

**IMPORTANT:**  
Go to [www.extron.com](http://www.extron.com) for the complete user guide, installation instructions, and specifications before connecting the product to the power source.

This guide provides instructions for an experienced installer to set up and operate the Extron NAVigator System Manager. The NAVigator manages, configures, and controls an AV streaming system consisting of Extron NAV encoders, and decoders (endpoints). The NAVigator also provides a centralized communication bridge between the control system and the endpoints. The NAVigator can support up to 16 endpoints as shipped and can be upgraded via a link license to support up to 240 endpoints.

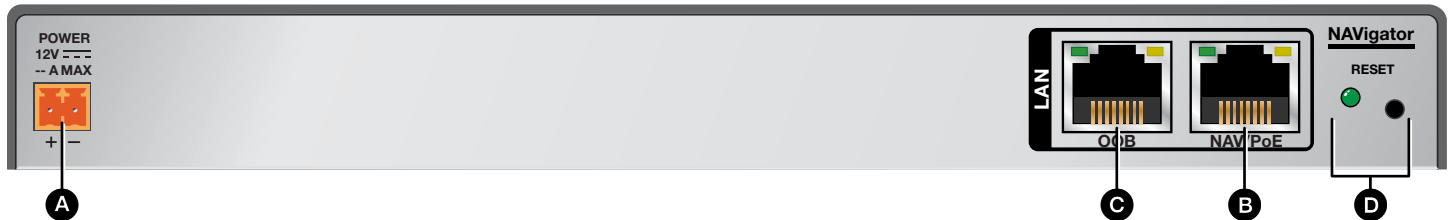
**NOTE:** For more information on any subject in this guide, see the *NAVigator User Guide*, available at [www.extron.com](http://www.extron.com).

### Installation

#### Step 1 – Mounting

Turn off or disconnect all equipment power sources and mount the NAVigator as required.

#### Step 2 – Connections



**Figure 1. NAVigator Rear Panel Features**

**A Power connector** (optional) — Plug the included external 12 VDC power supply into this 2-pole connector for local power. See the drawing at right to wire the connector and [Power](#) on page 2 for power options.

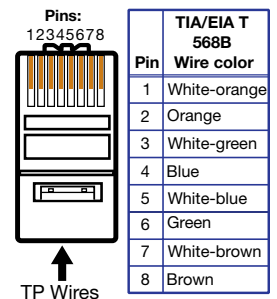
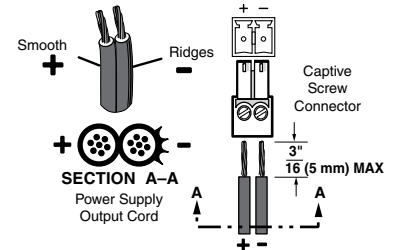
**NOTE:** Alternatively, the NAVigator can be powered via PoE, from the network switch or using an optional PI 140 Power Injector.

**B NAV/PoE port** — Connect this port to your AV LAN network for connection to streaming endpoints (NAV encoders and decoders), as well as management and control devices. This port can also receive Power over Ethernet (PoE) to power the NAVigator. **Streaming endpoints must be on the same network as the NAV/PoE port.**

**C OOB (Out of Band) port** — Connect this port to the Out of Band network for remote management and configuration of the NAV system. **The OOB port cannot receive PoE.**

**NOTE:** The OOB network is a secure boundary from the in-band NAV network. The OOB port allows for a secure web interface and secure control of the NAVigator.

**D Reset button and LED** — Press this button and observe the LED to initiate three modes of NAVigator reset (see the *NAVigator User Guide*, available at [www.extron.com](http://www.extron.com)).



#### Step 3 – Front Panel Configuration Port Connection



**Figure 2. NAVigator Front Panel Features**

**A Configuration port** — Connect a PC or other controlling device into the NAVigator via this front panel mini-B USB connector for configuration of the NAVigator and NAV system. The port uses IP over USB technology; the IP address is always 203.0.113.22 and **CANNOT** be changed.

# NAVigator • Setup Guide (Continued)

## Indicators (see figure 2 on the previous page)

### **B** Power LED (indicates power and startup status) —

**Blinking** — The unit is receiving power, either locally or remotely (via PoE) and is booting up.

**Lit solid** — The unit is receiving power, either locally or remotely (via PoE) and is operational.

### **C** LAN LEDs (OOB and NAV) —

**Link LED** — Lit solid indicates that a network link is established. Blinking indicates a link speed less than 1G.

**Act LED** — Blinking indicates network traffic. The blink rate corresponds to activity.

## Operation

### Power

The NAVigator can be powered in one of three ways:

- Locally, from the included external power supply and via the power connector (see **A** on page 1).
- Remotely, via the NAV/PoE port (see **B**) and PoE; either by the network switch or by using an optional PI 140 Power Injector.
- Locally (**A**) and remotely (**B**), with priority on the NAV/PoE port. If PoE voltage drops below a threshold, the NAVigator immediately transitions to the power connector with no effect on system operation.

