Configuration Document
Video Distribution System

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1.0 VIDEO DISTRIBUTION SYSTEM

1.1 VIDEO DISTRIBUTION SYSTEM EQUIPMENT OVERVIEW

Video Distribution manages IP video/audio content and distributes it in real time or on-demand, or stores it for later scheduled distribution. The Video Distribution System also includes (Design-Only) video displays and video walls.

Table 1-1. Supported Systems							
Platform	Component	Product Name					
	Audience Microphone	Communicator C100					
	Audience Camera	Webcam C920					
	IP to ATSC Encapsulator	ATSC Rocket					
	IP to DVB Encapsulator	DVB Rocket					
	ATSC Demodulator	TLV300E-8VSB					
	DVB Demodulator	Virenza-T+T2					
	Set Top Box	Generic					
	Video Display 21" Unit	Bravia L Series					
	Video Display 40" Unit	Bravia V Series					
	Video Display 50" Unit	Bravia W Series					
	Video Display 57" Unit	Bravia W Series					
	Video Display 67" Unit	Bravia XBR7 Series					
	DVD Recorder	DVD-1150					
	Encoder	Generic					
	Video Media Server	Generic					
	Video Wall Controller	MediaWall					
	Distribution Amplifier	XE-12D					

Video Distribution Configuration Prerequisites

- Laptop for configuration
- IP addresses/netmask/gateway for all the Encoders, Set Top Boxes, Demodulators, Encapsulators, Video Media Server and Video Wall Controllers
- Multicast operational on the network
- Display monitor (either DVI or composite)
- Display monitor (VGA)
- USB keyboard
- Set Top Box remote control

CAT5 Coupler Prerequisites for Videoteleconference DVD Recorder (DVD-1150)

- Laptop with RS-232 interface (or USB to RS-232 adapter)
- BCD null modem "Program Dongle" for DB-9 cable (shipped with the DVD-1150)

- Videoteleconference configuration software CD (NG-312-20008, Line Item 34K), which includes:
  - Embedded Systems Academy *FlashMagic* program
  - Hex file

1.2 VIDEO DISTRIBUTION SYSTEM EQUIPMENT CONFIGURATION PROCEDURES

1.2.1 INSTALL ENCODER CARDS INTO 21-SLOT CHASSIS

The chassis can hold any combination of either the XXX or the YYY encoders. This combination depends on the requirements of the input sources.
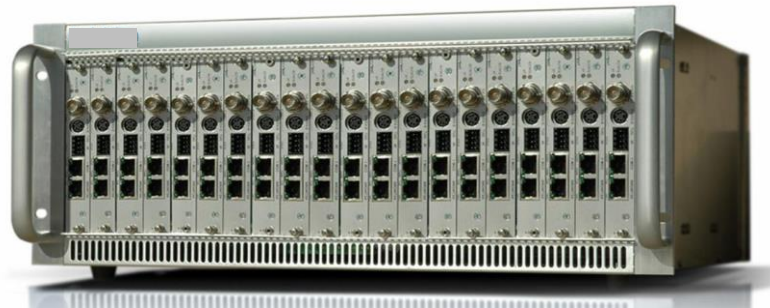

> **NOTE**: Do not remove the cover of the 21-slot chassis.
>
> Do not install encoder cards while chassis is connected to AC power.
>
> Do take antistatic precautions while handling circuit cards by appropriate grounding (i.e., antistatic grounded wrist strap.)
>
> Do not touch or push the fan blades on the back of the chassis.

1. Slide each card into place and assure each card is seated properly and secure with front panel screws. Do not force the connections to prevent any damage to the unit.

2. Connect the power cords to both of the power receptacles on the back of the 21-slot chassis.
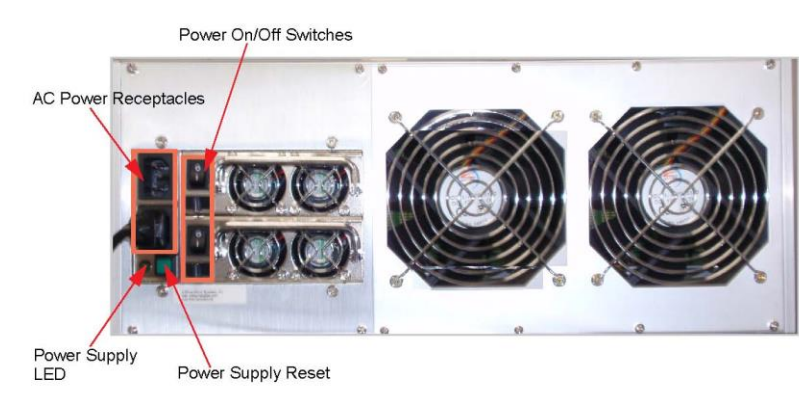

3. Plug the cord(s) into an AC power source.

    a. The Power Supply LED will turn green indicating that the chassis is powered up.

    b. In the front of the chassis, the status LEDs will start blinking green, indicating that the encoders are booting up.

    c. Wait until the Status LEDs stay solid green, indicating that the encoders are ready for operation.

d. If the Status LED continues to blink, reset the unit by pressing in the Reset button, next to the network port, for five seconds or until the status LED blinks red. Wait for it to become solid green.

> **NOTE**: Should the status LED continue to blink, this is an indiction of corrupted firmware in the encoder, which will need to be replaced.

4. Using the laptop and an Ethernet network cable, connect the laptop's network port to the first encoder. The encoder's network port is highlighted in red for the two types of encoders available. The laptop's network settings should be set as follows:
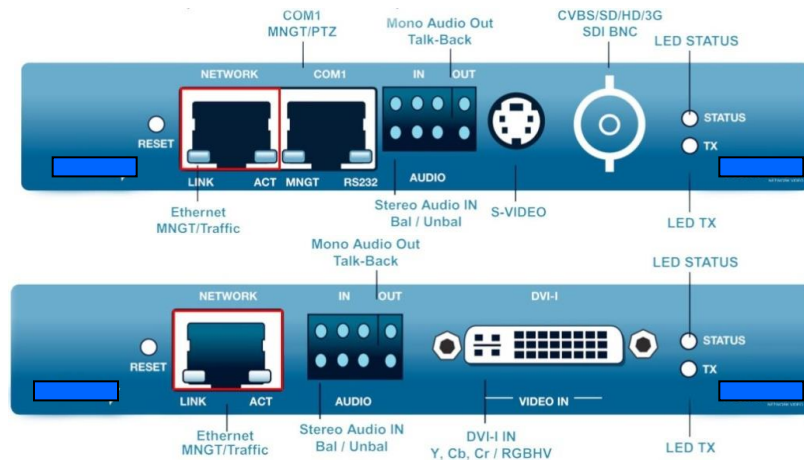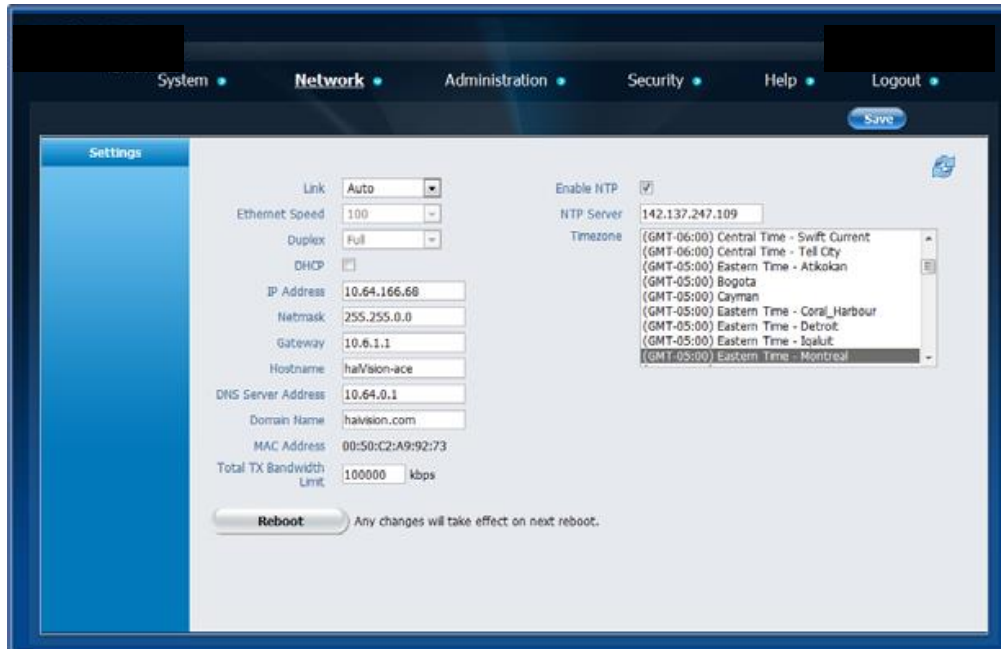

e. Set the laptop's IP to: **X.X.X.X**

f. Set Subnet to: **255.255.0.0**

g. Set Gateway to: **X.X.X.X**

5. From a Web browser on the laptop, type the IP Address (**http://X.X.X.X**) into the address field and press [**Enter**].


