				Import Device M	ap 🔔	mport				
				Export Device M	ap 🔔	Export				
				Credential Manageme		fanage				
				Grevencer Mattagette						
		Outputs All								
	Device Type NVX Transm	itter v Roplace	Device							
	Available Inputs			Ø Refresh		signments				Remove
	# Capability	Model *	Hostname 🛊	IP Address 💲	**	Capability	Model \$	Name \$	IP Address 💲	
	1 👷 🔿 😽	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	192.168.1.152	1	w 🗉 😽	DM-NVX-350C	Input 4	<u>192.168.1.54</u>	
	2 👷 😨 😽	DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	<u>192168.1.104</u>	2	w 💷 🍝	DM-NVX-351C	Input 7	<u>192 168 1.124</u>	
	3 🕅 🔤 🥌	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.1.75</u>	3	w 🗷 🍝	DM-NVX-360C	Input 1	<u>192 168 1.110</u>	
	4 🕅 🖾 🗠	DM-NVX-350C	DM-NVX-350C-00107F9B7040	<u>192168.1.198</u>	4	<b>x</b> 🙂 🗠	DM-NVX-E20-2G	Input (2G)	<u>192 168 1 228</u>	
	5 🕅 🔍 🗠	DM-NVX-350C	DM-NVX-350C-00107F8B6C5E	192168.1.242	5	<b>X</b> 🙂 🗠	DM-NVX-E760C	Input 2 (E760)	<u>192.168.1.82</u>	
	6 🕅 🖾 🗠	DM-NVX-350C	DM-NVX-350C-00107F9B6551	<u>192.168.1.21</u>	6	<b>** 🗉 </b>	DM-NVX-363C	Input 2	192.168.1.8	
	7 👷 🖾 😽	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	<u>192168.1.132</u>	7		DM-NVX-352C	Input 5	<u>192.168.1.14</u>	
	7 👷 🖸 😽		DM-NVX-350C-00107F9B7A7B	<u>192 168.1.132</u>	7		DM-NVX-352C	Input 5	192.168.1.14	
	8 🕅 🖾 🛩		DM-NVX-351-00107F8B98BA	192.168.1.90	8			DM-NVX-351-Placeholder	•	
	9 🕅 🗇 🗠		DM-NVX-351C-00107F8B2E7C	192168.1.129	9	10 4		DM-NVX-351-Placeholder	•	
	10 🕅 📼 🔫	DM-NVX-351C	DM-NVX-351C-00107F886691	192108.1104	10	17 C 4		DM-NVX-351-Placeholder	•	
	Endpoints In-Use: 10 Available Endpoints: 990 Total Endpoints: 1000								NAX 🙂 NVX	NUX
				Physic	al Assignment					
				Assign via Setup Butto	on 📘 🔳	for 5 🛟 Min	ites			

Domain Endpoint Map Page - Sample Screen Shown for Domain 1

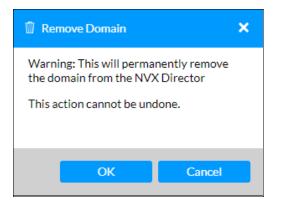
2. Click the **Delete** button.

#### Endpoint Map Page - Delete Domain

CRESTRON.		? 🕲
DM NVX DIRECTOR Status Network Device Dashboard	DM-NVX-DIR-ENT	✓ Action ✓
Add Domain_ GLOBAL DOMAIN Routing	- Endpoint Map	
DOMAIN 1 (001) Routing	Domain Name DOMAN 1 Domain Number 1	
Endpoint Map Control System	Multitast Offset 0 Custom Multitast Range Multitast Range 228.8.00-139.8.127.255	
	See Domin	
	Delete Domain G Datate	
	Import Levice Map 🕹 Export	
	Credential Management 9, Manage Menutis Outputs All	
	Derks Nys NX traunter v Region Devis Available Input	C Remove
	Capability Model * Hostname      PAddress :     PAddress :     PAddress :	
	1 DMAN/X30C DMAN/X30C/00079979CF 122181152 1 DMAN/X30C Input 4 12218155	
	2 2 DMM/X33C DMM/X33CC0107796CE1 12161134 2 2 DMM/X35C input 7 192163134	

The **Remove Domain** dialog box opens, providing a warning that the domain will be permanently removed.

## Remove Domain Dialog Box



3. Click **OK** to delete the domain.

## Importing a Device Map

A device map can be imported on an existing Domain Endpoint Map page that does not include a domain configuration of input and output assignments.

**CAUTION:** If the Domain Endpoint Map page already includes a domain configuration of input and output assignments, importing a device map will replace the existing configuration.

To import a device map on the Domain Endpoint Map page:

 In the navigation bar, go to the domain for which a device map is to be imported and then click Endpoint Map. The Domain Endpoint Map page opens.

Domain Endpoint Map Page (Sample Screen Shown Without Input and Output Assignments)

CRESTRON.				? <b>Ø</b>
DM NVX DIRECTOR Status Network Device Dashboard Add Domain_	DM-NVX-DIR-ENT			Action
GLOBAL DOMAIN	— Endpoint Map			
Routing		Densis Marca	DOMAIN 1	
DOMAIN 1 (001)		Domain Name		
Routing Endpoint Map		Domain Number	1	
Control System		Multicast Offset	0 Custom Multicast Range	
		-	239.8.0.0 - 239.8.127.255	
		Save Domain	🖺 Save	
		Delete Domain	😰 Delete	
		Import Device Map	2 Import	
		Export Device Map	📥 Export	
		Credential Management	Q Manage	
	Inputs Outputs All			
	Input Assignments	Select All	Output Assignments	Select All
	# ^ Capability Model + Name +	IP Address 🕈	# * Capability Model * Name *	IP Address
				ß
	No Records Found		No Records Found	

2. Click the **Import** button.

#### Domain Endpoint Map Page - Import Device Map

CRESTRON				? 🕲
DM NVX DIRECTOR Status Network Device Dashboard	DM-NVX-DIR-ENT			✓ Action ×
Add Domain GLOBAL DOMAIN Routing	— Endpoint Map			
DOMAIN 1 (001)		Domain Name	DOMAIN 1	
Routing Endpoint Map		Domain Number	1	
Control System		Multicast Offset	0 Custom Multicast Range	
			239.8.0.0 - 239.8.127.255	
		Save Domain	Save	
		Delete Domain	1 Delete	
		Import Device Map	1 Import	
		Export Device Map	📥 Export	
		Credential Management	At Manage	
	Inputs Outputs All			
	Input Assignments	Select All	Output Assignments	Select All
	# * Capability Model \$ Name \$	IP Address 💲	# * Capability Model \$ Name \$	IP Address 💠
				ß
	No Records Fe	ound	No Records Fou	nd
				~~~~~~~~

File Explorer opens.

