DM-NVX-E30(C)

DigitalMedia™ 4K60 4:4:4 HDR
Network AV Encoder

Web interface Guide

Crestron Electronics, Inc.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

Crestron, the Crestron logo, Crestron Toolbox, and DigitalMedia are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. Dolby and Dolby Atmos are either trademarks or registered trademarks of Dolby Laboratories in the United States and/or other countries. DTS HD and DTS:X are either trademarks or registered trademarks of DTS, Inc. in the United States and/or other countries. HDMI is either a trademark or registered trademark of HDMI Licensing LLC in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography.

This document was created by the Software Tools department at Crestron.
©2018 Crestron Electronics, Inc.

Table of Contents

Introduction 4
Easy Configuration Guide 7
Status 11
Stream 14
HDMI Input 18
Output 22
Network 24
Device 29

Introduction

The DM-NVX-E30(C) is a compact video encoder designed to function as a transmitter featuring support for HDR10 and HDCP 2.2.

Web-based Configuration Interface

The web-based configuration interface of the DM-NVX-E30(C) consists of web pages that allow viewing status information of the DM-NVX-E30(C) and configuration of its network, and device settings.

Accessing the Web-based Configuration interface of DM-NVX-E30(C)

The web-based configuration interface is accessed from a web browser. The following table lists various operating systems and the corresponding supported web browsers.

Operating System and Supported Web Browsers

OPERATING SYSTEM	SUPPORTED WEB BROWSERS
Windows® operating system	Chrome™ web browser, version 31 and later Firefox® web browser, version 31 and later Internet Explorer web browser, version 11 and later Microsoft Edge web browser
OS X® operating system	Safari® web browser, version 6 and later Chrome™ web browser, version 31 and later Firefox® web browser, version 31 and later

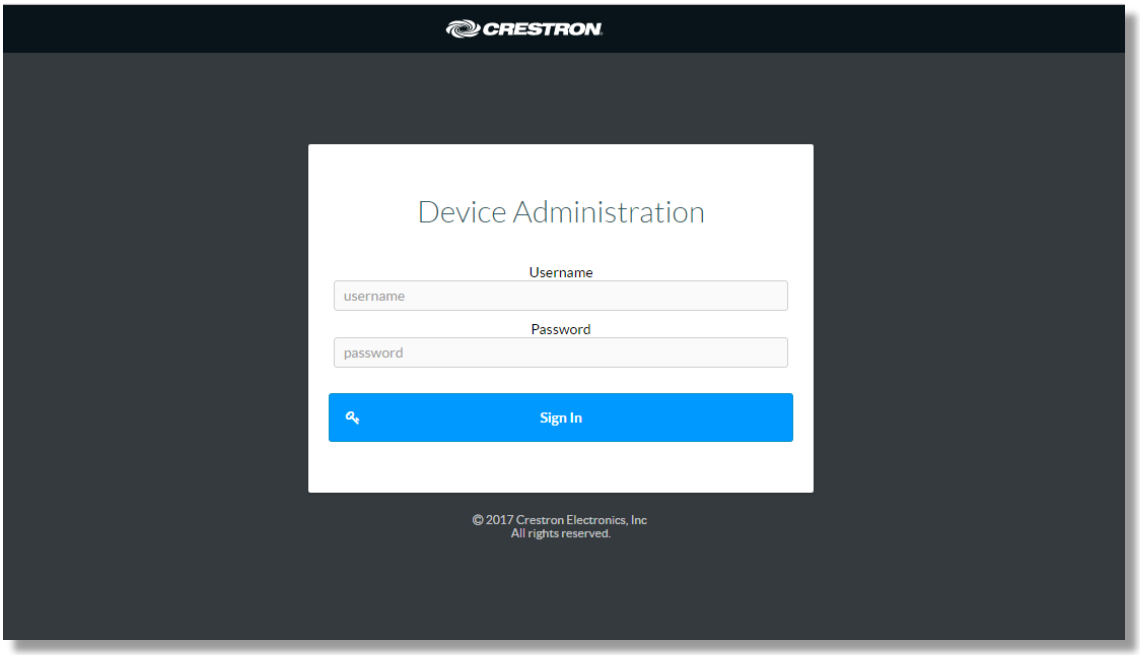
To access the user interface, do either of the following:

- Open it directly in a web browser
- Open a web browser from within the Crestron Toolbox™ application.

Opening directly in Web Browser

1. Press the Setup button on the DM-NVX-E30(C) to display the IP address on the HDMI output or use the front panel of the DMF-CI-8 chassis for DM-NVX-E30C
2. Open a compatible web browser.
3. Enter the IP address of the DM-NVX-E30(C)
4. Enter your credentials in the **Device Administration** dialog (Note that the user name and password are case sensitive). The default user name is *admin*, and the default password is *admin*.

   NOTE: For enhanced security, it is recommended that the default password is changed.



5. Click **Sign In**.

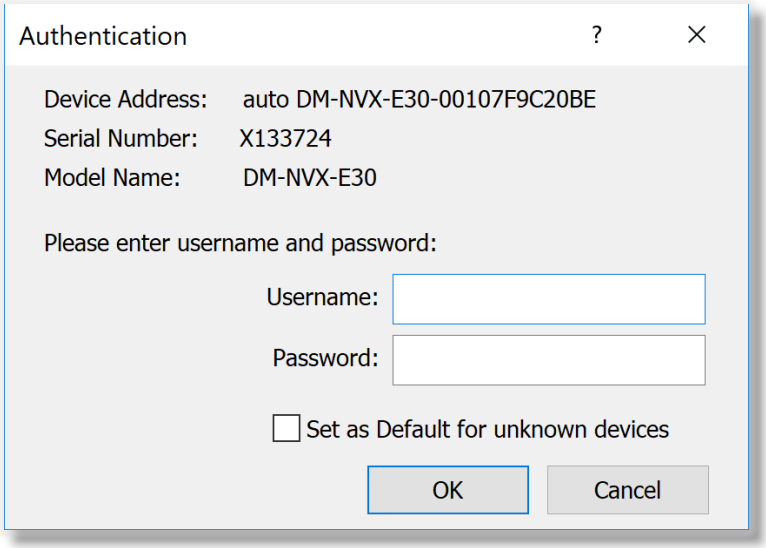
Opening a Web Browser from within the Crestron Toolbox™ Application

To access the user interface by opening a web browser within the Crestron Toolbox™ application, do the following:

1. Open the Crestron Toolbox™ application.
2. From the **Tools** menu, select **Device Discovery** Tool. You can also access the Device Discovery Tool by clicking the Device Discovery Tool button in the toolbar of Crestron Toolbox.

   NOTE: The security software running on the computer may send a program alert that there was an attempt of the Crestron Toolbox application to connect to the network. Allow the connection, so that the Device Discovery Tool can be used.

   The DM-NVX-E30(C) is discovered and is listed in the device list on the left-hand side of the screen. The associated host name, IP address, and firmware version are also displayed.
3. In the Device Discovery Tool list, double-click on your DM-NVX-E30(C) device
4. Enter your credentials in the Authentication dialog that opens and click 'Log In'



5. Click the **Web Configuration** button in the Configuration page displayed on the left hand side of the Device Discovery Tool.

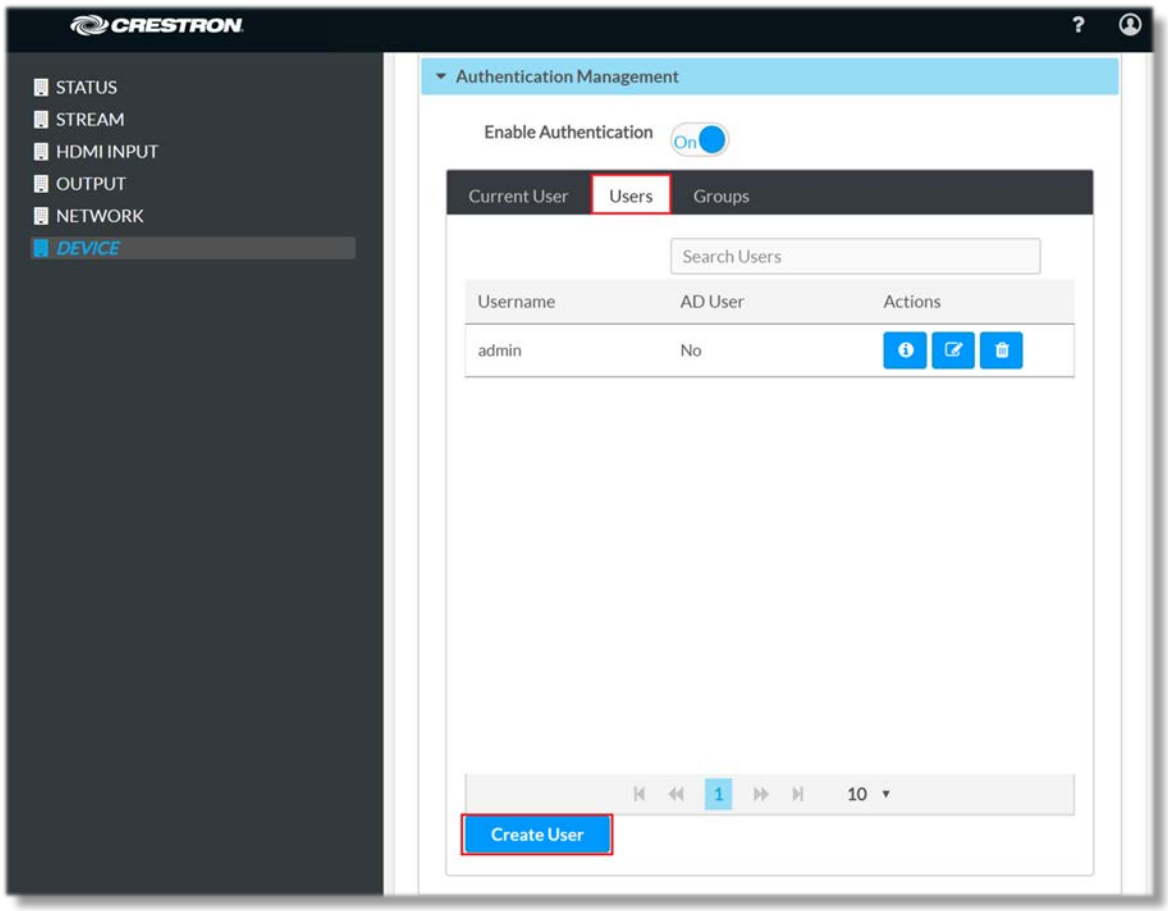
Easy Configuration Guide

How to Log in to DM-NVX-E30(C) using Active Directory credentials

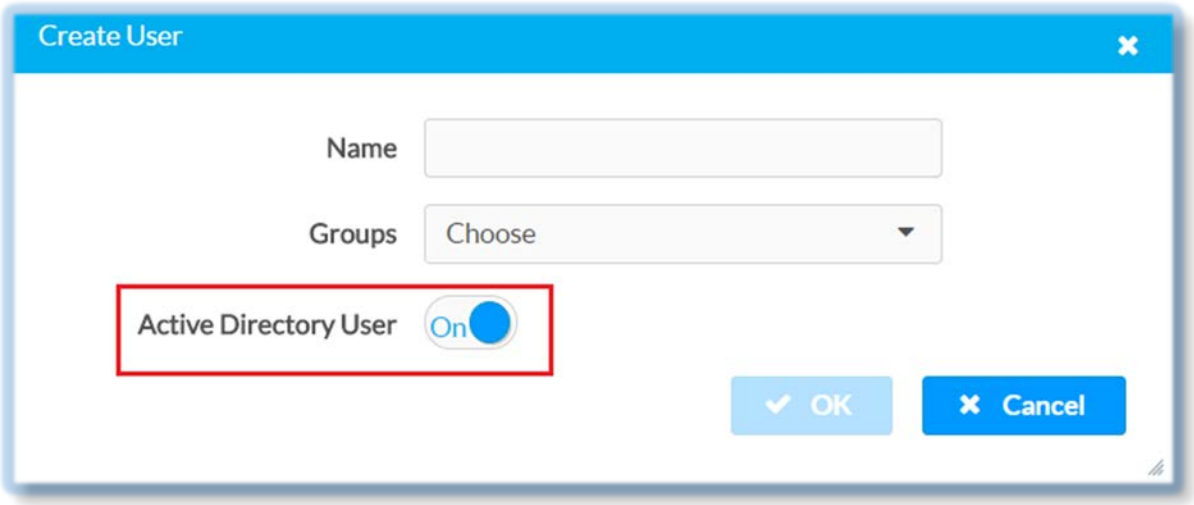
There are two ways to login using Active Directory credentials: by using Active Directory user, or by using Active Directory Group user.

To log in as Active Directory User:
Pre-requisites: Users are already created on Active Directory server

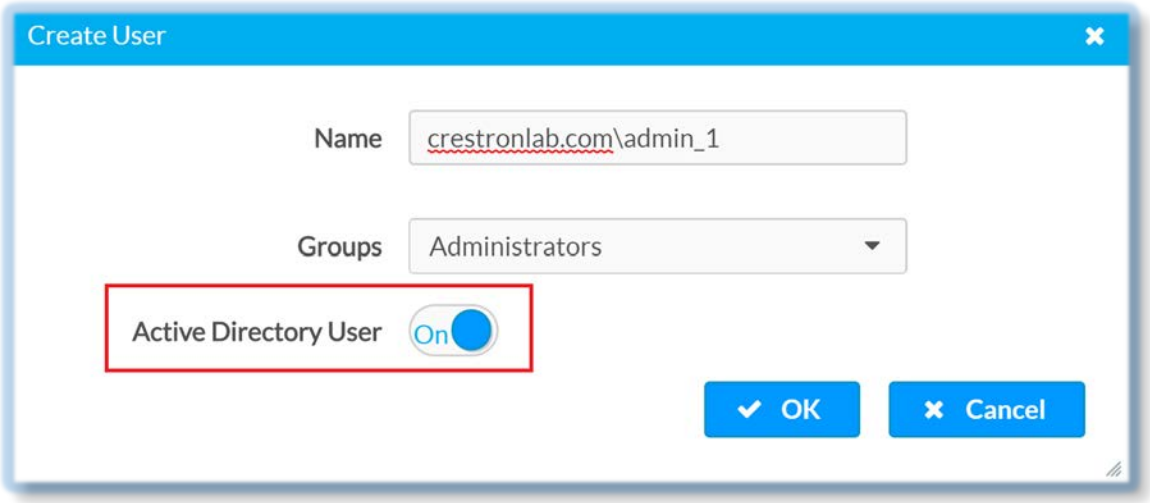
1. Log in to DM-NVX-E30(C)
2. Navigate to the **Device** page, click on **Authentication Management** and select the **Users** tab
3. Click on **Create User** button



4. In **Create User** dialog, set the **Active Directory User** slider for **Active Directory** to “ON”



5. Enter the name of the user in the **Name** text field using the following format "*Domain name\username*", for example "crestronlab.com\admin_1"
6. Select Administrators in the Groups drop-down list, so that the Active Directory user will have administrator privileges



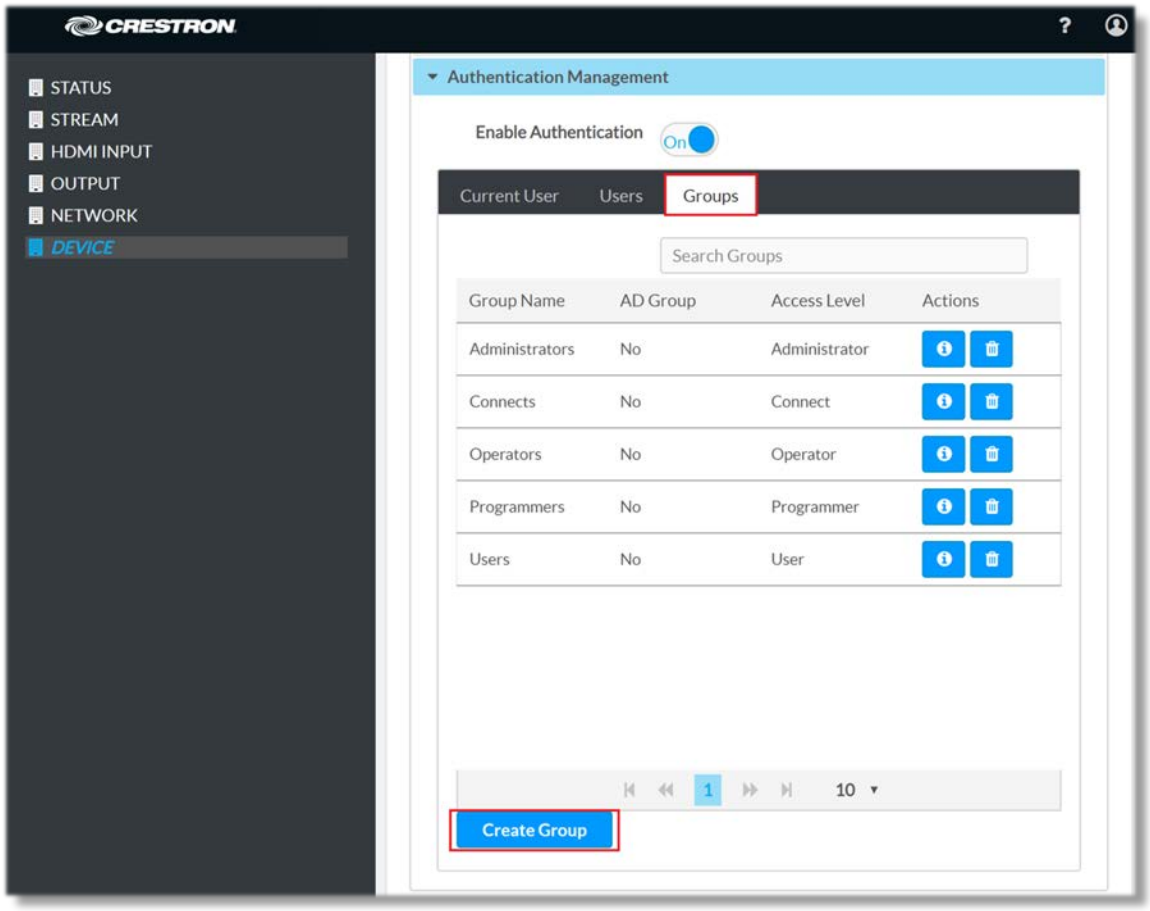
7. Log in to DM-NVX-E30(C) using Active Directory user credentials i.e "crestronlab.com\admin_1"