6. Type username *<admin>* and password *<password>* and click **Login**.

7. Select **Network** from Main Menu bar at top of the display.

8. The first thing you must do after you login is to make sure you have the latest firmware version (version X.X.X). You will know you have the latest version if "Security" is one of the menu options across the top of the screen. If it is the latest version, skip to step 8. Otherwise upgrade the firmware with the steps that follow:

    h. You will need a copy of the latest firmware (*.xxx file)

    i. Navigate to **Administration➔Upgrade**

    j. Click **Browse…** and locate the firmware

    k. Click **Upload**. This will take a few minutes.

    l. Navigate to **Administration➔Status** and click **Reboot**

    m. Confirm reboot. This process will take 20-30 minutes. After the unit reboots, login according to the procedure above.

9. Enter the following parameters for the first encoder card:

    n. IP Address: <**Encoder Card ### IP address**>

    o. Netmask: <**Encoder Card ### netmask**>

    p. Gateway: <**Encoder Card ### gateway**>

    q. Hostname: <**Encoder Card ### hostname**> Example (*VDS-ENC01-015*)

    r. DNS Server: <**Encoder Card ### DNS server address**>

    s. DNS Name: <**Encoder Card ### DNS name**> Same as 8d above.

10. Select the **Enable NTP** check box.

11. Enter the NTP server IP into the NTP server text box

12. Select the Timezone: **GMT+00:00**.

13. Click **Save** in the upper right corner of the display.

14. Click **Reboot**.

15. Wait two minutes.

16. Open a browser on the laptop and navigate to the IP address in 8a above.

17. Log on with the username and password from above.

18. Select **Security** > **Accounts**.

19. On the Accounts page, click the number 1 and the following page appears.
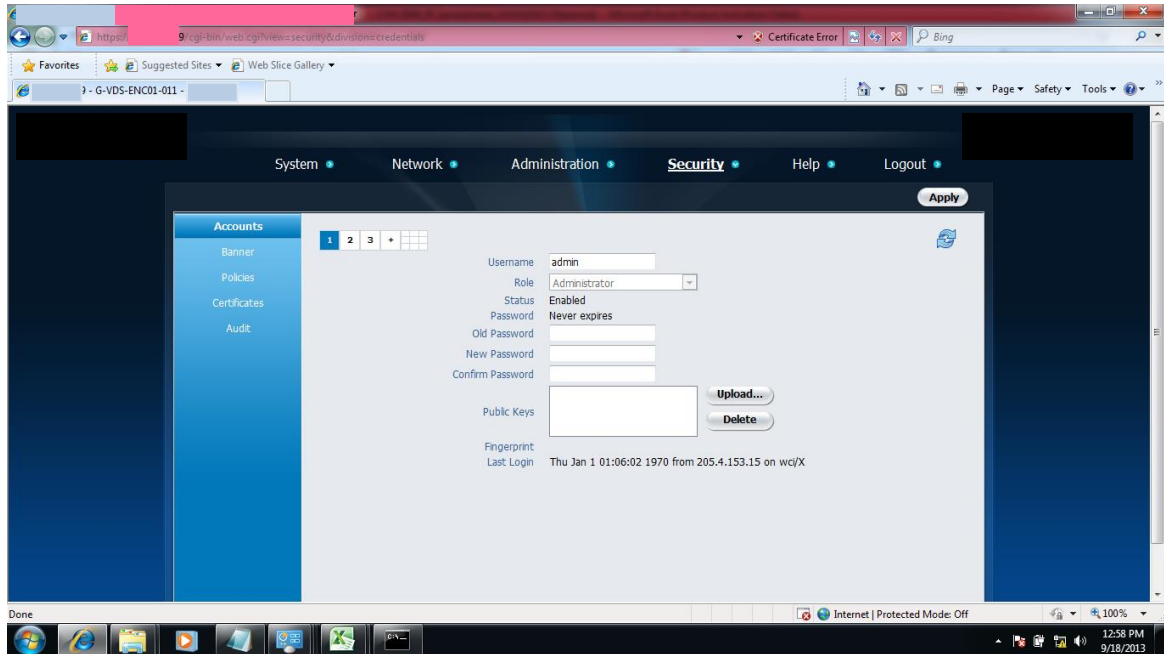
20. Enter the **Old Password**.

21. Enter the **New Password**.

22. **Confirm Password**.

23. Click the **Apply** button in the upper right.

24. Click the checkerboard icon in the upper left.

25. For Operator and User selected **Delete** from their dropdown menus.

26. Click **Apply**.

27. If you need an Administrator with a username other than admin, click the + sign and enter the appropriate information.

28. Disconnect the laptop and the cable from the encoder card.

29. Using an Ethernet UTP Cable (Cat 5 or higher), connect the network port of the encoder card to the rack switch.

30. The encoder card is now on the network and available for final configuration.

31. Repeat steps 4 through 29 for each remaining card until all have been configured.
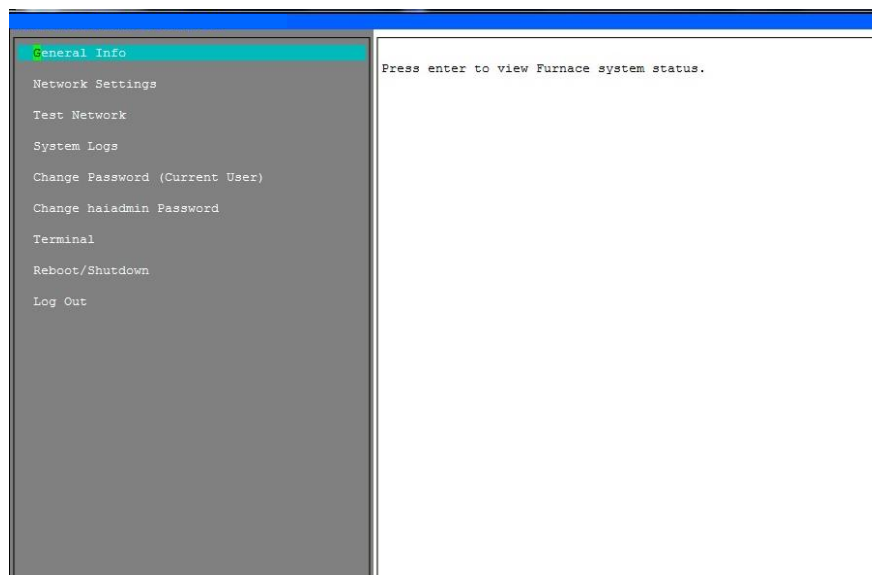
1.2.2 PRE-CONFIGURE SERVERS

1. Connect a VGA monitor and USB keyboard to the back of the portal sever. You will be presented with the following screen. If you do not see the screen, hit any key on the keyboard.

> **NOTE:** If the proper screen still will not display, the system may have an outdated operating system and will need to be upgraded by the vendor.

```
To Administer the system, browse to:

                         Please Log In
                         Username:
                         Password: ******
```

2. Enter the username and password and hit Enter
   a. Username = *username*
   b. Password = *password*
3. After you are logged in you will be presented with the Console screen.
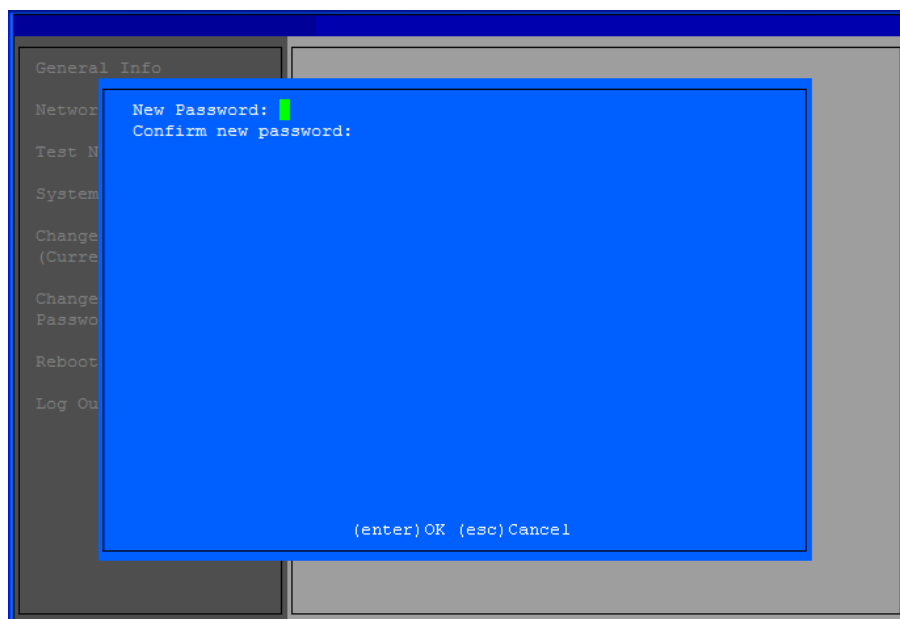
```
General Info                          Press enter to view Furnace system status.

Network Settings

Test Network

System Logs

Change Password (Current User)

Change haiadmin Password

Terminal

Reboot/Shutdown

Log Out
```

4. Use the arrow keys on the keyboard to navigate down to Network Settings and hit Enter. You will be presented with the following screen.


5. Enter the following information in the screen. Be sure to Tab between fields.
   a. Hostname: ***\<VF Hostname>*** (example *VDS-XXX-015*)
   b. IP address: ***\<VF IP Address>*** (from Master IP list)
   c. Gateway: ***\<VF Gateway>***
   d. Netmask: **\<VF Netmask>**
   e. DNS1: *\<VF DNS Server 1>*
   f. Boot Protocol: ***static***
6. Hit Enter. This will return you to the Console screen.
7. Use the arrow keys to navigate to Change password (Current User) and click Enter. You will be presented with the following screen.

