LCI With PD100

How to configure and Install a PD100 in both Com and Managed Dre

PD100

- The PD100 is a great option for properties that wish to insert their own content as a channel.
- For the Com system a PD100 is required in order to insert a channel through the Com
- In a managed Dre the property has the option of either loading the video directly to the MCS server, or if they wish to have more control over the content they can use a PD100 with a DVD player or Laptop in order to play the content.

PD100 Connections

The PD100 is able to accept input from a number of different connection types. You can connect content to it via:

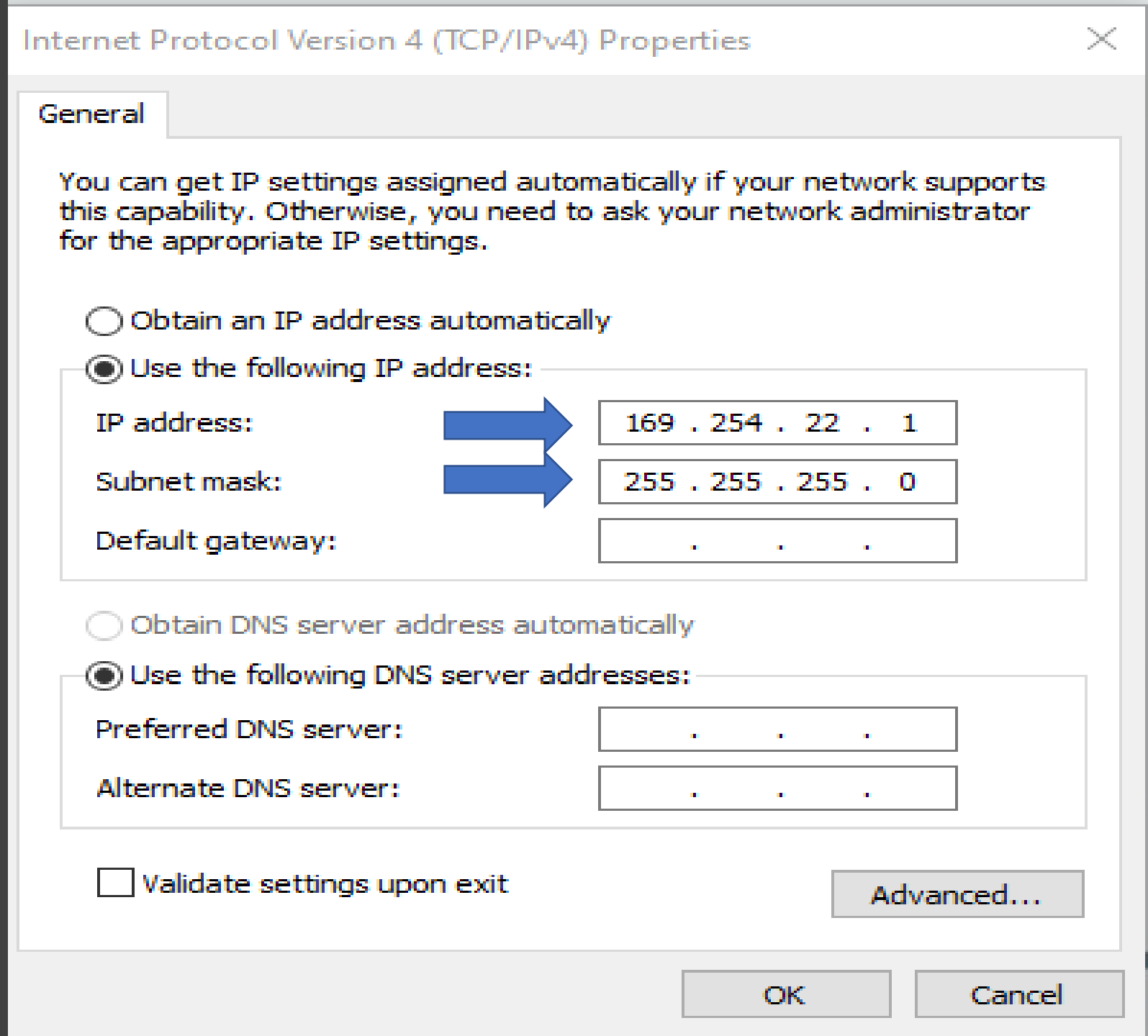
- Composite
- Component
- HDMI
- As well as feed audio in via digital optical or Coaxial

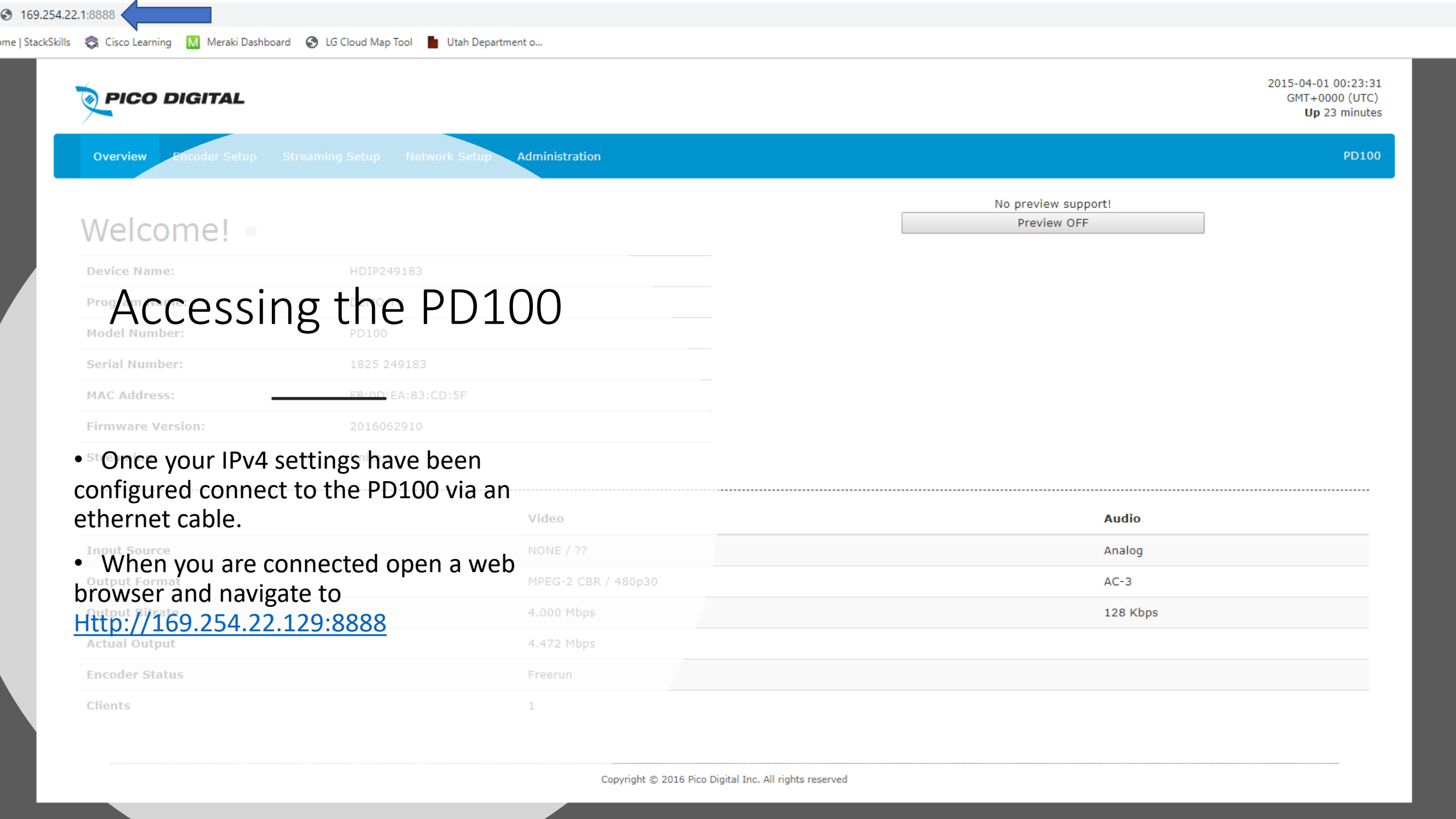
First Time Configuration

- If the PD100 has not been configured you will need to login to the unit and configure it for the system that it will be integrated in.
- To connect to the PD100 power it on and use and ethernet cable to connect from a laptop to the PD100

Configure IPv4 Settings

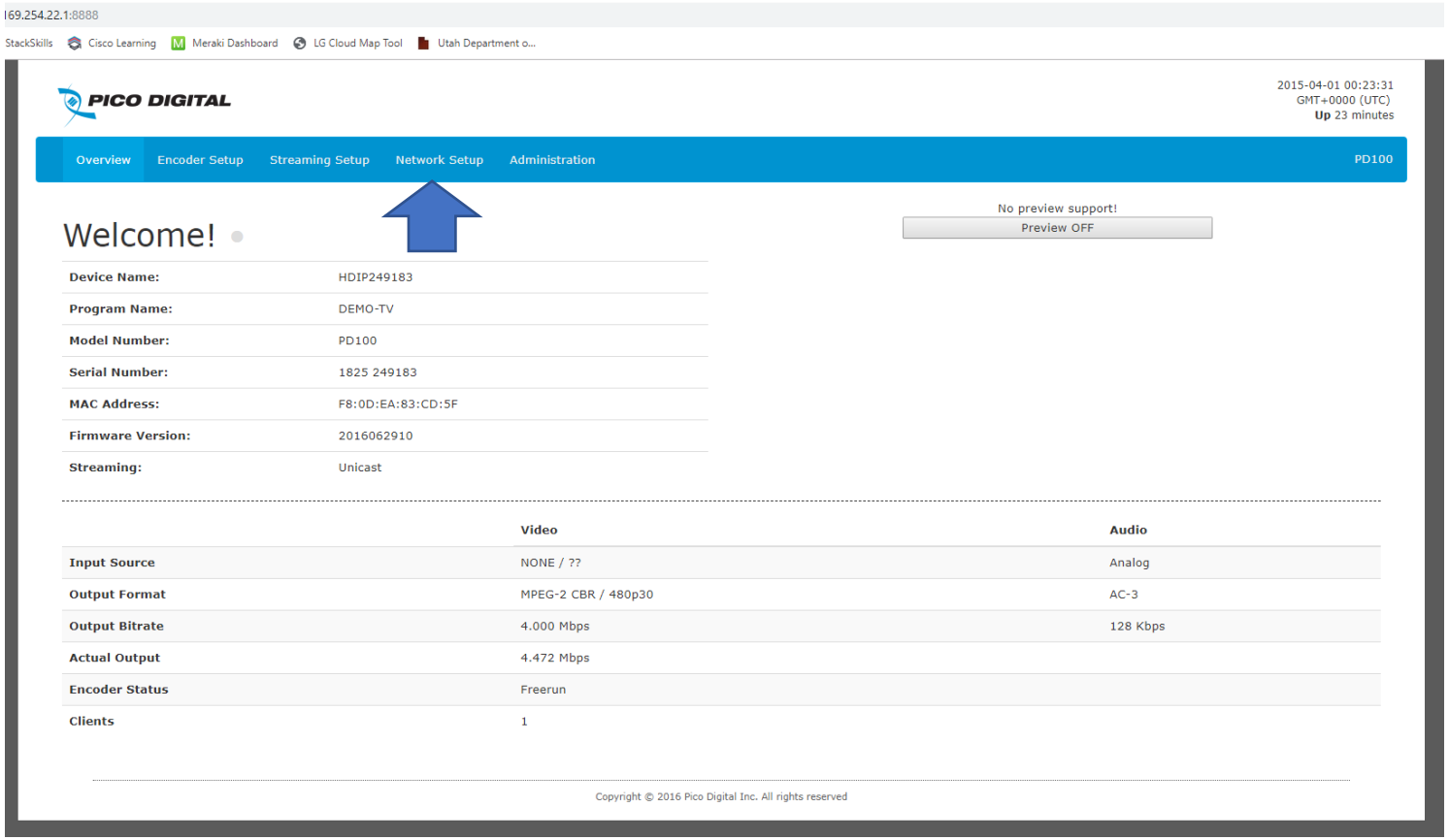
- In order to connect to the PD100 you will need to configure your IPv4 settings.
- Fresh out of the box you will need to set your IPv4 Settings to the following
- IP Address: 169.254.22.1
- Subnet Mask: 255.255.255.0





