PathTrak™ Video Monitoring

RF and MPEG Monitoring System

User Guide

JDSU

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Table of Contents

About This Guide

Purpose and scope

The purpose of this guide is to help you install, configure, and use the the PathTrak™ Video Monitoring system features and capabilities.

The PathTrak™ Video Monitoring User Guide is designed to provide useful information about PathTrak™ Video Monitoring system hardware installation and provide warranty information and sources of technical assistance.

Assumptions

This guide is intended for novice, intermediate, and experienced users who want to use the PathTrak™ Video Monitoring effectively and efficiently. We are assuming that you have basic computer and mouse/track ball experience and are familiar with basic telecommunication concepts and terminology.

Technical assistance

If you need assistance or have questions related to the use of this product, call or e-mail JDS Uniphase Corporation's Cable Technical Assistance Center for customer support.

Table 1 Technical assistance centers

Region	Phone Number	
Americas	866 228 3762 World Wide: 301 353 1550	tac@jdsu.com
Cable TV/ Multimedia Products	America: 800 428 4424 Ext. 8350 World Wide: 317 788 9351 Ext. 8350	catv.support@jdsu.com
Brazil	+11 5503 3825 4617 3839 4617 3729	

Table 1 Technical assistance centers (Continued)

Region	Phone Number	
Europe, Africa, and Mid-East	+49 (0) 7121 86 1345 (Europe)	hotline.europe@jdsu.com
	+800 882 85822 (European Freephone)	support.uk@jdsu.com
	+49 (0) 6172 59 11 00 (JDSU Germany)	hotline.ger-many@jdsu.com
	+33 (0) 1 30 81 50 60 (JDSU France)	support.france@jdsu.com
Asia Pacific	+852 2892 0990 (Hong Kong)	
	+86 10 6655 5988 (Beijing-China)	
Southeast Asia, Aus-tralia, and New Zea-land	+60 3 2730 6333 (Kuala Lumpur)	
All others	866 228 3762	tac@jdsu.com

During off-hours, you can request assistance by doing one of the following: leave a voice mail message at the Technical Assistance number in your region; e-mail North American Technical Assistance Center, tac@jdsu.com, or European Technical Assistance Center, support.uk@jdsu.com; or submit your question using our online Technical Assistance Request form at www.jdsu.com.

Conventions

This guide uses naming conventions and symbols, as described in the following tables.

Table 2 Typographical conventions

Description	Example
User interface actions appear in this **typeface**.	On the Status bar, click **Start**.
Buttons or switches that you press on a unit appear in this **TYPEFACE**.	Press the **ON** switch.
Code and output messages appear in this `typeface`.	`All results okay`
Text you must type exactly as shown appears in this `typeface`.	Type: `a:\set.exe` in the dialog box
Variables appear in this ***typeface***.	Type the new ***hostname***.
Book references appear in this ***typeface***.	Refer to ***Newton's Telecom Dictionary***
A vertical bar | means "or": only one option can appear in a single command.	`platform [a|b|e]`
Square brackets [ ] indicate an optional argument.	`login [platform name]`
Slanted brackets < > group required arguments.	`<password>`

Table 3 Keyboard and menu conventions

Description	Example
A plus sign + indicates simultaneous keystrokes.	Press **Ctrl+s**
A comma indicates consecutive key strokes.	Press **Alt+f,s**
A slanted bracket indicates choosing a submenu from menu.	On the menu bar, click **Start > Program Files**.

Table 4 Symbol conventions

	**This symbol represents a general hazard.**
	**This symbol represents a risk of electrical shock.**
	NOTE This symbol represents a Note indicating related information or tip.

Table 5 Safety definitions

	**WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	**CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

PathTrak™ Video Monitoring Overview

1

This chapter provides a general description of the PathTrak™ Video Monitoring system. Topics discussed in this chapter include the following:

About the PathTrak™ Video Monitoring System

PathTrak™ Video Monitoring system provides monitoring and deep analysis of forward path digital and analog RF signals and MPEG video streams. PathTrak™ Video Monitoring provides web-based access to both live and historical QAM RF and MPEG performance throughout your network.