3. Navigate to the location of the device map file that is to be imported, and then click **Open**.

The device map is imported into the domain. DM NVX transmitter endpoints are automatically added to the **Input Assignments** table, and DM NVX receiver endpoints are automatically added to the **Output Assignments** table.

NOTE: If the device map file is formatted incorrectly, it will not be accepted by the DM NVX Director network appliance.

Exporting a Device Map

A device map consists of a DM NVX Director domain configuration that can be imported or exported an .xml file. A device map can be exported to your computer to provide a backup of a current domain configuration or for use by a replacement DM NVX Director network appliance if necessary.

To export a device map:

 In the navigation bar, go to the domain from which the device map is to be exported and then click Endpoint Map. The Domain Endpoint Map page opens.

CRESTRON														?
DM NVX DIRECTOR Status Network Device Dashboard	DM-NVX	-DIR-EN	т									I	✓ Action \	
Add Domain														
GLOBAL DOMAIN	- Endpoint	Map												
Routing														
DOMAIN 1 (001)							DOMAIN 1							
Routing					Domain Nun	nber 1	1							
Endpoint Map Control System					Multicast O	ffset (0	Custom Multi	cast Range					
					Multicast Ra	ange 2	39.8.0.0 - 23	9.8.127.255						
					Save Dor	main	🔡 Save							
					Delete Dor	main	Delet	ie in the second second second second second second second second second second second second second second se						
					Import Device	Man	₫, Impo	+						
					Export Device		🛓 Expo							
					Credential Manager	nent	9 ₆ Manaj	Be						
	Inputs	Out												
	Device Type	NVX Transmitter	 Replace D 	evice										
	Available Input	3			Ø Refrest	h I	Input Assign	ments					D Remove	
		Capability	Model *	Hostname 🕈	IP Address 💲		**	Capability	Model 🗘	Name \$	IP	Address 🕻		
	1	w 🗉 😽	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	<u>192.168.1.152</u>		1	* 🛛 😽	DM-NVX-350C	Input 4	<u>19</u>	2168.1.54		
	2	w 🗉 🍝	DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	192168:1104		2	w 🗉 😽	DM-NVX-351C	Input 7	193	2.168.1.124		
	3	11 3 45	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.175</u>		3	99 🙂 🔶	DM-NVX-360C	Input 1	<u>19</u>	2.168.1.110		
	4	17 C 🔸	DM-NVX-350C	DM-NVX-350C-00107F987040	<u>192.168.1.198</u>		4	18 C	DM-NVX-E20-2G	Input (2G)	<u>19</u>	2 168 1 228		
	5	1	DM-NVX-350C	DM-NVX-350C-00107F8B6C5E	<u>1921681242</u>		5	R 💿 🗠	DM-NVX-E760C	Input 2 (E760)	<u>19</u>	2.168.1.82		
	6	10 10	DM-NVX-350C	DM-NVX-350G-00107F9B6551	192168.1.21		6	19 1	DM-NVX-363C	Input 2	19	2168.1.8		
	7	W 🗆 😽	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	<u>1921681132</u>		7	19 1	DM-NVX-352C	Input 5	19	2168.1.14		
	7	W 🗉 🍾	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	<u>192168.1.132</u>		7	** 🗊 ∾	DM-NVX-352C	Input 5	<u>192</u>	168.1.14	_	
	8	w 🗉 🔸	DM-NVX-351	DM-NVX-351-00107F8B98BA	192.168.1.90		8	そ 田 を	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder				
	9	W 🖸 🍝	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	192168.1.129		9	19 m	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder				
	10	W 🖸 🍝	DM-NVX-351C	DM-NVX-351C-00107F8B6691	<u>1921681164</u>		10	※ 回々	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder				
				<< (1-10 +) >>>						(02+1)				
	Endpoints In-Us Available Endpo Total Endpoints	oints: 990									X NAX	INVX	NUX	
					Phys	sical Assig	poment							
					Assign via Setup Bu			5 🔅 Minute	s					

Domain Endpoint Map Page (Sample Screen Shown for Domain 1)