When power is applied, the NAVigator runs a series of self-tests that blink the front panel Power LED and all other indicators. The NAVigator then boots the NAV operating system. It can take approximately 45 seconds for self-test and system startup to complete. When the process is complete, the Power LED lights steadily.

**NOTE:** The NAVigator is **NOT** operational until the boot process is complete (the Power LED lights steadily).

## System Operation and creation of a NAV system

Discovery of endpoints and connection to the NAVigator can be done via the embedded HTML pages.

Creating a NAV system using the NAVigator and its embedded HTML pages is a five-part process:

1. Connect to the NAVigator via the embedded HTML pages (see “Connection via HTML pages,” below).
2. View and change NAVigator network settings as necessary (see **Network Connection settings** on page 4).
3. Discover and assign endpoints to the NAV system (see **Discover and assign encoders and decoders** on page 6).
4. View and change endpoint network settings as necessary (see **Configure selected endpoint communication settings** on page 7, and **Configure other endpoint settings** on page 9).
5. Create and validate ties between the encoder and decoders (see **Create ties** on page 10).

### Connection via HTML pages

Connection to the NAVigator and its embedded HTML pages can be made via either the front panel Configuration (USB) port (using IP over USB technology) (see figure 2, **A** on page 1) or either of the rear panel ports (NAV/PoE or OOB) (see figure 1, **B** and **C** on page 1).

Access the NAVigator using HTML pages as follows:

1. Start a web browser.

#### NOTES:

- Suggested browsers to fully support the NAV system are: Google Chrome™, Mozilla™ Firefox™, and Microsoft Edge™.
- The network must be properly configured for multicasting (IGMP). Failure to do so may result in degraded performance.

2. Enter the IP address of the applicable NAVigator in the browser Address field.

#### NOTE:

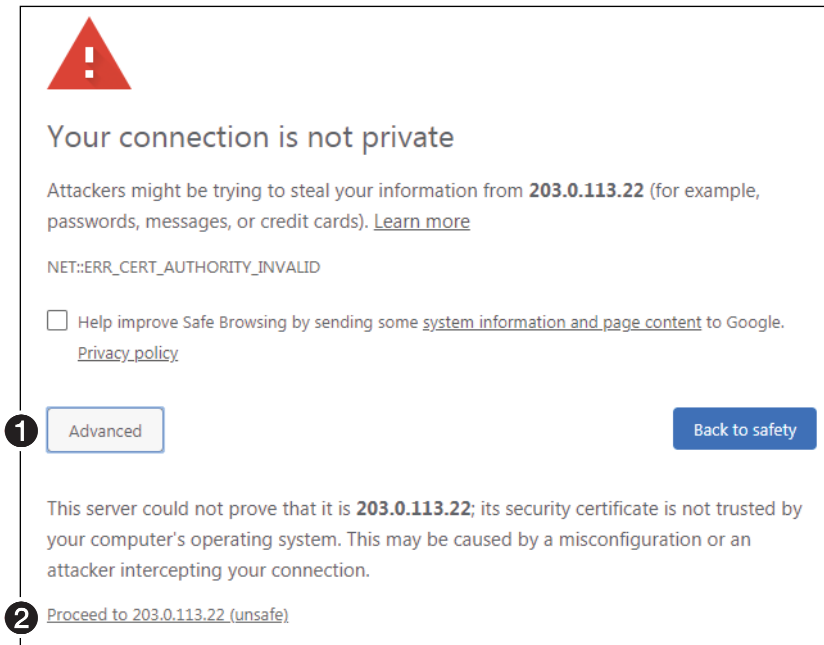
- **Default settings:**

Port	DHCP	IP address	Subnet mask
Config (USB)*		203.0.113.22	
NAV/PoE (RJ-45)	On		
OOB (RJ-45)	Off	192.168.253.254	255.255.255.0

\* **For the Config port**, the address for IP over USB **CANNOT** be changed.

3. Press the keyboard <Enter> key. The browser displays a privacy error message (see figure 3).

**NOTE:** Figure 3 shows this message in the Chrome browser. On other browsers, the display may be different.



**Figure 3. Privacy Error Message**

4. Click **Advanced** (see figure 3, ①). The button changes to **Hide Advanced** and explanatory text and a link appear below the button.
5. Click **Proceed to <IP address> (unsafe)** (②). The browser opens to the Login dialog box (see figure 4).



**Figure 4. Login Dialog Box**

6. Enter the **Username** (see figure 4, ①) and **Password** (②) and click **Sign In** (③). The browser opens the embedded HTML pages (see figure 5 on the next page).

**NOTES:**

- The default Username is admin.
- The factory configured passwords for all accounts on this device have been set to the device serial number. If the password is reset, the NAVigator defaults to the default password, which is extron.
- Usernames and passwords are case sensitive.
- The HTML page may open with any panel open on the right side of the page (for example Device Settings, see figure 5, A).