RF and MPEG Monitoring System Components

The RF and MPEG Monitoring System is composed of the following components:

- PathTrak™ Video Monitoring Server and Client software
- Temporary 60 days license file for PathTrak™ Video Monitoring (e-mail licensingkey@jdsu.com for your permanent license file). Refer to back of manual for details
- Optional ISS RF Input Selector Switch
- RSAM Analog/QAM RF/MPEG Probe
- Other set up items needed are splitters, monitor, keyboard, mouse, straight RS232 cable and PC with HyperTerminal application installed

PathTrak™ Video Monitoring Pre-Configuration Requirements

2

This chapter provides instructions for pre-installation configuration. Topics discussed in this chapter are as follows:

Pre-Installation Preferred Methods

Some of the individual components that make up the PathTrak™ Video Monitoring system will need to be configured with your network information before they communicate together as a system. There are two different preferred methods for configuring your PathTrak™ Video Monitoring system.

– Inputting the network information into the individual JDSU test equipment at a central location before it is rack mounted and delivered to its permanent locations, i.e., VHO's (Video Hub Office), VSO's (Video Servicing Office), Hubsite, and Headend.
– Installing your JDSU test equipment in its rack mounted position at the various sites and then configuring the network information.

This chapter will discuss both methods of Installation. Essentially the only difference is where it is configured. As you read through this document you can decide logistically which method is more efficient and practical for your business objectives.

Whichever method that you decide on, the first step to take is to obtain IP addresses from your IT department. You will need Static IP addresses for the following equipment.

– PathTrak™ Video Monitoring Server (customer's provided equipment)
– Each RSAM Analog/QAM RF/MPEG Probe

For each of these devices obtain the following information:

– Static IP address
– Subnet Mask
– Default Gateway
– DNS Address

NOTE

Keep a record of the IP addresses during this process.

Using the central location method, you may consider it a good practice to pair the devices up before you configure the network information. You may also want to label each device with its IP and location infor-

mation. Paired devices would typically consist of one RSAM and up to 2 of the Optional ISS RF Input Selector Switches. We will cover how to configure the Selector switches later in this document.

Configuring the Network information

Now that we have all of our network information, we can configure each of the devices. We will consider the central location method first. These instructions assume that you have paired the RSAM and ISS Selector Switches as to the location and area that they will be installed. We will first configure the IP of the RSAM and the ISS selector switch.

Configuring the RSAM Analog/QAM RF Probe

To configure an RSAM for Ethernet Communications

NOTE

A temporary PC is used for the serial data port connection. This connection is used to set the RSAM's IP address, Subnet Mask, Gateway, and PathTrak™ Video Monitoring Server information.

1. Using a standard DB9 serial cable (supplied with the RSAM unit), connect the **serial data port located in control area 1** of the RSAM to a **PC serial data port connection**.
2. Power up the **temporary PC** and the connected **RSAM**.
3. Using the temporary PC, launch the **HyperTerminal** application.
4. Configure **HyperTerminal** for direct connection using the available **COM port**.
5. Configure the COM port with the following settings:
   - **Bits Per Second: 57600**
   - **Data Bits: 8**
   - **Parity: None**
   - **Stop Bits: 1**
   - **Flow Control: None**
6. Using the HyperTerminal application, set the **RSAM's IP address**, **Subnet Mask**, **Gateway, and DNS IP**.

The RSAM should be given a fixed IP address in order to maintain connectivity. The RSAM IP address will be populated into the PathTrak™ Video Monitoring database for communications and control.

7 From the **HyperTerminal** command prompt type the following command:

```
setup
```

The following setup text is displayed:

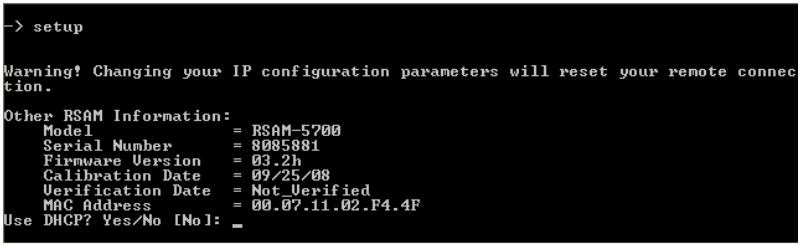

Figure 1 Setup text

8 Using the HyperTerminal, answer the DHCP prompt.

– Use DHCP? Yes/No [No], type **No**.