8. Enter new password.
9. Confirm new password and then hit Enter. This will return you to the Console.
10. Use the arrow keys to navigate to Change password and click Enter. You will be presented with the screen above.
11. Enter new password.
12. Confirm new password and then hit Enter. This will return you to the Console.
13. Use the arrow keys to navigate to Reboot/Shutdown and hit Enter.
14. Highlight Reboot and hit Enter.
15. Hit Confirm. The server will reboot which takes about five minutes.
16. Repeat steps 1 through 9 and steps 13 through 15 for the other server.
17. Disconnect the monitor and keyboard.
18. Open a browser on a workstation in the system. Enter the IP address for the server from step 5b above. You will be presented with the following screen.
19. Click the **Sign In** link in the upper right corner of the resulting display.
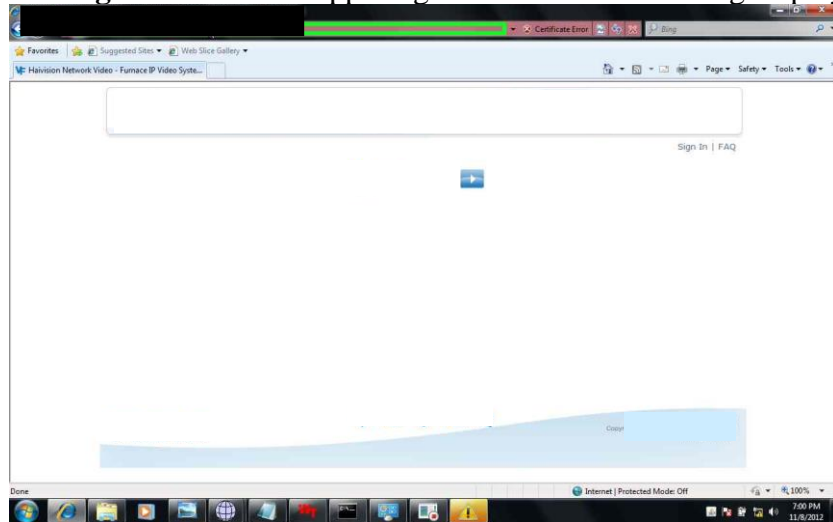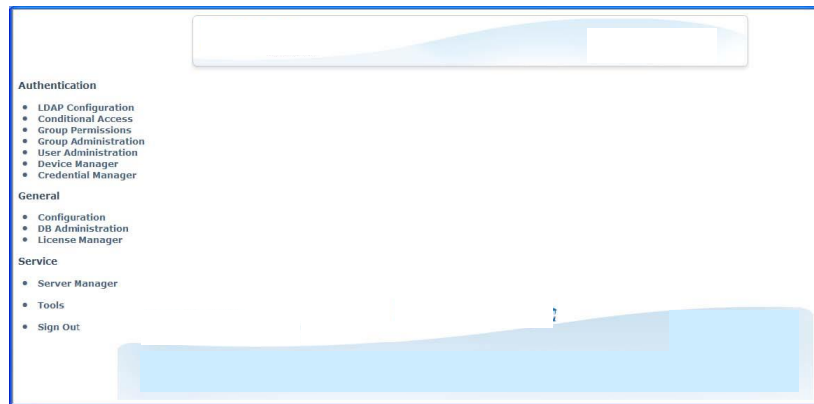

20. Enter the *<Username>* and *<Password>*

   a. Username: *username*

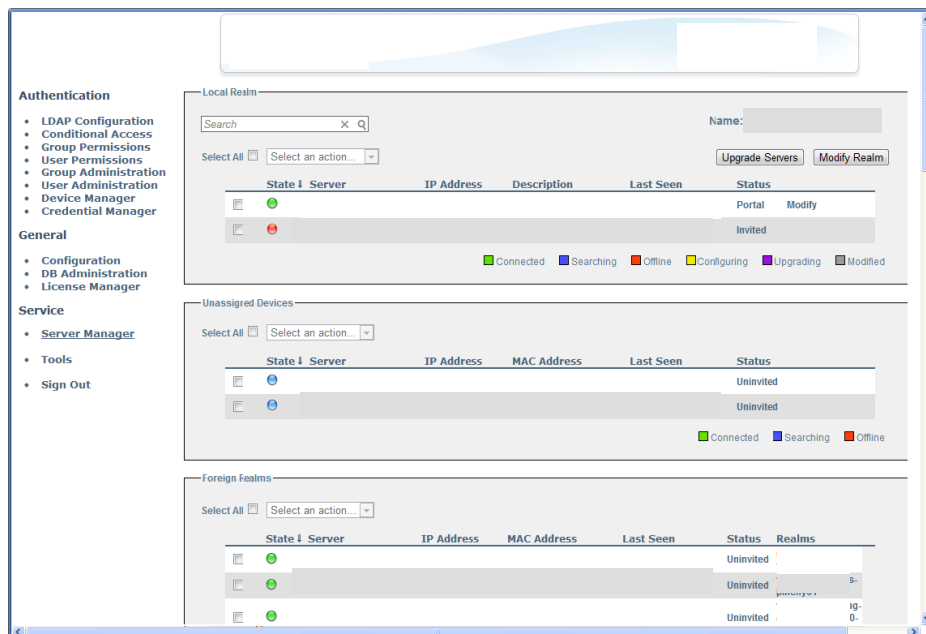   b. Password: From step 11 above

NOTE: The same password as updated above.
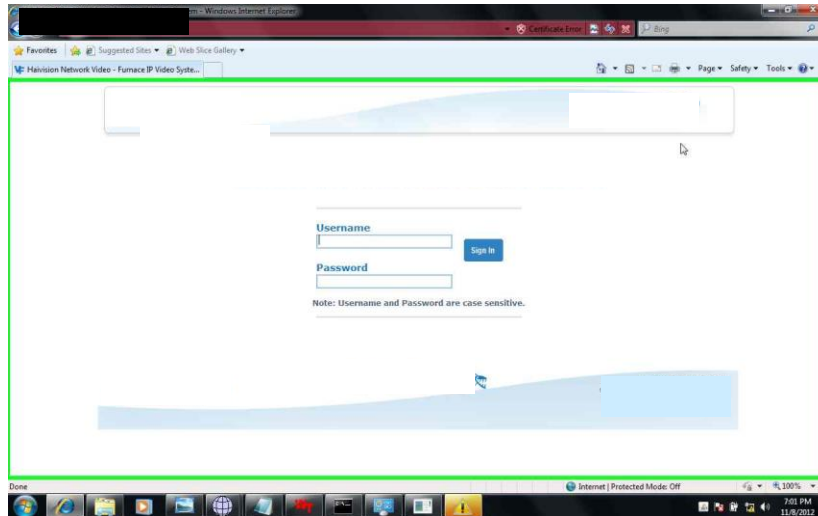
21. Click **Sign In**. You will be presented with the following screen.

22. Select **Server Manager.** The Server Manager page opens and lists all available resources in the local Realm.

23. Only the servers may be modified through this interface and will have a **Modify** button next to them. Select the **Modify** button next to the portal server and the IP Settings Page will open.

24. Enter the missing network parameters for the server:
    a. DNS Server 2: <***VF DNS Server 2***>
    b. Hostname: <***VF Hostname***> Example (*VDS-XXX-015*)

25. Save settings by clicking **Save**.

26. Now you will have to create an administrator. Click the **User Administration** link and then click the **Create User** button.

27. Enter the following information:
    a. Username
    b. Password
    c. Confirm Password
    d. Name

28. Hit **Submit**.

29. Now click the **User Permission** link and next to the user you just created, click **Modify**.

30. Check the box that says **All Permissions** to assure this user has full administrative privileges.

31. Click the **Sign Out** link.

32. Repeat steps 23 through 25 for the other server.

Activate settings just saved by checking the boxes next to the portal and media servers and choosing **Activate Changes** from the **Select an action…** drop down box at the top of the Server Manager page.

33. Click **Update Servers** and the server will reboot with saved changes applied.

34. Detailed operational configurations may now be done using this same portal interface from any connected browser. The new IP address specified in Step 5a above must be used.

1.2.3   CONFIGURE SET TOP BOXES

1.   Connect supplied DC Power Supply Unit (PSU) to **DC IN**.

2.   Connect a TV display to the **HDMI** port (or some other port if you have a monitor that does not accept HDMI).

3.   Turn on the TV Display and select the **HDMI** input.

4.   Turn on the Set Top Box (STB) by plugging in the PSU.

5.   **NOTE**: Initially, the splash screen is seen on power up. Then the STB begins to boot up and self configure. The self configuration screen below indicates which stage of the configuration the STB is presently in by the icons at the bottom.

6.   Interrupt the bootup process by clicking the **Up ARROW** on the remote control. Interruption must be done before the third icon is lit. The Settings page appears.

7. When prompted, enter the password:

8. There is no "read" password

9. The "write" password is **XXXX.**

10. Use the Up and Down ARROWS on the remote control to highlight **Network Settings.** Click **OK** to select. The Network Settings page appears.