# NAVigator • Setup Guide (Continued)

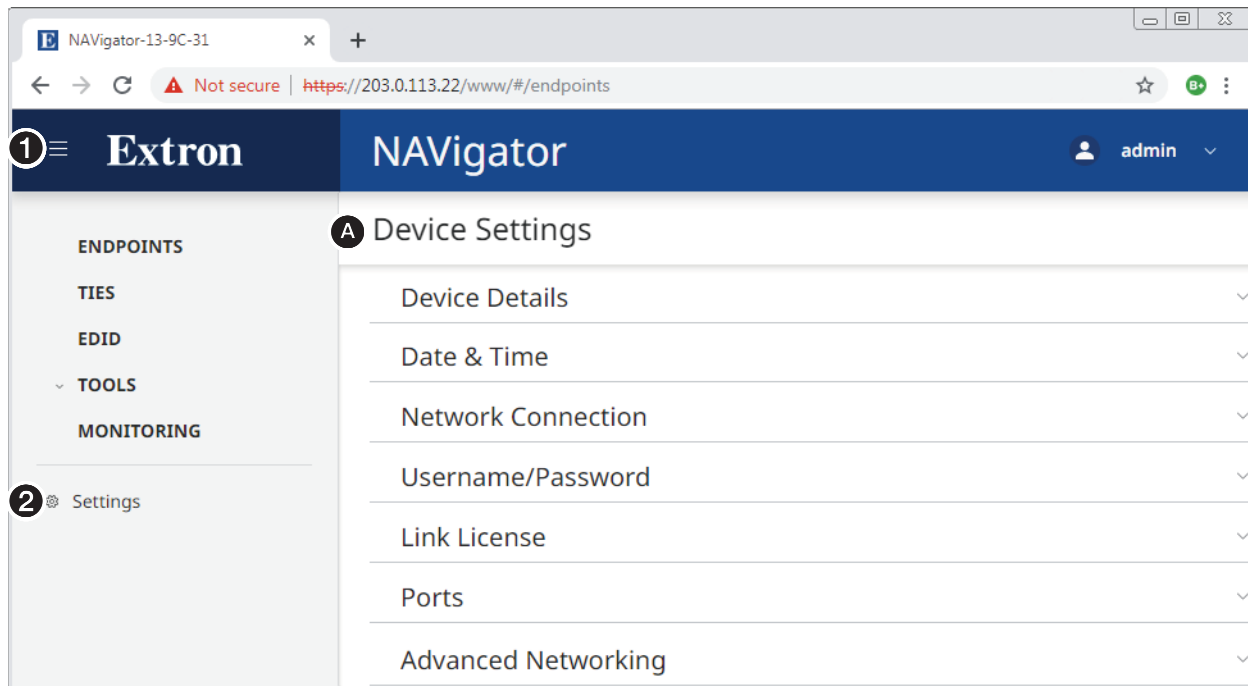


Figure 5. Home Page

**NOTE:** Detailed descriptions of communication, configuration, monitoring are provided in the *NAVigator User Guide*, available at [www.extron.com](http://www.extron.com).

## Network Connection settings

View and change connection settings as follows:

1. On the home page, if necessary, click the Menu link (see figure 5, ❶). Click **Settings** (❷). The Device Settings pane opens (see figure 6).

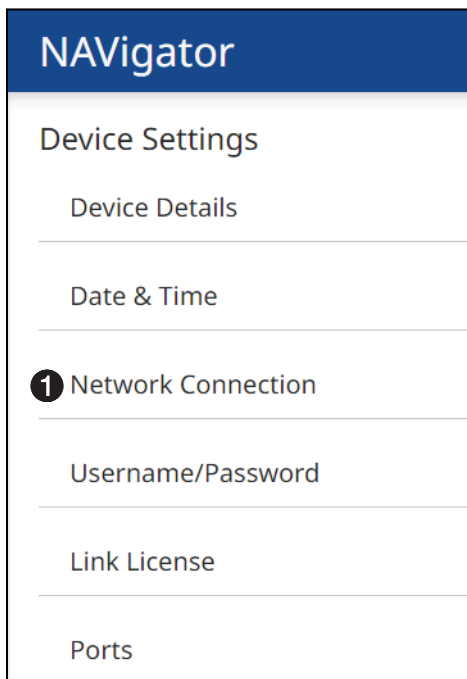


Figure 6. Device Settings Pane

2. Click **Network Connection** (see figure 6, ❶). The Network Connection pane opens (see figure 7 on the next page), showing protected views of the network connection settings.