9 Using the HyperTerminal set the RSAM-5800's:

– Static IP address:

– Subnet Mask:

– Default Gateway:

– Host PVM IP Address:

– SNMP Destination 1:

– SNMP Destination 2:

– SNMP Destination 3:

– SNMP Destination 4:

– SNMP Destination 5:

10 To confirm each entry, press **Enter**.

11 To close the HyperTerminal window, click the Close button.

Configuring the ISS RF Input Selector Switch

To configure a ISS

1. Remove the **ISS** from the shipping container.
2. Select and record the **DIP switch position** (Figure 2 and Table 6) to be assigned to the ISS.

   This position is needed to properly configure the switch in the PathTrak™ Video Monitoring software.

NOTE

When daisy-chaining the switches, each DIP switch must have a different switch identification setting.

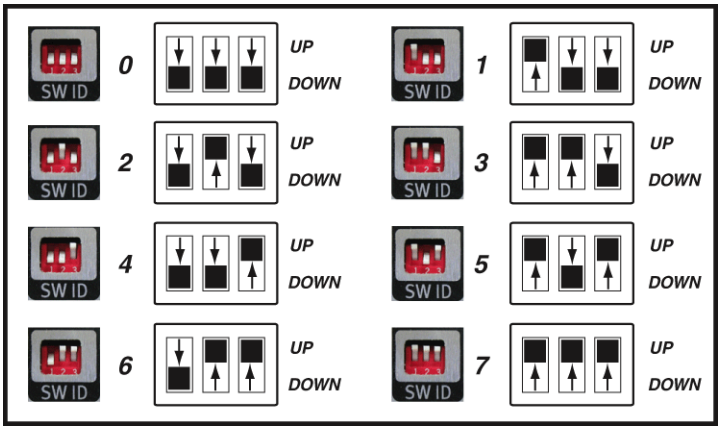

Figure 2 ISS DIP Switch

Table 6 ISS DIP switch assignment

ISS	DIP Switch 1	DIP Switch 2	DIP Switch 3
0	DOWN	DOWN	DOWN
1	UP	DOWN	DOWN
2	DOWN	UP	DOWN
3	UP	UP	DOWN
4	DOWN	DOWN	UP
5	UP	DOWN	UP
6	DOWN	UP	UP

Table 6 ISS DIP switch assignment (Continued)

ISS	DIP Switch 1	DIP Switch 2	DIP Switch 3
7	UP	UP	UP

3 You will need to configure each **RSAM and ISS selector switch** in the previous manner described.

Each device needs its own IP address configuration.

PathTrak™ Video Monitoring Network Requirements

3

This chapter provides the network requirements that allows the PathTrak™ Video Monitoring system to work on your network. Topics discussed in this chapter are as follows:

Network Requirements

The PathTrak™ Video Monitoring Server requires a static IP address.

While in the monitoring mode, the RSAM sends all pertinent measurement and alarming information to the PathTrak™ Video Monitoring Server via FTP port 21. The file type is XML and the bandwidth is less than 1 kB/S per RSAM.

When viewing the live measurements data is sent via RPC port 111 and the bandwidth is less than 100 kB/S per live measurement session.