11. Highlight **Static**. Click **OK.**
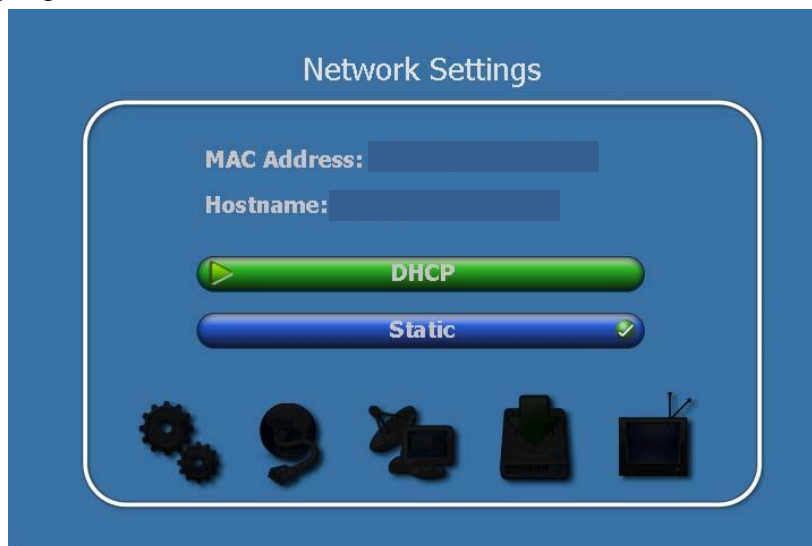
12. When the Static Network Settings page is displayed, enter the appropriate values:

    a. IP Address: <STB### IP Address>

    b. Subnet Mask: <STB### Subnet Mask>

    c. Gateway: <STB### Gateway>

    d. DNS Server 1: <STB### DNS Server 1>

    e. DNS Server 2: <STB### DNS Server 2> .

13. Click Accept Changes.

14. When prompted, enter the write password XXXX .

15. Click Reboot.

16. Click OK. The STB will reboot and the new values take effect.

1.2.4 CONFIGURE IP TO ATSC ENCAPSULATOR OR IP TO DVB ENCAPSULATOR

1. Power up the encapsulator by plugging in the power cord and pressing the red power button on the front.

2. Connect an Ethernet cable from the client laptop to the WAN port on the back of the encapsulator.

Power   WAN   LAN   ASI
(either can be   Output
used for IP Input)
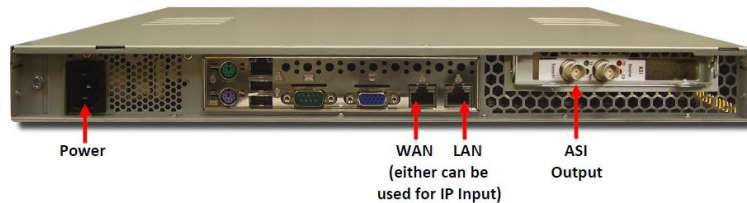
3. **NOTE:** The IP address for the WAN on the Encapsulator is on a label on the back of the system, just above the WAN port.

4. Set an IP address on the laptop that is in the same subnet as the Encapsulator.

5. Launch a web browser on the laptop and navigate to that IP address. A login window appears.

6. Enter Username: *admin*, Password: *admin*, click **OK**.

7. The home page for the Encapsulator appears. Click the **Network Setup** tab.

8. Click the **WAN Setup** link from the left pane.
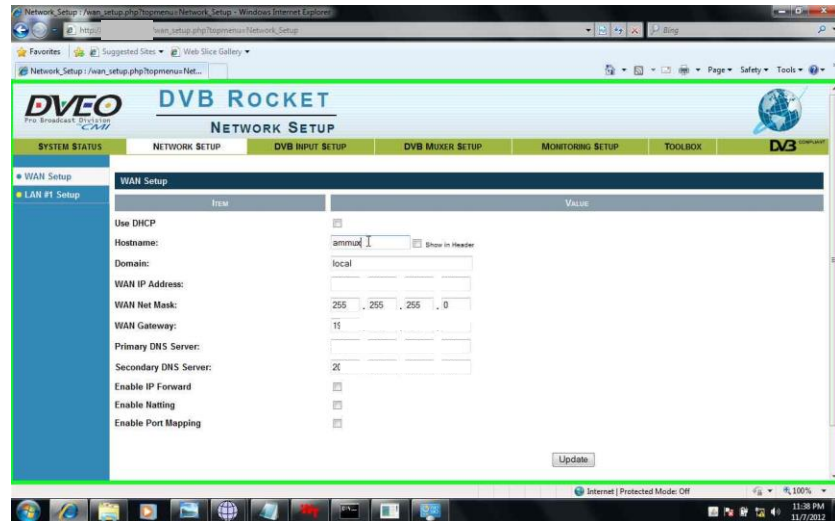
9.   Enter network parameters for the Encapsulator on the WAN Setup page.

10.   Use DHCP: Unchecked

11.   Hostname: <*Rocket Hostname*>   Exampe (G-VDS-XXX-015)

12.   Domain: <*Rocket Domain*> Example: (xxx5000)

13.   WAN IP Address: <*Rocket IP Address*>

14.   WAN Net Mask: <*Rocket Subnet Mask*>

15.   WAN Gateway: <*Rocket Gateway*>

16.   DNS Server 1: <*Rocket DNS Server 1*>

17.   DNS Server 2: <*Rocket DNS Server 2*>.

18.   Click **Update**.

19.   Click the **Toolbox** tab at the top of the web page and then the **Reset Unit** link on the left.
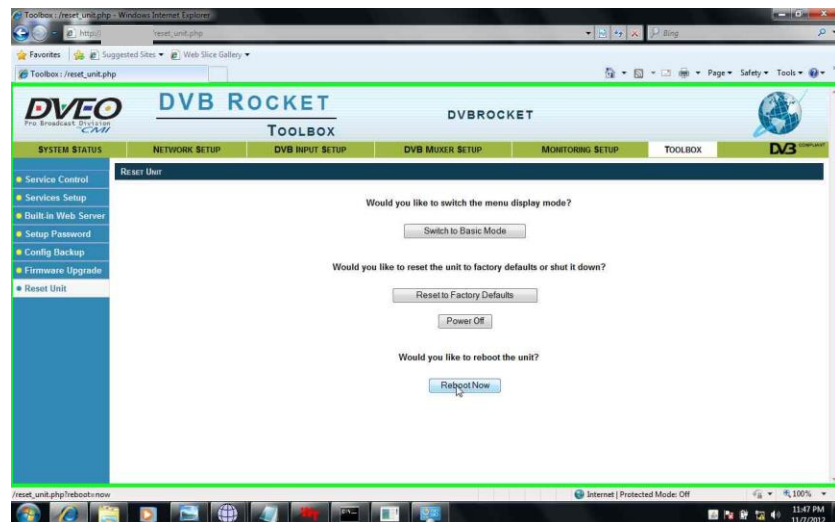
20.   Click **Reboot Now.** The server will reboot with saved changes applied.

21. To be able to change the password and logout, you will first have to upgrade the firmware on the Encapsulators. Open a broswer on the laptop and navigate to the IP address specified in step 8d above.

22. Navigate to the IP address specified in step 13 and login with credentials specified in step 6.

23. Go to **Toolbox** > **Firmware Upgrade**

24. Click on the Browse button and locate the new firmware.

25. Click **Apply** Full Firmware Upgrade

26. Click on **Reset Unit** on the menu on the left

27. **Reboot Now**

28. To change the password, log back in and navigate to **Toolbox** > **Setup Password**.

29. Enter **New Password**

30. Enter **Confirm Password**

31. Click **Update**

32. Detailed operational configurations may now be done using this same interface from any connected browser.

33. Click **Logout** in the upper right corner when finished.

1.2.5 CONFIGURE ATSC DEMODULATOR (TLV300E) OR DVB DEMODULATOR (VIRENZA)
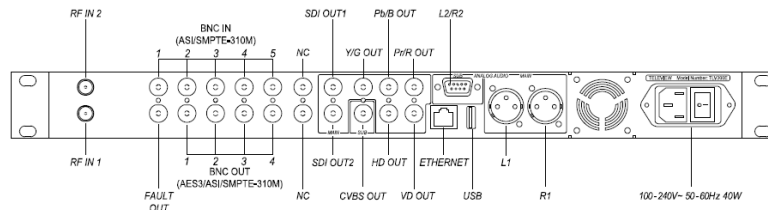
1. Power-up the demodulator by plugging in the power cord and pressing the power button next to the power cord on the back of the unit.

2. Connect the input signal on coax cable to the RF IN 1 port on the back of the unit.

3. Connect the output signal on coax to the CVBS OUT port on the back of the unit.

4. Connect the other end of that coax to the assigned encoder.

5. Connect the audio cables between L1/R1 on the back of the unit and the assigned Makito encoder.

6. While looking at the LCD display on the front panel, use the arrows to navigate to **CONFIG > SUB > SOURCE**.

7. Use the arrows to change the source to **RF-IN1**.

8. Click **Save**.

1.2.6 INSTALLATION OF ADOBE AIR AND POLYCOM M100 VIDEOTELECONFERENCE CLIENT SOFTWARE

Each laptop or desktop designated for use as a Video Teleconference talkback participant will require the installation of Adobe AIR and Polycom M100 software. Install Adobe AIR before installing M100.