### Network Connection

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**OOB - Public LAN**

**RESET TO DEFAULT**

Link Speed  
1 Gbps

DHCP  
Off  On

IP Address  
192.168.253.254

Subnet  
255.255.255.0

Gateway  
0.0.0.0

DNS Server  
0.0.0.0

DNS Suffix  
*Not Specified*

MAC Address  
00-05-A6-13-9C-31

**NAV - AV LAN**

**RESET TO DEFAULT**

Link Speed  
1 Gbps

DHCP  
Off  On

IP Address  
192.168.1.10

Subnet  
255.255.0.0

Gateway  
0.0.0.0

DNS Server  
0.0.0.0

DNS Suffix  
Not Specified

Link Local  
169.254.7.129

MAC Address  
00-05-A6-13-9C-32

**1** EDIT

**Figure 7. Network Connection Pane**

3. To change the settings, click **Edit** (see figure 7, ❶). The Edit button changes to Save.
4. If desired, click on the DHCP switch (❷) to toggle Dynamic Host Configuration Protocol on and off.
5. If desired, click in the desired editable field (❸) and edit it as desired.

**NOTES:**

- Fields that are available for editing are underlined.
- DHCP must be off to edit these fields.

6. Repeat step 4 as necessary for other values.
7. Click **Save** (❹).

# NAVigator • Setup Guide (Continued)

## Discover and assign encoders and decoders

Discover and assign encoders and decoders (endpoints) to the NAV system as follows:

**NOTE:** You can also pair encoders and decoders to each other using the device **ID** buttons on the endpoints (see the applicable encoder and decoder guides available at [www.extron.com](http://www.extron.com)).

**TIP:** Press and release the device **ID** button on the front panel of an endpoint to highlight the ID field on the HTML page for that endpoint (see [figure 10](#), ③ on page 7). This can help identify the device. Press and release the button again to clear the highlight.

1. On the home page, if necessary, click the **Menu** link (see figure 8, ①). Click **Endpoints** (②) > **Discover Endpoints** (③). The Assign Endpoints panel opens (see [figure 10](#)).

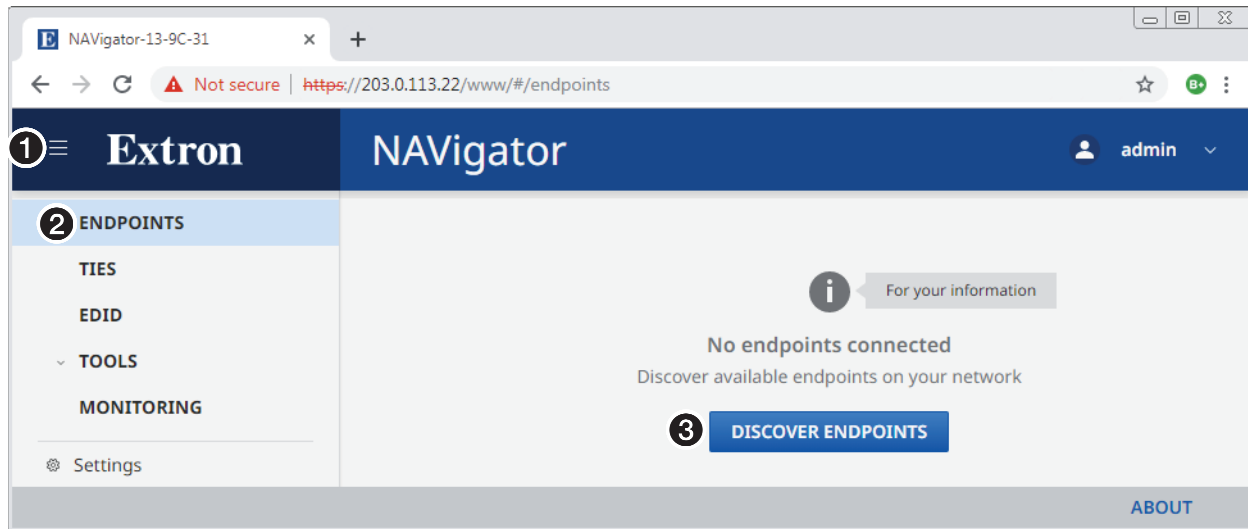


Figure 8. Discover Endpoints

**NOTE:** If you are adding to an existing set of assigned endpoints, at this point the endpoints pane shows the existing endpoints. Click the Discover link instead (see figure 9, ①) to add new endpoints.