2. Click the **Export** button.

Domain Endpoint Map Page - Export Device Map

CRESTRON.												1	? 🕲
DM NVX DIRECTOR Status													٦ Â
Network	DM-NVX	(-DIR-EN	T									✓ Action	
Device Dashboard													
Add Domain_													
GLOBAL DOMAIN	- Endpoin	it Map											
Routing					Domain Nar	ne	DOMAIN 1						
DOMAIN 1 (001)					Domain Numb								
Routing Endpoint Map													
Control System					Multicast Offs			Custom Multi	ast Range				
·					Multicast Ran								
					Save Doma		🔡 Save						
					Delete Doma	in	Delete						
					Import Device M	ap	2. Impor	:		6			
					Export Device M	ap	📥 Expor	-		- •			
					Credential Manageme	nt	4 Manag	e					
	Inputs	Out	puts All					-					
	Device Type	NVX Transmitter	 Replace Devi 	ice									
	Available Inpu				Ø Refresh		Input Assignr	nents				Remove	
		Capability	Model *	Hostname \$	IP Address \$	ī.	÷*	Capability	Model \$	Name \$	IP Address 🛊		
	1	W 🕑 🔫	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	<u>192.168.1.152</u>	L	1	w 🗉 🍝	DM-NVX-350C	Input 4	192.168.1.54		
	2	W 🛛 🔶	DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	192108.1.104		2	y 🛛 🍝	DM-NVX-351C	Input 7	192.168.1.124		
	3	W 🛛 🔶	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192.168.1.75</u>		3	w 🛛 🍝	DM-NVX-360C	Input 1	<u>192.168.1.110</u>		
	4	19 (DM-NVX-350C	DM-NVX-350C-00107F9B7040	<u>192.168.1.198</u>		4	99 C 4	DM-NVX-E20-2G	Input (2G)	192.168.1.228		
	5	W 💷 🦘	DM-NVX-350C	DM-NVX-350C-00107F886C5E	192108.1.242		5	X 🖸 🗢	DM-NVX-E760C	Input 2 (E760)	<u>192.168.1.82</u>		
	6	1	DM-NVX-350C	DM-NVX-350C-00107F9B6551	192.168.1.21	1	6	*	DM-NVX-363C	Input 2	192.168.1.8		
	7	1 D 🔸	DM-NVX-350C	DM-NVX-350C-00107F987A7B	192168.1.132		7	80 0	DM-NVX-352C	Input 5	192.168.1.14		
	7	19 💌 🍝	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192.168.1.132		7	W 🛛 ∾	DM-NVX-352C	Input 5	<u>192.168.1.14</u>		
	8	W 🗉 😽	DM-NVX-351	DM-NVX-351-00107F8898BA	<u>192.168.1.90</u>		8	を 田 水	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder			
	9	w 💿 😽	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	<u>192168.1.129</u>		9	19 m	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder			
	10	W 🖸 🍝	DM-NVX-351C	DM-NVX-351C-00107F886691	192.168.1.164		10	19 H	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder	•		
				<pre>((1-10 *)))</pre>						< 1+10 · · >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>			
	Endpoints In-U Available Endp Total Endpoint	points: 990									NAX 📴 NVX	NUX 💽	
					Physic	al Assi	gnment						
					Assign via Setup Butto	on	🕨 🔳 for	5 🔅 Minute					

The device map is downloaded to the **Downloads** folder of your computer.

Managing Credentials

For security purposes, the password of all endpoints in a domain can be changed. Alternatively, a new user account can be created.

To change the password or to create a new user account:

1. In the navigation bar, go to the desired domain and then click **Endpoint Map**. The Domain Endpoint Map page opens.

Domain Endpoint Map Page (Sample Screen Shown for Domain 1)

CRESTRON											
DM NVX DIRECTOR Status Network Device Desiboard	DM-NVX-DIR-	ENT									✓ Action ✓
Add Domain	- Endpoint Map										
OBAL DOMAIN Routing	chuponic mep										
MAIN 1 (001)				Domain Name							
Routing Endpoint Map				Domain Number							
Control System						Custom Mult	lcast Range				
				Multicast Range Save Domain							
				Delete Domain							
				Import Device Map							
				Export Device Map							
				Credential Management							
	_	Outputs All		Credential Management	e Man	age					
	Device Type NVX Trans		Device								
	Available Inputs			Ø Refresh	Input Assig	nments					D Remove
	# Capabili	ty Model *	Hostname 🛊	IP Address 💲	**	Capability	Model \$	Name \$	I	Address 🕻	_
	1 🗰 🖬	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	192108.1.152	1	w 💿 😽	DM-NVX-350C	Input 4	<u>19</u>	2.168.1.54	
	2 🐙 🖾 🖥	DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	192168.1.104	2	w 💿 🍝	DM-NVX-351C	Input 7	<u>19</u>	2.168.1.124	
	3 🗰 💷 -	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.1.75</u>	3	12 10 10	DM-NVX-360C	Input 1	<u>19</u>	2.168.1.110	
	4 👷 🖸 -	DM-NVX-350C	DM-NVX-350C-00107F9B7040	192168.1.198	4	19 ()	DM-NVX-E20-2G	Input (2G)	<u>19</u>	2 168 1 228	
	5 💓 💷	DM-NVX-350C	DM-NVX-350C-00107F886C5E	192168.1.242	5	X 💿 🗠	DM-NVX-E760C	Input 2 (E760)	<u>19</u>	2.168.1.82	
	6 🔣 🖾	DM-NVX-350C	DM-NVX-350C-00107F9B6551	192168.1.21	6	191	DM-NVX-363C	Input 2	19	2168.1.8	
	7 🕅 💷	DM-NVX-350C	DM-NVX-350C-00107F987A78	192.168.1.132	7	w 💷 🔨	DM-NVX-352C	Input 5		2.168.1.14	
	7 😿 🖸	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192.168.1.132	7	1 (C) (C) (C) (C) (C) (C) (C) (C) (C) (C)	DM-NVX-352C	Input 5	<u>19</u>	2.168.1.14	
	8 👿 🖬		DM-NVX-351-00107F8B98BA	192168.1.90	8	W 🗉 👳		DM-NVX-351-Placeholder			
	9 👿 🖬		DM-NVX-351C-00107F8B2E7C	192168.1.129	9	W 🗉 👳		DM-NVX-351-Placeholder	•		_
	10 😿 🖾 🖻	DM-NVX-351C	DM-NVX-351C-00107F886691	<u>192168.1.164</u>	10	21日本		DM-NVX-351-Placeholder	-		
	Endpoints In-Use: 10 Available Endpoints: 990 Total Endpoints: 1000								MAX NAX	D N/X	NUX
				Physical A	Assignment	r 5 🛟 Minut	82				