To log in as Active Directory Group User

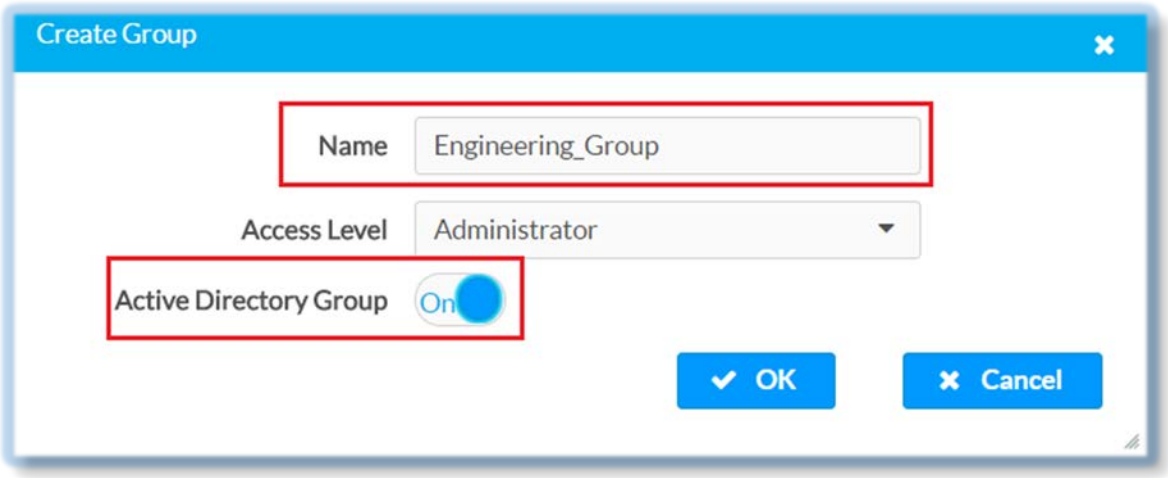
Pre-requisites:

- Active Directory Users & Active Directory Groups are already created on AD server.
- Active Directory users are assigned to specific Active Directory Groups, for example: *Active Directory Group : Engineering_Group*, *Active Directory User : user1*

1. Log in to DM-NVX-E30(C)
2. Navigate to the **Device** page, click on **Authentication Management** and select the **Groups** tab



3. Click on **Create Group** button
4. In **Create Group** dialog, set the for **Active Directory Group** slider to “ON”
5. Enter the name (case sensitive) of the Active Directory group in the **Name** text field
6. Select “Administrators” from the Access Level drop-down list so that the Active Directory group will have administrator privileges

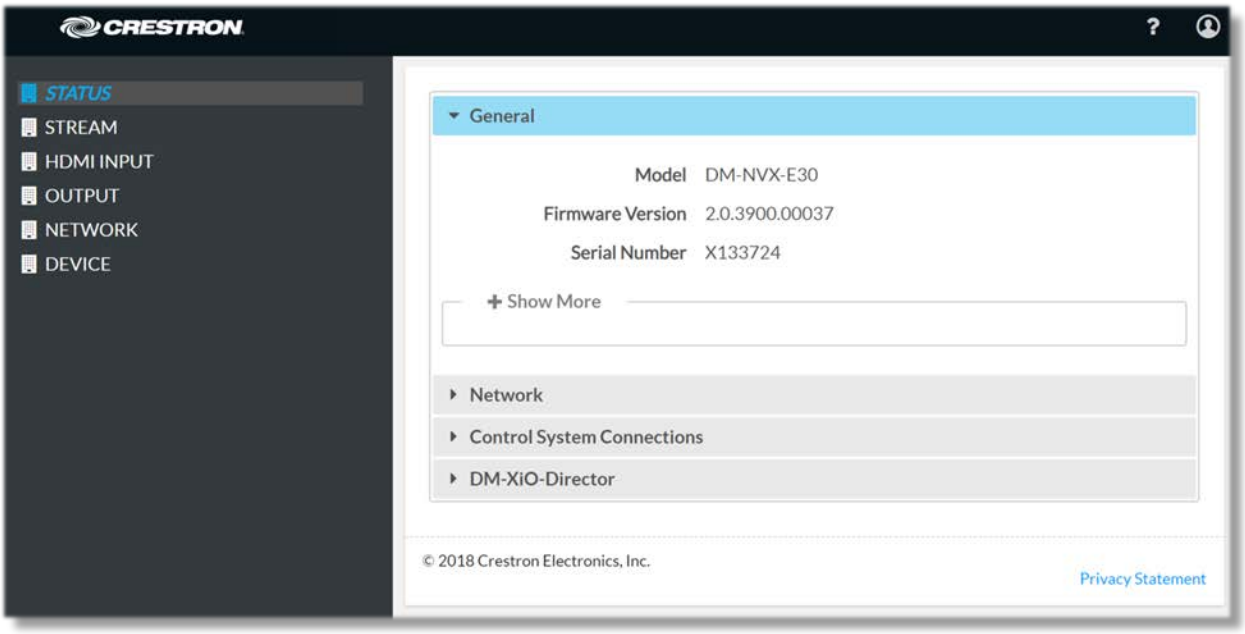


7. Log in to DM-NVX-E30(C) using Active Directory Group User credentials, i.e. ‘`crestronlab.com\user1`’ .

Status

The Status Information page is the first page that is visible when starting the web interface of DM-NVX-E30(C). It displays general information about the DM-NVX-E30(C) (such as model name, serial number, and firmware version), current network settings (such as host name and IP address, etc.), as well as information about the connection to the control system and/or DM-XiO-Director.

The Status page can be accessed at any time by simply clicking the **STATUS** tab in the navigation bar of the web-based user interface of the DM-NVX-E30(C).



Information displayed on the Status page is organized in five main sections:

General: shows general information about DM-NVX-E30(C), which consists of the following:

- Model of the device
- Firmware Version
- Serial Number

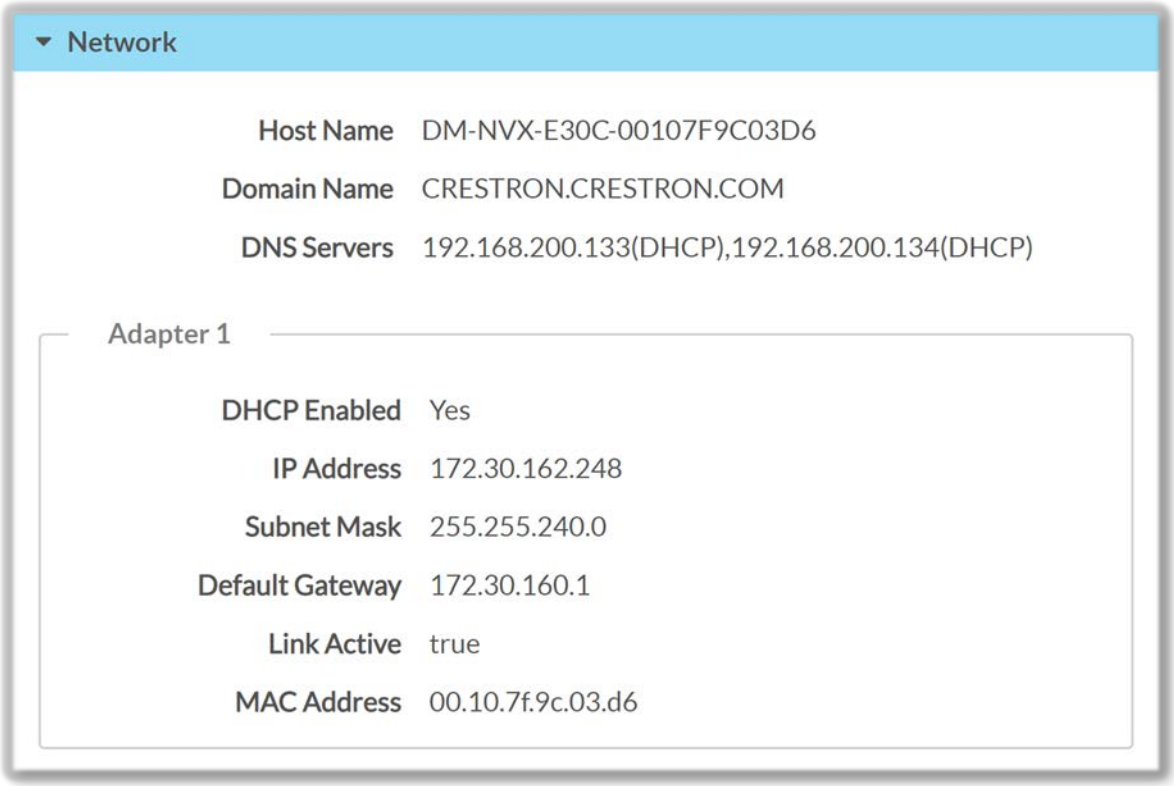
Click on + Show More to see additional information about DM-NVX-E30(C).

Network: displays network-related information, which consists of the following:

- Domain Name
- Host Name of DM-NVX-E30(C)

  NOTE: By default the host name of DM-NVX-E30(C) consists of the model name followed by the MAC address of the device. For example, DM-NVX-E30(C)-00107F7C6544.

Additionally, IPv4 addressing information is provided as shown below:



Control System Connections: Shows connection information, consisting of the following:

- **IP ID** - of DM-NVX-E30(C)
- **Room ID**
- **IP Address/Hostname** - Address of the control system
- **Type** (always set to Peer)
- **Server Port** (the default port is set to 41794)
- **Connection Type** (always set to Gway)
- **Status** (OFFLINE or ONLINE)
- **Encrypt Connection** – displays information whether the connection is encrypted or not

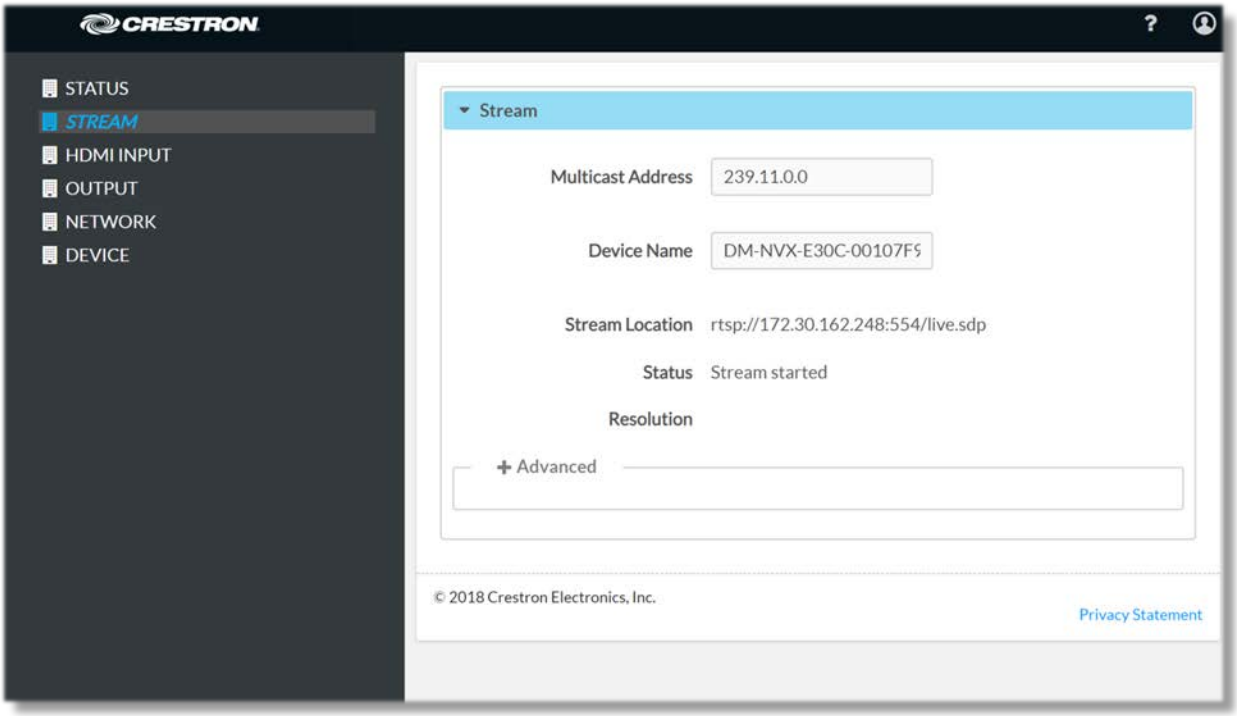
DM-XiO-Director: Displays read-only information about the networks settings for the DM-XiO-Director. Note that the fields below will not be populated when using XiO-Director v 1.0.

- **DM-XiO-Director HostName** – host name of the DM-XiO-Director
- **Domain Name** – domain name of the DM-XiO-Director
- **Domain Number –** domain number of the DM-XiO-Director
- **Domain Slot Number**

Stream

The Stream page provides means to switch between the two modes (Receiver or Transmitter) of the DM-NVX-E30(C) and to set relevant stream parameters.

The Stream page can be accessed at any time by simply clicking the **STREAM** tab in the navigation bar of the web-based user interface of the DM-NVX-E30(C).



Stream

Multicast Address: Enter the multicast stream address of the device in the **Multicast Address** field.

Device Name: Type a device name in the text field to be able to easily identify the device amongst several devices of that type.

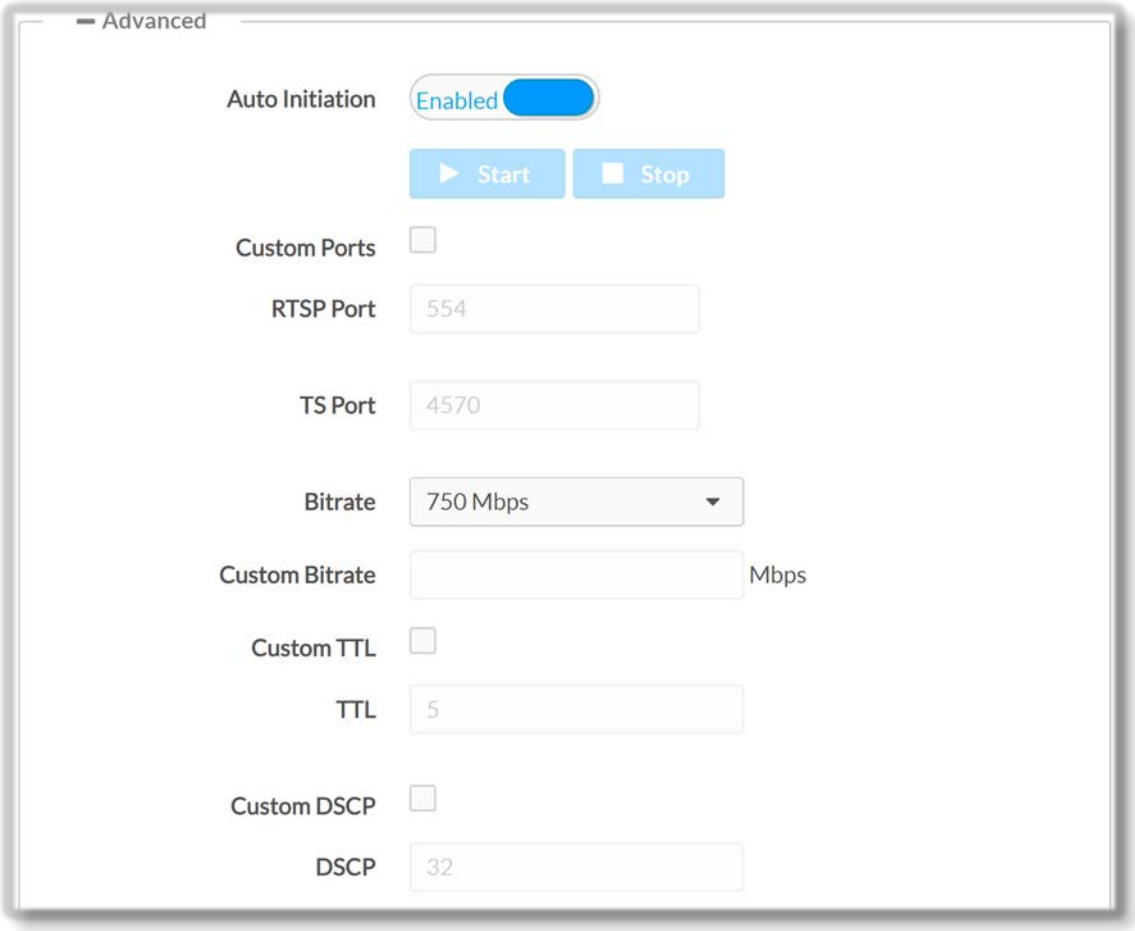
The read-only **Stream Location** text field displays the RTSP URL of the client.