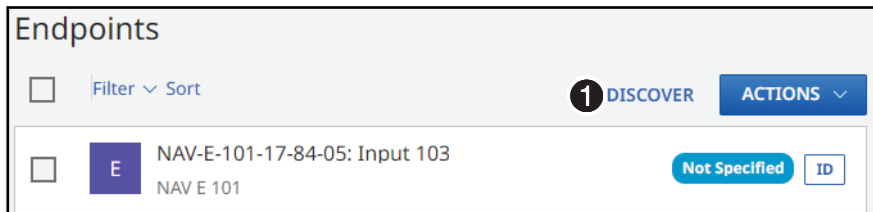
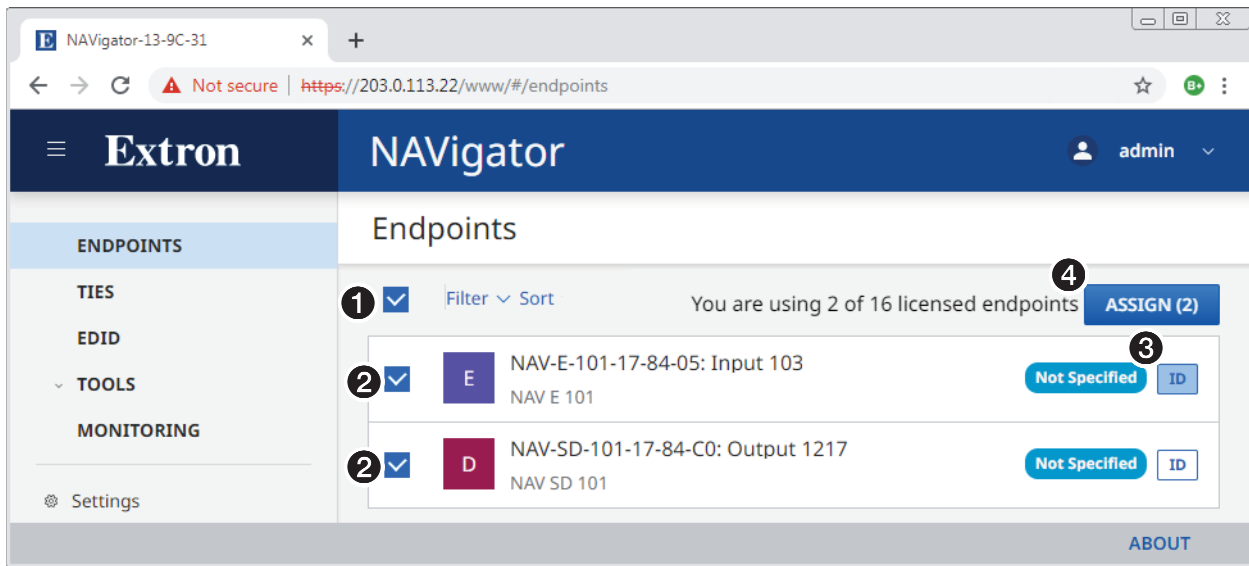
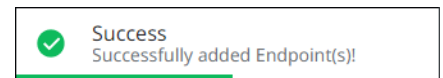


Figure 9. Appearance of Endpoints Panel when Adding to Existing Endpoints



**Figure 10. Assign Endpoints**

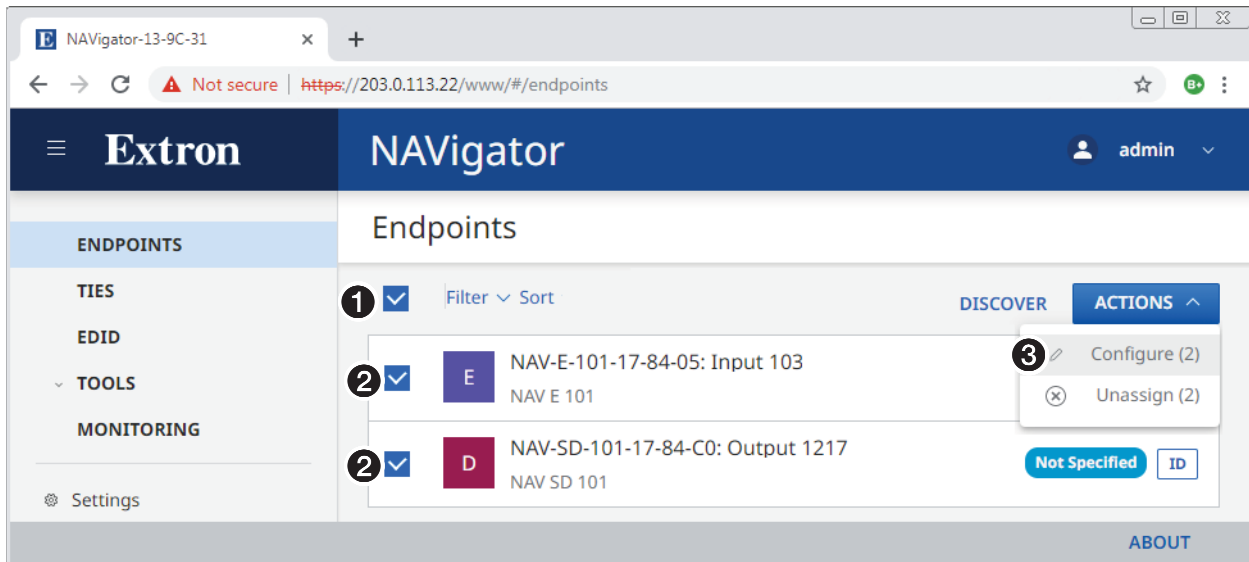
2. Click the **All** checkbox (see figure 10, ❶) or individual endpoint checkboxes (❷).
3. Click **Assign** (❸). The NAVigator assigns the endpoints and reports success on the endpoints panel.