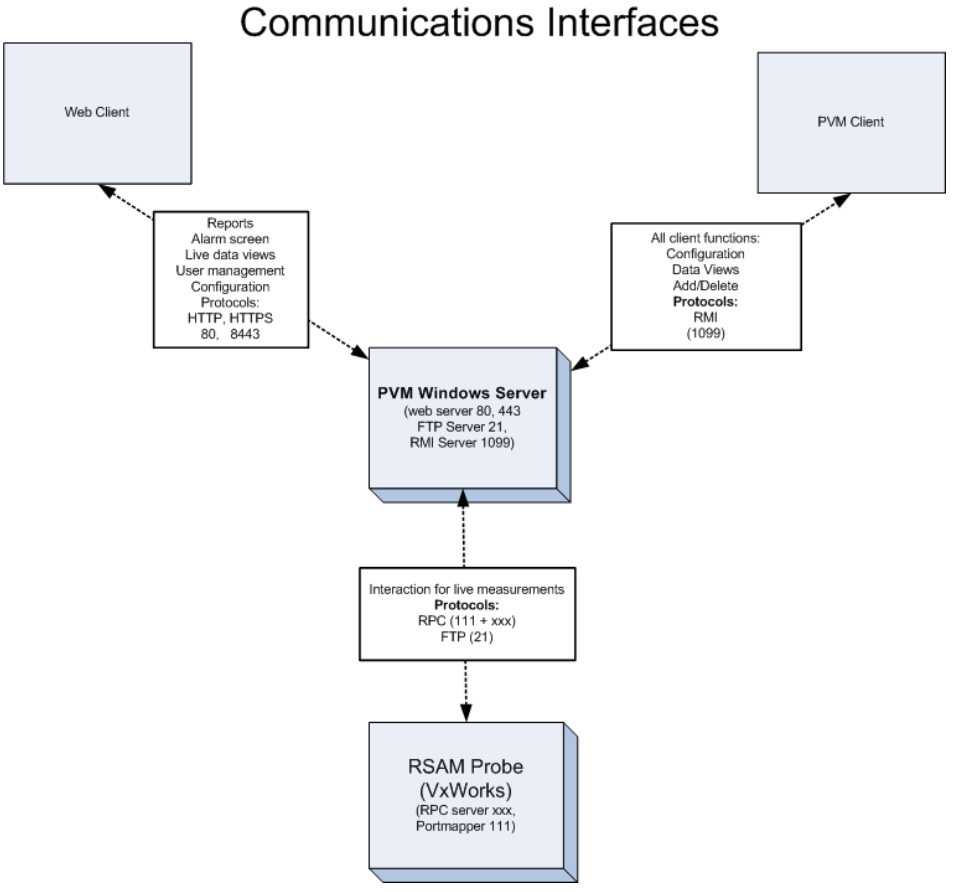

Figure 3 Communications Interfaces

Protocol and port details

In consideration of your network and firewall settings, we have listed among other items, the applications, protocols and port settings that this system uses to communicate and to display information.

Table 7 Protocol and Port Details

Application	Application Protocol	Transport Protocol	Originator	Originator Port	Target	Target Port
PathTrakVM Server						
PVM Client/ Server	RMI	TCP	Client PC	dynamically assigned by OS	PVM Server	1099 (by default)
Web Client/ Web Server	HTTP	TCP	Client PC	dynamically assigned by OS	PVM Server	80 (by default)
Secure Web Client/Web Server	HTTPS	TCP	Client PC	dynamically assigned by OS	PVM Server	443 (by default)
Synchroniza-tion	FTP	TCP	RSAM	dynamically assigned ports cur-rently 1024 thru 5000	PVM Server	21 + dynami-cally assigned by OS
RSAM						
RSAM Com-mand/Control	RPC	TCP/UDP	PVM Server	dynamically assigned by OS	RSAM	111 + dynami-cally assigned ports currently 1024 thru 5000
SNMP Regis-tration	SNMP	UDP	OSS Server	dynamically assigned by OS	RSAM	161
HyperTerminal	Telnet	TCP	Client PC	dynamically assigned by OS	RSAM	23
PathTrakVM Client						

Table 7 Protocol and Port Details (Continued)

Application	Application Protocol	Transport Protocol	Originator	Originator Port	Target	Target Port
PVM Client/ Server Call-back (optional)	RMI	TCP	PVM Server	dynamically assigned by OS	Client PC	dynamically assigned by OS
OSS Server						
SNMP Trap	SNMP	UDP	RSAM	161	OSS Server	162