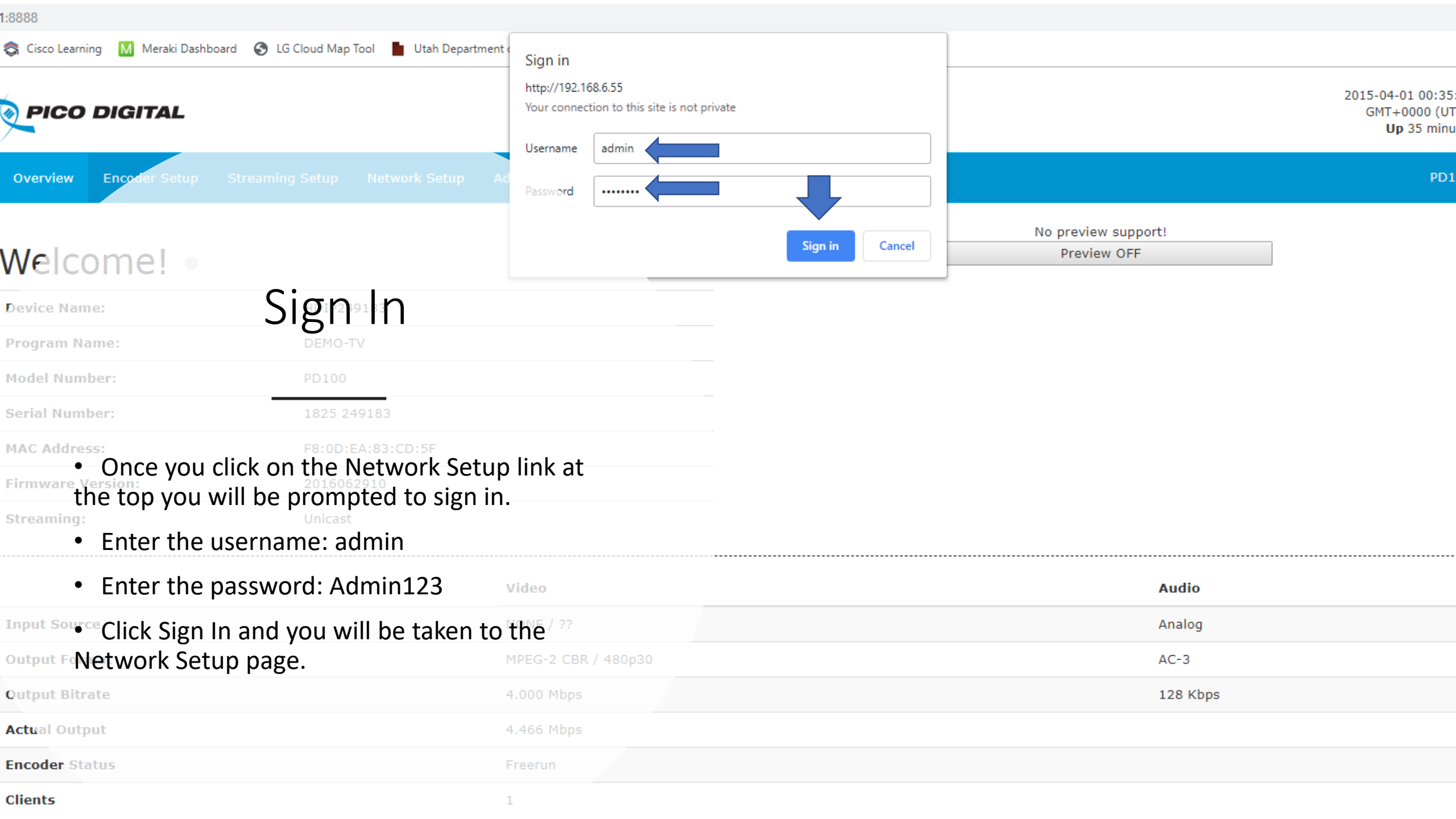
Accessing the PD100

- Once your IPv4 settings have been configured connect to the PD100 via an ethernet cable.
- When you are connected open a web browser and navigate to Http://169.254.22.129:8888



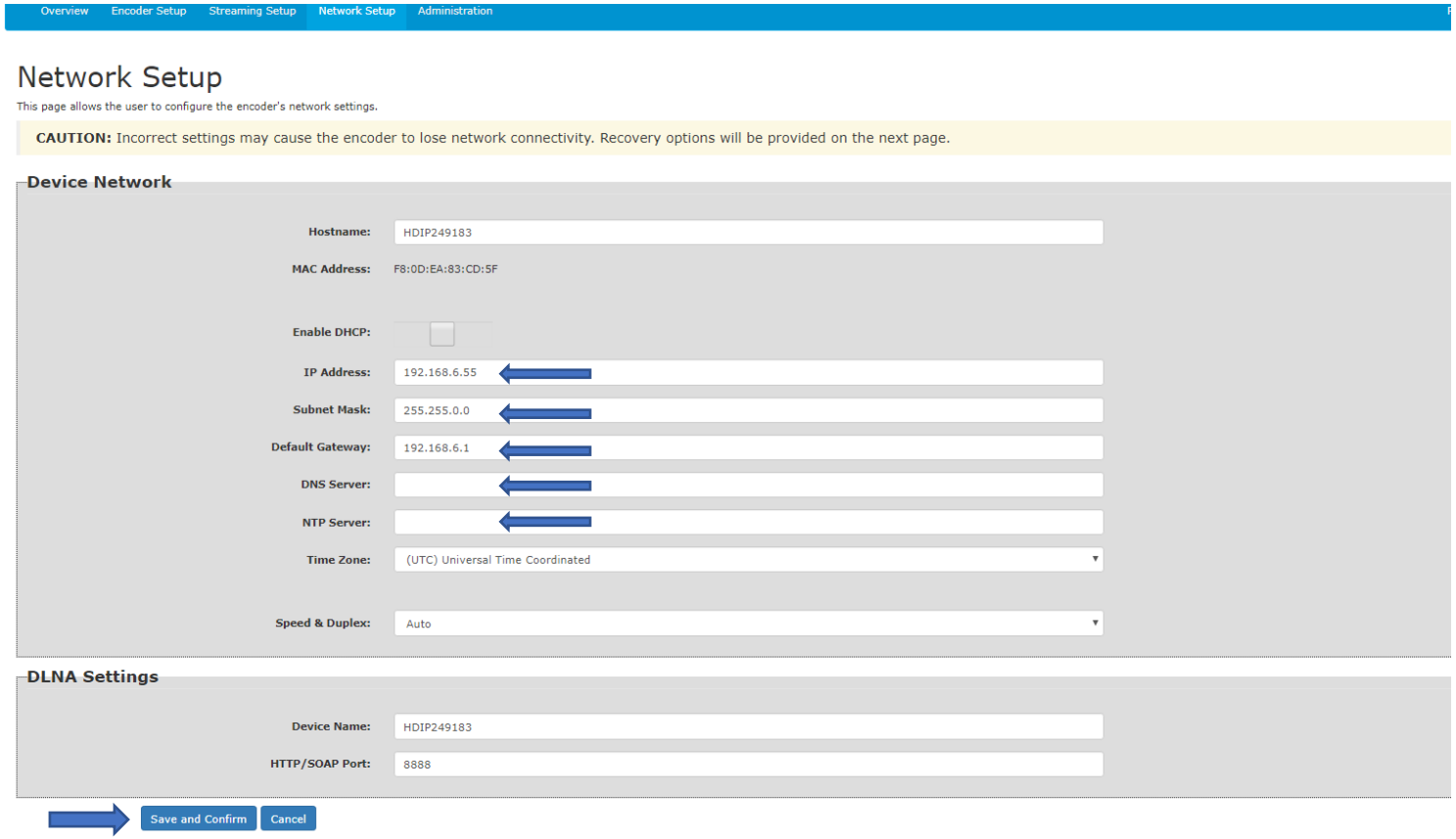
Navigate to the Network Setup Page

- First we will need to change the network in which the PD100 is on. Depending on which system you are placing the PD100 the network setting we use will change.



Sign In

- Once you click on the Network Setup link at the top you will be prompted to sign in.
- Enter the username: admin
- Enter the password: Admin123
- Click Sign In and you will be taken to the Network Setup page.

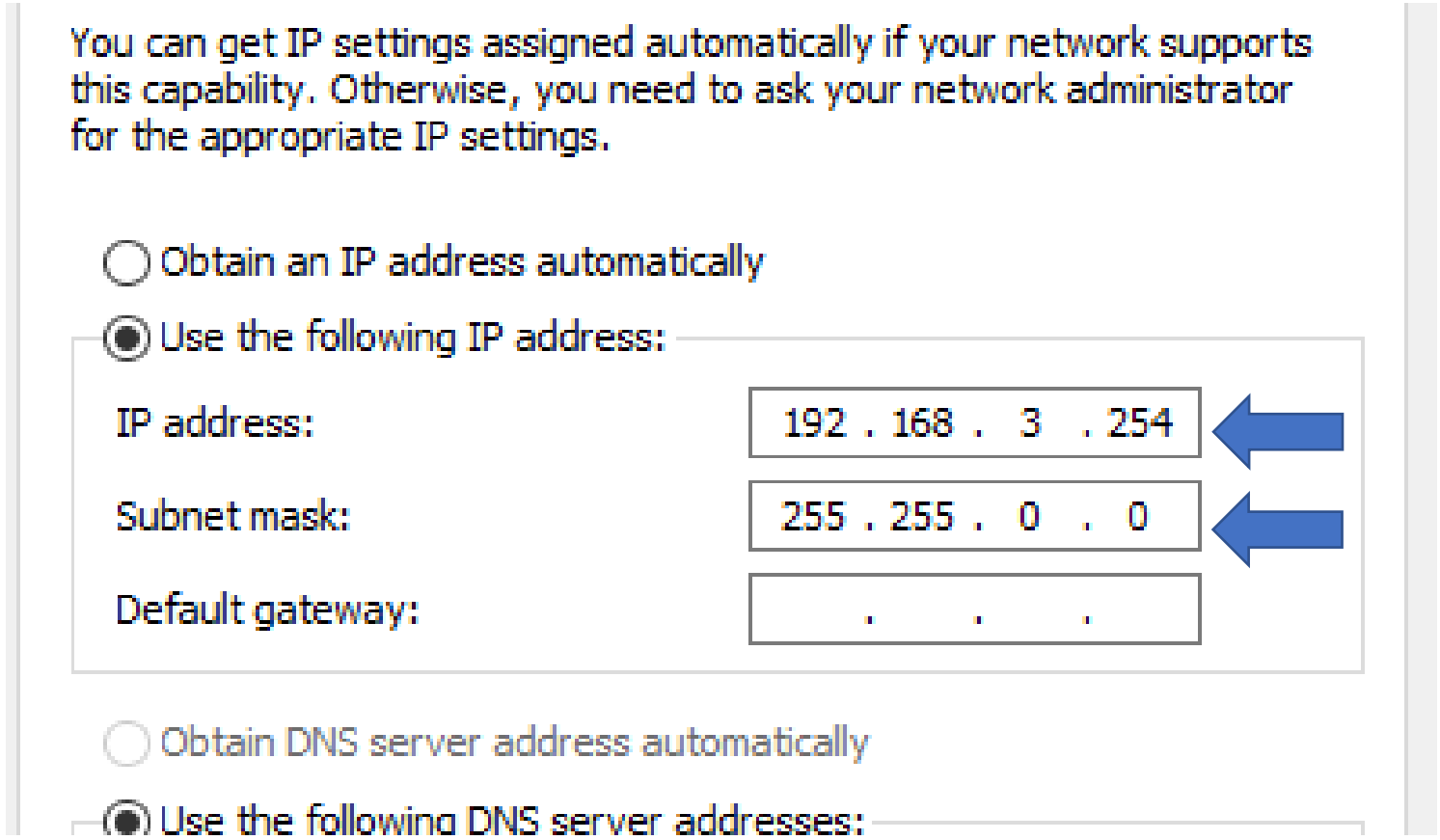


Network Setup For Com

If we are configuring the PD100 for a Com we will need to set the following values on the Network Setup page.