### Configure selected endpoint communication settings

Configure endpoints as follows:

1. On the Endpoints page, click the **All** checkbox (see figure 11, ❶) or individual endpoint checkboxes (❷).



**Figure 11. Selecting Configure**

2. Click **Actions > Configure** (❸). The configure panel opens (see figure 12 on page 8).

# NAVigator • Setup Guide (Continued)

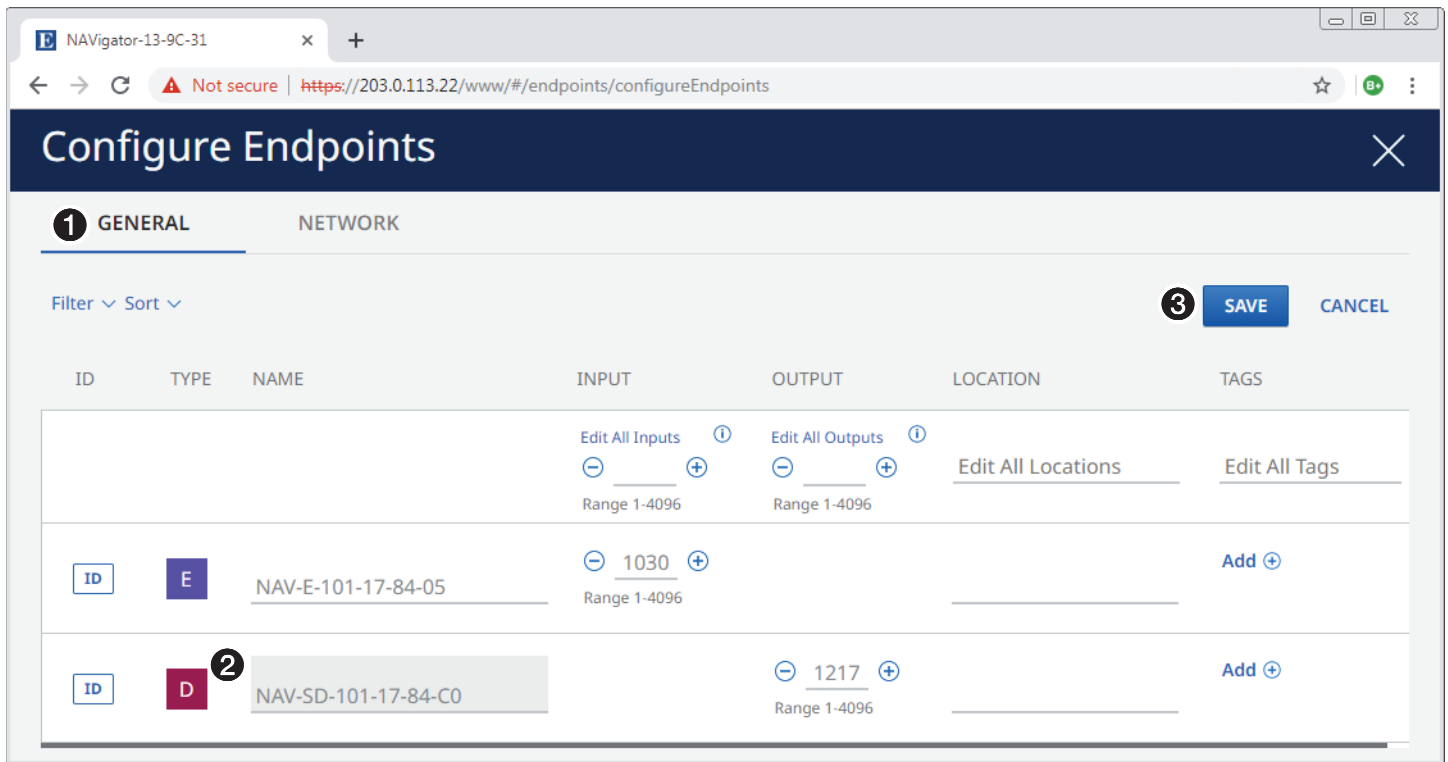


Figure 12. Configure General Endpoints

3. Click the **General** link (see figure 12, 1) and the **Network** link (see figure 13, 1) as necessary to make changes to the settings shown on the figures, as desired.
4. Click in one or more fields to be edited and make changes as necessary (see figure 12, 2 or figure 13, 2).
5. Click **Save** (3) on either figure).