1. Insert the disk with Adobe AIR into the CD reader on the laptop or desktop.
2. Navigate to the Adobe AIR install file and double click it.
3. Click **Run**.
4. Click **Install**.
5. If it asks you if you agree with the install terms click **OK**.
6. Click **Finished**.
7. Insert the disk with the Polycom M100 software into the CD reader (if different than the Adobe AIR disk).
8. Navigate to the M100 install file and double click it.
9. Click **Run**.
10. Choose English and click **OK**.
11. Click **Next**.
12. Accept the license agreement and click **Next**.
13. Click **Next**.
14. Click **Install**.
15. Within 30 days you will need to activate the M100 software, which requires two separate license numbers.

1.2.7 INSTALLATION OF VLC SOFTWARE FOR USE ON VDS CLIENT MACHINES

Each client machine designated for use in the Video Distribution System may have use for VLC software which facilitates converting video in one standard format to video in a different format.

1. Insert the disk with the VLC software into the CD reader on the client machine.
2. Navigate to the VLC install file and double click it.
3. Click **Run**.
4. Click **Next** three times.
5. Click **Install**.
6. Click **Finished**.

1.2.8 CONFIGURATION OF POLYCOM M100 VIDEOTELECONFERENCE CLIENT SOFTWARE

Each laptop designated for use as a VIDEOTELECONFERENCE participant will contain Polycom M100 software. This software accommodates a microphone and camera and enables

the laptop to participate in a video teleconference. The Polycom M100 must be configured to use the same Gatekeeper as the rest of the participants in that enclave.

1. Launch the Polycom M100 application on the laptop.

2. First you will need to activate the application. Navigate to the Activation submenu or click on the Activation button at start up.

3. Select the **Specify** button and enter the License Number and the Activation Key Code.

4. Click the **Activate** button.

5. Next, navigate to **Menu > Preferences > H.323** (see below).
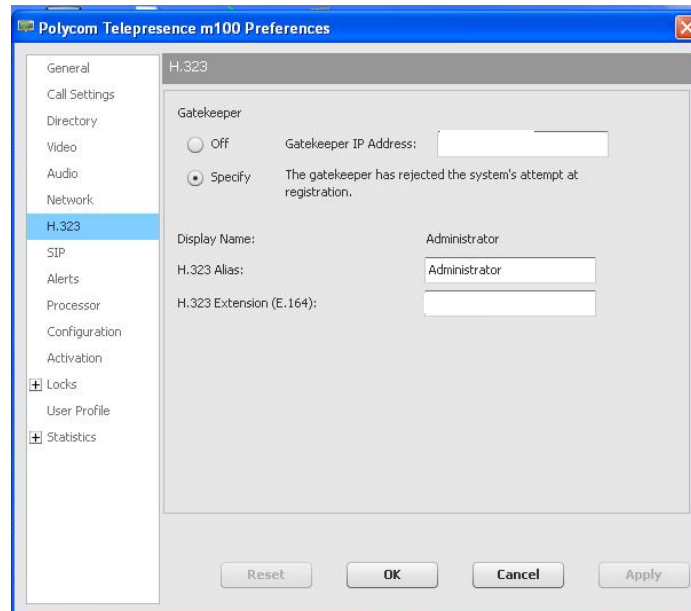
6. Under Gatekeeper choose **Specify** and enter the Gatekeeper IP address in the text box. For other video teleconferences, it will be the Gatekeeper IP address.

7. Click Apply

8. Click OK

9. If the teleconference is encrypted, go to Menu-->Preferences-->Call Settings-->AES Encryption and check ON.

10. Click Apply

11. Click OK

1.2.9 CONFIGURATION OF VIDEOTELECONFERENCE DVD RECORDER (DVD-1150)

Recording and playback of VDS audio/video is made possible with the Video Teleconference DVD Recorder. The firmware on this recorder should be updated to the latest version to take advantage of any performance improvements or bug fixes.

NOTE: First makes sure that new firmware is a later version of already installed firmware. Installed firmware can be seen on the startup screen after turning the unit on.

1. With the DVD-1150 powered-off, connect the RS-232 cable with the BCD Program Dongle attached from the laptop to the lower **SERIAL IN** DB-9 connector on the rear of the DVD-1150. The dongle MUST be connected to the laptop and not the recorder. A serial cable from the Touch Panel Controller may already be attached, remove that cable temporarily. A portion of the rear panel is shown below for clarity.

2. Verify DVD-1150 is powered-off.

3. Turn DIP switch #4 ON (up)for programming (it is OFF in normal use). New units have a six-position DIP switch instead of the four-position switch shown above. Still use #4 for programming purposes. Leave the other DIP switches in their present position.

4. Install *FlashMagic* on the laptop and run *FlashMagic*. The FlashMagic window opens.
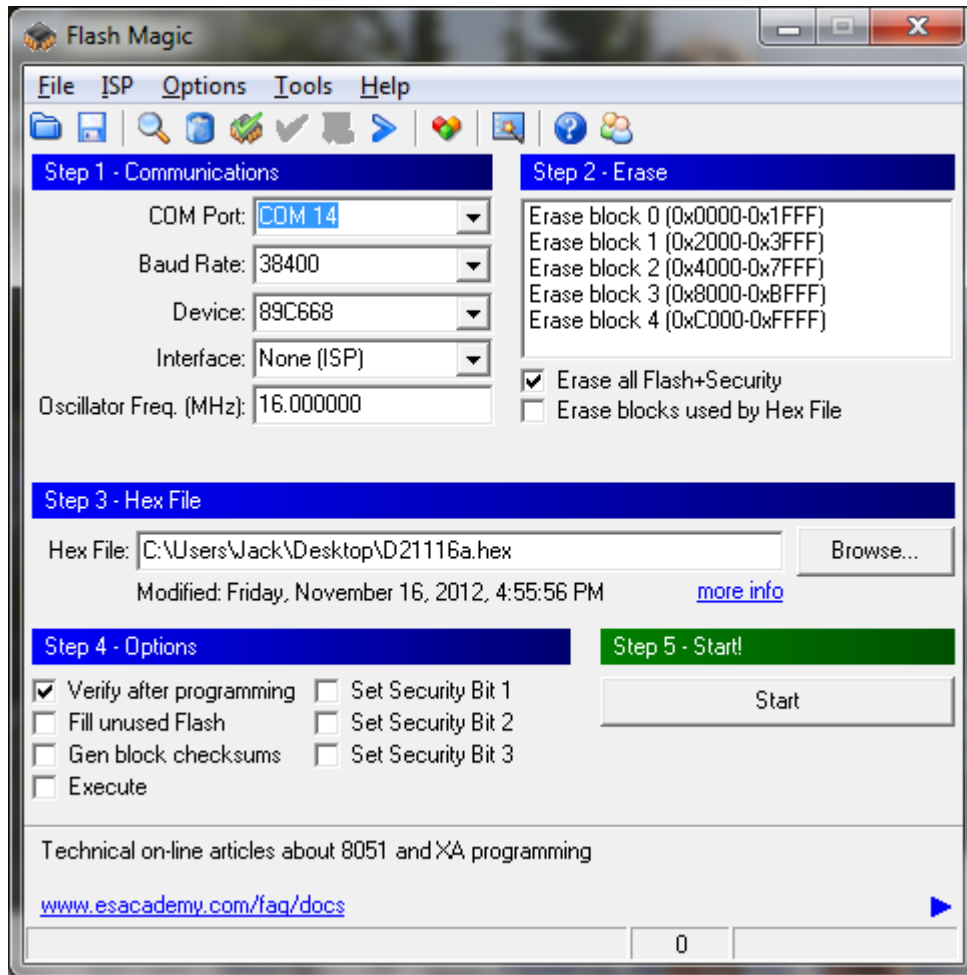
5. In the *FlashMagic* window, set the following:

   a. COM Port: to agree with the computer

   b. Baud Rate: **38400** or **19200**

   c. Device: **89C668**

   d. Interface: **None (ISP)**

   e. Oscillator Freq. (MHz): **16** (default)

   f. Check **Erase all Flash+Security**

   g. Hex File: **D21116a.hex** (or most current)

   h. Check **Verify after programming**

   i. Uncheck everything else

6. Power-on the DVD-DVD 1150.

7. In the *FlashMagic* window, select **Start.**

8. The program displays **Finished** when the programming is complete. If the programming fails for any reason, start over and reprogram.

9.   When the DVD-DVD-1150 has been successfully programmed:

   a.   Power-off the DVD-1150

   b.   Return DIP switch #4 to the OFF position

   c.   Disconnect the laptop and RS-232

   d.   Reconnect the original RS-232 cable from the Touch Panel Controller to **SERIAL IN**

   e.   Power-on the DVD-1150 and verify operation.

2.0   ACCEPTANCE CRITERIA

2.1   OVERVIEW

The Video Distribution System (VDS) allows afloat platforms to distribute video sources, with multicast capability, to video displays throughout the platform. It includes all the necessary equipment required to distribute and manage video distribution.

2.2   PURPOSE OF ACCEPTANCE TEST

The VDS racks are complex due to both the variety of components and the variety of internal rack cables. All of the components have to be cabled properly and fully configured for the VDS racks to operate as designed. This test, in conjunction with other QA procedures, is designed to validate full operation of the racks before leaving the production facility. It is intended to expose any component "dead on arrival" (DoA) issues and some infant mortality, faulty cables or misconnected cables, and validate proper configuration according to the Configuration Document. This same procedure may be utilized in full or partially for subsequent testing of the installed system.