- IP Address: 192.168.6.55
  - If you are configuring multiple PD100's for a Com you will go up by 1 for each PD100. Example PD100 number 2 would have an IP address of 192.168.6.56 three would be 192.168.6.57 and so on.
- Subnet Mask: 255.255.0.0
- Default Gateway: 192.168.6.1
- DNS Server: Leave Blank
- NTP Server: Leave Blank

Once you have set this information click the Save and Confirm button at the bottom. The PD100 will restart and you will lose connection.

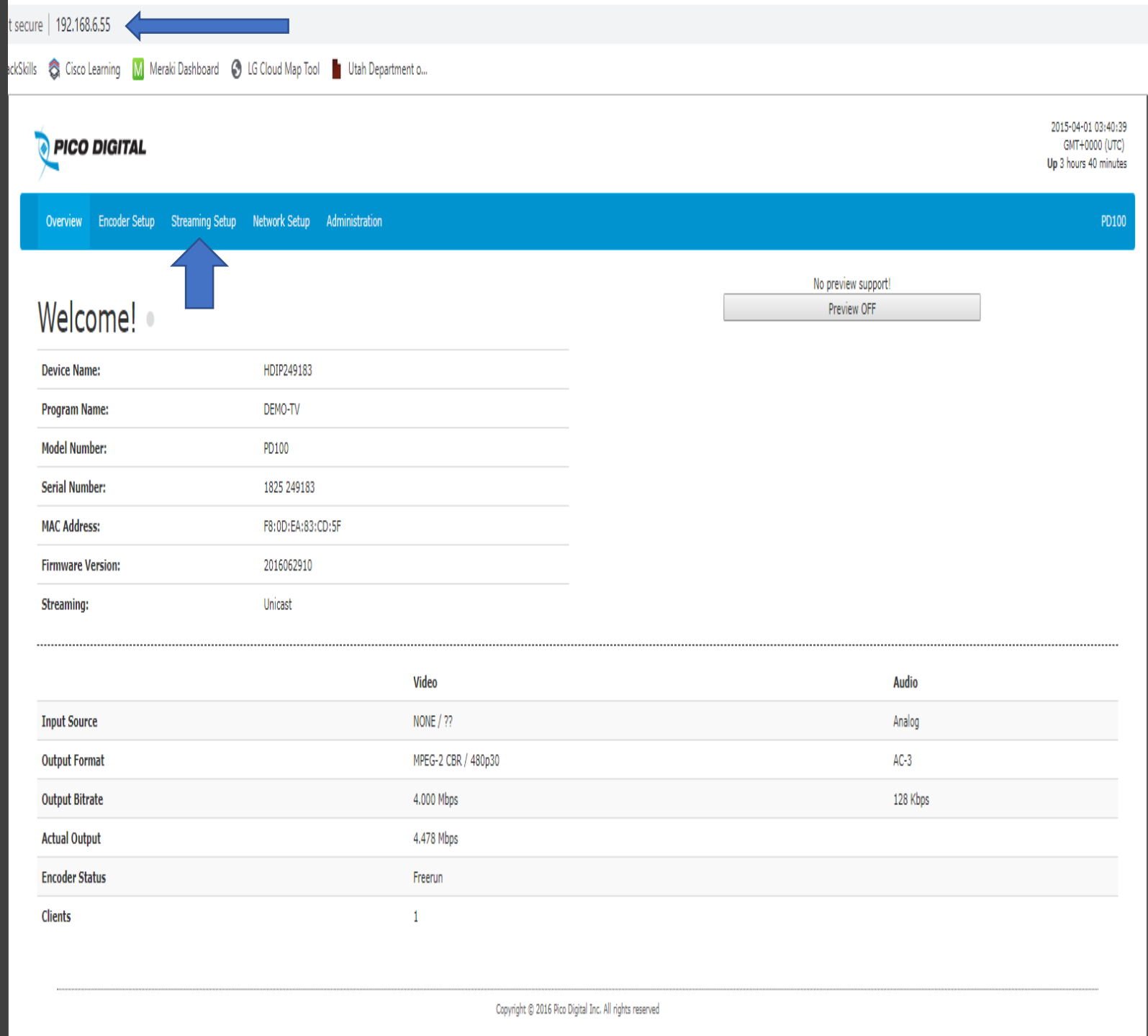


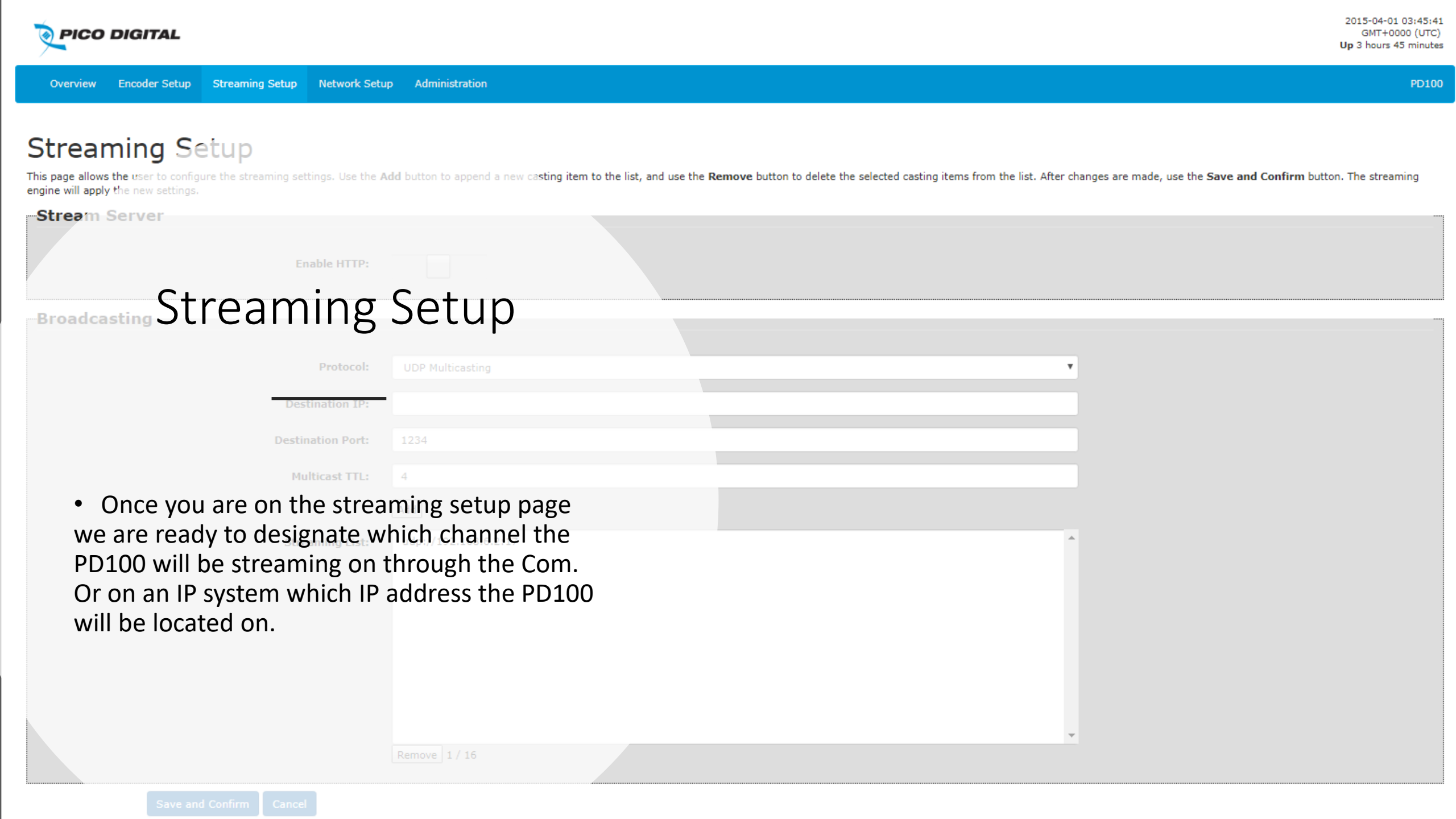
Change your IPv4 Settings

- Once you have lost connection to the PD100 you will need to change your IPv4 settings in order to reconnect.
- Change your IPv4 Settings to the same setting you would use to connect to the Com.
- Incase you have forgotten they are the following:
- IP Address: 192.168.3.254
- Subnet Mask: 255.255.0.0

Reconnect to the PD100

- Once you have changed your IPv4 settings you can reconnect to the PD100 by opening a web Browser and connecting to 192.168.6.55 (or other address depending on which PD100 you are connecting to)
- Click on the Streaming Setup link at the top