2. Click the **Manage** button.

Domain Endpoint Map Page - Credential Management

CRESTRON													
INVX DIRECTOR Itatus Network Device Dashboard	DM-NVX	-DIR-EN	Т										✓ Action \
Add Domain													
BAL DOMAIN Routing	- Endpoint	Мар											
MAIN 1 (001)					Domain Name								
touting Indpoint Map					Domain Number								
ontrol System					Multicast Offse Multicast Range			Custom Multi	cast Range				
					Save Domain		L Save	0.12/.235					
					Delete Domain		Delete						
					Import Device Map	• 💼	ž. Import			€3			
					Export Device Map	•	🛓 Export			45			
					Credential Managemen	t 🧖	k Manage						
	Inputs	Outp	uts All		-								
	Device Type		• Replace 0	Device									
	Available Inputs	Capability	Model *	Hostname \$	C Refresh	input	t Assignm	ents Capability	Model \$	Name 🕻		IP Address 💲	Remove
	1	w 🗉 😽	DM-NVX-350C	DM-NVX-350C-00107F9879CF	192168.1.152		1	w 🗉 🍝	DM-NVX-350C	Input 4		192.168.1.54	
	2	W 🖸 😽	DM-NVX-350C	DM-NVX-350C-00107F986CE1	192168.1.104		2	y 🗊 🍝	DM-NVX-351C	Input 7		192.168.1.124	
	3	v 🗉 😽	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.1.75</u>		3	¥ 🛛 🔶	DM-NVX-360C	Input 1		<u>192.168.1.110</u>	
	4	17 💷 😽	DM-NVX-350C	DM-NVX-350C-00107F9B7040	192.168.1.198		4	X 0 ~	DM-NVX-E20-2G	Input (2G)		<u>192.168.1.228</u>	
	5	19 III 10	DM-NVX-350C	DM-NVX-350C-00107F8B6C5E	<u>192168.1242</u>		5	* •	DM-NVX-E760C	Input 2 (E760)		<u>192.168.1.82</u>	
	6	18 💷 🐟	DM-NVX-350C	DM-NVX-350C-00107F986551	192168.1.21		6	*	DM-NVX-363C	Input 2		192.168.1.8	
	7	19 10 10	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192.168.1.132		7	20	DM-NVX-352C	Input 5		192.168.1.14	
	7	v 🗉 🔸	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192168.1.132		7	**	DM-NVX-352C	Input 5		<u>192.168.1.14</u>	
	8	* •	DM-NVX-351	DM-NVX-351-00107F8898BA	192168.1.90		8	*	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder			
	9	w 🗉 😽	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	<u>192168.1.129</u>		9	1	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder			
	10	¥ 🖸 😽	DM-NVX-351C	DM-NVX-351C-00107F8B6691	<u>192168.1164</u>		10	7 O *	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder			
				<< (1-10 v > >>						(1-10 · ·)))			
	Endpoints In-Us Available Endpoi Total Endpoints:	ints: 990									MAX 1	I NVX	NUX
					Diversity	Assignme	ent						
					Assign via Setup Buttor			5 🛟 Minute					

The **Change Domain Password** dialog box opens.

Change Domain Password Dialog Box

Change D	omain Passwo	rd				×
			Name	admin		
			Password			
			Confirm Password			
	Domain 🛊	# 🔹	Name 🛊	Model 🛊	IP Address 🛔	
	1	TX 2	Input 1	DM-NVX-360C	<u>192.168.1.110</u>	
	1	TX 3	Input 2	DM-NVX-363C	<u>192.168.1.8</u>	
	1	TX 4	Input 2 (E760)	DM-NVX-E760C	<u>192.168.1.82</u>	
	1	TX 5	Input 3	DM-NVX-E30C	<u>192.168.1.17</u>	
			I	3 ▶ ₩		
					ОК	Cancel

The **Change Domain Password** dialog box provides a table listing all DM NVX endpoints in the domain. For each endpoint, the following information is provided:

- **Domain:** Displays the domain number to which the endpoints are assigned
- **#:** For a transmitter, indicates **TX** followed by a number indicating the order in which the transmitter was added to the domain. For a receiver, indicates **RX** followed by a number indicating the order in which the receiver was added to the domain.

To list the endpoints based on the ascending or descending alphanumeric order of the designations in the **#** column, use the scroll arrows to the right of the **#** heading.

• Name: Indicates the device name assigned to the endpoint.

To list the endpoints based on the ascending or descending alphanumeric order of the names, use the scroll arrows to the right of the **Name** heading.

• **Model:** Indicates the model name of the endpoint.

To list the endpoints based on the ascending or descending alphanumeric order of the model names, use the scroll arrows to the right of the **Model** heading.

• **IP Address:** Indicates the IP address of the endpoint. Clicking the IP address provides access to the web interface of the endpoint.

To list the devices based on the ascending or descending numerical order of the IP address, use the scroll arrows to the right of the **IP Address** heading.

Four DM NVX endpoints are listed at a time. All DM NVX endpoints in the table can be viewed by using the scroll arrows at the bottom of the table to navigate through the list of endpoints.

- 3. Change the username and password of all DM NVX endpoints in the domain as required:
 - a. In the **Name** text box, modify the current username if required. The username is not case sensitive.
 - b. In the **Password** text box, enter a new password using a minimum of 8 characters. The password is case sensitive.
 - c. In the **Confirm Password** text box, reenter the password for confirmation.
 - d. Click OK.

NOTE: If, for some reason, an error occurs relating to credentials for a particular DM NVX endpoint, click the IP address of the endpoint and set the credentials using the web interface of the endpoint. The DM NVX Director network appliance is blocked from accessing the endpoint for 24 hours. To remove the block and enable the DM NVX Director network appliance to access the endpoint, issue the following console command from the endpoint:

remblockedip all

Assigning Endpoints

After a domain has been added and saved, additional endpoints can be assigned to the endpoint map as required.

To assign endpoints to an existing endpoint map of a domain:

In the navigation bar, go to the desired domain and then click **Endpoint Map**. The Domain Endpoint Map page opens.

Domain Endpoint Map Page (Sample Screen Shown for Domain 1)