The read-only **Status** field reports the status of the device, for example: 'Stream stopped', 'Stream started', 'Connecting', etc.

The read-only **Resolution** field reports the resolution of the stream.

Click the + Advanced link to view additional information about the stream.

+ Advanced Stream Options



Move the **Auto Initiation** slider to the desired position (**Enabled** or **Disabled**) to specify whether the stream will automatically start when the correct parameters are set. By default, **Automatic Initiation** is set to 'Enabled'.

Press the **Start** or **Stop** button, to start or stop a stream if **Automatic Initiation** is disabled. Note that when **Automatic Initiation** is disabled, the device will wait for the **Start** button to be pressed before attempting to start a stream.

Select the **Custom Ports** check box if you wish to specify custom RTSP or TS port. Crestron recommends using a custom port value greater than 10000.

RTSP Port – Enter custom TCP port number for the RTSP server of the primary audio/video stream.
Valid values range from 1 to 65535. By default the RTSP Port of the DM-NVX-E30(C) is set to port 554.

TS Port – Enter custom UDP port (value must be an even number; odd value will be rejected by the device) at which both audio and video are transmitted. By default the TS Port is set to 4570. Valid values range from 1 to 65530.

Bitrate: Select a bitrate from the **Bitrate** drop-down list to set the bitrate of the transmitted stream in Mbps. Crestron recommends to use the default value.

-or-

Select *Custom* in the **Bitrate** drop-down list and type custom value (in Mbps) in the **Custom Bitrate** text field below.

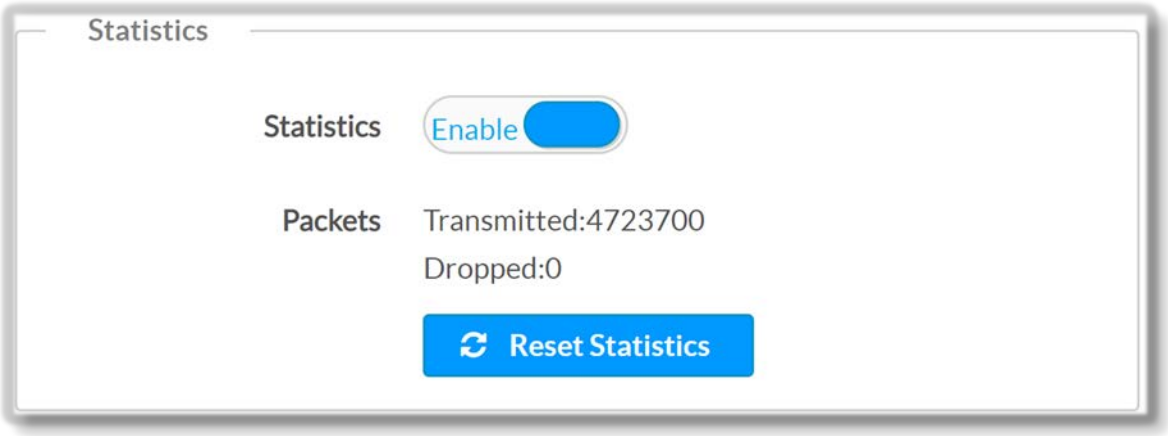
Select the **Custom TTL** check box and enter custom TTL (Time-to-Live) value in the **TTL** text field. TTL values can range from 1 to 255.

Select the **Custom DSCP** check box and enter custom value in the **DSCP** text field. DSCP values can range from 1 to 63.

Note that if **Automatic Initiation** is enabled the DM-NVX-E30(C) will restart the stream whenever any of the following parameters are changed. Otherwise the stream must be restarted manually:

- TS Port
- RTSP Port
- Multicast Address
- Bitrate

Statistics



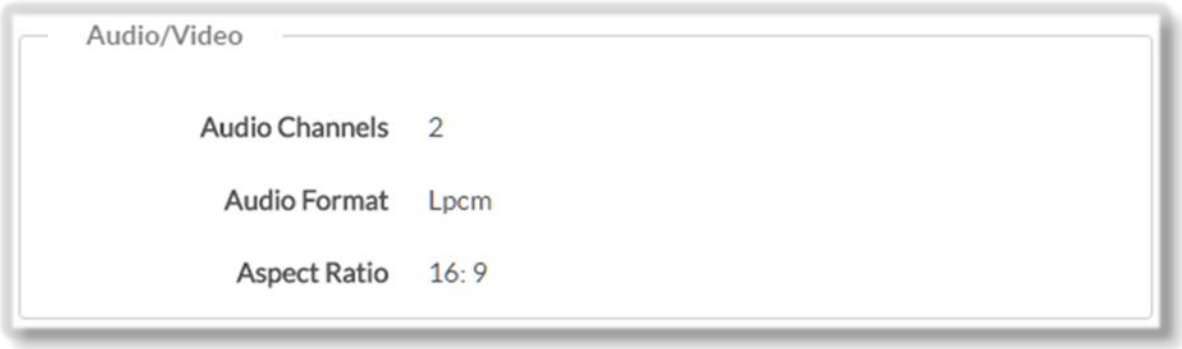
Move the **Statistics** slider to the desired position (**Enable** or **Disable**) to specify whether statistics reporting will be enabled or disabled. By default, statistics reporting is disabled.

Packets Transmitted, **Packets Dropped:** Report the number of transmitted video packets and the number of dropped packets sent when streaming out.

Click **Reset Statistics** button to zero out reported statistics data.

Audio / Video

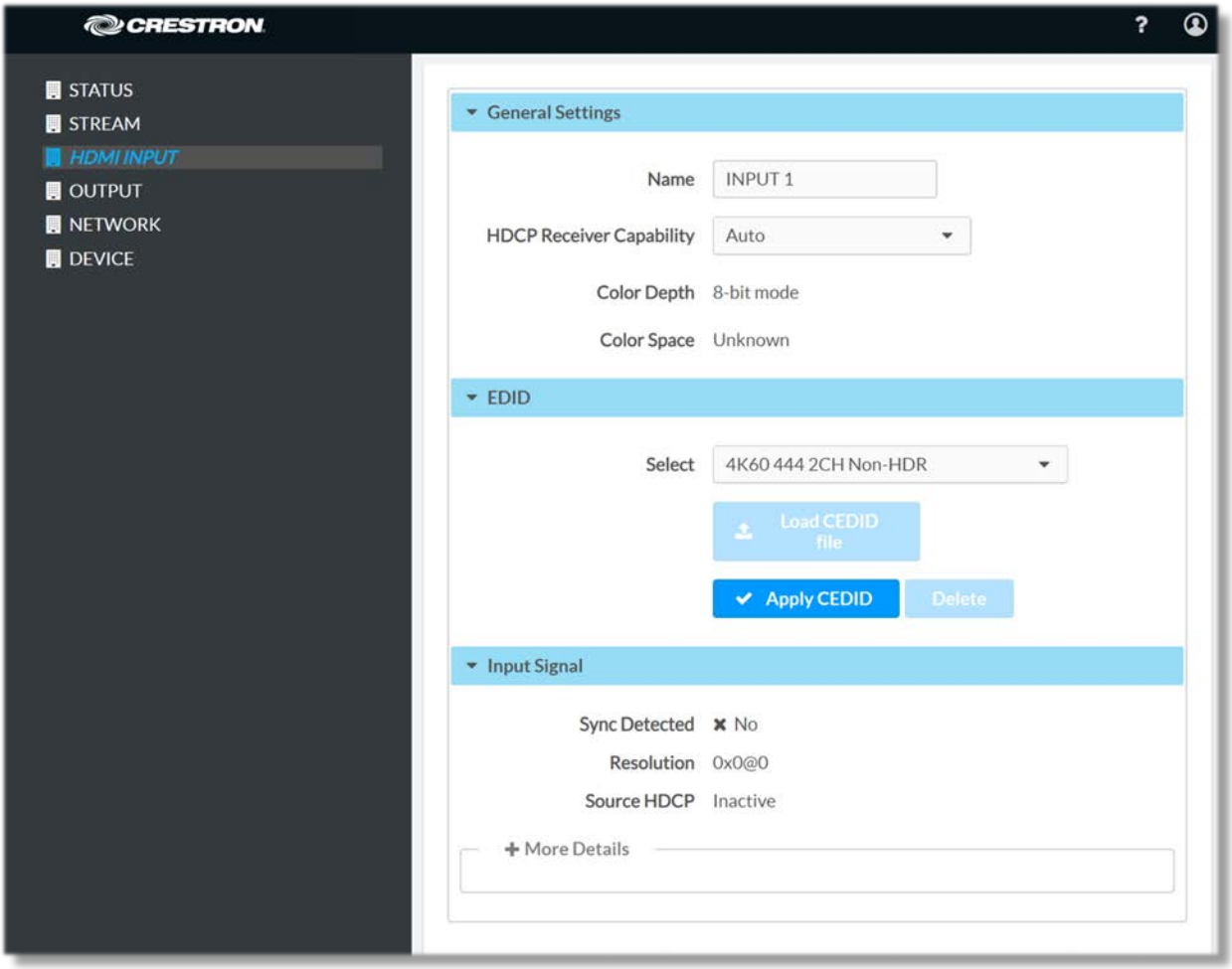
The Audio/Video section displays read-only audio/video information about the stream as follows:



- **Audio Channels** – number of channels in the stream
- **Audio Format** – indicates the audio format of the input/output stream
- **Aspect Ratio** – the aspect ratio of the stream

HDMI Input

The HDMI Input page can be accessed at any time by simply clicking on **HDMI INPUT** or in the navigation bar of the web-based user interface of the DM-NVX-E30(C).



General Settings

Modify the name of this HDMI input by editing the existing name or entering a brand new name for the HDMI input in the **Name** field. Any changes take effect immediately and the new/edited stream routing name is reflected in the Inputs page.

Use the **HDCP Receiver Capability** drop-down list to specify whether the HDCP Support capability for this input will be Disabled, Auto, HDCP 1.4 or HDCP 2.2

The non-editable **Color Depth** and **Color Space** fields display information about the color depth and color space respectively.

EDID

In the **Select** drop down list select a built in EDID file from the list of built-in predefined EDID files.

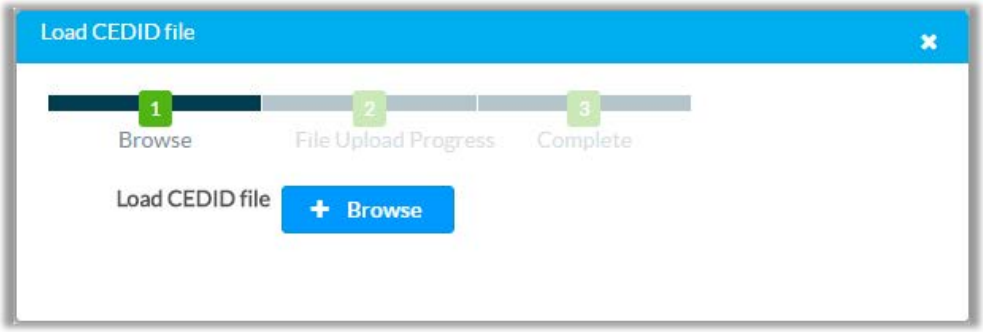
Predefined EDIDs are as follow:

- 01 DM Default
- Consumer 1080p60 HBR
- Consumer 720p60 HBR
- Consumer 1080p60 3D HBR
- Laptop 16x9 1080p60 2ch
- Laptop 16x10 1920x1200 2ch
- Laptop 16x10 1280x800 2ch
- Laptop widescreen 2ch
- Consumer 1080p50 HBR
- Consumer 720p50 HBR
- Consumer 1080p50 3D HBR
- Laptop 16x9 1080p50 2ch
- DM default 4k 30Hz 2ch
- Consumer 4k 30Hz 3D HBR
- Consumer 4k 25Hz 3D HBR
- DM Default 4k 60Hz 2ch
- DM Default 4k 30Hz HBR
- 4K60 444 2CH Non-HDR
- 4K60 444 2CH HDR
- 4K60 444 HBR HDR
- 4K60 444 2CH HDR DCI
- 4K60 444 HBR Non-HDR

- or -

Upload a custom EDID file by following the steps below:

1. In the **Select** drop down list select *Custom* and click **Load CEDID file**:



2. In the **Load CEDID file** dialog click the **+Browse** button
3. Locate and select the desired custom EDID file (*.cedid), and then click the **Open** button.

The name of selected custom EDID file is displayed in the in the **Load CEDID file** dialog.

4. Click **Send EDID**.
5. When the EDID is applied/sent successfully, a message box appears indicating success. Close the message box by clicking **OK** or pressing the **X** in the upper right-hand corner.
   The custom EDID file is added to the list of available EDID files and it is shown in the **Select** drop-down list for the HDMI input.

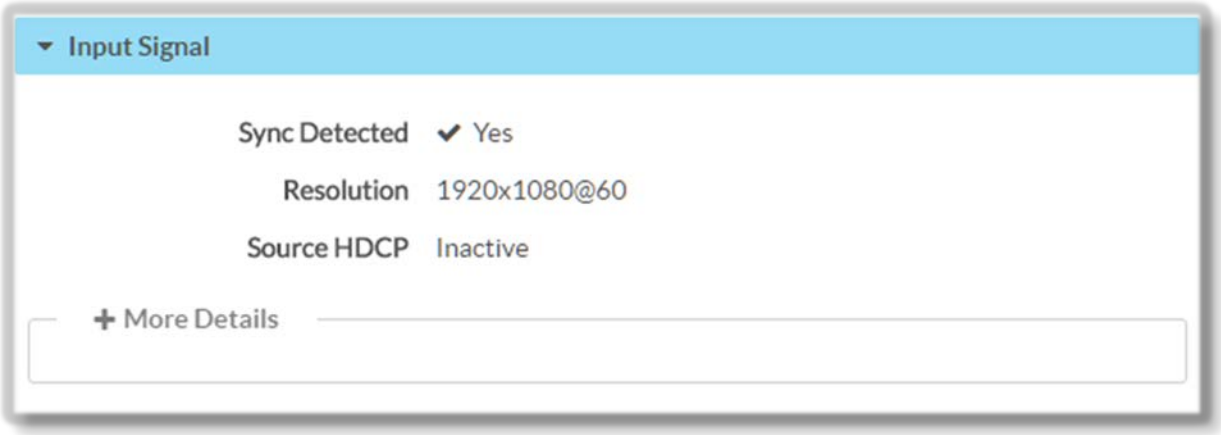
To delete a custom EDID file from the Select drop-down list, do the following:

NOTE: Only custom EDID files can be deleted. Built-in EDID files cannot be deleted.

1. In the **Select** drop-down list, select the custom EDID file to be deleted.
2. Click the **Delete** button. The **Delete EDID** message box appears, asking for confirmation that the EDID be removed.
3. Click **Yes** to delete the EDID or click **No** to cancel the delete operation.

The custom EDID file is deleted from the list of available EDID files and is no longer shown in the **Select** drop-down list.