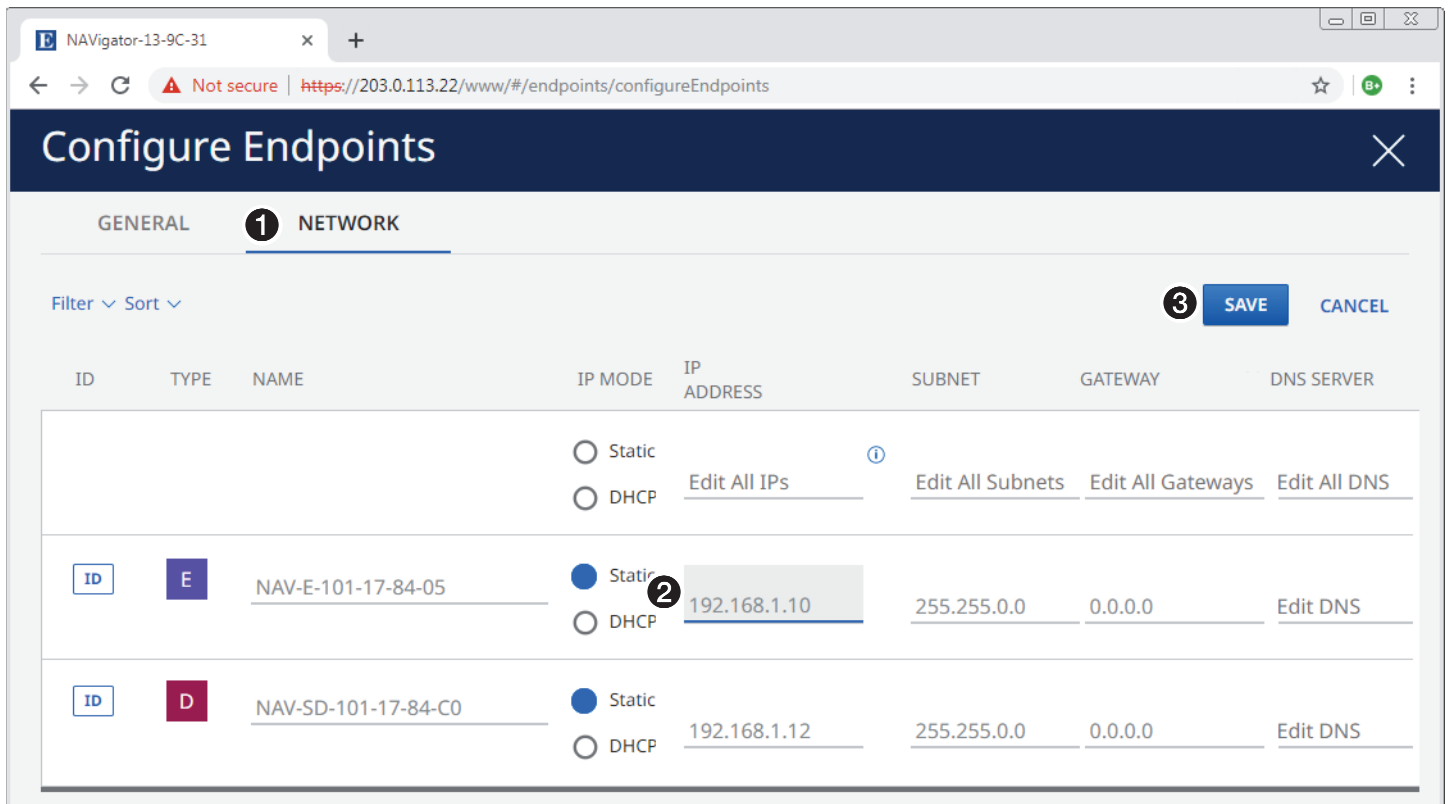


Figure 13. Configure Network Endpoints

## Configure other endpoint settings

The HTML pages of an endpoint can be opened via the NAVigator for additional endpoint configuration, as follows:

1. On the Endpoints page (see figure 14), click in the field for the connected endpoint (❶). The HTML page opens a Device Details side panel to the right of the Endpoints panel.
2. Click the **IP Address** link in the Device Details panel (❷). The HTML page opens a new tab in the browser that is connected to the endpoint (❸). The HTML page for the endpoint behaves as described in the user guides for the endpoint (see the applicable encoder and decoder guides available at [www.extron.com](http://www.extron.com)).

The screenshot shows the Extron NAVigator-13-9C-31 web interface. The browser address bar shows the URL <https://203.0.113.22/www/#/endpoints>. The page title is "NAVigator-13-9C-31" and the user is logged in as "admin". The main content area is titled "Endpoints" and contains a table of endpoints. The table has columns for checkboxes, endpoint IDs, and "ID" links. The endpoint "NAV-SD-101-17-84-C0: Output 1217" is selected, and a "Device Details" panel is open on the right. The "Device Details" panel shows the following information:

Name	NAV-SD-101-17-84-C0
Output #	1217
Model	NAV SD 101
IP Address	192.168.10.109
FW Version	1.00.0000-b001

The "Stream Input" section shows "Video Stream" and "Audio Stream" options. The "Output" section shows "HDMI" (1920x1080@60Hz), "HDCP" (locked), "HDMI Audio" (Unmuted), "Analog Audio" (Unmuted), "Audio Only" (On), and "Volume" (100%).