DIRECTOR											
	DM-NV	X-DIR-EN	п								✓ Action
rd nain_											
MAIN	— — Endpo	int Map									
(001)					Domain Name	DOMAIN 1					
(001)					Domain Number	1					
: Map System					Multicast Offset	•	Custom Mult	cast Range			
					Multicast Range	239.8.0.0 - 23	39.8.127.255				
					Save Domain	🛄 Sav	9				
					Delete Domain						
					Import Device Map						
					Export Device Map						
				_	Credential Management	Re Mana	28e				
	Input Device Type	Out NVX Transmitter	Puts All	eráre							
	Available Inp				Ø Refresh	Input Assign	nments				C Remove
		Capability	Model *	Hostname 🕈	IP Address 🗘	**	Capability	Model 🕻	Name \$	IP Address 💲	
	1	W 🗉 😽	DM-NVX-350C	DM-NVX-350C-00107F9B79CF	192.168.1.152	1	w 🛛 😽	DM-NVX-350C	Input 4	192.168.1.54	
	2	₩ 🗷 🛩	DM-NVX-350C	DM-NVX-350C-00107F9B6CE1	192168.1.104	2	*	DM-NVX-351C	Input 7	192.168.1.124	
	3	恢 🖸 🍝	DM-NVX-350C	DM-NVX-350C-00107F9B70C4	<u>192168.175</u>	з	w 🖸 🍝	DM-NVX-360C	Input 1	<u>192.168.1.110</u>	
	4	17 🗷 😽	DM-NVX-350C	DM-NVX-350C-00107F987040	192168.1.198	4	19 ()	DM-NVX-E20-2G	Input (2G)	<u>192.168.1.228</u>	
	5	11	DM-NVX-350C	DM-NVX-350C-00107F886C5E	192168.1242	5	X 0 ~	DM-NVX-E760C	Input 2 (E760)	<u>192.168.1.82</u>	
	6	1 I I I I I I I I I I I I I I I I I I I	DM-NVX-350C	DM-NVX-350C-00107F9B6551	192168.1.21	6	1 I I I I I I I I I I I I I I I I I I I	DM-NVX-363C	Input 2	192.168.1.8	
	7	w 🗉 😽	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192168.1.132	7	X	DM-NVX-352C	Input 5	<u>192168.1.14</u>	
	7	19 D 10	DM-NVX-350C	DM-NVX-350C-00107F9B7A7B	192.168.1.132	7	19 🐨 🐟	DM-NVX-352C	Input 5	<u>192.168.1.14</u>	
	8	w 💿 😽	DM-NVX-351	DM-NVX-351-00107F88988A	<u>192168.1.90</u>	8	17 E 4	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder		
	9	w 💿 😽	DM-NVX-351C	DM-NVX-351C-00107F8B2E7C	<u>192 168.1.129</u>	9	W 🗉 👳	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder	-	
	10	19 I I I I I I I I I I I I I I I I I I I	DM-NVX-351C	DM-NVX-351C-00107F8B6691	<u>192 168.1 164</u>	10	¥ 🗆 🔶	DM-NVX-351-Placeholder	DM-NVX-351-Placeholder	-	
				<< < 1-10 → >>>					((1+10 - v)))		
	Endpoints In- Available End Total Endpoir	points: 990								NAX 📴 NVX	NUX 😽
					Physical Assign via Setup Button	Assignment	. 5 🚺 Minus				
					Assign via betup Button		P Minut				

The steps necessary to add endpoints on the Domain Endpoint Map page are the same as when assigning endpoints on the Add Domain page. Refer to <u>Assigning Endpoints in the Endpoint Map</u> and <u>Assigning Endpoints Using the Setup Button in the Adding a Domain section for additional information</u>.

In addition, the following tasks that can be performed on the Add Domain page can also be performed on the Domain Endpoint Map page:

- Removing an endpoint.
- Replacing an endpoint.

- Viewing input and output assignments simultaneously.
- Viewing endpoint statistics.

Saving Changes to an Existing Domain

To save changes to an existing domain:

1. Click the **Save** button to save the domain. (Alternatively, clicking **Save Changes** in the **Action** menu will also save the changes.)

A **Confirmation** dialog box opens, prompting for confirmation that the domain be saved.

Confirmation Dialog Box for Saving the Domain

🗸 Cor	nfirmation	×
-	ou sure you want to name=DOMAIN 1	
	✔ ОК	X Cancel

2. Click **OK** to save the domain.

If additional endpoints have been assigned to the domain, the **Manage Device Credentials** dialog box opens.

🕼 Manage 🛙	Device Crea	dentials			×
		I	urrent credentials for all new endpoints Name sword Default credentials (admin/admin) account	or no user	
		IP Address	Host Name	Status	
		<u>192.168.1.64</u>	DM-NVX-350C-DEADBEEF1234	ONLINE	
		<u>192.168.1.228</u>	ILLYA-NVX-E20-2G-00107FF476A0	ONLINE	
		М			
			-	ОК	Cancel

Manage Device Credentials Dialog Box

By default, the **Default credentials (admin/admin) or no user account** checkbox is selected. The checkbox of all newly added DM NVX endpoints is also selected.

Four DM NVX endpoints are listed at a time. All endpoints in the table can be viewed by using the scroll arrows at the bottom of the table. The IP address, host name, and status (ONLINE or OFFLINE) of each DM NVX endpoint is displayed. Clicking the IP address provides access to the web interface of the endpoint.

NOTE: Do not deselect the checkbox of any of the DM NVX endpoints listed in the table. The same credentials must be used for all DM NVX endpoints in the domain.

- 3. To be able to use the current credentials for all DM NVX endpoints listed in the table, do either of the following:
 - For DM NVX endpoints using **admin/admin** as the default credentials or no user account, ensure that the **Default credentials (admin/admin) or no user account** checkbox is selected (default setting), and then continue with step 6.
 - For DM NVX endpoints with an existing user account, deselect the **Default credentials** (admin/admin) or no user account checkbox, enter the username and password, and then continue with step 4.
- 4. Click **OK** to assign the credentials to the DM NVX endpoints.

NOTE: If, for some reason, an error occurs relating to credentials for a particular DM NVX endpoint, click the IP address of the endpoint and set the username and password using the web interface of the endpoint. The DM NVX Director network appliance is blocked from accessing the endpoint for 24 hours. To remove the block and enable the DM NVX Director network appliance to access the endpoint, issue the following console command from the endpoint:

remblockedip all

The **Save Domain** dialog box opens. If additional endpoints were added to the domain, the dialog box indicates that the devices are being configured and assigned. To indicate that changes to the domain are saved, the dialog box indicates that the configuration is complete.

Save Domain Dialog Box - Complete

Save Domain	×
Configuration complete.	
100%	
	ОК

5. Click **OK** to close the dialog box.

Domain Control System

A single control system, referred to as the Global Control System, can be assigned to all domains simultaneously in the **Control System** section of the Device page. In addition, support of multiple control systems enables the Global Control System or another control system, referred to as a Domain Control System, to be assigned to each domain on an individual basis.