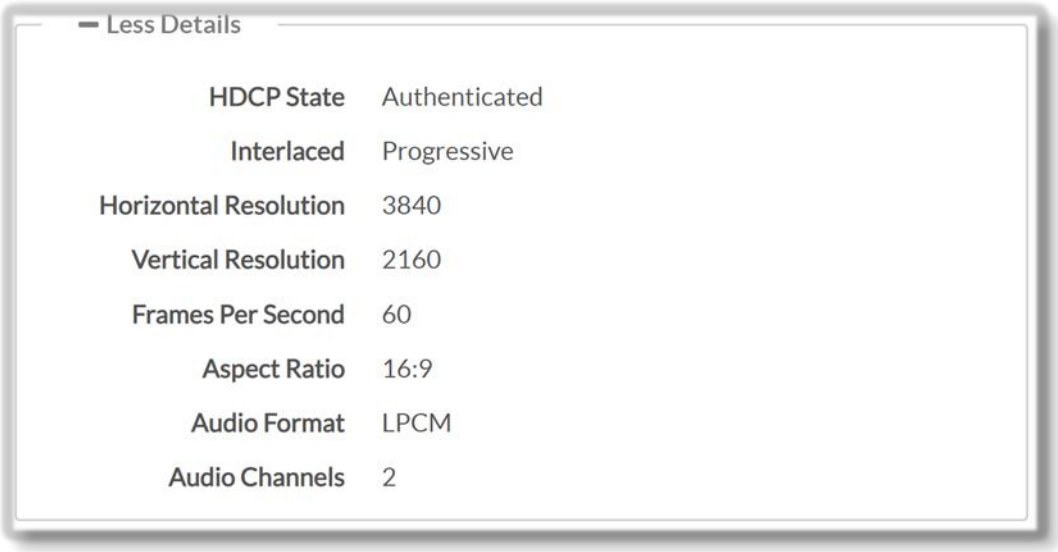
Input Signal



The Input Signal section displays the following read-only information about the signal on the HDMI input:

- **Sync Detected:** Indicates if video sync levels are detected at the HDMI input.
- **Resolution:** Reports the resolution
- **HDCP:** Indicates the presence of HDCP (High-bandwidth Digital Content Protection), which requires compatible players and displays

Click the + More Details link to view additional information about the HDMI input settings. The + More Details section displays additional details about the HDCP state, horizontal and vertical resolution, aspect ratio, audio format and audio channels and more:



HDCP State - Reports the status of HDCP authentication. Possible values are as follows:

- HDCP not required
- Unauthenticated
- Busy (authentication in progress)
- Authenticated
- Non-HDCP source

Interlaced – Indicates whether the scanning method used is interlaced or progressive scanning method.

Horizontal Resolution - Reports the horizontal resolution of the HDMI Output. Reported values range from 0 to 4096 pixels.

Vertical Resolution - Reports the vertical resolution of the HDMI Output in lines. Reported values range from 0d to 2160 lines.

Frames per Second - Reports the frame rate of the HDMI Output.
Reported values range from 0 (no refresh rate information is available) to 85 Hz.

Aspect Ratio - Reports the aspect ratio of the HDMI output.

Audio Format - Reports the audio format.

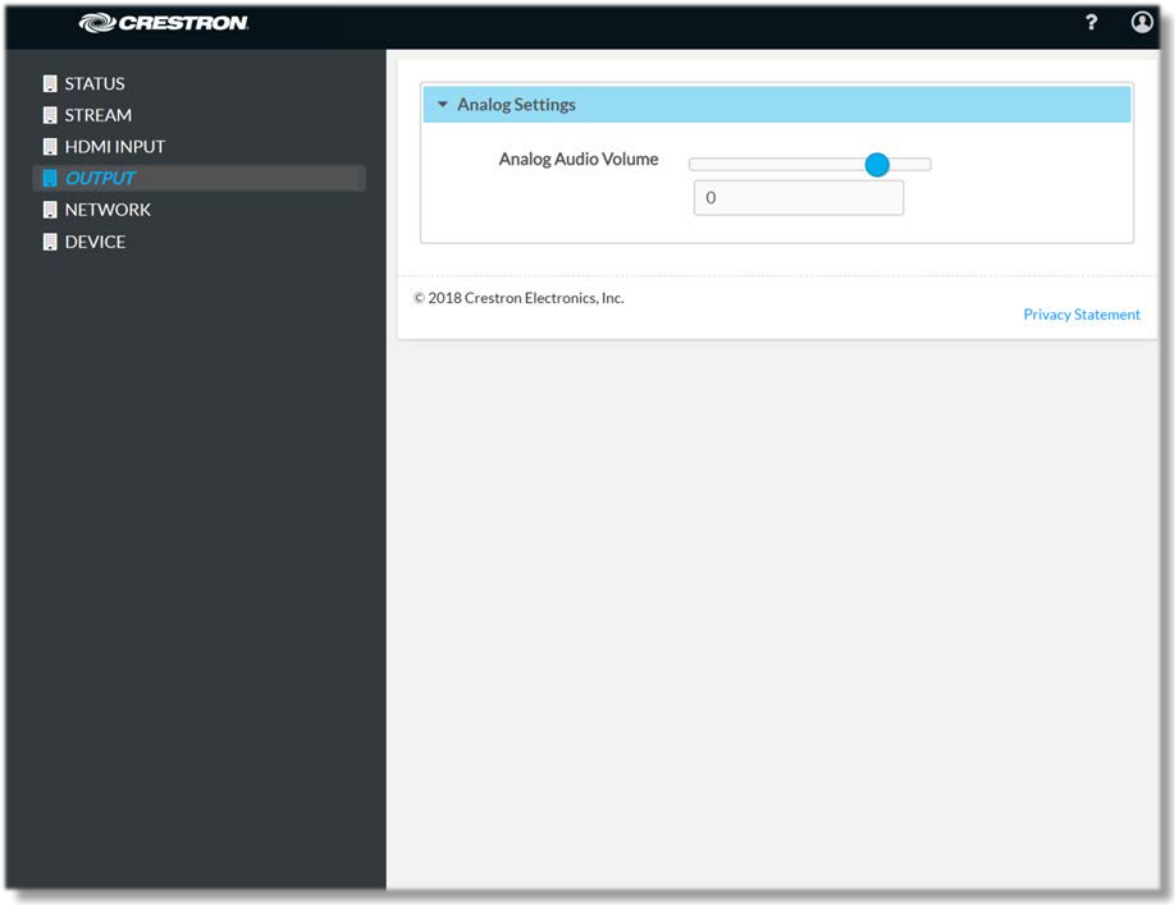
Audio Channels - Reports the number of detected audio channels accompanying the video.

Click –Less Details to hide this section from view.

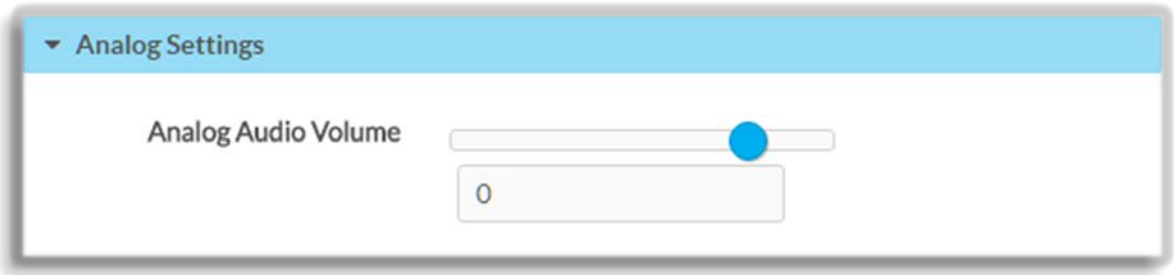
Output

Use the Output page to adjust the analog audio volume.

The Output page can be accessed at any time by simply clicking the **OUTPUT** tab in the navigation bar of the web-based user interface of the DM-NVX-E30(C).



Analog Settings



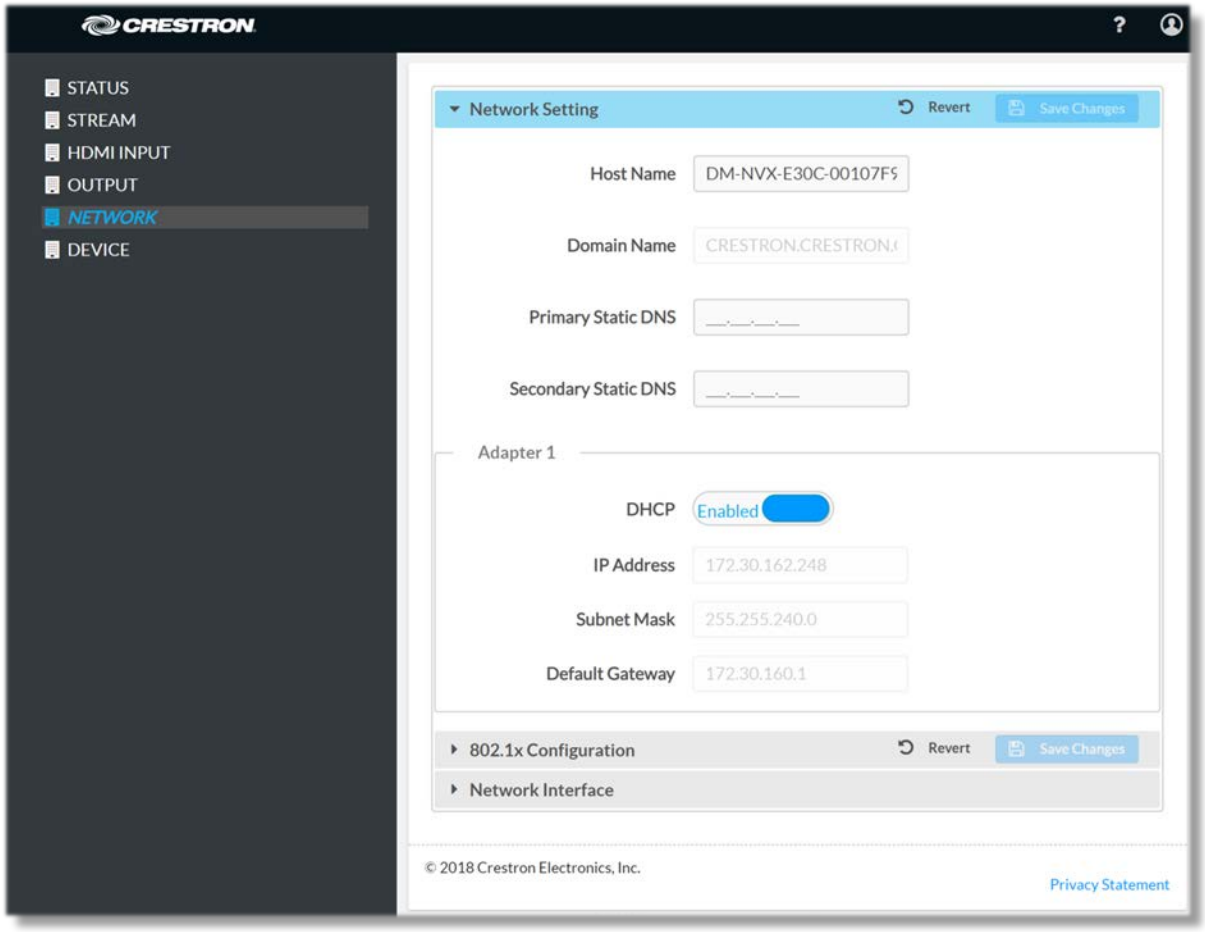
Adjust the volume of the analog audio by moving the **Analog Audio Volume** slider to the left or right or by entering a value in the text field below the Analog Audio Volume

slider. The volume level is applied equally to the left and right channels. Values range from -80 dB to 24 dB, adjustable in 0.1dB increments.

Network

The Network page allows network settings such as host name, domain name, and DHCP (Dynamic Host Configuration Protocol) mode to be set.

The Network page can be accessed at any time by simply clicking the **NETWORK** tab in the navigation bar of the web-based user interface of the DM-NVX-E30(C).

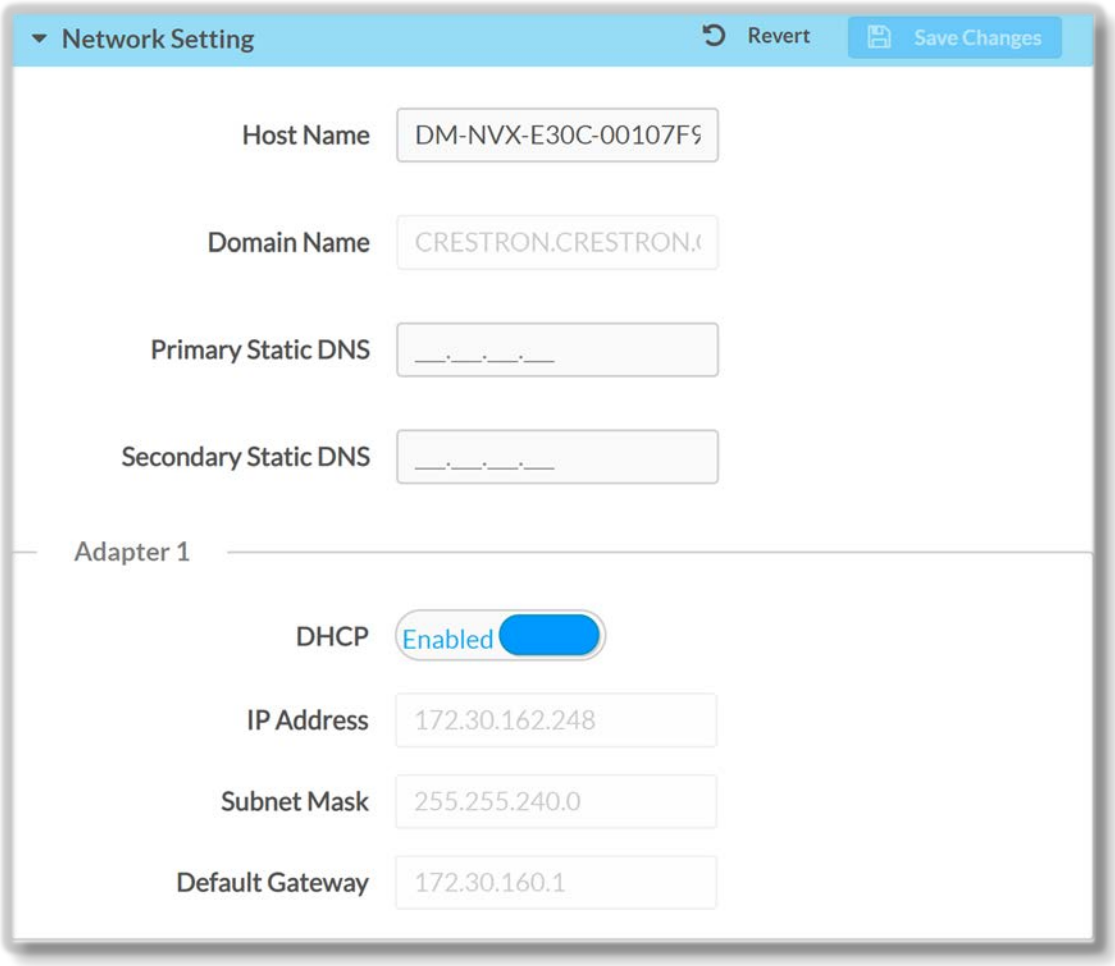


Network Settings

To configure the network settings of DM-NVX-E30(C), modify one or more of the following:

Host Name: Overwrite the existing host name in the **Host Name** text field with the desired new host name. The host name is restricted to the letters a to z (not case sensitive), the digits 1 to 9, and the hyphen.

Domain Name: Specify a domain name.



Set the **DHCP** slider to **Enabled** or **Disabled** to specify whether the IP address of the DM-NVX-E30(C) is to be assigned by a DHCP (Dynamic Host Configuration Protocol) server.

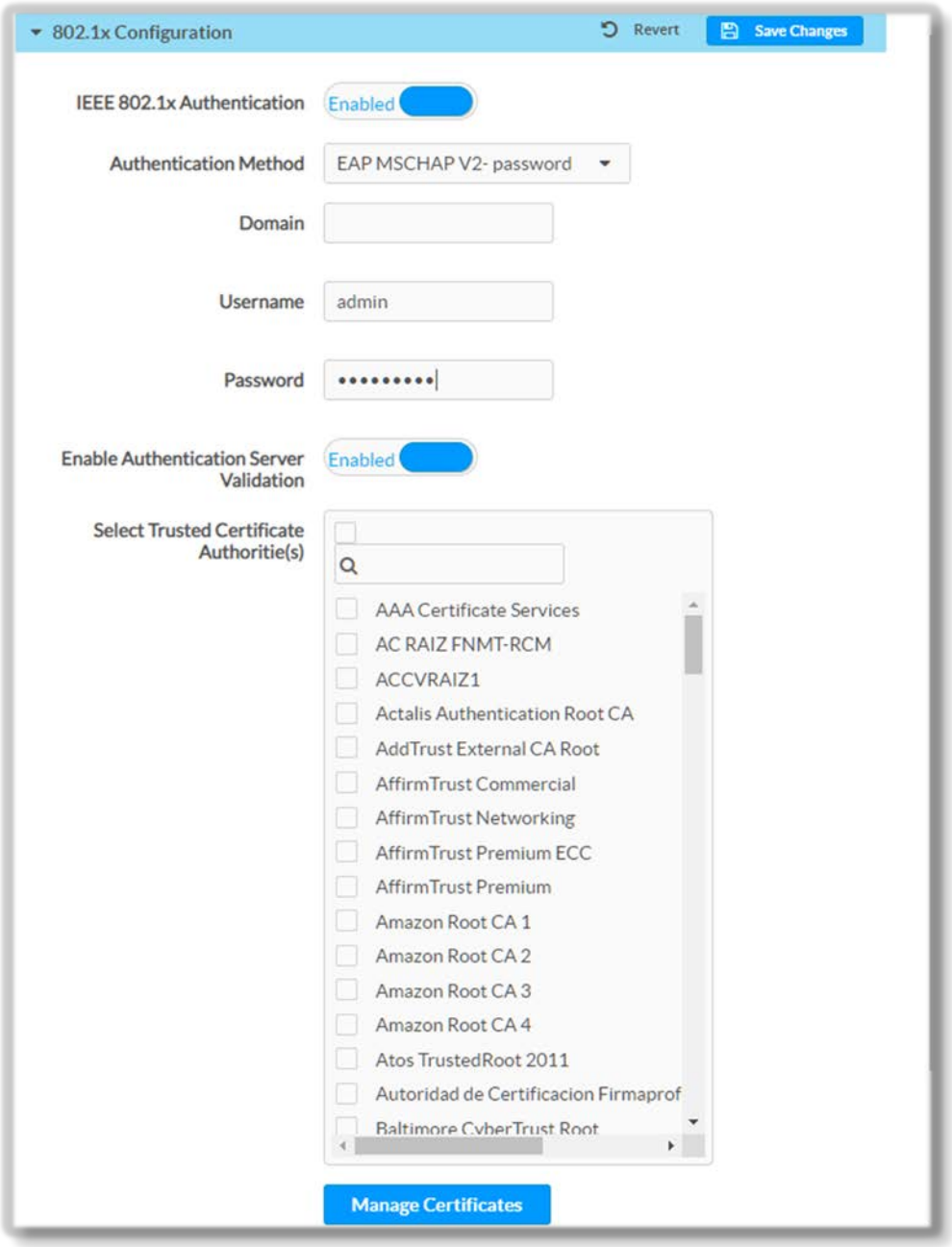
- When DHCP is enabled: (default setting) The IP address of the DM-NVX-E30(C) would be automatically assigned by a DHCP server on the local area network (LAN) for a predetermined period of time.
- When DHCP is disabled: Manually enter information in the following network settings fields:
  - **IP Address:** Enter unique IP address for the DM-NVX-E30(C).
  - **Subnet Mask:** Enter the subnet mask that is set on the network.
  - **Default Gateway:** Enter the IP address that is to be used as the network's gateway.
  - **Primary Static DNS:** Enter the IP address of the primary DNS server.
  - **Secondary Static DNS:** Enter the IP address of the secondary DNS server.