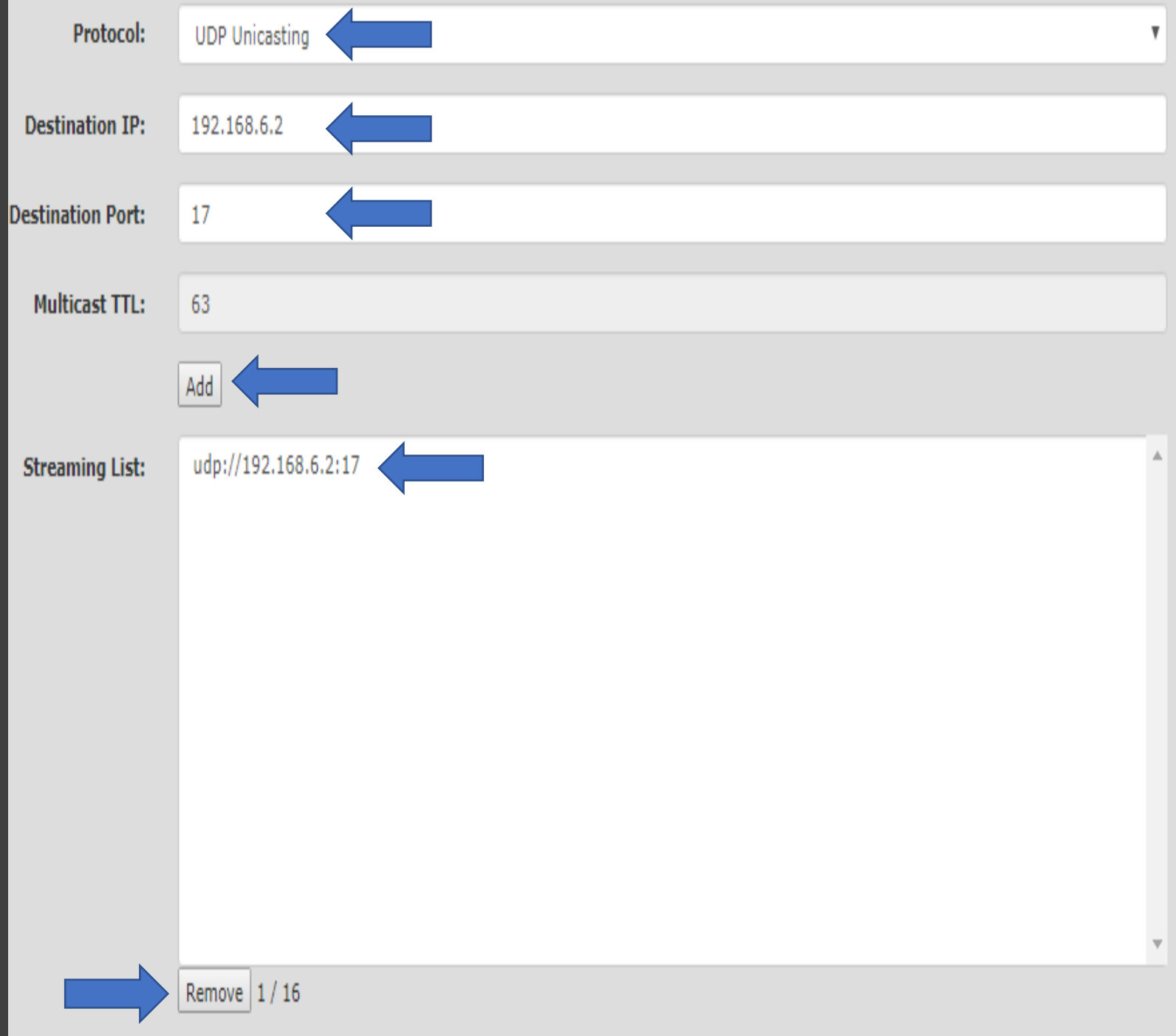
Streaming Setup

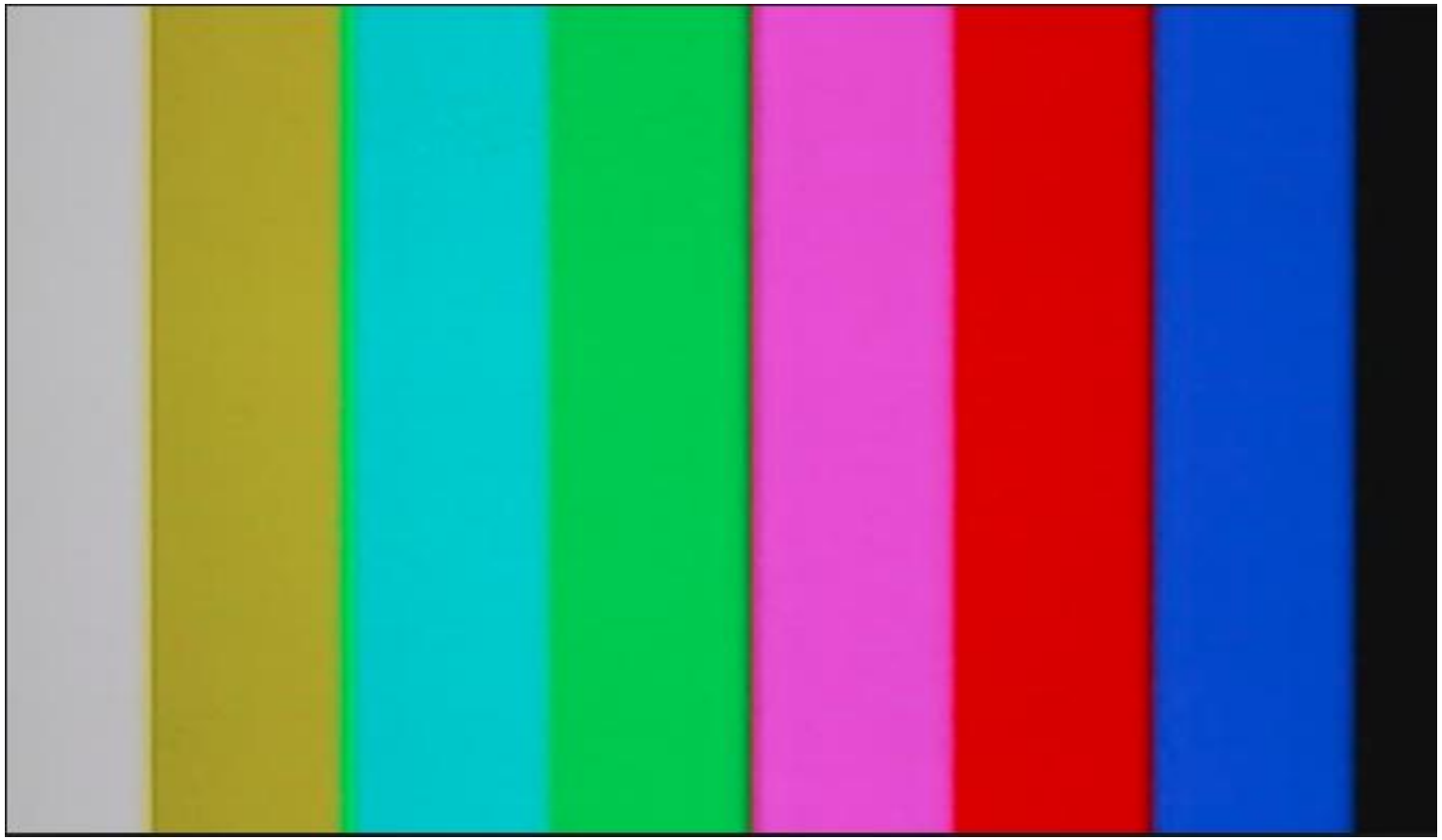
- Once you are on the streaming setup page we are ready to designate which channel the PD100 will be streaming on through the Com. Or on an IP system which IP address the PD100 will be located on.

Streaming Setup QAM Configuration

If you are doing an RF Com we will need to decide which channel the PD100 will be located. We will do this by using the base ports associated with each channel. In this example we will be streaming on channel 30.2

- Once you have decided on your channel we will start by Using the Protocol: drop down window and selecting UDP Unicasting
- Next we will need to enter the IP address of the QAM blade that we wish to output from. This is usually 192.168.6.2 but can be different.
- In the Destination Port: field we will enter the base port representing the channel we wish to use.
- After you have entered all this information click add and the new IP address will show up in the Streaming List: field below.
- By default there is an address already in this field. Simply click on the undesired address and click the Remove button at the bottom to delete it.
- Once you have all the information entered and added to the Streaming List don't forget to click on the Save and Confirm button at the bottom of the page.

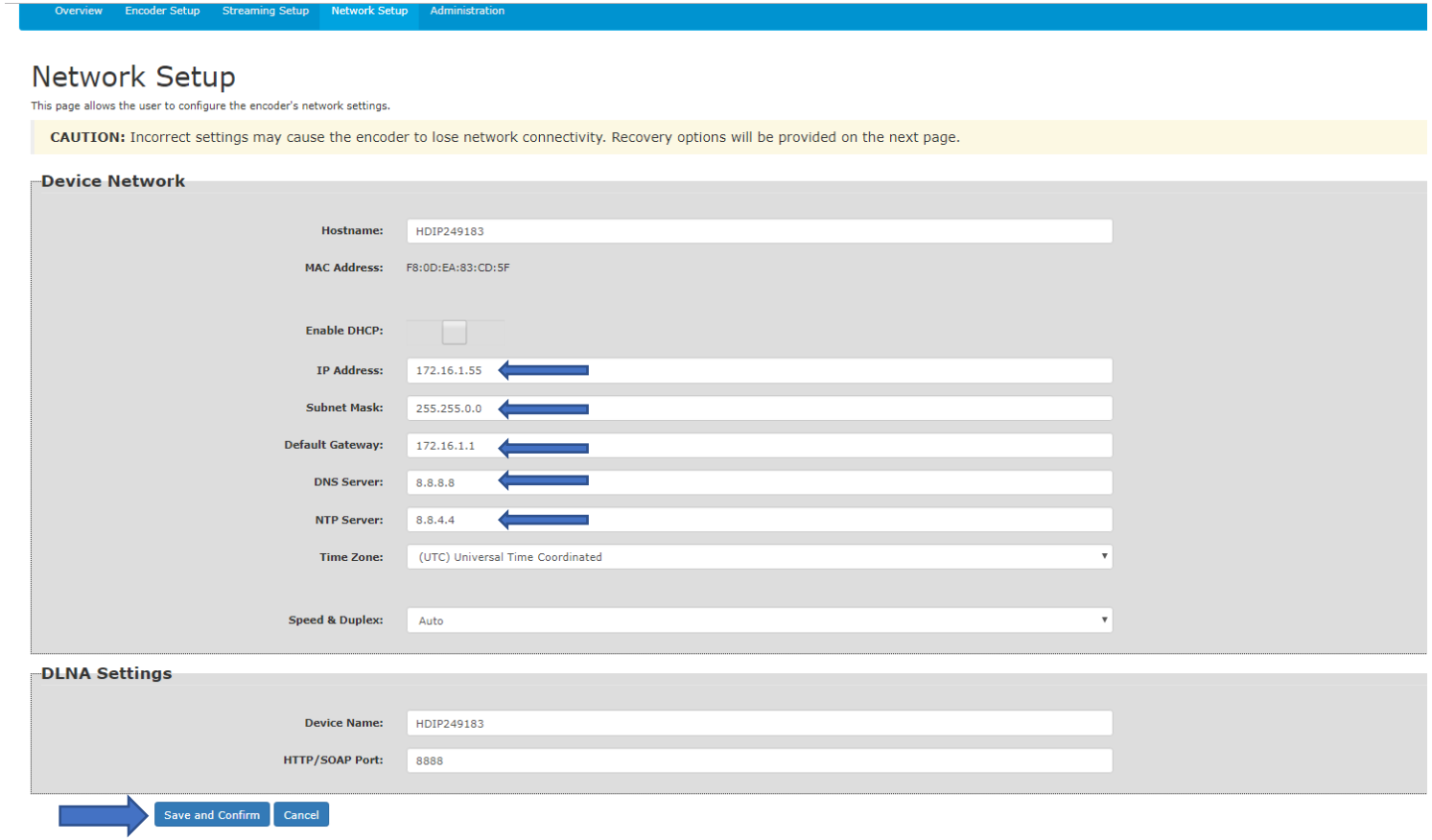




Ready to Connect

Once you have set the QAM IP address and port to indicate which channel it will be streaming on you are ready to connect the PD100 to the Com.

- Disconnect the ethernet cable from your laptop and connect it to the front of the Com unit. You should be able to navigate to the QAM page of the Com and check the bitrate for the chosen channel to see if its streaming.
- At this point you should be able to also scan your PD100 channel on the test TV. Even with nothing connected you should get a color bar screen which is the default output of the PD100.

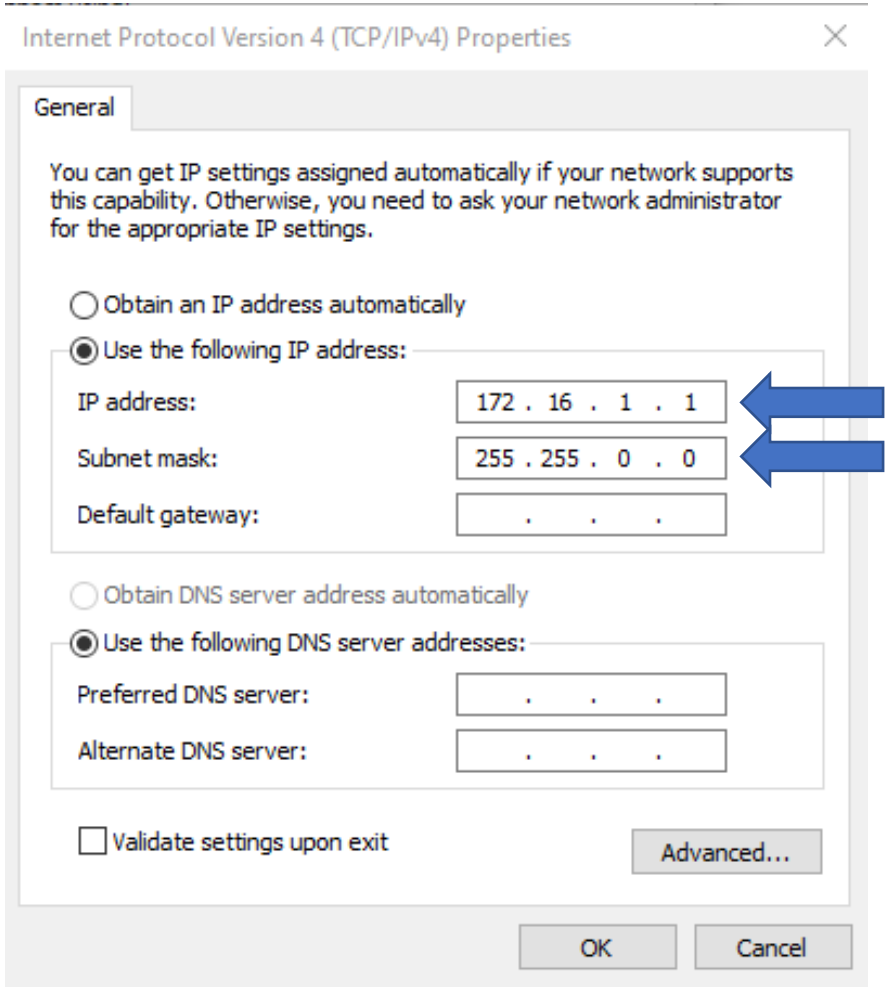


Network Setup for Dre

If we are configuring the PD100 for a DRE we will need to set the following values on the Network Setup page.