2.3   REQUIRED TEST EQUIPMENT

| Table 2-1. Required Test Equipment	
Description	**Make/Model**
DVD writeable disks	DVD+RW
Composite Video source	SWADS-100CAM or equivalent
Composite video display	VTM-LCD351 or equivalent
Test Laptop	Panasonic Toughbook CF-53

2.4   TEST SETUP DIAGRAM
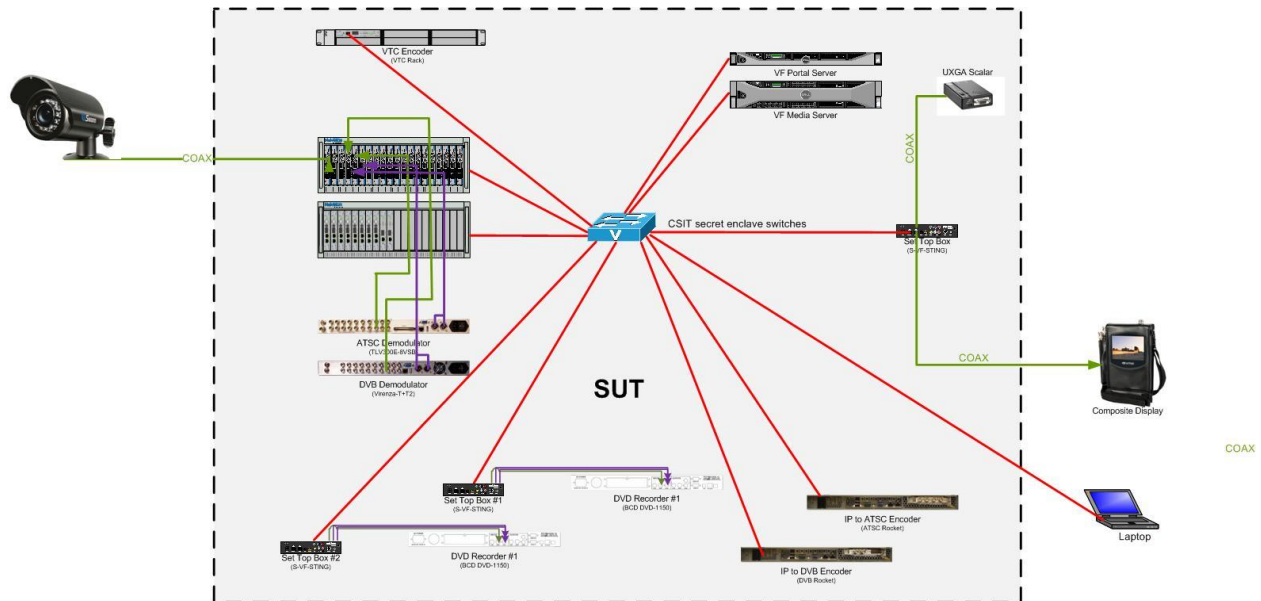
2.5   TEST CONDITIONS TO BE IMPOSED

| Table 2-2. VIDEOTELECONFERENCE Acceptance Test Conditions	
Item	**Description**
System Under Test - Completeness	The racks shall be completely built with all components and cables properly installed and verified by QA.
System Under Test – Configuration	The procedures for configuration found in the VDS Configuration Document shall be fully executed.
Test Configuration	The composite camera shall be connected to encoder 14 in chassis 1 in unit 15 and the composite display shall be connected to a Set Top Box external to the racks as shown in the Test Setup Diagram in Section 1.1.4
Rack Power	The Rack UPS shall be plugged into an appropriate source.
Network Addresses	Configured per the network plan.

Rack Components – Power	In normal operation, when the UPS is powered on the following components will be powered on:
	        Encoders
	        DVD Recorders
	        Set Top Boxes (STB)
	        Demodulators
	        Rockets
	        Server
	        Server
	        Rack switch

Test Laptop	Configured with a browser and an IP address in the same subnet as the other configured items with a last octet chosen so as to not conflict with any other device in the subnet.

2.6   STEP-BY-STEP PROCEDURE

1. From a browser on the laptop, type the server's IP address into the address field and press **Enter.**

2. Click the **Sign In** link and login with the *username* and *password* specified above.

3. Click the **Tools** link and the **Tools** page appears.
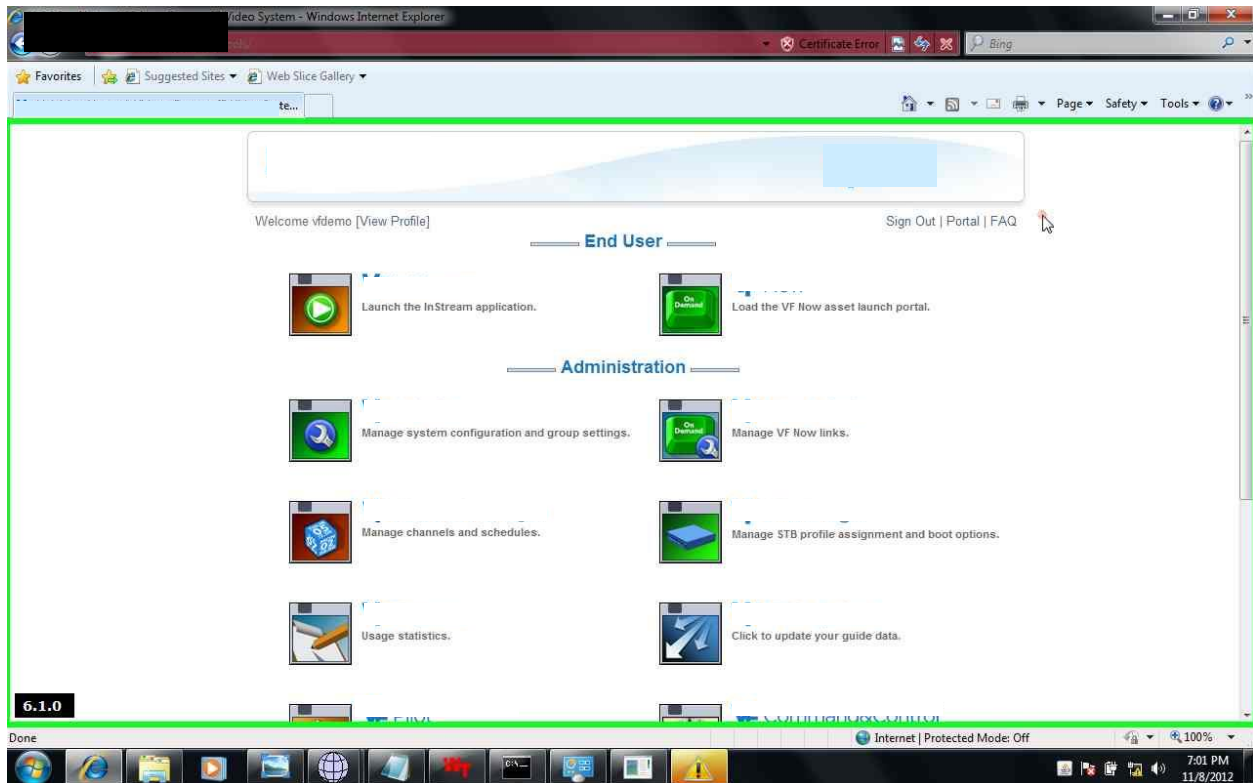
4. Click on the **Admin** icon.