To assign a control system to a domain on an individual basis:

1. In the navigation bar, go to the desired domain and then click **Control System**.

CRESTRON						
DM NVX DIRECTOR						
Status						
Network	DM-NVX-DIR-EN	Т				✓ Save Changes
Device						
Dashboard						
Add Domain						
OBAL DOMAIN	- Domain Control System					
Routing			Use Global Control 5	System		
DMAIN 1 (001)			Use Domain Contro	l System		
Routing			Use Custom Endpoin	nt IP ID		
Endpoint Map						
Control System	IP Table					
OMAIN 2 (125)		IPID	IP Address/Hostname	Room ID	Status	
Routing		U III		Room ID		
		09 ~	192.168.1.1	0	ONLINE	
Endpoint Map						

- 2. Click one of the following radio buttons:
 - Use Global Control System: Enables the Global Control System specified in the Device > Control System section of the web interface to be used. When assigning control systems on an individual basis, the Global Control System can be used for one or more domains.
 - Use Domain Control System: Enables a control system other than the Global Control System to be used. If Use Domain Control System is selected, configure the following:
 - **IPID:** In the drop-down list, click the desired IP ID for the domain.
 - **Address:** Enter the IP address of the Domain Control System. The IP address must be different from the IP address of the Global Control System and must be unique for each domain.

• Use Custom Endpoint IP ID: Forces all connected DM NVX endpoint IP IDs to be configured locally. The IP ID of the DM NVX Director device will not be applied to any of the connected endpoints, and all endpoints will have to be configured manually.

CAUTION: Use this mode only if specifically required. Either **Use Global Control System** or **Use Domain Control System** will allow the DM NVX Director device to assign IP IDs more efficiently, and will save those IP IDs as part of the device configuration file. Losing communications to the DM NVX Director in either of these modes does not lead to losing communications with the connected endpoints. In **Use Custom Endpoint IP ID** mode:

- The IP IDs of the individual devices are not saved in the DM NVX Director's configuration file.
- Changing the device control mode back to one of the other modes will overwrite the locally set IP IDs of the endpoints.
- 3. Click **Save Changes** to save the control system assigned to the domain.

Status indicates whether the control system is ONLINE or OFFLINE.

Management

DM NVX Director network appliance management functions include:

- Updating Firmware on page 101
- Managing Endpoint Firmware on page 104
- Restoring Factory Default Settings on page 105
- Rebooting the Device on page 109
- Restarting Applications on page 111
- Uploading a Configuration File on page 113
- Downloading a Configuration File on page 115
- Downloading Message Logs on page 116
- Adding a Log Marker on page 117
- Manage EDIDs on page 117

Updating Firmware

NOTES:

- Before updating firmware, ensure that all domain endpoint maps are saved.
- For upgrade from Release 2.0 to Release 4.0, a .dat file is provided for Release 4.0 firmware. The 4.0 .dat file is used to upgrade from Release 2.0 to Release 4.0..
- For upgrade from Release 4.0 to a later Release 4.0 maintenance release, a .csf file is provided for Release 4.0 firmware.

Updating Firmware from Release 2.0 to Release 4.0

To update firmware from Release 2.0 to Release 4.0:

- 1. Download the latest compressed firmware file (*.zip) from <u>www.crestron.com/firmware</u> to a computer.
- 2. Extract the Release 4.0 .dat file from the .zip file and save the file to the desired folder on your computer.
- 3. In the Release 2.0 web interface, go to the **Device** page, click the **Firmware Upgrade** button, and complete the firmware upgrade process.

Firmware Upgrade Button (Release 2.0)

@CRESTRON		٩
DM NVX DIRECTOR	* > DM NVX DIRECTOR > Device	
Status	* > DMNVXDIRECTOR > Device	
Network	✓ Device Management	
Device		
Global Domain	Firmware	
Add Domain	Main Firmware Version 20001.0011	
	Model DM-NVX-DIR-ENT	
	Serial Number 5303786X7A25018	
	Firmware Upgrade	

Updating Firmware from Release 4.0 to a Later Maintenance Release

To update firmware from Release 4.0 to a later Release 4.0 maintenance release:

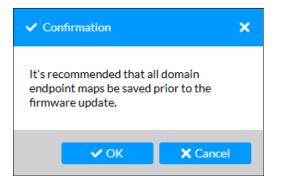
- 1. Download the latest compressed firmware file (*.zip) from <u>www.crestron.com/firmware</u> to a computer.
- 2. Extract the Release 4.0 .csf file from the .zip file and save the file to the desired folder on your computer.
- 3. In the **Action** menu located in the upper-right corner of the web interface, click **Update Firmware Version**.

Action Menu - Update Firmware Version (Release 4.0)

✓ Action	
🖺 Save Changes	
つ Revert	
Lupdate Firmware Version	
Anage Endpoint Firmware	
Sestore Device	
C Reboot Device	
C Application Restart	
Upload Configuration	
Download Configuration	
Download Logs	
AddLogMarker	

A **Confirmation** dialog box opens, recommending that all domain endpoint maps be saved prior to the firmware update.

Confirmation Dialog Box for Saving All Domain Endpoint Maps



- 4. Do either of the following:
 - If endpoint maps are already saved, click **OK**. File Explorer opens. Continue with step 5.
 - If endpoint maps need to be saved, click **Cancel** and then save the endpoint maps. Repeat steps 3 and 4, and then continue with step 5.
- 5. Navigate to the latest firmware file, select the file, and then click **Open**.

The **Firmware Upgrade** dialog box opens, indicating the progress of the file upload and upgrade process. When the upgrade process has completed, the dialog box indicates that the process has completed successfully.

Managing Endpoint Firmware

Firmware files for all supported DM NVX device model families can be loaded directly to the DM NVX Director. Uploaded firmware can be pushed to endpoints of that device model family from the **Dashboard** page, under the **Firmware** column of the table. Click an endpoint's **Upgrade** button to push the loaded firmware file to that endpoint.

To upload a firmware file:

1. In the Action menu, click on Manage Endpoint Firmware.

Action Menu - Manage Endpoint Firmware



 Click the Upload file button for a given DM NVX Device Model Family, then upload a compatible firmware file. If the file does not match the selected model family, it will be rejected. The File Name and File Version columns will populate once a firmware file has been uploaded for a given model family.