- IP Address: 172.16.1.55
  - If you are configuring multiple PD100's for a DRE you will go up by 1 for each PD100. Example PD100 number 2 would have an IP address of 172.16.1.56 three would be 172.16.1.57 and so on.
- Subnet Mask: 255.255.0.0
- Default Gateway: 172.16.1.1
- DNS Server: 8.8.8.8
- NTP Server: 8.8.4.4

Once you have set this information click the Save and Confirm button at the bottom. The PD100 will restart and you will lose connection.

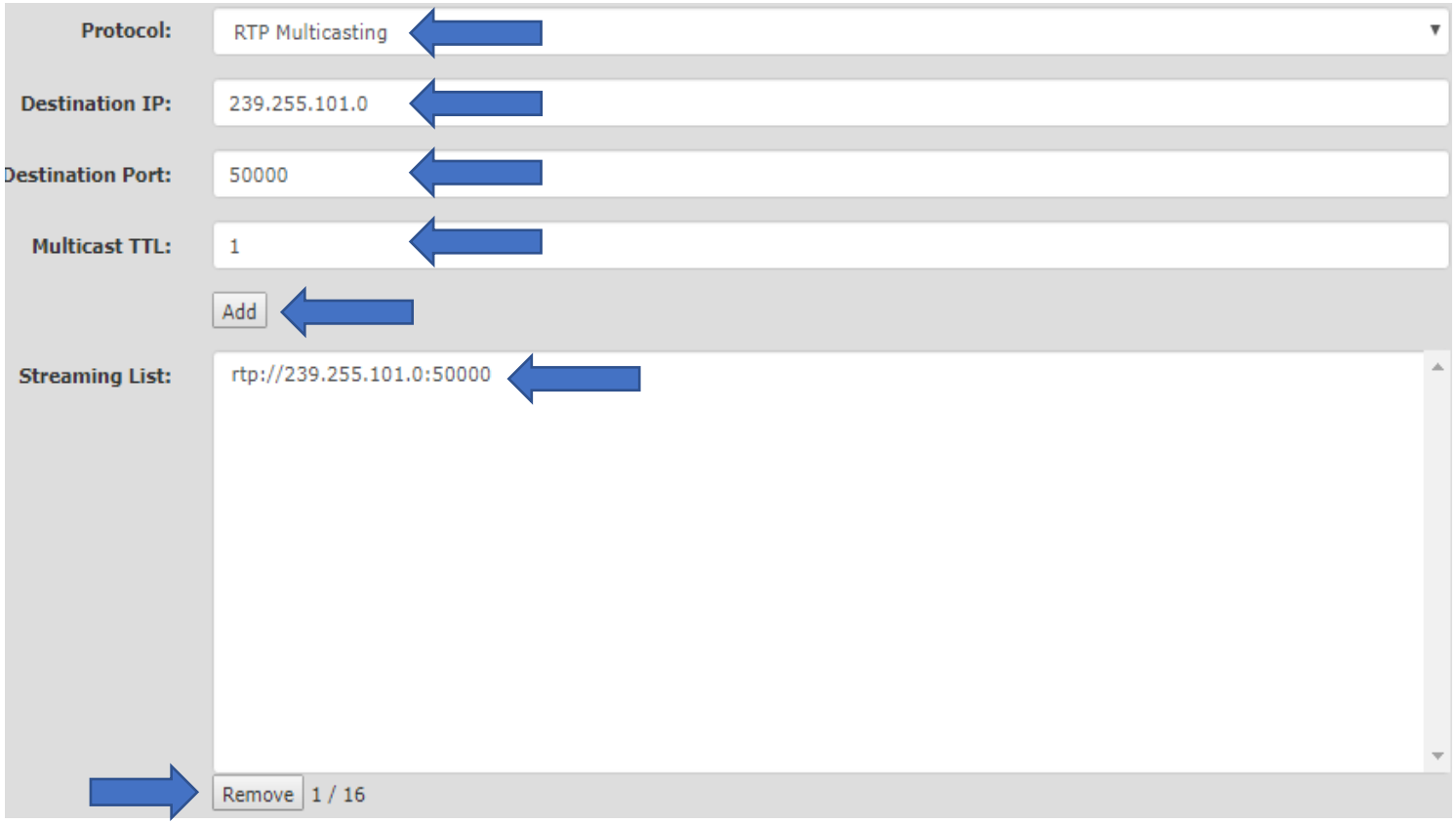


Change your IPv4 Settings

Once you have lost connection to the PD100 you will need to change your IPv4 settings in order to reconnect.

Change your IPv4 Settings to the same network as the Managed Dre

- IP Address: 172.16.1.1
- Subnet Mask: 255.255.0.0



Streaming Setup Managed Dre

Once you are on the streaming setup page we are ready to designate which channel the PD100 will be streaming on through the Dre.

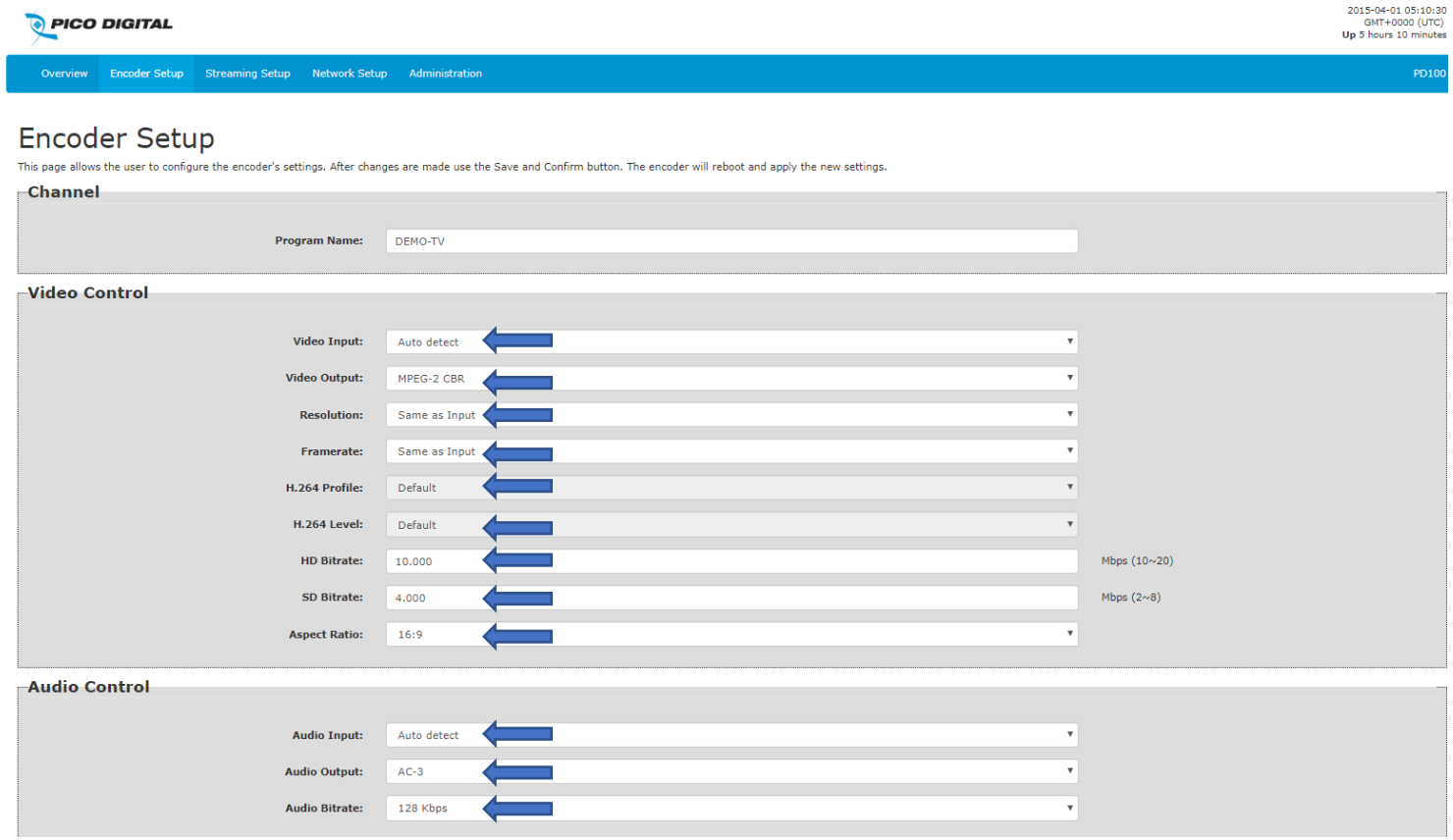
- Using the drop down window in the Protocol: field select the RTP Multicast option
- In the Destination IP: field enter 239.255.101.0 This address is for channel 2501
- In the Destination Port: field enter 50000
- In the Multicast TTL: field set the value to 1
- Once all of the information has been entered click the Add button to enter the address into the Streaming List: field
- If there are any undesired addresses click on them to highlight them then click on the Remove button at the bottom.

Once you have removed and added the needed addresses don't forget to click the Save and Confirm button on the bottom of the page.

Dre Streaming Setup Explained

The range of usable channels are 2500-2600, and the number that identifies the channel is the 3rd set. *Example:* 239.255.XXX.0 with XXX being the identifier. The equation to discover XXX is as follows: To set a channel on 2546, we subtract 2400 from the desired channel number. 2546 - 2400 = 146. Therefore, the IP address for channel 2546 is 239.255.146.0. Likewise 2501 - 2400 = 101. Thus, the IP address for channel 2501 is 239.255.101.0