5. Click on the **Server Manager** link on the left side and the Local Realm appears showing the status of all the encoders and servers in the system.
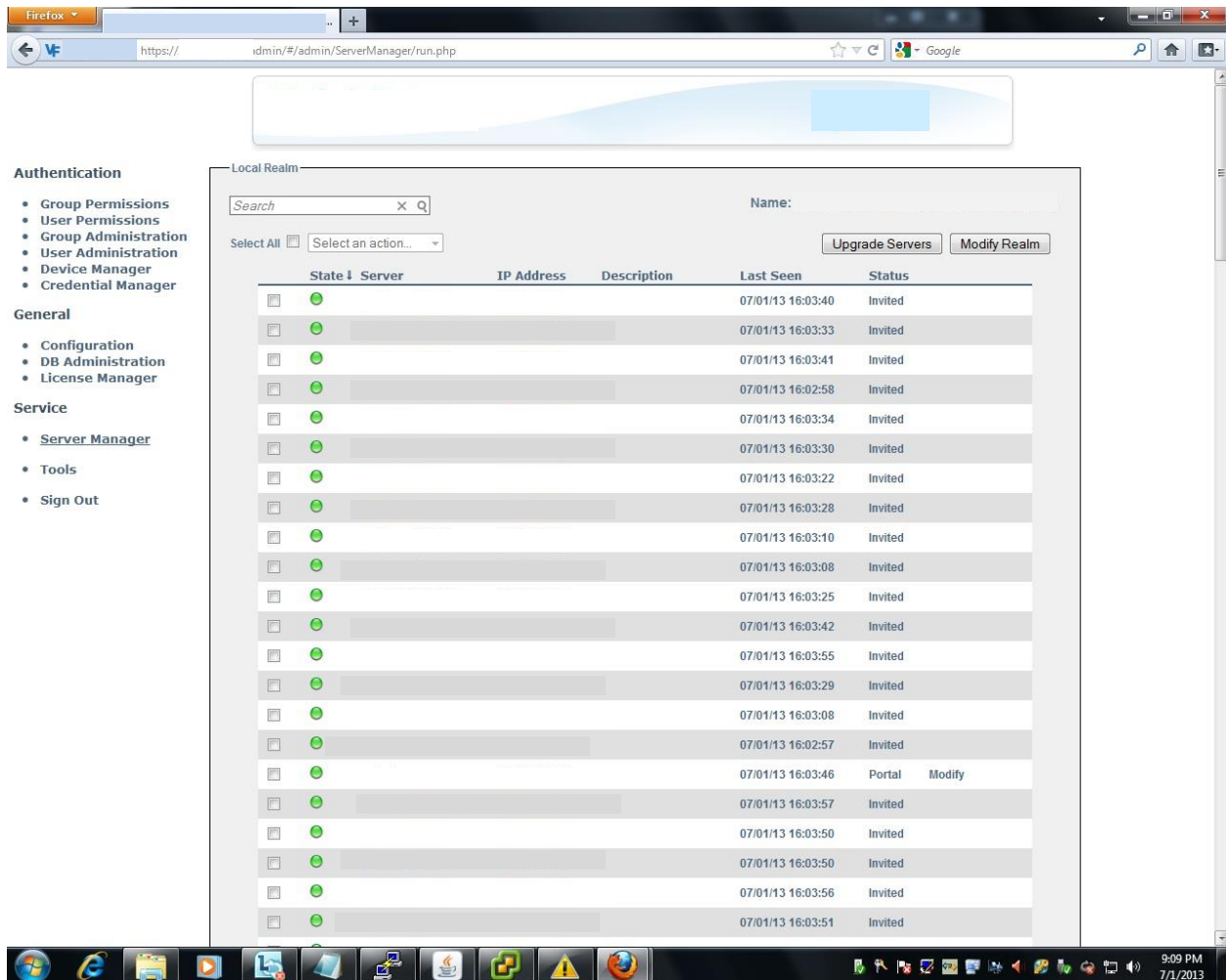
6. Make sure the encoder in the VIDEOTELECONFERENCE rack is powered on.

7. Verify that all the encoders and servers are in the green state.

8. In the event that one or more encoders is not in the green state, perform the following procedure to try and get them into the green state.

   a. If they are in the Unassigned Devices area, check the box next to each one and choose *Invite* from the dropdown list.

   b. If they are in the Local Realm, check the box next to all non-green encoders.

   c. Choose *Evict* from the dropdown list at the top—this will place the encoders in the Unassigned Devices area.

   d. Next, you will need to re-boot all of the encoders in the Unassigned Devices area.

   e. Launch a browser and navigate to the IP address of the first unassigned encoder.

   f. Login with the *username* and *password*.

   g. Go to **Administration➔Status** and click **Reboot**.

h. You will have to wait a few minutes for the encoder to reboot

i. Repeat the rebooting procedure for each unassigned encoder.

j. Check the box next to all of the encoders in the Unassigned Devices area.

k. Choose *Invite* from the dropdown list. All of the encoders should be green and in the Local Realm area. If not, you may have a bad encoder.

9. Now you need to create a channel using the server and software. Open a browser on the laptop and the IP address of the server into the address bar.

10. Click on the Sign In link in the upper right corner and login using the appropriate username and password.

11. On the left side of the Administration page, click on the Channel Manager icon .

12. On the left side of the Channel Manager page, click on the Channel Editor link.

13. On the Channel Editor page, click on the Add a Channel button. The New Channel page appears.

New Channel Page

14. Enter the following information:
    a. Encryption Level: none
    b. Call Sign: camera1
    c. Channel Number: 001.
    d. Private Number: 99001.
    e. Source: Single-stream
    f. Type: select encoder
    g. Host: select the encoder from the list that has the camera connected to it
    h. Output URL: enter vftp://X.X.X.X:xxxx.
15. Click on the Save Configuration button.
16. Now you will need to add the channel to the Default lineup. Click on the Lineup Editor link and the Lineup Editor appears.
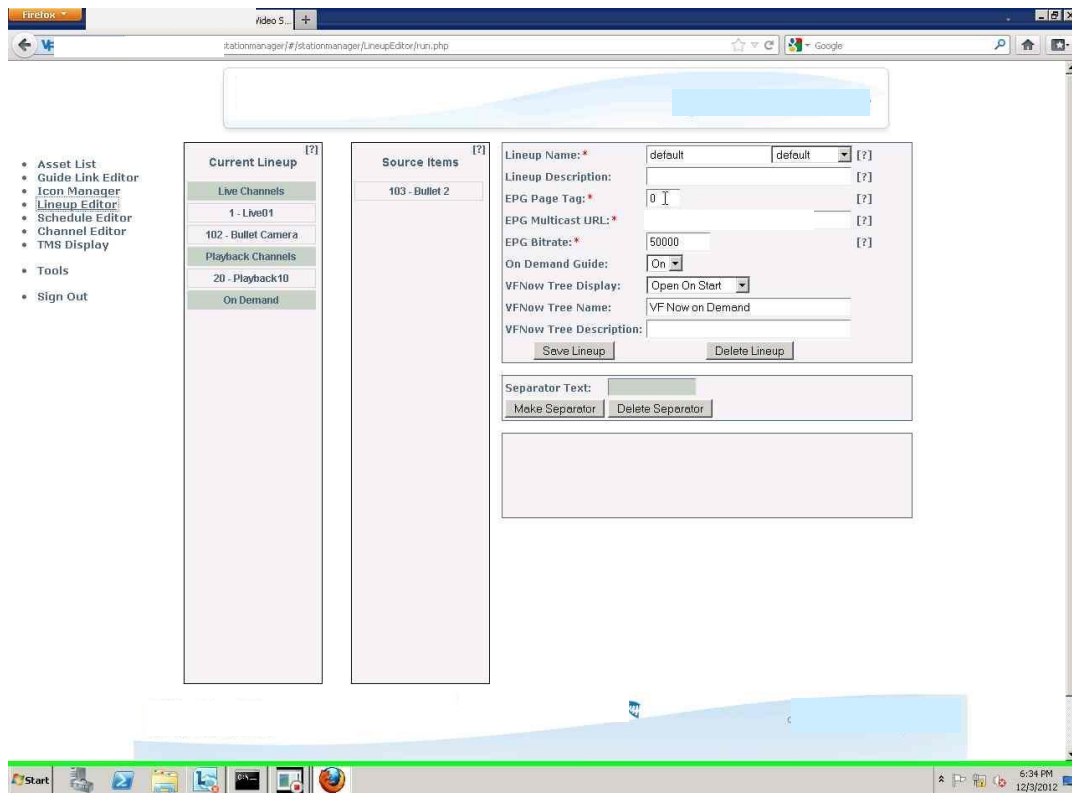
Channel Page

17. Enter the following information:

   a. Lineup Name: If it doesn't already exist, enter Default and choose default from the dropdown menu.

   b. EPG Page Tag: 0.

   c. EPG Multicast URL: vfdp://X.X.X.X:xxx.

   d. EPG Bitrate: 50000.

18. Drag the channel created in step 13 above from the Source Item column to the Current Lineup column.

19. Click Save Lineup.

20. You need to reboot the Set Top Box with the composite display attached. The easiest way to do that is to remove the power from the STB temporarily.

21. Wait for the unit to reboot .

22. Using the remote control that came with the Set Top Box with the composite display attached, press the Guide button.

23. You should see the channel camera1. Click OK.

24. You should see the video from the camera on the display.

25. Now you need to record and playback video. Open a browser on the laptop and enter the IP address of the Portal Server into the address bar.

26. Click on the Sign In link in the upper right corner and login using the appropriate username and password.
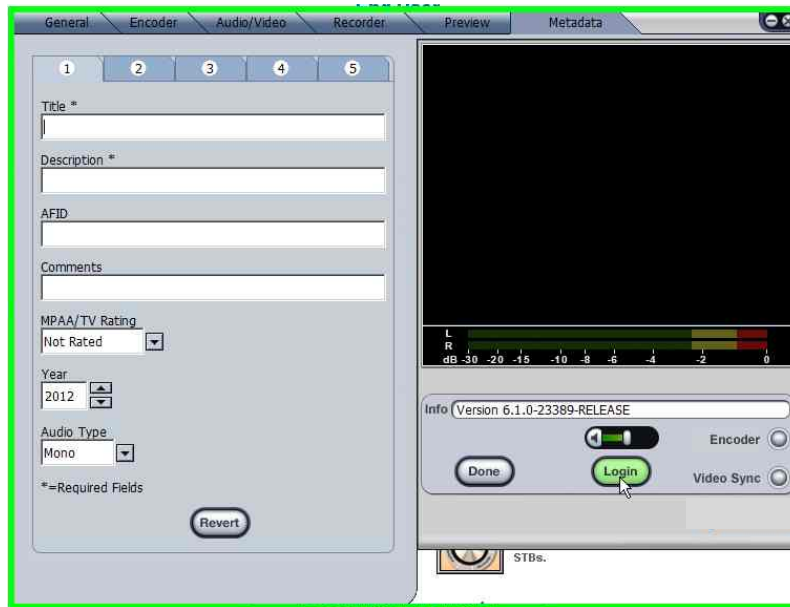
28

27. On the lower center of the Administration page, click on the icon. The utility appears.
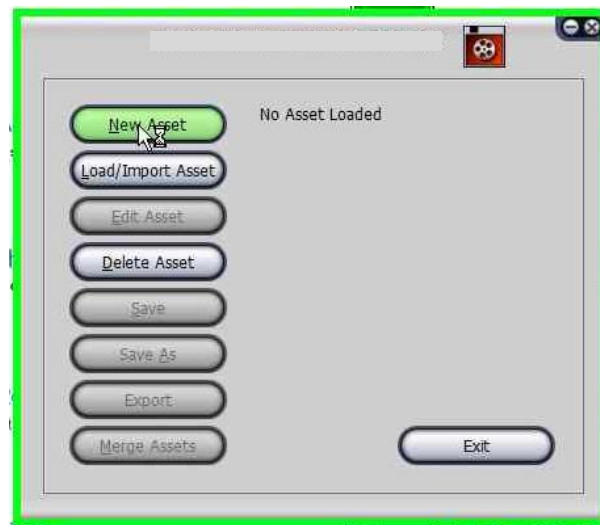
28. Click on the New Asset button. The Select New Asset Name window appears.