Manage Firmware Files Window

			🗍 Delete file
Device Model Family	File Name	File Version	Actions
DM-NVX-35x	Empty	-	🔁 Upload file
DM-NVX-36x	Empty	-	🛃 Upload file
DM-NVX-D80	Empty	-	🛃 Upload file
DM-NVX-E76x	Empty	-	🔁 Upload file
DM-NVX-D/E30	Empty	-	🔁 Upload file
DM-NVX-10/20/200	Empty	-	🛃 Upload file

To delete firmware files from the device:

1. In the Action menu, click on Manage Endpoint Firmware.

Action Menu - Manage Endpoint Firmware

B	Save Changes
C	Revert
	Update Firmware Version
1 .	Manage Endpoint Firmware
Э	Restore Device
С	Reboot Device
S	Application Restart
4	Upload Configuration
ŕ.	Download Configuration
	Download Logs
	AddLogMarker
오	Manage EDIDs

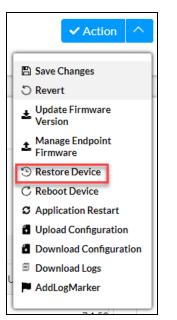
2. Select the checkboxes to the left of the table for each **Device Model Family** firmware file to be deleted, then click the **Delete** button. Click **Close** to close the **Manage Firmware Files** window.

			🗊 Delete file
Device Model Family	File Name	File Version	Actions
DM-NVX-35x	Empty		🚺 Upload file
DM-NVX-36x	Empty	-	🚺 Upload file
DM-NVX-D80	Empty	-	🛃 Upload file
DM-NVX-E76x	Empty	-	🛃 Upload file
DM-NVX-D/E30	Empty	-	🛃 Upload file
DM-NVX-10/20/200	Empty	-	🛃 Upload file

Restoring Factory Default Settings

To restore factory default settings:

In the Action menu located in the upper-right corner of the web interface, click Restore Device.
 Action Menu - Restore Device



A **Confirmation** dialog box opens, prompting for confirmation that all domains and configurations be removed.

Confirmation Dialog Box for Removing All Domains

✓ Confirmation	×
This will permanently ren and configurations. Do yo proceed?	
✓ OK	× Cancel

2. Click **OK**.

The Restore progress bar appears, indicating the progress of restoring the device to factory default settings.

Restore Progress Bar

00/	
2% Restoring device	

When the process has completed, the Create User page opens, enabling a user account to be created.

Create User Page

CRESTRON	
	VX Director inistration
Username	
Password	
Confirm Password	
· · · · · · · · · · · · · · · · · · ·	Create User
Provide the second second second second second second second second second second second second second second s	Partners Rindmola Ne Inter Rindmola et fail fair Linner Agement

After a user account is created, the Sign In page opens, enabling sign-in to the device.

Sign In Page

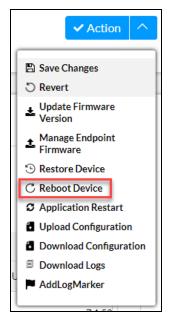
@ CRESTRON	
	DM NVX Director Administration
	Username
	Password
	A _t Sign In
	© 2023 Crestron Electronics, Inc Privacy Ratement Crestron Software End-User License Agreement

Rebooting the Device

To reboot the device:

1. In the **Action** menu located in the upper-right corner of the web interface, click **Reboot Device**.

Action Menu - Reboot Device



A **Confirmation** dialog box opens, prompting for confirmation that the device be rebooted. **Confirmation Dialog Box for Rebooting the Device**

✓ Confirmation	×
Do you want to reboot the device now?	
✓ OK X Cancel	

2. Click **OK**.

The Reboot progress bar appears, indicating the progress of the reboot process. Reboot Progress Bar

✓ Reboot		×
	14%	
Rebooting device		

When the reboot process has completed, the Sign In page opens, enabling sign-in to the device.

Sign In Page

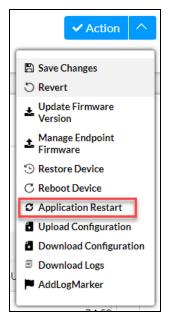
CRESTRON.		
	DM NVX Director	
	Administration	
	Isername	
	lassword	
2	4 Sign In	
•	s aginn	
	© 2023 Crestron Electronics, Inc Privacy Statement Crestron Software End-User License Agreement	
	-	

Restarting Applications

To restart applications running on the DM NVX Director network appliance:

1. In the **Action** menu located in the upper-right corner of the web interface, click **Application Restart**.

Action Menu - Application Restart



A **Confirmation** dialog box opens, prompting for confirmation that the service be restarted. **Confirmation Dialog Box for Restarting the Service**

×
Cancel

2. Click **OK**.

The Application Restart progress bar appears, indicating the progress of the restart process. Application Restart Progress Bar

Application Restart	×
Restarting ap	plication
209	6
	ОК

When the restart process has completed, the Sign In page opens, enabling sign-in to the device. Sign In Page

CRESTRON.		
	DM NVX Director	
	Administration	
	Username	
	Password	
	۹ ₄ Sign In	
	© 2023 Crestron Electronics, Inc	
	Privacy Statement Crestron Software End-User License Agreement	

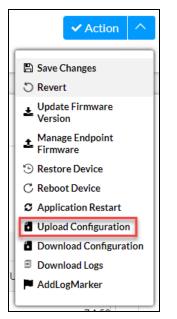
Uploading a Configuration File

A configuration file (*.tgz) consists of all domain configurations on a DM NVX Director network appliance. A configuration file that was downloaded from a DM NVX Director network appliance being replaced can be uploaded to the replacement DM NVX Director network appliance.

To upload a configuration file to a DM NVX Director network appliance:

1. In the **Action** menu located in the upper-right corner of the web interface, click **Upload Configuration**.

Action Menu - Upload Configuration



File Explorer opens.

Confirmation Dialog Box

2. Navigate to the desired configuration file (*.tgz), select the file, and then click Open.

×

A **Confirmation** dialog box opens, prompting for confirmation that all attributes and domains on the DM NVX Director network appliance be overwritten.



You are about to overv and domains on this DI Press "OK" to continue	M-NVX-Director
✓ ОК	× Cancel

3. Click **OK** to confirm that all attributes and domains (if any) can be overwritten.

The **Uploading File** dialog box opens, indicating that the *.tgz file is being uploaded. When upload process is complete, the **Uploading File** dialog box indicates that the file is uploaded.

Uploading File Dialog Box - File Uploaded

Uploading file	×
File uploaded	
	✔ ОК

4. Click **OK**.

The **Save Domain** dialog box opens, indicating any of the following as applicable:

- The DM NVX Director network appliance is connecting to the endpoints.
- The device mode (transmitter or receiver) of the endpoints is being configured.
- Multicast addresses are being assigned.