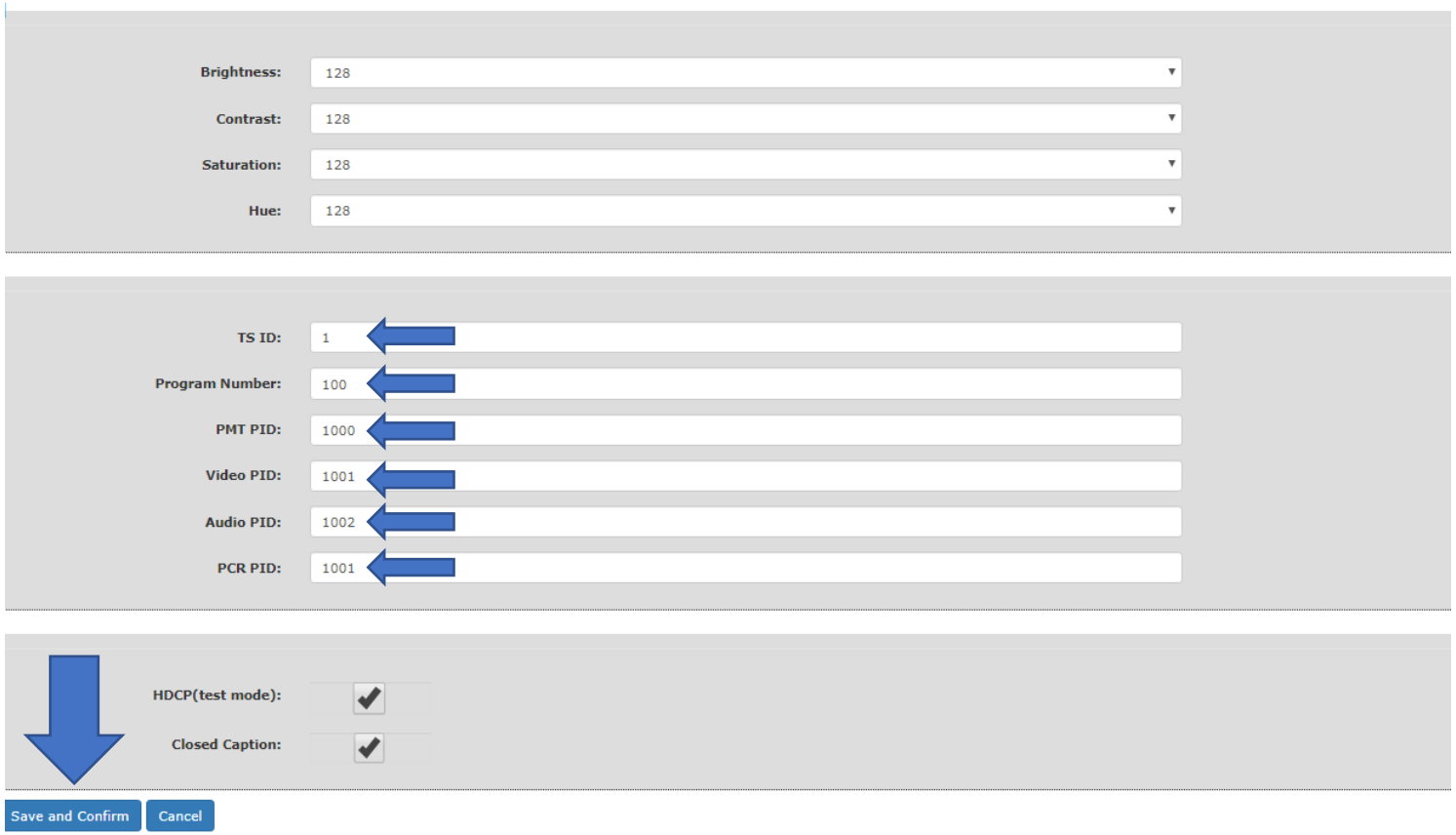
The Destination port is always 50000



Encoder Setup

Once you have finished the Streaming Setup you will need to navigate to the Encoder Setup by using the link at the top. You will need to make the following changes.

- Video Input: Auto Detect
- Video Output: H.264
- Resolution: Same as Input
- Frame Rates: Same as Input
- H.264 Profile: BASE
- H.264 Level: Level 1
- HD Bitrate: 10
- SD Bitrate: 4
- Aspect Ratio: 16:9
- Audio Input: Auto Detect
- Audio Output: AC-3
- Audio Bitrate: 256 Kbps

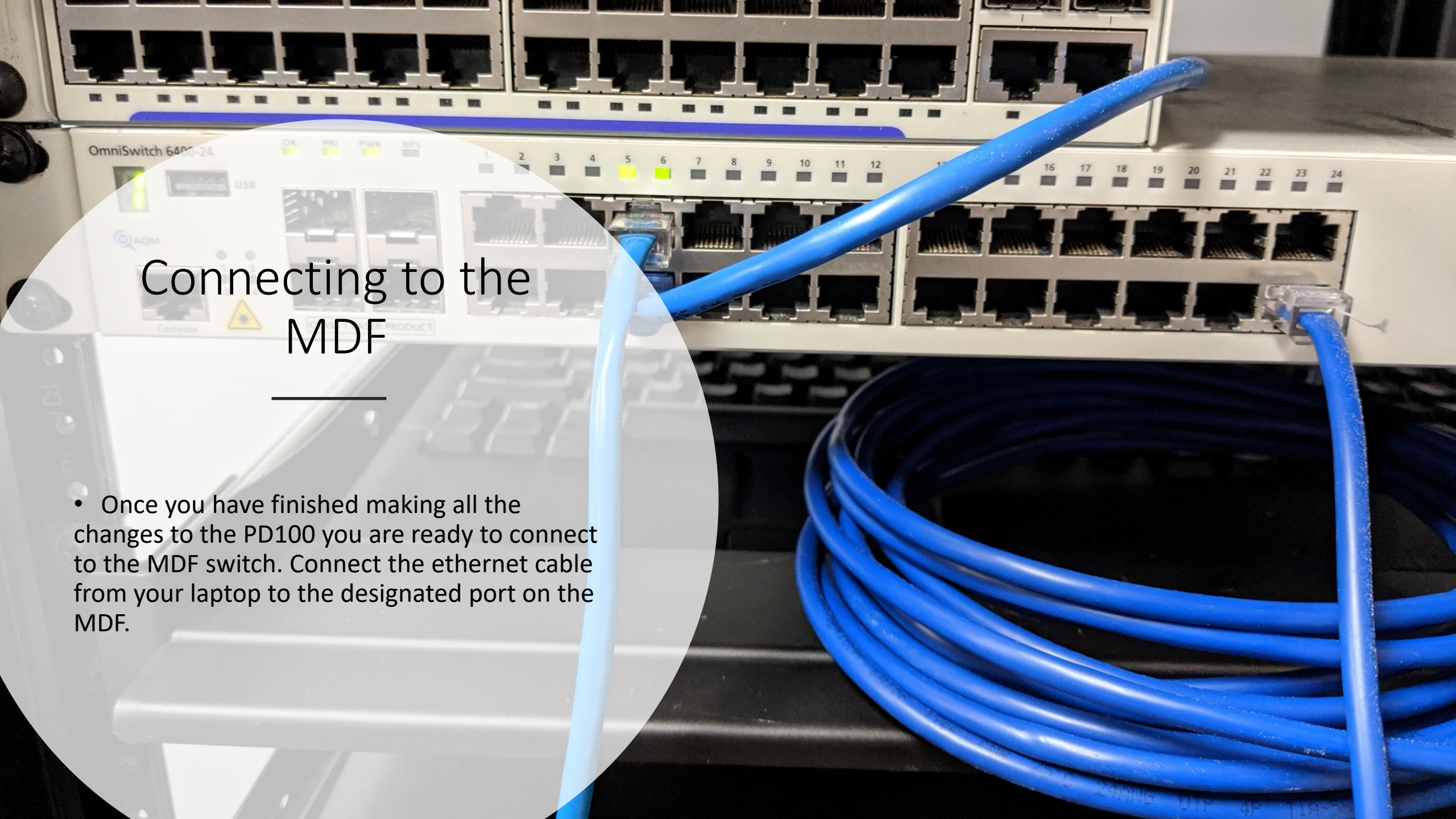


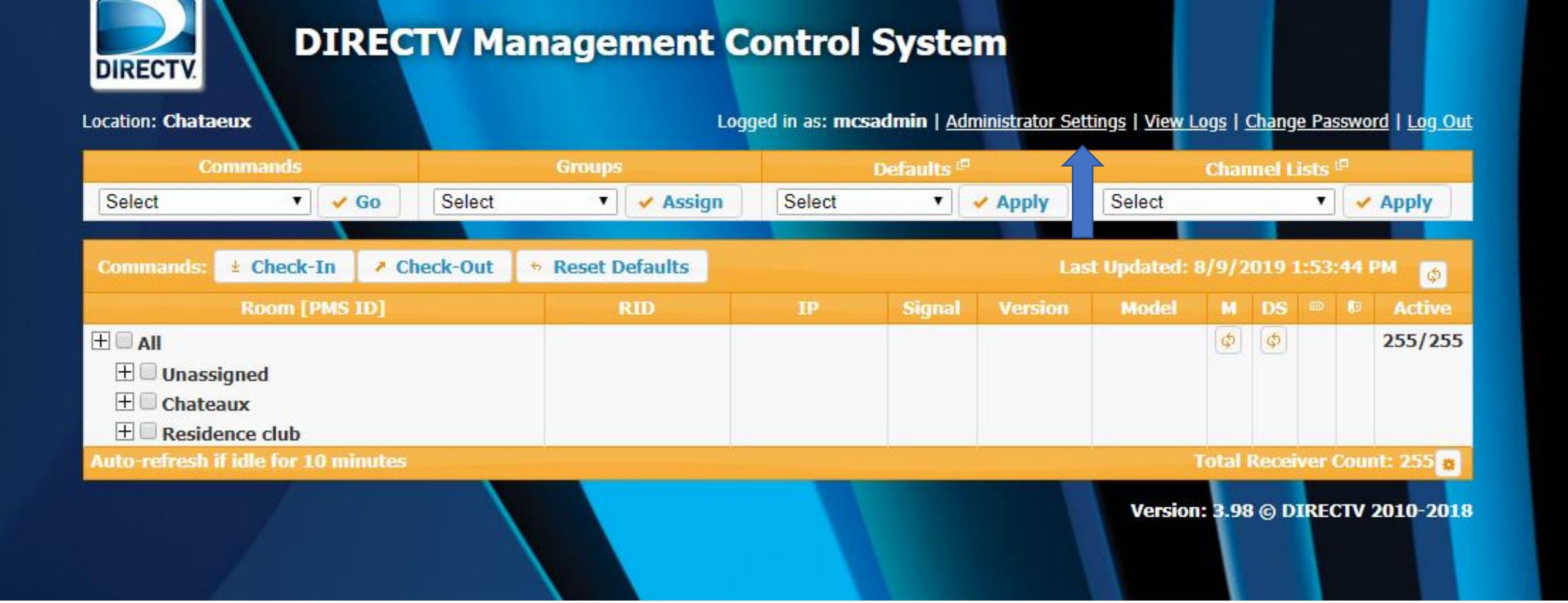
Encoder Setup Cont.

- TS ID: 1
- Program Number: 100
- PMT PID: 1000
- Video PID: 4176
- Audio PID: 4177
- PCR PID: 4176
- Don’t forget to click Save and Confirm at the bottom of the screen.

Connecting to the MDF

- Once you have finished making all the changes to the PD100 you are ready to connect to the MDF switch. Connect the ethernet cable from your laptop to the designated port on the MDF.