To save any changes, click the **Save Changes** button. The DM-NVX-E30(C) automatically reboots.

To revert to the previous settings without saving the current entries, click the **Revert** button.

802.1x Configuration

DM-NVX-E30(C) has built-in support for the 802.1X standard (an IEEE network standard designed to enhance the security of wireless and Ethernet LANs. The standard relies on the exchange of messages between the device and the network's host, or authentication server), allowing communication with the authentication server and access to protected corporate networks.



To configure DM-NVX-E30(C) for 802.1X Authentication:

Move the **IEEE 802.1X authentication** slider to Enabled. This will enable all options on the 802.1X dialog.

Select the **Authentication method: EAP-TLS Certificate** or **EAP-MSCHAP V2 Password** according to the network administrator's requirement.

If **EAP-TLS Certificate** is the selected authentication method, click **Manage Certificates** to upload the required machine certificate.
The machine certificate is an encrypted file that will be supplied by the network administrator, along with the certificate password.
-or-

If **EAP-MSCHAP V2 Password** is the selected authentication method, enter the Username and Password supplied by the network administrator into the **Username** and **Password** text fields. The Password method does not require the use of a machine certificate, only the user name and password credentials.

If the Enable Authentication Server Validation option was enabled, this will enable the list box of signed by trusted CAs certificates pre-loaded into the DM-NVX-E30(C).
Select the check box next to each CA whose certificate can be used for server validation, as specified by the network administrator.
If the network does not use any of the listed certificates, the network administrator will provide their own certificate, which must be uploaded manually, via the **Manage Certificates** functionality.

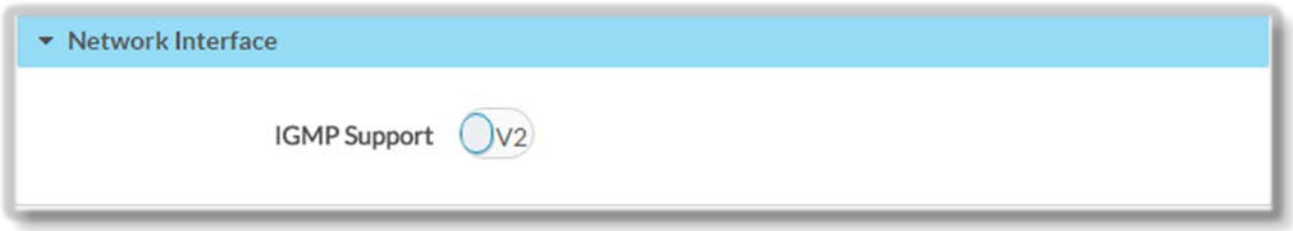
If required, type the domain name of the network in the **Domain** field.

When the 802.1X settings are configured the way you want, click **Save Changes** to save the changes to the device and reboot it.

Click **Revert** to cancel any changes.

Network Interface

Use **IGMP Support** check box to switch between IGMPv2 (default setting) and IGMPv3 snooping based on existing network setup.



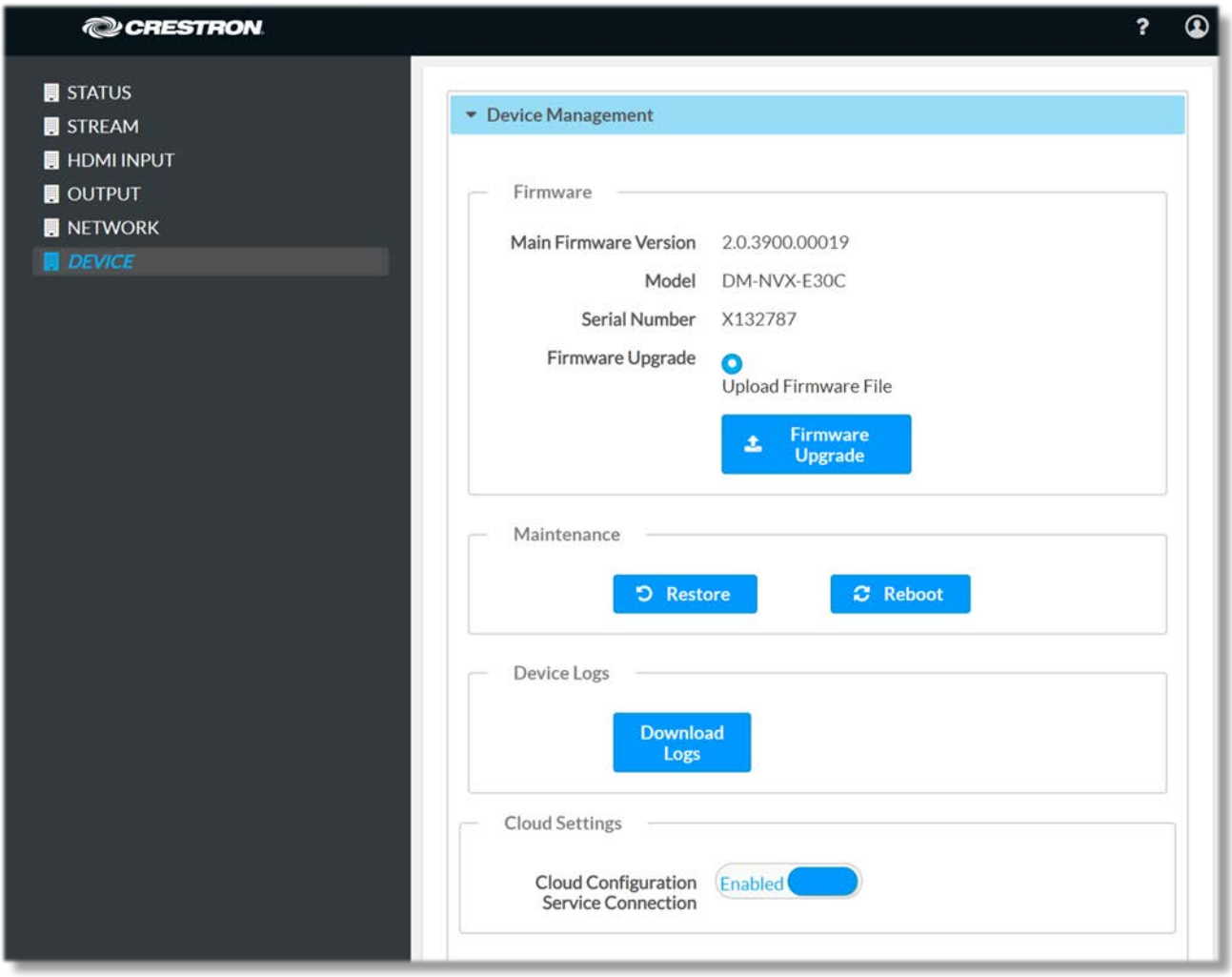
Note that a change in the IGMP support settings will require reboot of the DM-NVX-E30(C).

Device

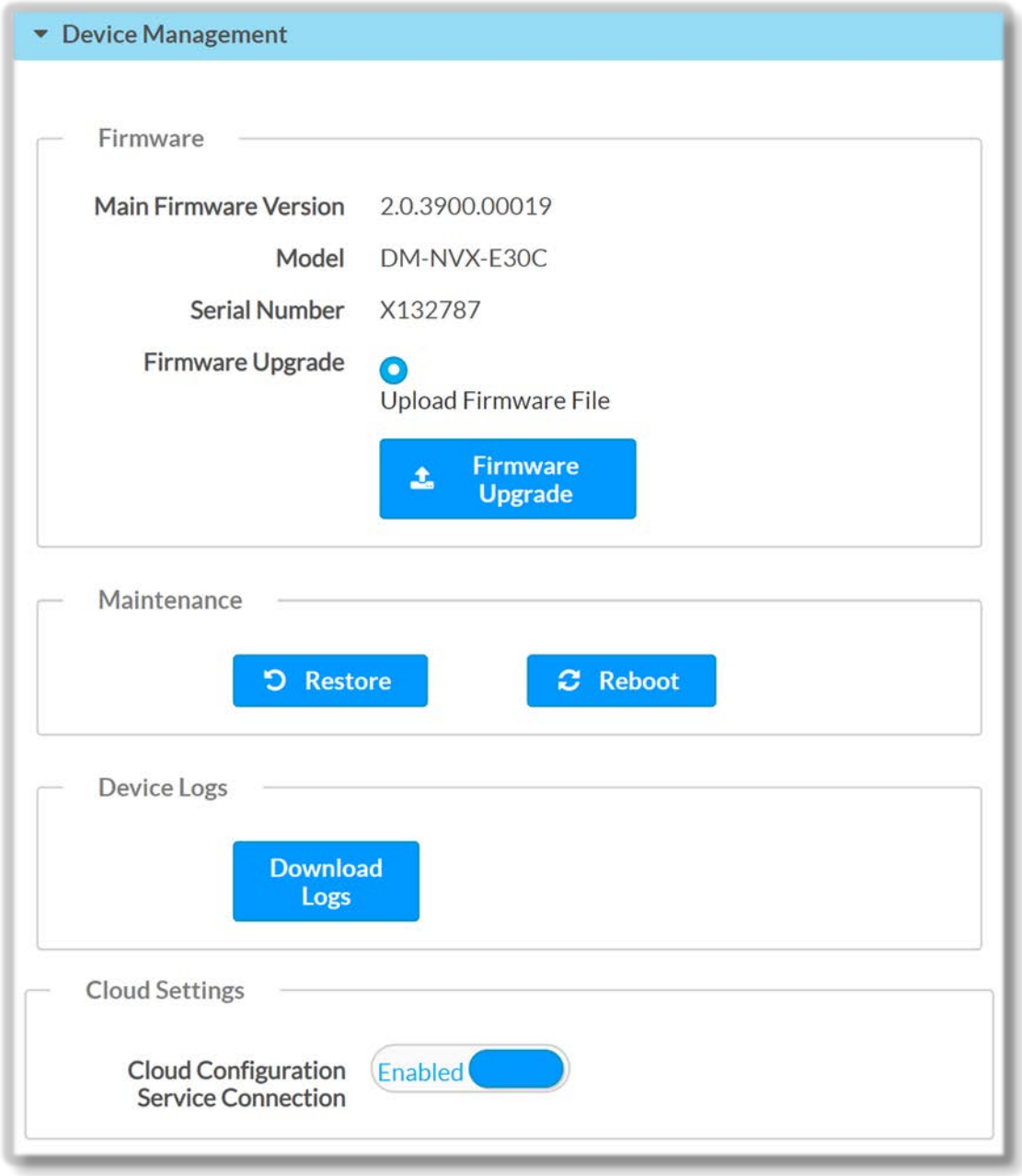
The Device page can be used to configure and manage various functions of the DM-NVX-E30(C), such as:

- Upgrading firmware
- Restoring factory default settings
- Rebooting the DM-NVX-E30(C)
- Downloading device logs
- Connecting the DM-NVX-E30(C) to a control system

The Device page can be accessed at any time by simply clicking the **DEVICE** tab in the navigation bar of the web-based user interface of the DM-NVX-E30(C).



Device Management



The *Firmware* section displays the following information about the DM-NVX-E30(C):

- Main Firmware Version
- Model, which is DM-NVX-E30(C)
- Serial Number

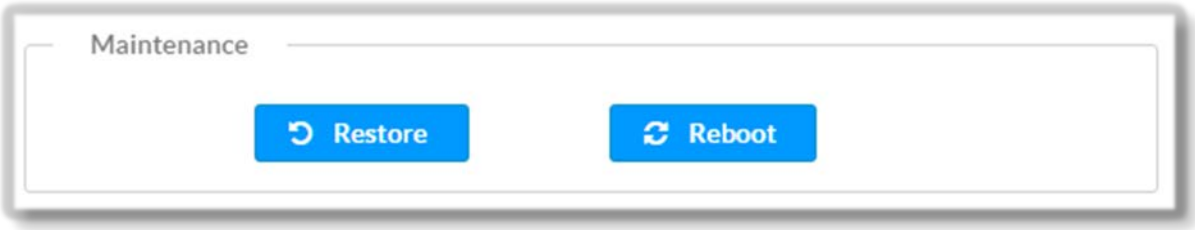
To upgrade the firmware of the DM-NVX-E30(C):

1. Click the **Upload Firmware File** radio button if you wish to upload a firmware file located on your PC.
2. Click **Firmware Upgrade**

3. In the Firmware Upgrade dialog, click the **Browse** button.

4. Locate and select the desired firmware file, and then click the **Open** button. The **Upload firmware file** text field displays the selected firmware filename.
5. Click the Load button and wait for the progress bar to complete and for the **OK** button in the message to become clickable.
6. Click **OK**. The device with new firmware can now be accessed.

The *Maintenance* section of the Device page allows rebooting or restoring the DM-NVX-E30(C) to factory default settings.



Restoring Factory Default Settings

1. Click the **Restore** button to restore the settings of the DM-NVX-E30(C) to factory defaults.

   NOTE: When settings are restored, all settings, including the network settings, will revert to the factory default settings. If a static IP address is set, restoring the device to factory default settings will revert the IP address to DHCP mode, which is the factory default setting.

2. Click **Yes** in the Restore dialog to restore the DM-NVX-E30(C) to factory settings.

   The Restore dialog is displayed again, indicating that the Restore process was successful and that the device rebooted.

   Alternatively click **No** to cancel the restoring operation and return to the Device page.

Rebooting the DM-NVX-E30(C)

1. Click the **Reboot** button. The Reboot message box appears, asking for confirmation that the device be rebooted.
2. Click **Yes** to reboot the device. The Reboot message box appears, indicating that the device is rebooting.

The *Device Logs* section of the Device page allows downloading logs for troubleshooting and other purposes.

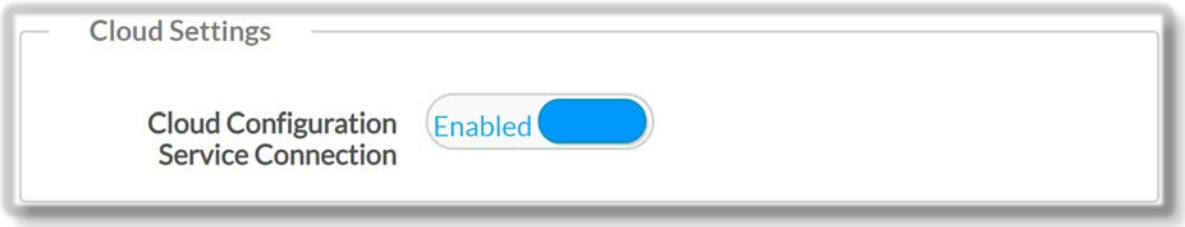
To download device logs:

1. Click the Download Logs button. A logs file (*.tgz) is downloaded to the PC (Downloads folder) or mobile device.

   Name of the Log file consists of the following: 'logs_' + IP Address of DM-NVX-E30(C) + Date + Time + the extension .tgz ; for example: logs_172.30.73.11_2017.3.13_12.11.51.tgz

Cloud Settings

The *Cloud Settings* section of the Device page provides functionality to enable (default) or disable the cloud connection.