29. Navigate to the Desktop, enter a file name, click Save.
30. From the resultant pop-up choose Off-line Asset and click on the Next button. The utility appears.

Utility

31.   Click the Login button.

32.   Click the drop down arrow and choose the encoder assigned to channel camera1.

33.   Click the Connect button from the resultant pop up. Make sure the video you want to record appears in the video window.

34.   Enter a Title and a Description into the appropriate text fields on the Metadata tab (sub-tab 1) of the VFEditor utility.

35.   Click on the Recorder tab of the VFEditor utility.

36.   Click the Start Record button and wait a minute or two.

37.   Click the Stop Recording button to stop recording.

38.   Click the Done button under the video window.

39.   From the resultant pop up window choose Save As.

40. From the resultant pop up choose Published.

Save Asset As Pop Up

41. Click Exit. The Video has been saved.
42. Click the Tools link in the upper right.
43. On the upper right of the Administration page, click on the icon .
44. On the left side of the page click on the Link Administration link.
45. At the top of the Link Administration page click Add Link button. The Add Link utility appears.

Add Link Utility

46.   In the Enabled drop down box choose Yes.

47.   In the Show In Guide drop down box choose All Lineups.

48.   Click the Select Asset button. The Search For Asset window appears.

49.   Click the Search button. The stored asset (video) you want to view will appear in the search results.

50.   Scroll down to the video you want to view and click on it. That video's information now appears in the Asset text box of the Add Link utility.

51.   Make sure the Start Date and End Date in the Add Link utility allow the video to be played back now.

52.	Type the title of the video in the Relative URL text box.

53.	Click the Save Changes button.

54.	On the left side of the page, click on the Tools link.

55.	On the upper right of the Administration page, click on the icon.

56.	On the page, scroll down until you see the asset you just named in the step above and click on it. You should see the video play back.

57.	Now you will have to validate the proper operation of the Rockets. Open a browser on the laptop and enter the IP address of the DVB Rocket into the address bar.

58.	In the pop up box, enter the username and password.

59.	Go to DB Muxer Setup➔DVB Output Setup and make sure the inputs match those of the image below. NOTE: on the DVB Rocket the Output Stream Bitrate should be 12000000.
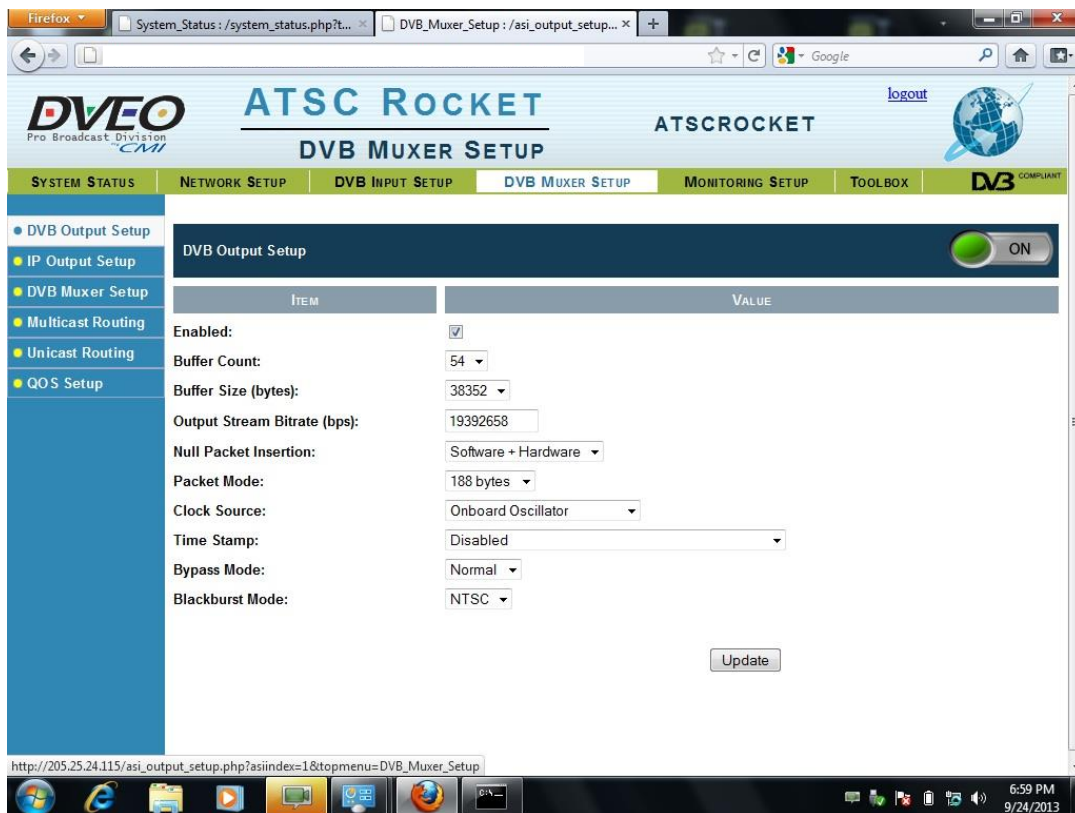
60.	Next, go to DVB Muxer Setup➔DVB Muxer Setup and make sure the inputs match those of the image below. NOTE: IP Input Name can be any name you want.

61. Finally go to DVB Muxer Setup➔Multicast Routing and enter the following information on the bottom row:

    a. Input Interface dropdown: choose WAN => eth0, <xxx.xxx.xxx.xxx>.

    b. Source IP: IP address of the encoder who has the camera attached.

    c. Multicast IP: X.X.X.X (from above).

    d. Output stream dropdown: choose the IP Input Name specified above.

    e. TTL: 32

62. Click Add Route.

63. Delete any other existing routes.

64. Click the Restart button at the top of the page

Multicast Routing Setup

ATSC ROCKET — DVB MUXER SETUP — ATSCROCKET

logout

SYSTEM STATUS | NETWORK SETUP | DVB INPUT SETUP | DVB MUXER SETUP | MONITORING SETUP | TOOLBOX

- DVB Output Setup
- IP Output Setup
- DVB Muxer Setup
- Multicast Routing
- Unicast Routing
- QOS Setup

Multicast Routing Setup — ON

INPUT INTERFACE	SOURCE IP	MULTICAST IP	OUTPUT INTERFACE	TTL	ACTION
wan => eth0,			1ststream	32	delete
local => lo, 127.0.0.1			local => lo, 127.0.0.1		Add Route

http://205.25.24.115/multicast_routing.php

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65. Go to System Status→System Status

66. Verify that eth0 Rx data rate > 0.00 Kb/s and that tun1 Tx data rate > 0.00 Kb/s.

Network

Interface	Rx	Tx	Total
tun12:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun3:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun16:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun7:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
lo:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun11:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun2:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun15:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun6:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
eth1:	4213.69 Kb/s	0.00 Kb/s	4213.69 Kb/s
tun10:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun1:	0.00 Kb/s	4137.00 Kb/s	4137.00 Kb/s
tun14:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun5:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
eth0:	0.00 Kb/s	1.00 Kb/s	1.00 Kb/s
tun9:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun13:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun4:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
tun8:	0.00 Kb/s	0.00 Kb/s	0.00 Kb/s
total:	4213.69 Kb/s	4138.00 Kb/s	8351.69 Kb/s

67. Repeat steps 56 through 65 for the ATSC Rocket.

68. Finally you will need to verify recording and playback from the DVD recorders. Temporarily disconnect the video input to the DVD recorder and connect it to the composite display.

69. Use the remote control as above to tune to the camera 1 channel.

70. Reconnect the input to the DVD recorder .

71. Repeat steps 67 through 69 for the other DVD recorder.

72. Insert a +RW type DVD into the first recorder.

73. On the front face of the DVD recorder, simultaneously press the Record and Play buttons. This will record the live video. Wait a minute or two and press Stop.

74. Temporarily disconnect the output of DVD recorder and connect it to the composite display.

75. Press the Play button on the DVD recorder and verify that you see the recorded video. If there is more than one video recorded on the DVD, use the up/down arrows on the DVD to navigate to the most recent video and then press Play.

76. Reconnect the input to the DVD recorder.

77. Repeat steps 71-75 for the other DVD recorder.