MCS Server

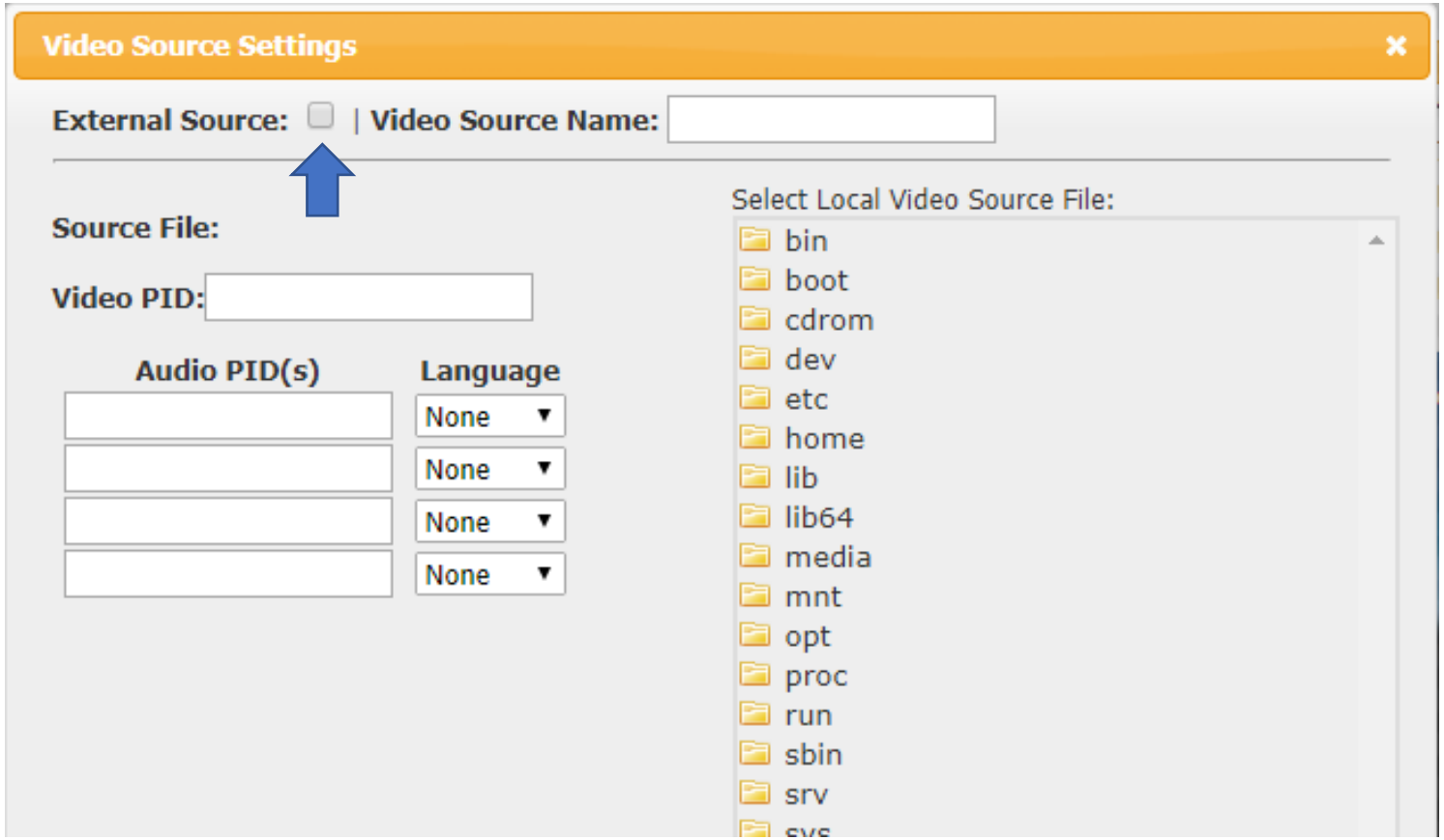
- Once the PD100 has been connected to the MDF switch log onto the MCS server.
- From here click on Administrator Settings at the top.

Administrator Settings

- From the Administrator Settings page click on the Video Sources tab.

New Video Source

Once on the Video Source tab click on the + New Video Source button



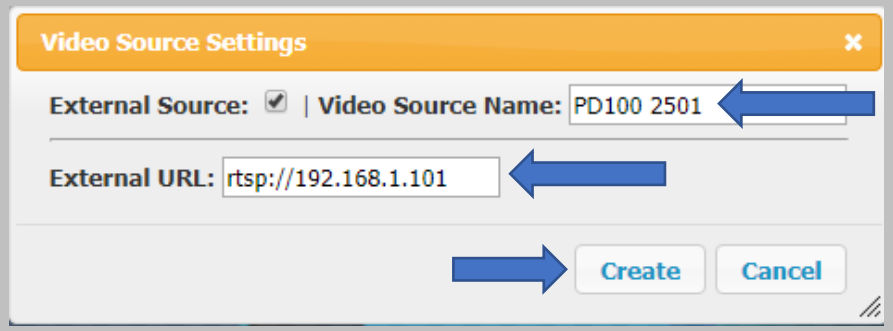
Video Source Settings

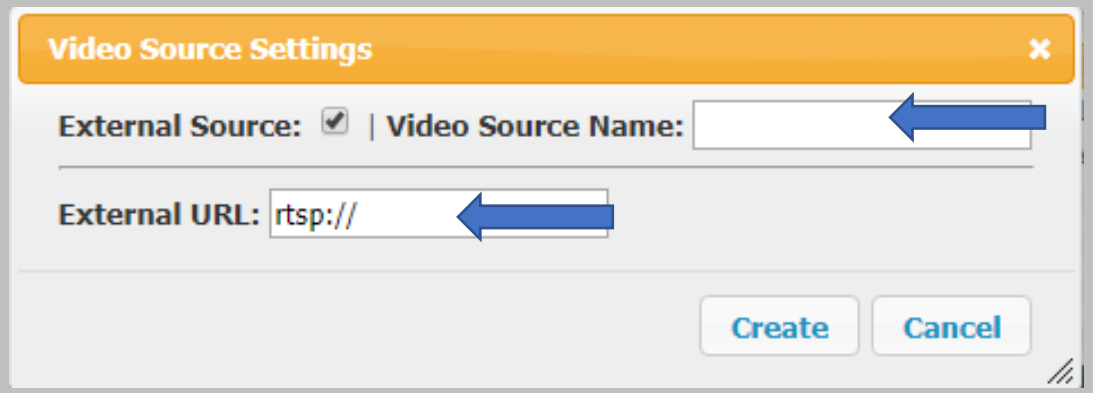
In the Video Source Settings window we will now need to identify that the channel is coming from an external source.

- Select the External Source check box at the top.

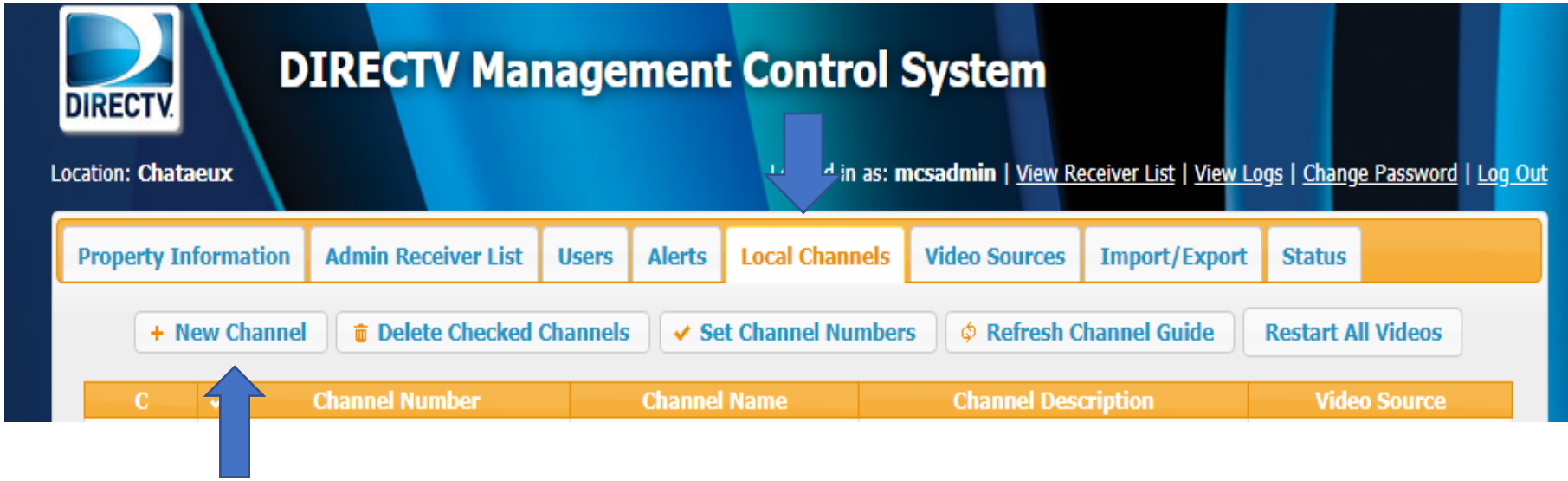
External Source

- Once you select the external source check box you will notice that the amount of information we need to enter dramatically decreases.
- Now we will need to enter a name into the Video Source Name field
- After we can set the External URL field
- The URL used in the DRE uses a 192.168.1.xxx format where xxx = the choses channel on the PD100. So using our setup example we used 239.255.101.0 to configure the PD100 for output on channel 2501. Using this address we will take the identifying number 101 and use it in the MCS address.
- Once you are down the address should look like this: rtsp://192.168.1.101
- Once you have filled out the needed information click on the Create button to create the video source on the MCS.

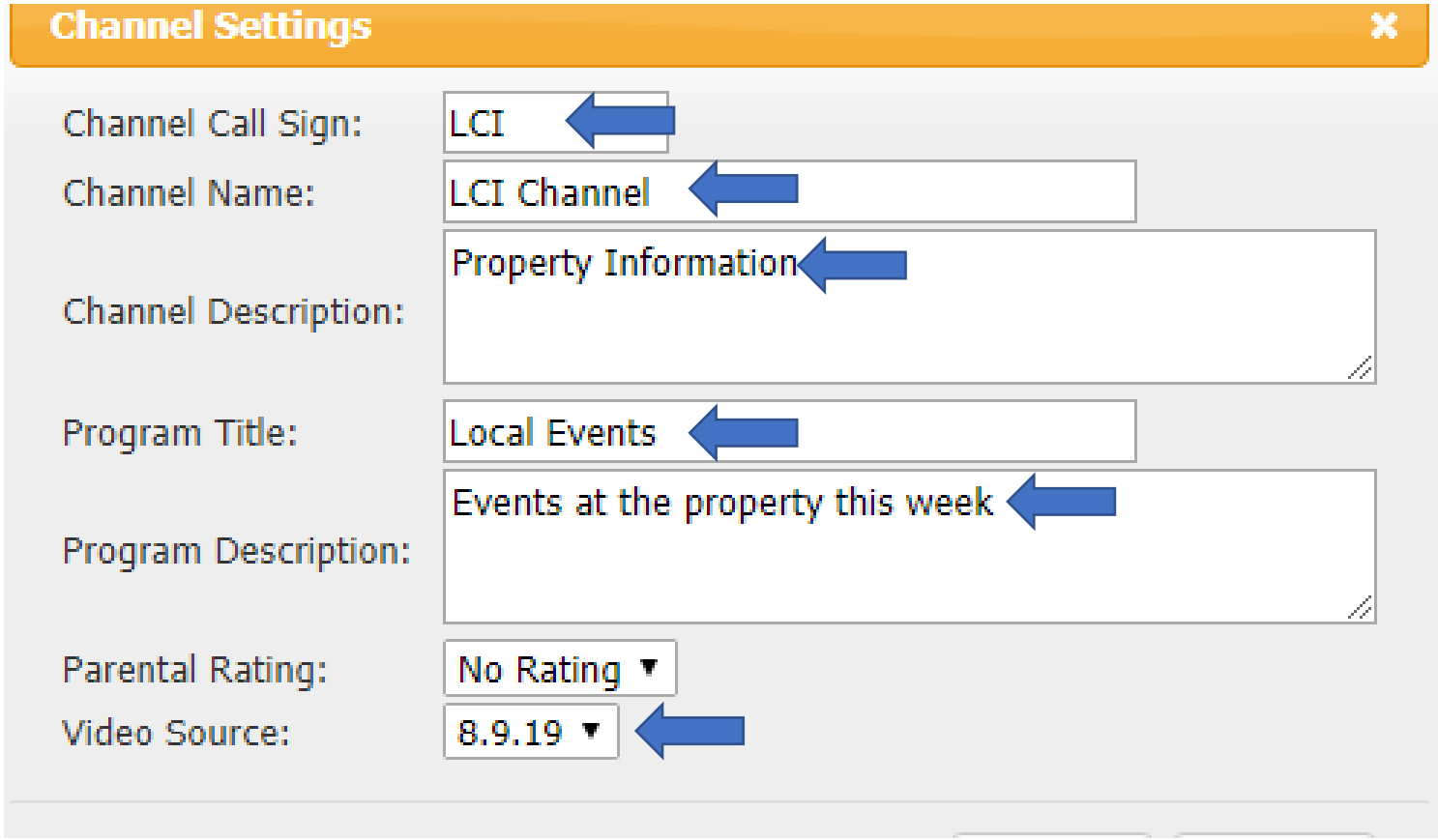




Local Channel



- Once you have created the video source we will need to create the channel that it will be broadcasting on.
- Navigate to the Local Channels tab on the MCS
- From here we will need to click on the + New Channel button



Creating the Channel

- Once you have clicked on the + New Channel button you will get the Channel Settings tab.
- From here you will need to fill out every field. Keep in mind that the property and the guests will see this information so try to make it professional and if in doubt ask the property how they would like it to look.
- At the bottom you will select the drop down window next to Video Source: and select the name we set for the channel we created on the Video Source tab.
- Once all of this has been set click on the Create button on the bottom to create the channel.