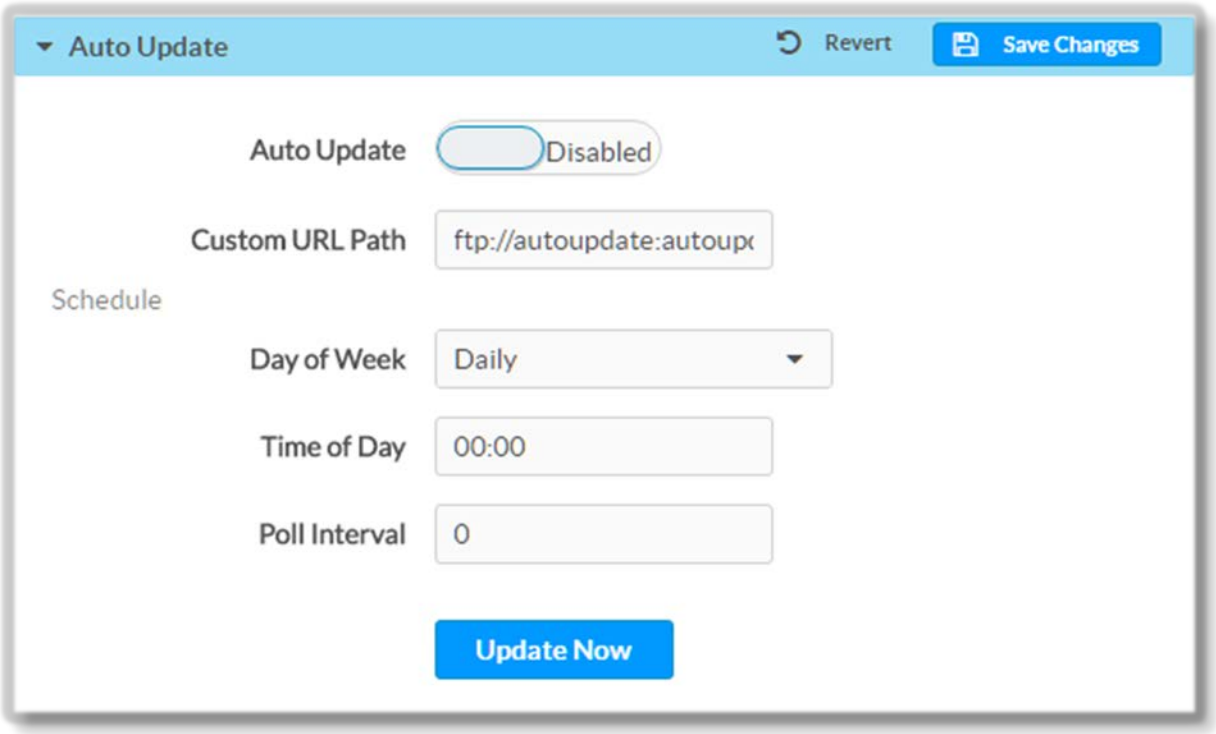


To enable / disable the connection to the cloud server:

1. Move the **Cloud Configuration Service Connection** slider to the **Enabled** (Disabled) position.

Auto Update

To auto update the controls provided on the web interface of DM-NVX-E30(C), do the following:



1. Move the **Auto Update** slider to the **Enabled** position. By default, the auto update functionality is set to Disabled.
2. Provide a path to the update cloud in the **Custom URL Path** text field.

   If you wish to schedule auto update to occur on certain days of the week, click on the **Day of Week** drop-down and select the desired option (available options are as follows: Daily, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday) and then enter time of the day when the auto update will start in the **Time of Day** text field.

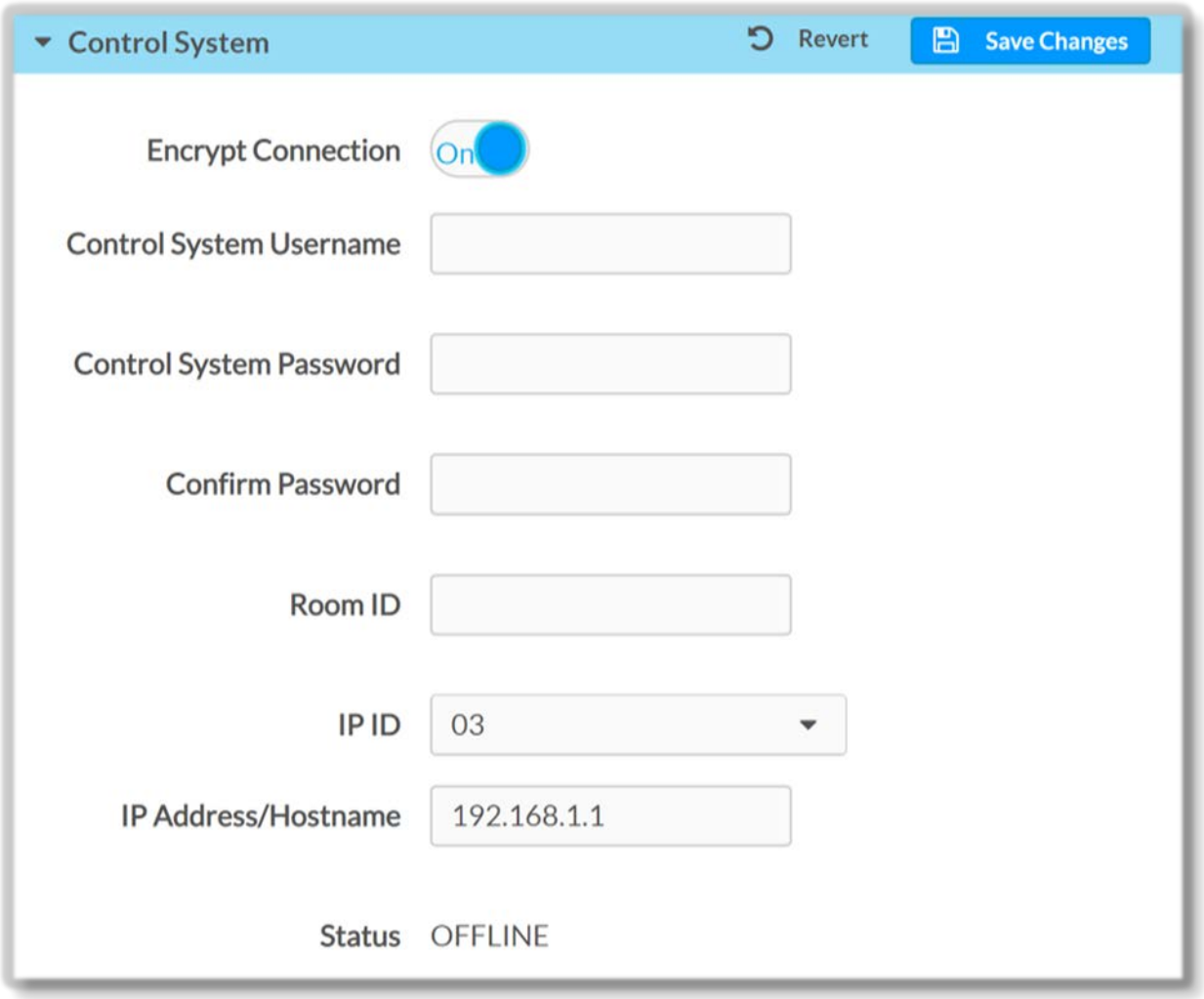
   If you wish to specify polling interval, enter value in the **Poll Interval** text field.

   Click the **Update Now** button to force an update immediately.

   To save the auto update settings, click the **Save Changes** button.
   To revert to the previous settings without saving, click the **Revert** button

Control System

To connect the DM-NVX-E30(C) to a control system, in the *Control System* section of the page, do the following:



1. In the **Encrypt Connection**, select **On** or **Off** to specify whether to use encryption. By default Connection encryption is set to Off.

   Note that when encryption is enabled, **Control System Username**, **Control System Password** and **Confirm Password** text fields are displayed if necessary to provide login information.

2. Enter Room ID in the **Room ID** text field
3. In the **IP ID** drop-down list, select the IP ID of the DM-NVX-E30(C). Valid values range from 03 to FE in hexadecimal notation.
4. In the **IP Address/Hostname** text field, enter the IP address or hostname of the control system.

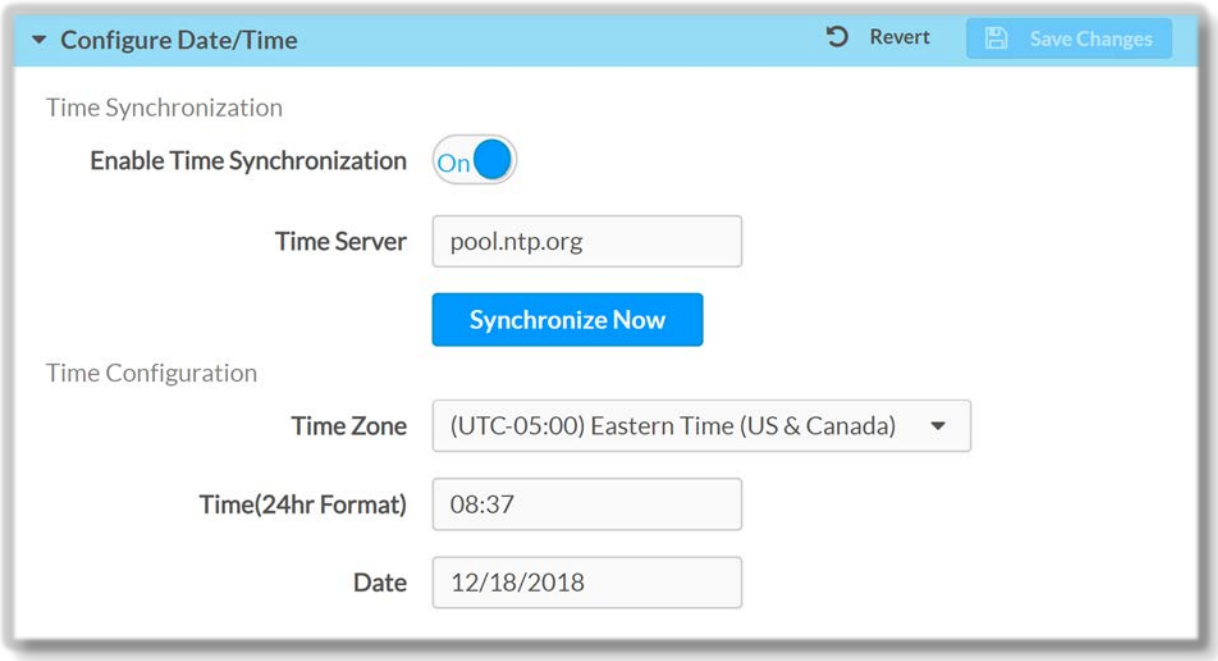
The **Status** field (read only) displays the connection status of the DM-NVX-E30(C) to the control system as OFFLINE or ONLINE.

To save the new entries, click the **Save Changes** button. The **Control System Save** message box appears, indicating that the control system settings were saved successfully.

To revert to the previous settings without saving, click the **Revert** button.

Configure Date / Time

To configure the date and time settings of the DM-NVX-E30(C), in the Configure Date/Time section of the page, do the following:



Time Synchronization

1. Move the **Enable Time Synchronization** slider to the desired position (**On** or **Off)** to specify whether time synchronization will be enabled (On) or disabled (Off). By default time synchronization is set to On.
2. In the **Time Server** text field, enter the URL of the NTP server
3. Click **Synchronize Now** to perform time synchronization between the device's internal clock and the time server

Time Configuration

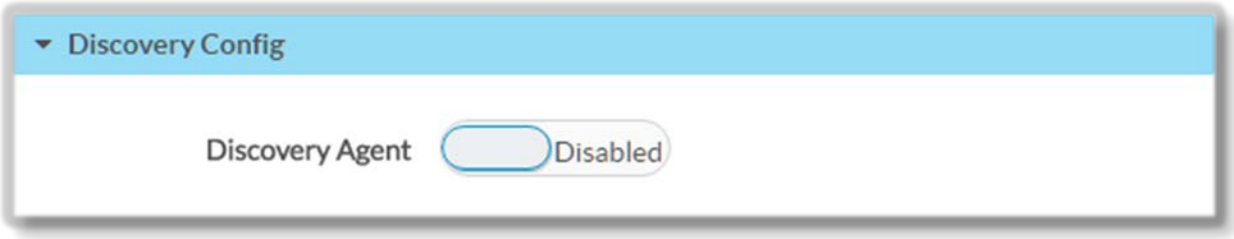
1. Click on the **Time Zone** drop-down to select the applicable time zone
2. In the **Time (24hr Format)** text field, enter current time in 24-hour format
3. In the **Date** text field, enter the current date

To save the settings, click the **Save Changes** button.

To revert to the previous settings without saving, click the **Revert** button.

Discovery Config

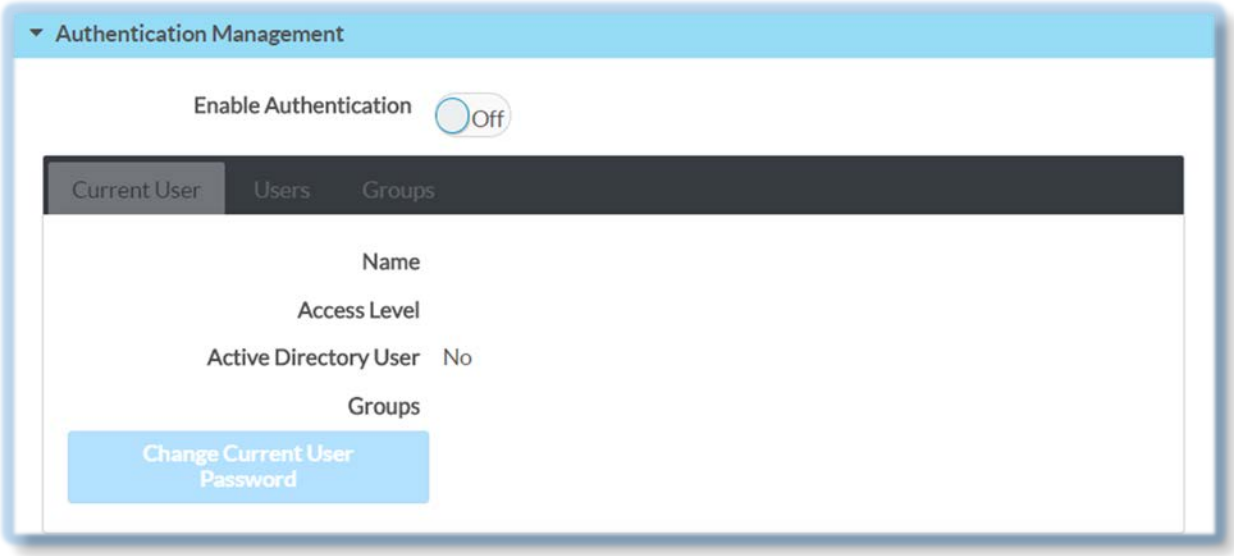
Move the **Discovery Agent** slider to **Enabled** or **Disabled** to specify if the DM-NVX-E30(C) will be discoverable or not. When Discovery Agent is enabled the DM-NVX-E30(C) will be displayed in the 'Available Streams' lists of other receivers.



Authentication Management

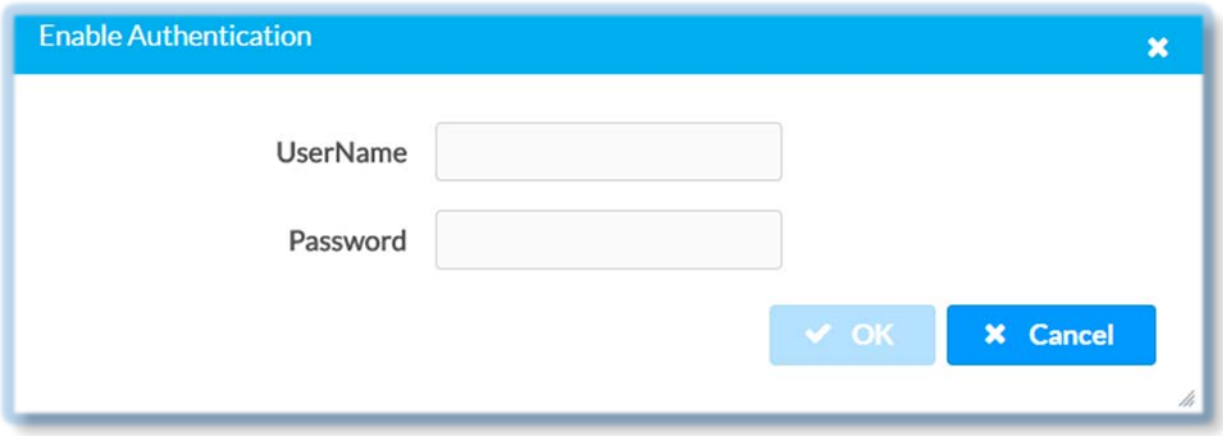
Click the Authentication Management tab to configure authentication management for users and groups and to allow different levels of access to the functions of DM-NVX-E30(C).

By default the authentication mode is disabled (set to **Off)**.



Move the **Enable Authentication** slider to the desired position (**On** or **Off**) to specify whether authentication will be enabled or disabled.