Figure 14. Open an HTML Page for a Connected Endpoint

## Create ties

Create or change a tie in the NAV system as follows:

1. On the home page, if necessary, click the **Ties** link (see figure 15, ❶, below).

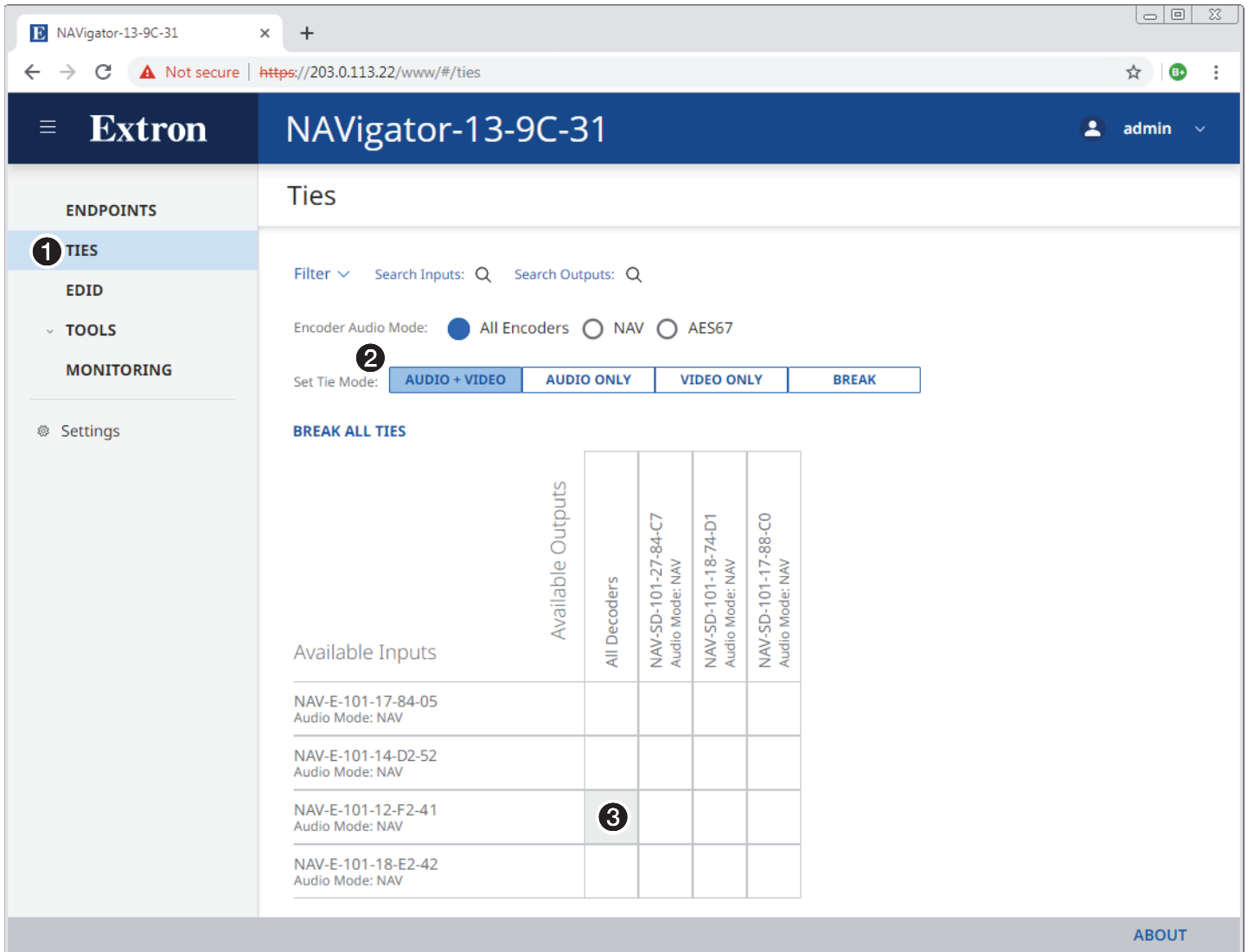


Figure 15. Create Ties

2. Click to select the desired Set Tie Mode (**Audio + Video**, **Audio Only**, **Video Only**, or **Break**) (❷).

**NOTE:** Break unties any established ties.

3. Click within the grid of inputs and outputs to tie the desired input to the desired output (or all outputs) (❸).
4. If the Create Ties pane asks you to confirm the change, click **Continue**.

CONTINUE

**NOTE:** In figure 15, Audio + Video from input NAV-E-101-12-F2-41 will be tied to All Decoders (all outputs).

Ties are displayed as follows:



Video and audio



Video only



Audio only

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the [Extron Safety and Regulatory Compliance Guide](#) on the Extron website.