When the **Save Domain** process is complete, the **Save Domain** dialog box indicates that the domain is saved.

Save Domain Dialog Box - Complete

🕼 Save Domain			×
1 Connecting	2 Configuring	3 Assigning	4 Complete
Domain Saved.			
		100%	
			ОК

5. Click **OK** to close the dialog box.

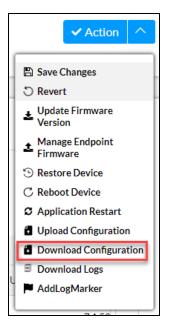
Downloading a Configuration File

A configuration file (*.tgz) consists of all domain configurations on a DM NVX Director network appliance. A configuration file can be downloaded to a computer for use as a backup configuration file or for uploading to a replacement DM NVX Director network appliance.

To download a configuration file from a DM NVX Director network appliance to a computer:

In the Action menu located in the upper-right corner of the web interface, click Download Configuration.

Action Menu - Download Configuration



The configuration file is downloaded to the **Downloads** folder of the computer using the following naming convention:

model_config_yyyy-mm-dd_hh-mm-ss.tgz

- model is the model name of the DM NVX Director network appliance
- yyyy-mm-dd is the 4-digit year, 2-digit month, and 2-digit day separated by hyphens
- *hh-mm-ss* is the 2-digit hour, 2-digit minutes, and 2-digit seconds separated by hyphens in 24-hour format

Example: DM-NVX-DIR-ENT_config_2022-12-14_14-53-49.tgz

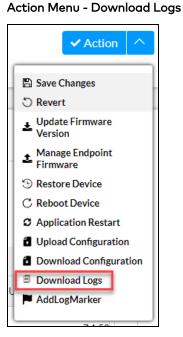
To upload the configuration file to a replacement DM NVX Director network appliance, refer to Uploading a Configuration File.

Downloading Message Logs

Message logs can be downloaded to a computer for diagnostic purposes. The message logs are compressed and downloaded as a .zip file.

To download message logs:

1. In the **Action** menu located in the upper-right corner of the web interface, click **Download Logs**.



The **Download logs** dialog box opens, indicating the progress of the process. When the process is complete, the dialog box indicates that the message logs have been downloaded.

Download Logs Dialog Box

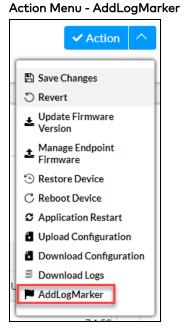
🛓 Download logs	×
Logs are loaded.	
Loaded: 1.52 MB	
	Close
	Close

2. Click **Close** to close the dialog box.

Adding a Log Marker

A note can be added to the message log by following the instructions below.

 In the Action menu located in the upper-right corner of the web interface, click AddLogMarker. The Add Log Marker dialogue box appears.



2. Enter the desired note in the dialogue box.

Add Log Marker Dialog Box

P Add Log Marker		×
Enter in a Log Marker label		
	ОК	Cancel
		Cancer

3. Select **OK**.

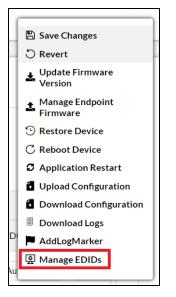
The entered text will appear in the log.

Manage EDIDs

Up to five custom EDID files can be uploaded to the device. Custom EDIDs can then be selected for endpoint inputs from the **Dashboard** table under the **Video Settings** tab. The **EDID Input 1** and **EDID Input 2** drop-downs will include all uploaded custom EDIDs. To upload a custom EDID:

1. In the Action menu, click on Manage EDIDs.

Action Menu - Manage EDIDs



 Click the +Add EDID button to upload a custom .cedid file. A pop-up window will appear. Manage EDIDs Window

2 N	lanage EDIDs	5		×
	The num	ber of files that can be uploaded: 5	+ Add EDID	
	#	Name	Actions	
	1	Procise EDID	🗊 Delete	
	2	ATMOS-4K	🗑 Delete	
	3	Jupiter EDID v2	🗊 Delete	
	-	-	-	
	-	-	-	

3. Browse for the .cedid file and select it. The file is uploaded once it is selected from the file browser. Click **OK** when the upload is complete to close the pop-up window.

File Upload Pop-up Window - Browse

🖬 File Upload		×
Browse to select a file		🕞 Browse
		*.cedid only
1 Browse	2 File Upload	3 Complete
		X Cancel
File Upload Pop-up Wind	ow - Unload Complet	
The opload top op Wind	ow opioud complet	
File Upload		×
🖥 File Upload		
File Upload UserSavedEDID-HDMI1.ce	did	
	did	×
UserSavedEDID-HDMI1.ce	2	★ Control C
UserSavedEDID-HDMI1.ce	_	► Browse *.cedid only
UserSavedEDID-HDMI1.ce	2	★ Control C

To delete uploaded EDID files:

1. In the Action menu, click on Manage EDIDs.

Action Menu - Manage EDIDs



Click the **Delete** button in the row of the EDID file to be deleted.
 Manage EDIDs Window

윤 Mar	nage EDI	Ds		×
	The nu	mber of files that can be uploaded: 5	+ Add EDID	
	#	Name	Actions	
	1	Procise EDID	🗍 Delete	
	2	ATMOS-4K	🗊 Delete	
	3	Jupiter EDID v2	🗊 Delete	
	-	-	-	
	-	-	-	
			× Clos	æ

3. Click **Close** to close the Manage EDIDs window.

Resources

For additional information about DM NVX Director network appliances and related DM NVX devices, refer to the following resources.

Related Documentation

- DM NVX[®] AV-over-IP System Design Guide
- Crestron Online Help (OLH)

Crestron Support and Training

- Crestron True Blue Support
- Crestron Resource Library
- Crestron Training Institute (CTI) Portal

Programmer and Developer Resources

- <u>help.crestron.com</u>: Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- <u>developer.crestron.com</u>: Provides developer documentation for Crestron APIs, SDKs, and other development tools

Product Certificates

To search for product certificates, refer to <u>support.crestron.com/app/certificates</u>.

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