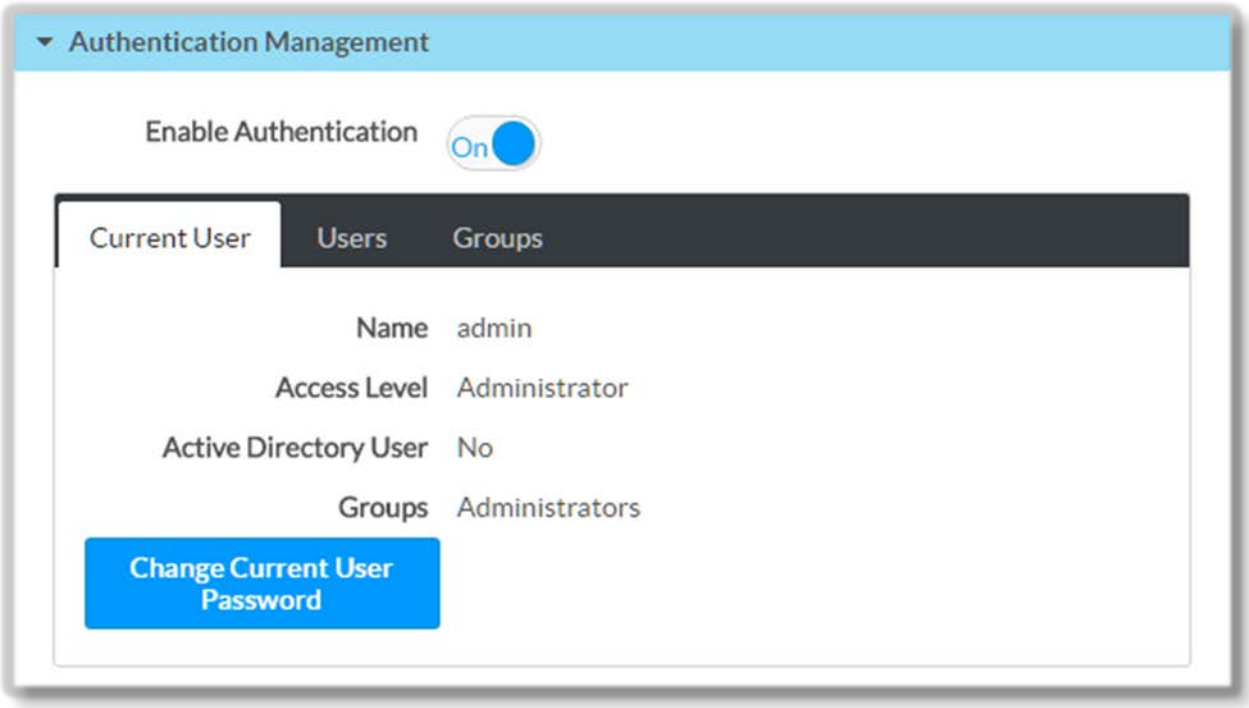
Note that in order to enable authentication you will be prompted to provide your administrator credentials:



After enabling/disabling authentication, the current device session will end and you may be redirected to the login page. Turning authentication on or off does not affect existing user or group accounts on DM-NVX-E30(C).

Once authentication is turned on, only users with administrator rights can disable it.

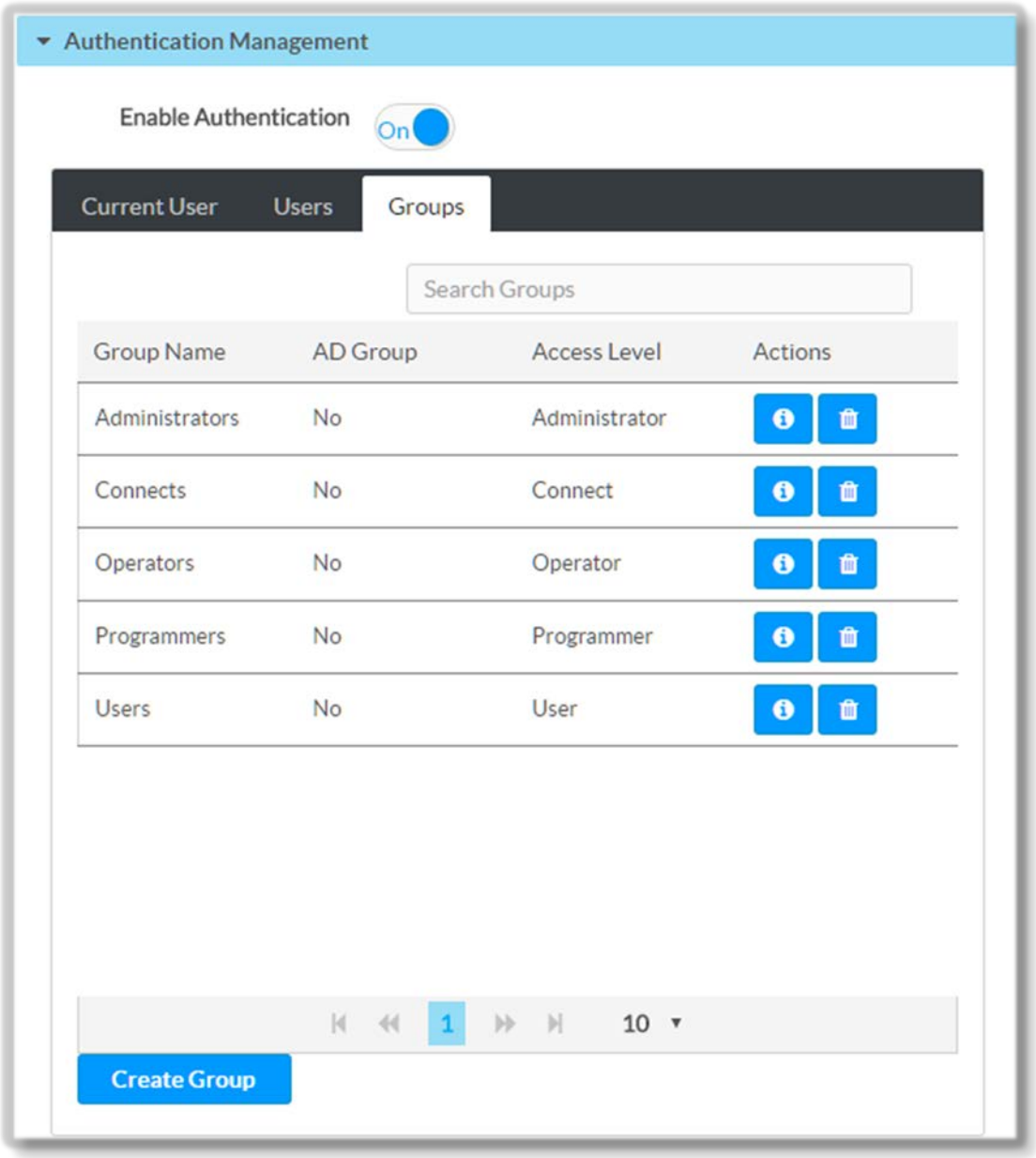
When authentication is enabled, click on the corresponding **Current User**, **Users** or **Group**s tabs to view, add, remove, and edit information local or Active Directory users and groups on DM-NVX-E30(C) or to change password for current user.



Groups

Click the **Groups** tab to view and edit group settings. The **Groups** tab can be used to add local and Active Directory groups, remove local and Active Directory groups, and preview information about a group.

Use the **Search Groups** text field to enter search term(s) and display groups that match the search criteria.



If groups listed in the **Groups** table span across multiple pages, navigate through the groups by clicking a page number or by using the left or right arrows at the bottom of the **Groups** pane to move forward or backward through the pages.

Additionally, each page can be set to display 5, 10, or 20 groups by using the drop-down menu to the right of the navigation arrows.

Existing groups are displayed in table format and the following information is provided for each group:

- **Group Name:** Displays the name of the group
- **AD Group:** Displays whether the group requires authentication using Active Directory
- **Access Level:** Displays the pre-defined access level assigned to the group (Administrator, Programmer, Operator, User, or Connect)

Click the corresponding button in the **Actions** column to view detailed group information or to delete selected group .

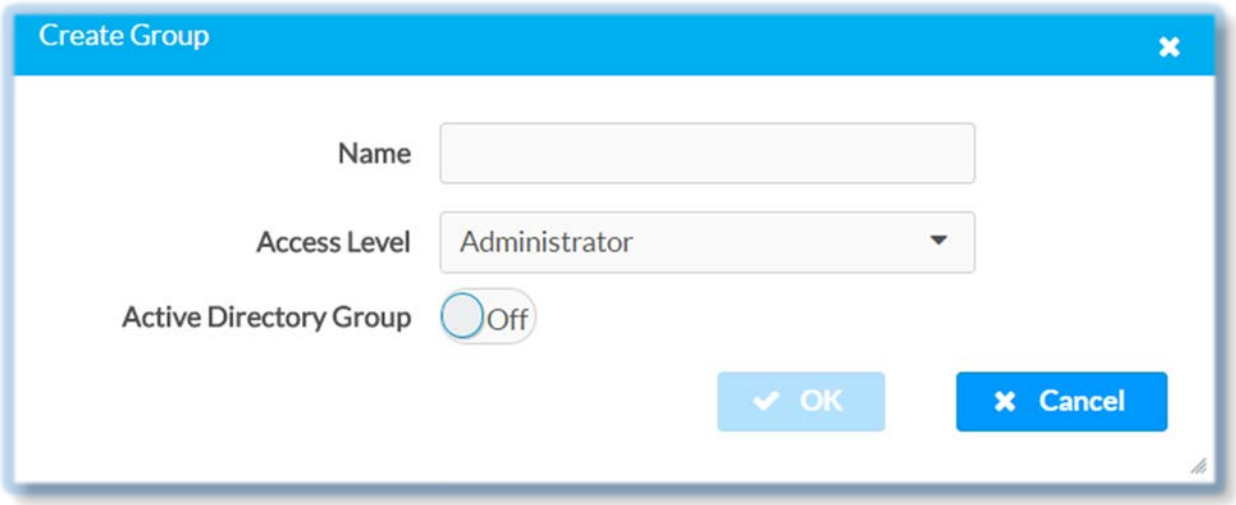
To create new group, click on the **Create Group** button in the **Groups** tab.

Create local group

1. Click **Create Group** button
2. In **Create Group** dialog enter the following:
   - Enter group name in the **Name** text field
   - Assign group access level by selecting a pre-defined access level (Administrator, Connect, Operator, Programmer, User) from the **Access Level** drop-down list
   - Make sure that the **Active Directory Group** slider is set to **Off**
3. Click **OK** to save; click **Cancel** to cancel the changes.

Add Active Directory group

A group cannot be created or removed from Active Directory server but an access can be granted to an existing group in Active Directory.



Once the group is added, all members of that group will have access to the DM-NVX-E30(C).

1. Click **Create Group** button
2. In **Create Group** dialog enter the following:
   - Enter group name in the **Name** text field, for example "Engineering Group"

     Note that group names are case sensitive; space is a valid character than can be used in group names
   - Assign group access level by selecting a pre-defined access level (*Administrator*, *Connect*, *Operator*, *Programmer*, *User*) from the **Access Level** drop-down list
   - Make sure that the **Active Directory Group** slider is set to **On**
3. Click **OK** to save; click **Cancel** to cancel the changes.

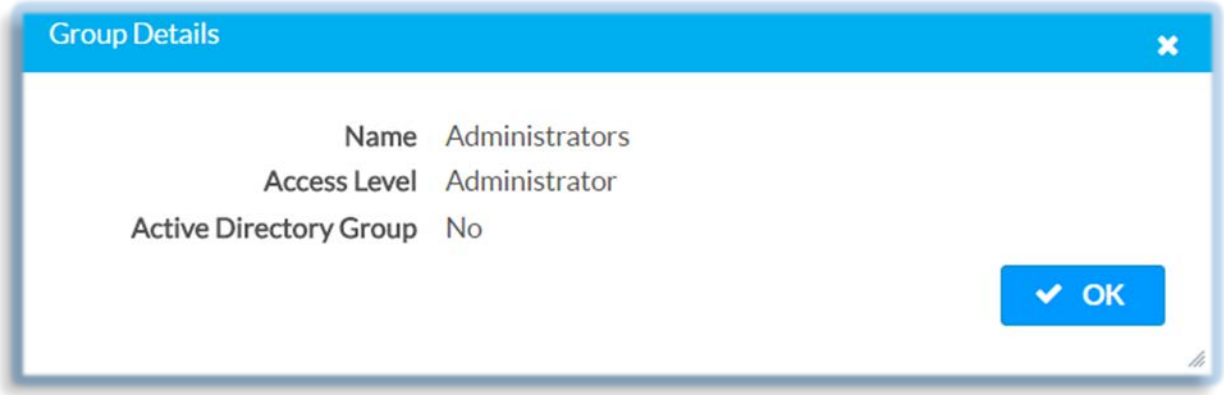
Delete a group

Click the trashcan button ( ) in the **Actions** column to delete a group. Click **Yes** when prompted to delete the group or **No** to cancel the deletion.

When a group is deleted, users in the group are not removed from the device/Active Directory server; however, because user's access level is inherited from a group(s), users within the group will lose the access rights associated with this group. When AD group is removed from DM-NVX-E30(C), all members of that group will lose access to the DM-NVX device.

View Group Details

Click the information button ( ) in the **Actions** column to view information for the selected group. The **Group Details** dialog listing the following information for the selected group:

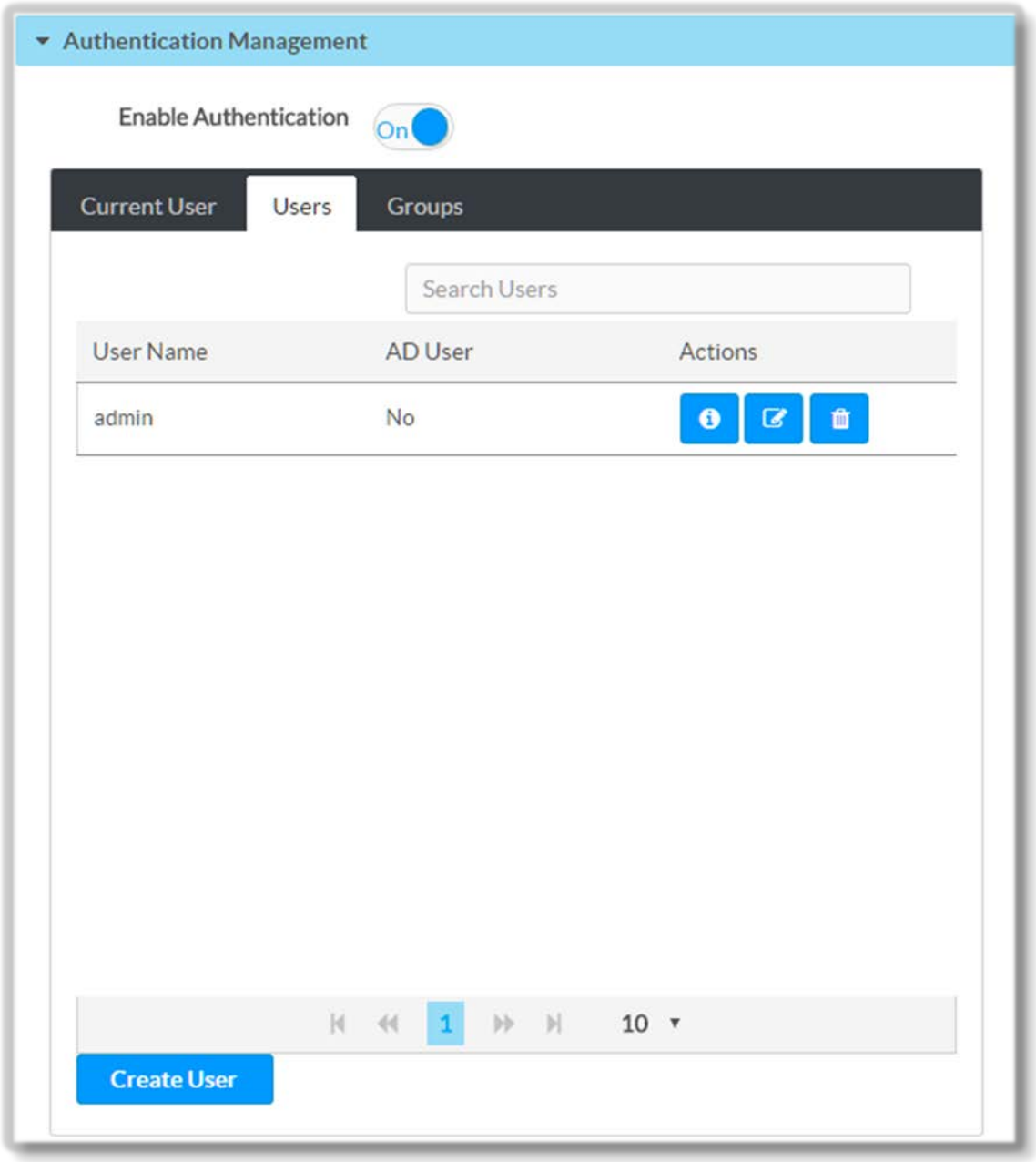


- **Name:** Displays the name of the group
- **Access Level:** Displays the access level of the group and its users
- **Active Directory Group:** Displays whether the group is an Active Directory group

Click **OK** to close the **Group Details** dialog and to return to the Authentication Management Groups settings.