Setting a Channel Number

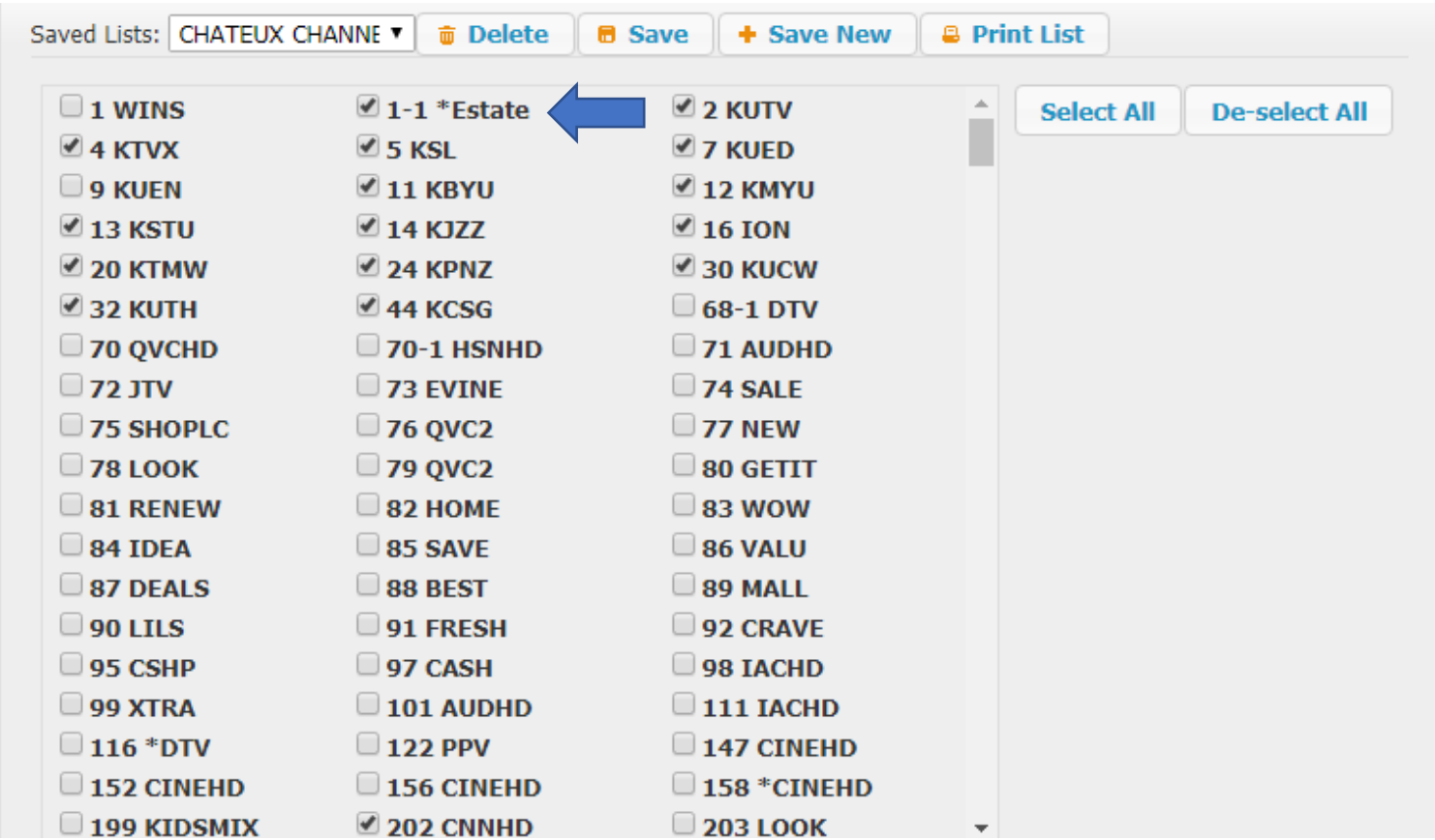
- Now we will need to set the channel number. Remember that the channel number is already pre determined by how we configure the MCS and the PD100 so in this instance the only option we have is 2501
- Using the drop down window to the right of the channel we just created select channel 2501
- Check the check box next to the channel number and then click the Set Channel Numbers button at the top.

Check the Percentage

- Unlike when videos are loaded directly onto the MCS server. External sources will not show a percentage under the C column. You will need to verify the channel is working in a room or on a receiver that is connected to the managed system.

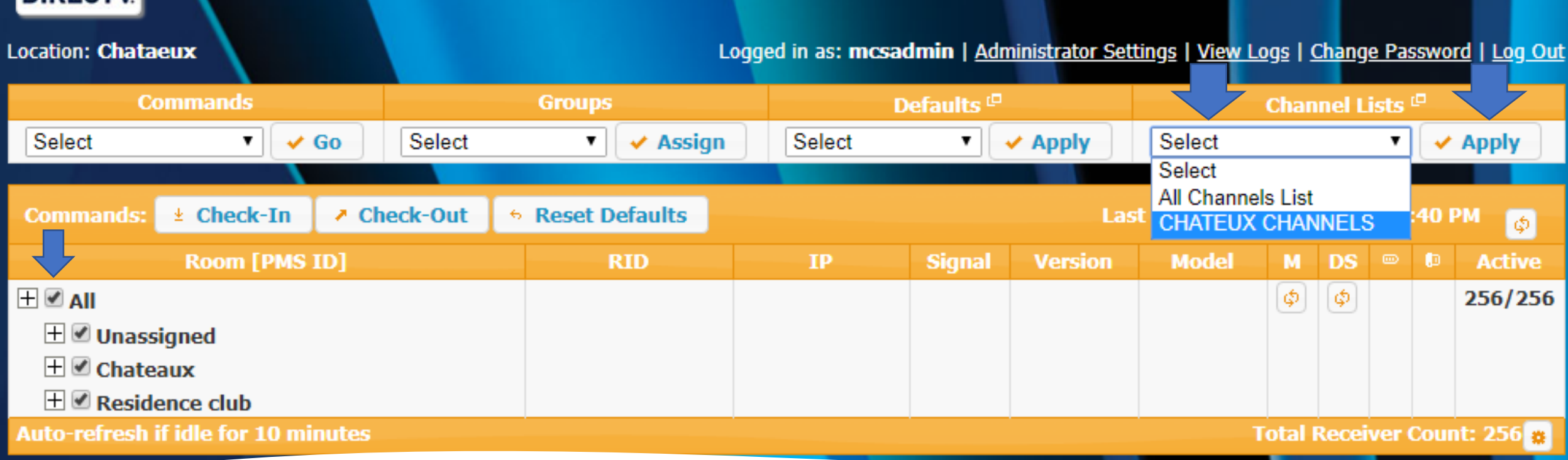
Adding the Channel to the Guide

- In order for a LCI channel to show up in the guide we will need to create a custom channel list from the home page of the MCS and send it out to the property.
- We will do this by clicking on the 2 little squares next to the Channel Lists title.



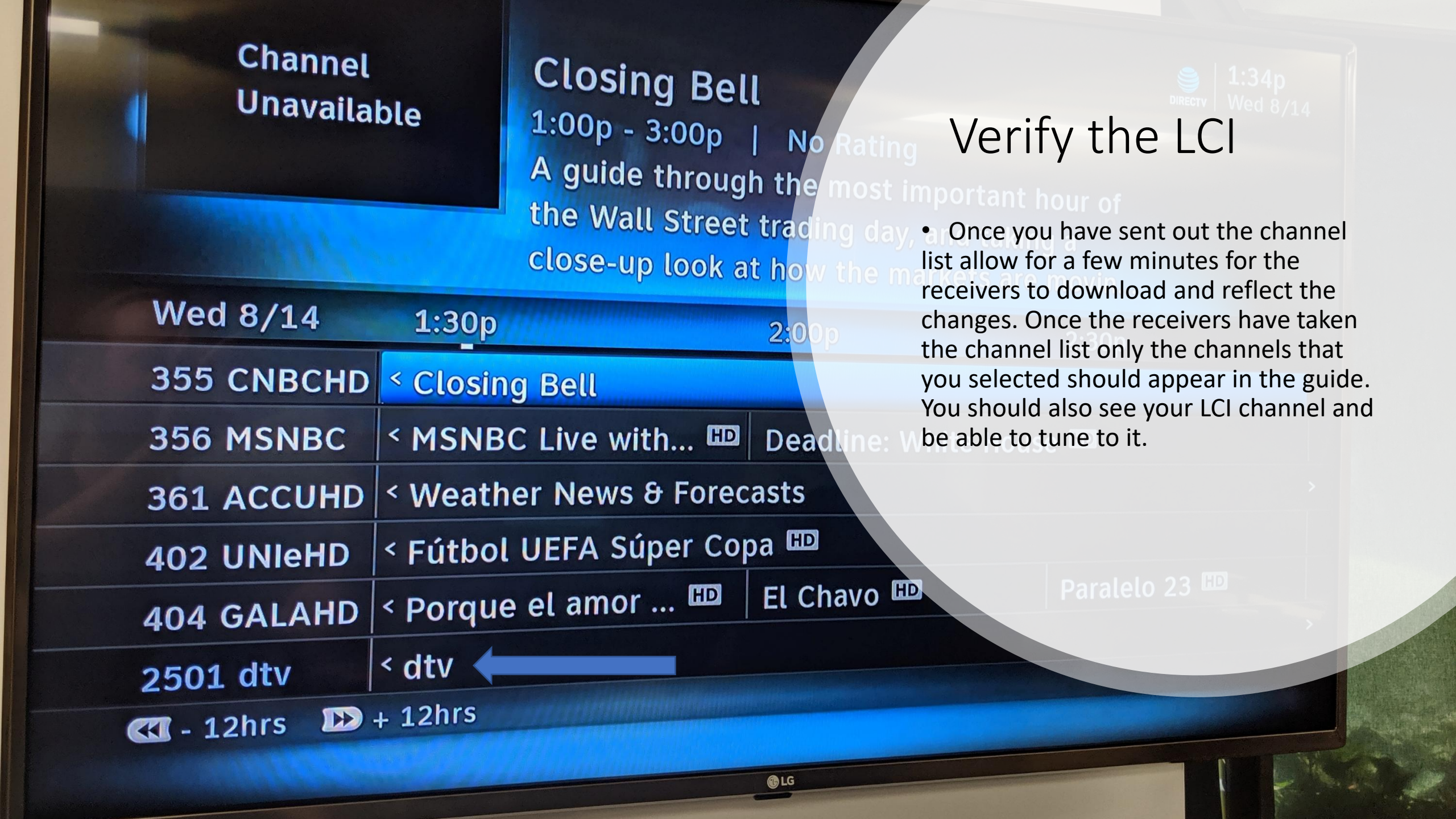
Creating the Channel List

- When the channel list loads make sure that your LCI channel is present. After the channel has been created it takes a few minutes to appear in the channel list. If the channel is no present simply close the window and wait a minute then try again.
- You will need to work with the PM to establish which channels are part of the properties line up. Not only will you need to select the LCI channel that you created but you will also need to check every channel that is in the properties package. This can potentially be 250+ channels.
- Once you have the channels selected click the save button and you will be asked to name the channel list. Please name it something easy to understand for others that may need to work on the system.
- In this example the LCI channel is 1-1 but for our channel we would need to verify that channel 2501 was present.



Sending out the Channel List

- Once you have created and saved the channel list we will need to send it out to the receivers.
- From the home page select the drop down window below Channel Lists and select the channel list you created that includes the LCI.
- In the receiver list select the receivers you wish to add the channel. If you want all receivers to have the channel check the box next to All.
- Once the desired receivers have been selected click the Apply button to the right of the Channel Lists drop down window.



Verify the LCI

- Once you have sent out the channel list allow for a few minutes for the receivers to download and reflect the changes. Once the receivers have taken the channel list only the channels that you selected should appear in the guide. You should also see your LCI channel and be able to tune to it.