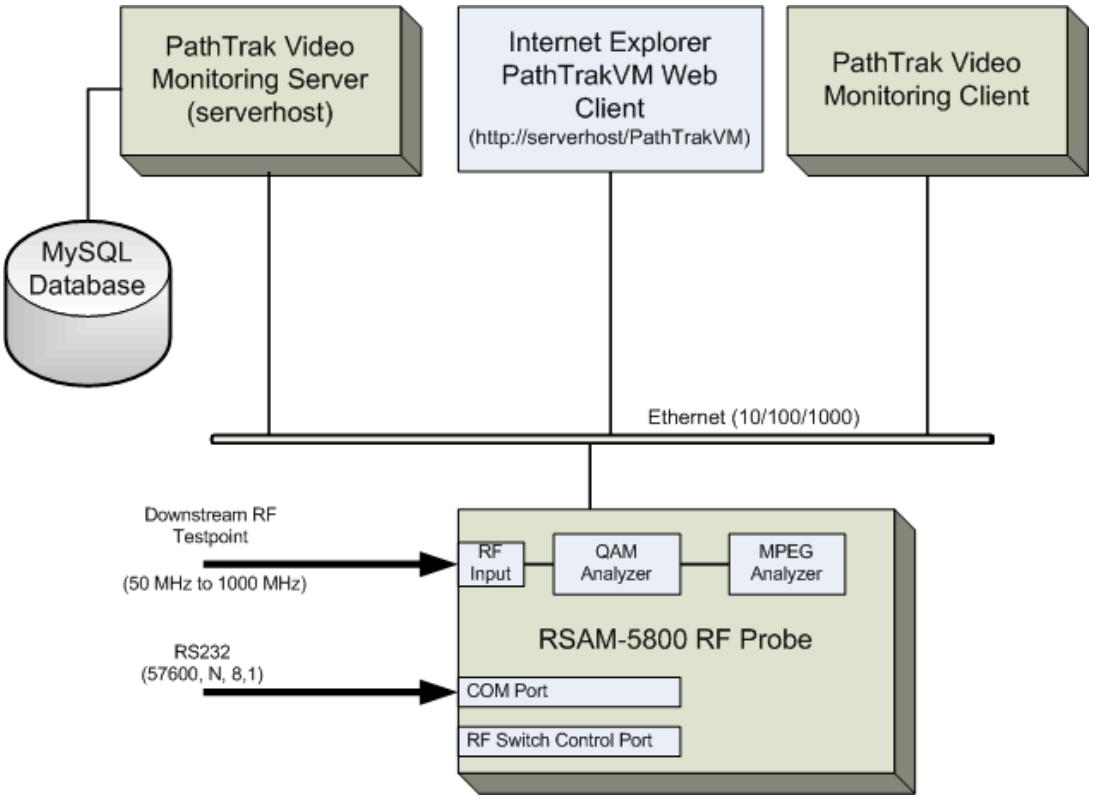

Figure 4 Diagram of a typical network layout

RSAM and ISS Installation

4

This chapter provides instructions on the installation and configuration of the RSAM and ISS. The topics discussed in this chapter are as follows:

Installation procedure

After the JDSU equipment has been pre-configured with your network addresses and dip switch settings, you are ready to install the Path-Trak™ Video Monitoring.

NOTE

If you chose not to pre-configure the network information earlier, you can configure them after they are rack mounted.

Installing an RSAM

The RSAM Analog/QAM RF Monitoring Probe (Figure 5) is a 2 RU 19 inch rack-mounted control chassis providing forward path remote service analysis and MPEG monitoring. A standard 6-foot, 19-in rack accommodates up to ten RSAM's.

Figure 5 RSAM Analog/QAM RF Monitoring Probe

To install a standard RSAM

1. Remove the **RSAM** from the shipping container.
2. Gently slide the **RSAM** into position inside the rack.
3. Using four screws, secure the **RSAM**.

NOTE

JDSU does not provide screws.

Installing an ISS

The ISS sixteen port RF Input Selector Switch (Figure 5) is a 1 RU 19-in-rack-mounted input selector switch designed to work integrally with the RSAM. The ISS provides the ability to add additional input ports to the RSAM.

Figure 6 ISS Sixteen Port RF Input Selector Switch

To install a standard ISS

1. Remove the **ISS** from the shipping container.
2. Gently slide the **ISS** into position inside the rack.
3. Using four screws, secure the **ISS**.

NOTE

JDSU does not provide screws.

Connecting the RSAM and the ISS selector switch

There are up to two different devices involved in the physical connection of this system.