Users

Click the **Users** tab to view and edit user settings. The **Users** tab can be used to add local and Active Directory users, remove local and Active Directory users, and preview information about users.



Use the **Search Users** text field to enter search term(s) and display groups that match the search criteria.

If users listed in the **Users** table span across multiple pages, navigate through the list of users by clicking a page number or by using the left or right arrows at the bottom of the **Users** pane to move forward or backward through the pages.

Each page can be set to display 5, 10, or 20 users by using the drop-down menu to the right of the navigation arrows.

Information about existing users is displayed in table format and the following details are provided for each user:

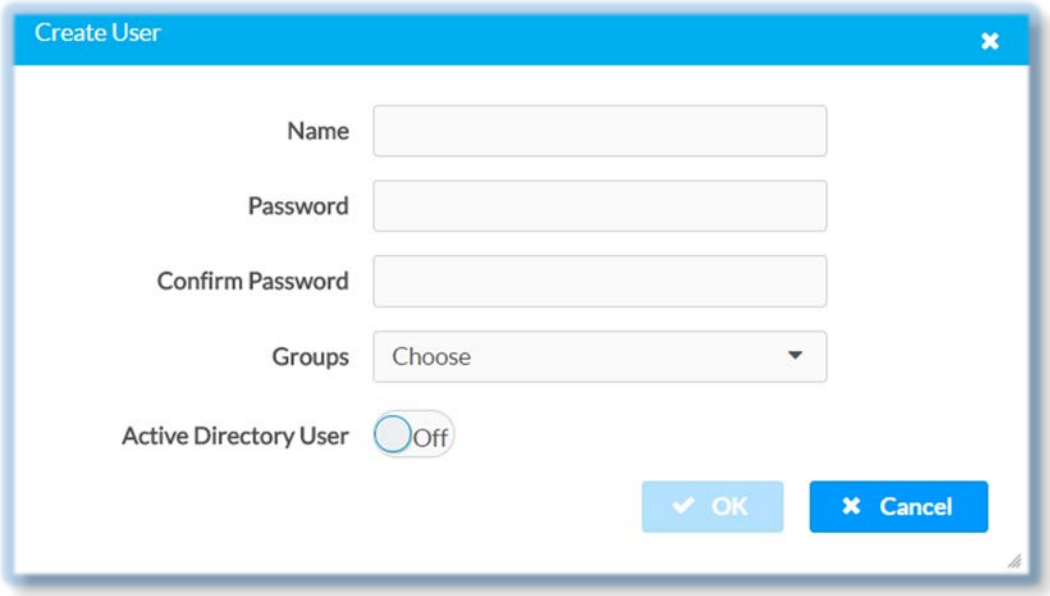
- **Username:** Displays the name of the user
- **AD User:** Displays whether the user requires authentication using Active Directory

Click the corresponding button in the **Actions** column to view detailed group information or delete group .

To create new group, click the **Create User** button.

Create new local user

1. Click **Create User** button in the **User** tab
2. In **Create User** dialog enter the following:



- Enter user name in the **Name** text field. Valid user name can consist of alphanumeric characters (letters a-z, A-Z, numbers 0-9) and the underscore "_" character.
- Enter password in the **Password** text field; re-enter the same password in the **Confirm Password** text field
- Assign access level by selecting one or more groups from the **Groups** drop-down list
- Make sure that the **Active Directory User** slider is set to **Off**

3. Click **OK** to save; click **Cancel** to cancel the changes.

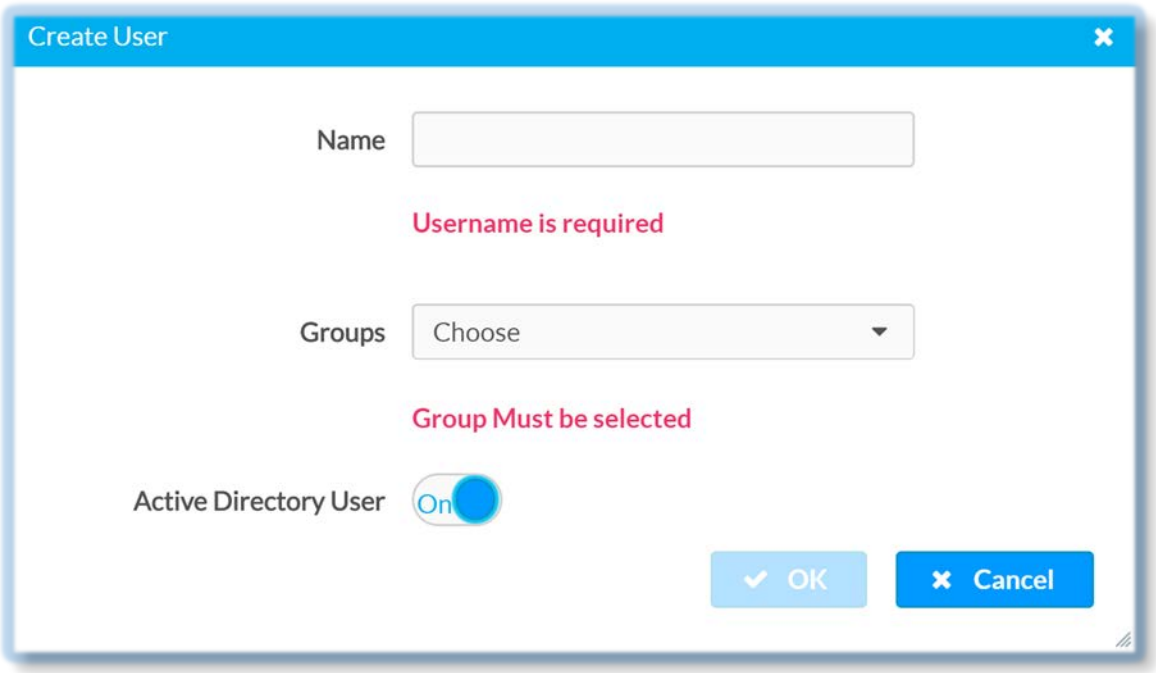
Add Active Directory user

Users cannot be created or removed from the Active Directory server but an access can be granted to an existing user in the Active Directory server.

To grant access to an Active Directory user, you can either add the user to a local group on the DM-NVX-E30(C), or add the Active Directory group(s) that they are a member of to the DM-NVX-E30(C) (see Add Active Directory group).

Add Active Directory user:

1. Click **Create User** button
2. In **Create User** dialog enter the following:



- Enter user name in the **Name** text field in the format “Domain\UserName”, for example “crestronlabs.com\JohnSmith”.

  Valid user name can contain the alphanumeric characters (letters a-z, A-Z, numbers 0-9) and the underscore character.

- Select one or more groups from the **Groups** drop-down list
- Make sure that the **Active Directory User** slider is set to **On**

3. Click **OK** to save; click **Cancel** to cancel the changes.

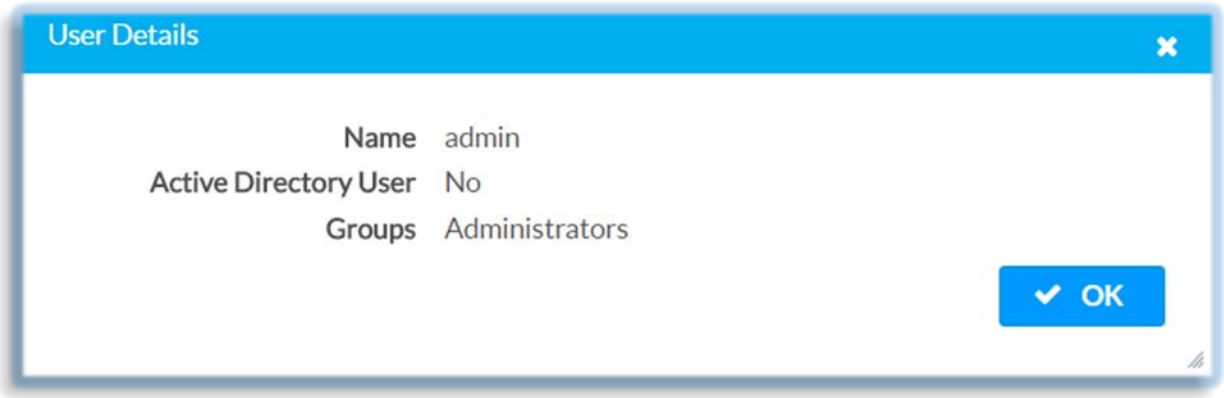
Delete user

Click the trashcan button ( ) in the **Actions** column to delete the user. Click **Yes** when prompted to delete the user or **No** to cancel the deletion.

After a user is removed from a group, they are deprived the access rights associated with that group. Note that the user account is not deleted by the delete user operation.

View User Details

Click the information button ( ) in the **Actions** column to view information for the selected user. The **User Details** dialog displays the following information for the selected user:

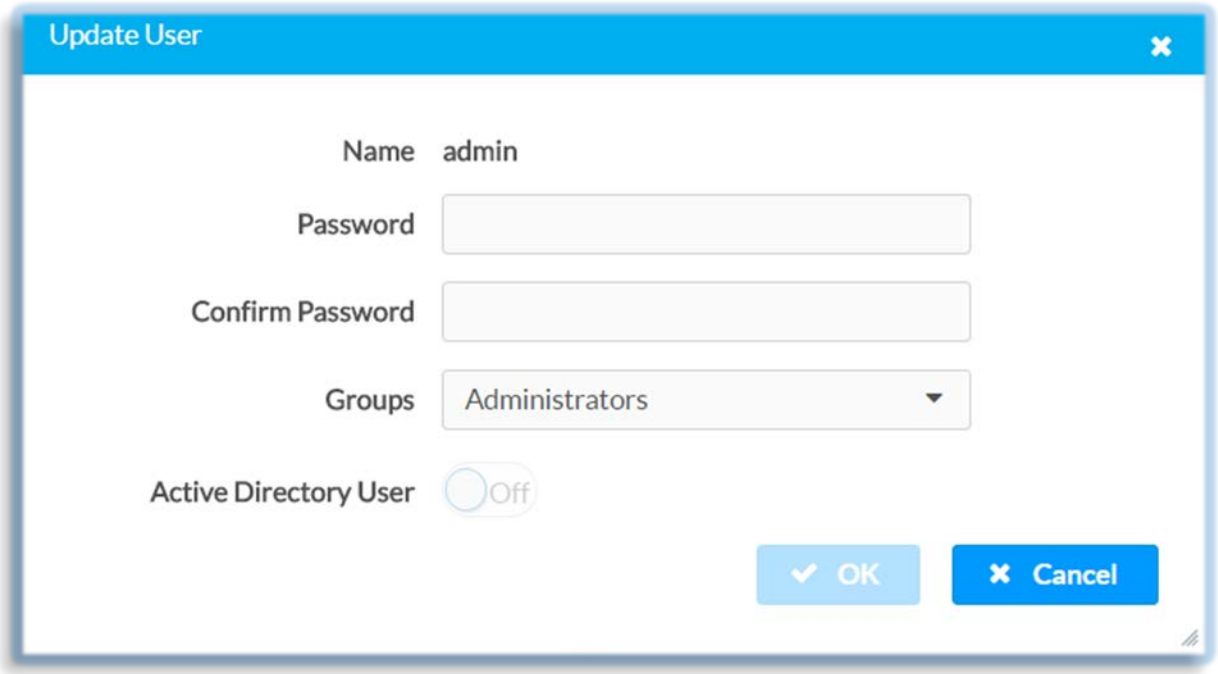


- **Name:** Displays the name of the selected user
- **Active Directory User:** Displays whether the user is an Active Directory user
- **Group:** Displays the applicable group(s) for the selected user

Click **OK** to close the **User Details** dialog and to return to the Authentication Management Users tab.

Update User Details

Click the information button ( ) in the **Actions** column to update information for the selected user.



Then:

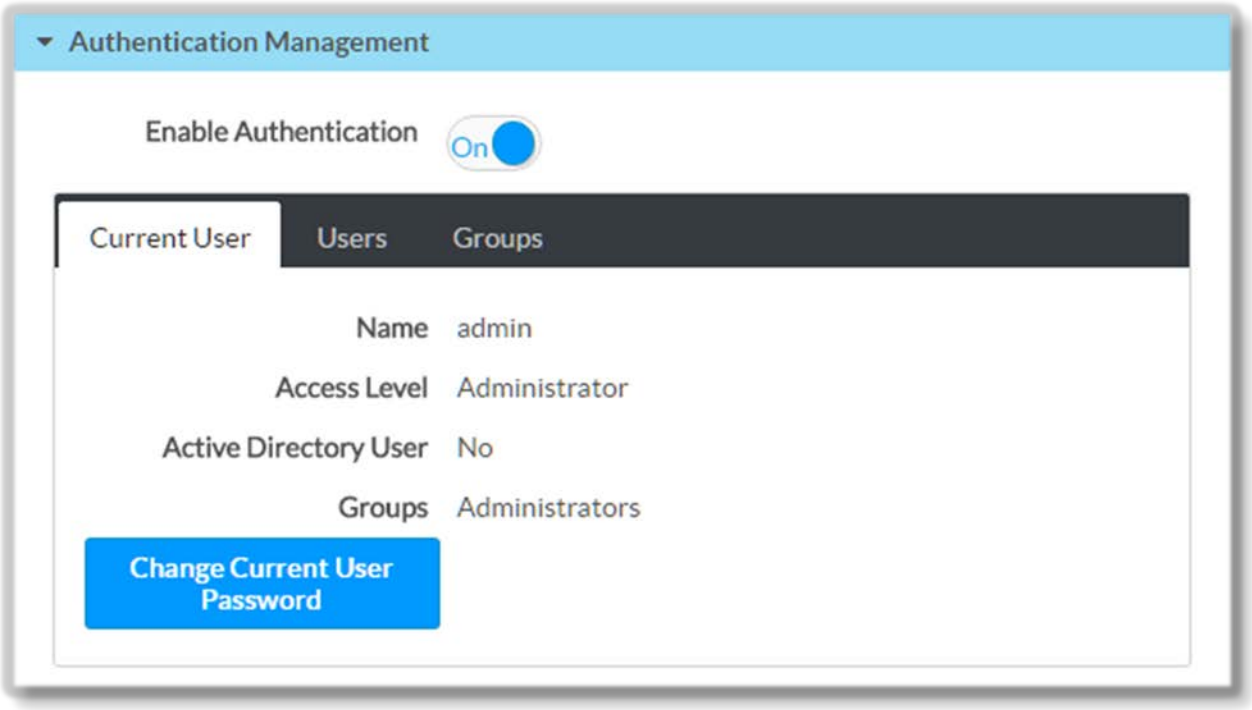
- Enter password in the **Password** text field; re-enter the same password in the **Confirm Password** text field
- Change access level by selecting one or more groups from the **Groups** drop-down list
- Click **OK** to save or click **Cancel** to cancel the changes.

The **Update User** dialog also displays the following read-only information for the selected user:

- **Name:** Displays the name of the user
- **Active Directory User:** Displays whether the user is an Active Directory user

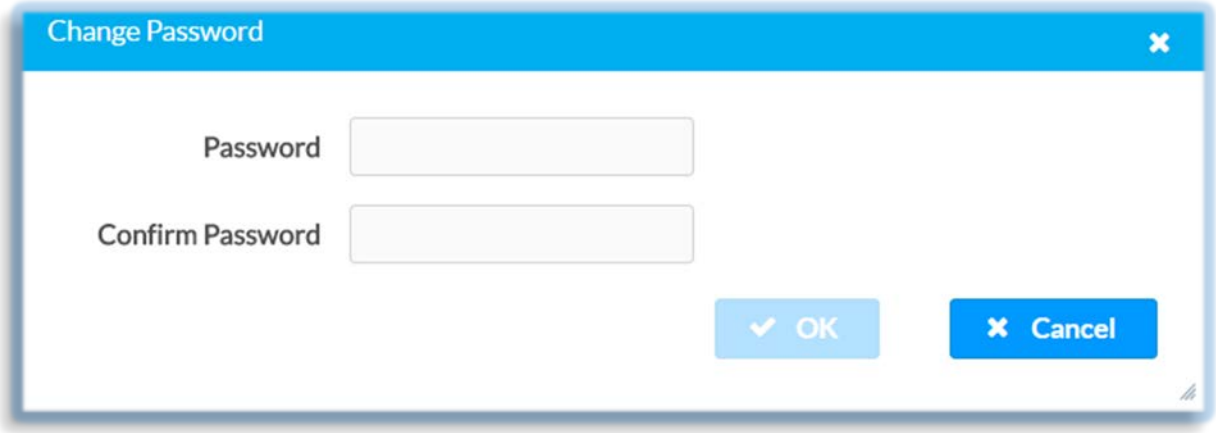
Current User

Click the **Current User** tab to preview read-only information or to change password for current user.



Click the **Change Current User Password** button to provide new password for the current user.

In **Change Password** dialog enter the new password in the **Password** text field, then re-enter the same password in the **Confirm Password** text field



Click **OK** to save or click **Cancel** to cancel the changes.