– RSAM
– ISS input selector switch

To physically connect the RSAM and the ISS selector switch together

1. Using the supplied 15 sub-D straight through cable, connect the **ISS Aux in port to the RSAM AUX control 1 port**.
2. Connect the **RF out of your plant to the RF in on the ISS selector ports**. For location of the ports, refer to Figure 7.

NOTE

It is recommended that you use a RF connection with a minimum RF level of 0dBmV at the 256QAM carriers.

3 Connect **Ethernet cables to the 10Base-T IN port** of the RSAM.

NOTE

If desired connect an Ethernet cable from your network to the RSAM 10Base-T IN port.

NOTE

The ISS uses a parallel TTL compatible input; the cable must be a straight through cable as supplied by JDSU. A VGA cable will not work and may cause damage.

4 Using a 75 Ohm coaxial cable, connect one end of the 75 Ohm coaxial cable to the **RF Out of the ISS RF switch** (Figure 7).

Figure 7 ISS RF Switch rear panel

5 Connect the other end of the **75 Ohm coaxial cable** to the RSAM (Figure 8) **RF In**.

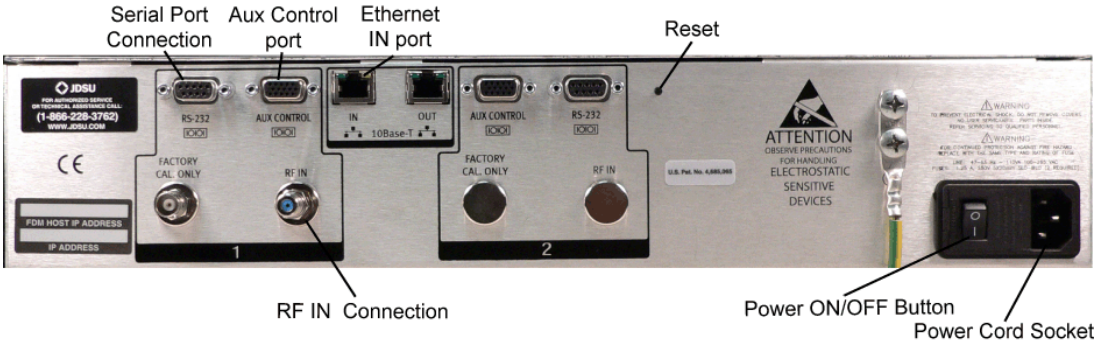

Figure 8 RSAM rear panel

Connecting the RSAM without the ISS

If you do not use the optional ISS switch use the following instructional steps.

To connect the RSAM without the ISS

1. Connect the **plant cable** to the **RF in of the RSAM**.
2. After the RSAM, and ISS are rack mounted and connected as described in the above section, **power on** the devices.

   The power on order is not relevant.

Connecting two ISSs

If you are connecting two ISS selector switches to one RSAM, one splitter is required.

To connect two ISS selector switches to one RSAM

1. Attach a **75 ohm coaxial cable** to the first **ISS selector switch RF OUT connector**.
2. Attach another **75 ohm coaxial cable** to the second **ISS selector switch RF OUT connector**.

   You should now have two separate cables with each of them connected to two ISS selector switch RF OUT connectors.
3. Take the opposite ends of the two **75 ohm coaxial cables** and connect both of them to the outputs of a **two way splitter**.
4. Connect another **75 ohm coaxial cable** to the input of the **two way splitter**

5 Connect the opposite end of the **75 ohm coaxial cable** to the **RSAM RF IN**.

Instructions for connecting two ISS selector switches

To daisy chain two ISS switches

1 Using the supplied **15 Sub-DS Straight through cable**, connect the **ISS AUX IN** port to the **RSAM AUX CONTROL 1 port**.

2 Connect the **AUX OUT** of the ISS to the **AUX IN** of the second ISS switch.

Adding an RSAM or ISS

5

This chapter provides instructions on adding RSAM and ISS devices to the PathTrak™ Video Monitoring software. Topics discussed in this chapter are as follows:

Adding an RSAM

To add an RSAM to the PathTrak™ Video Monitoring Server software

1 On the desk top, double click on the **PathTrakVM Client** icon.

The JDSU PathTrak™ Video Monitoring Client Logon dialog box (Figure 9) is displayed.

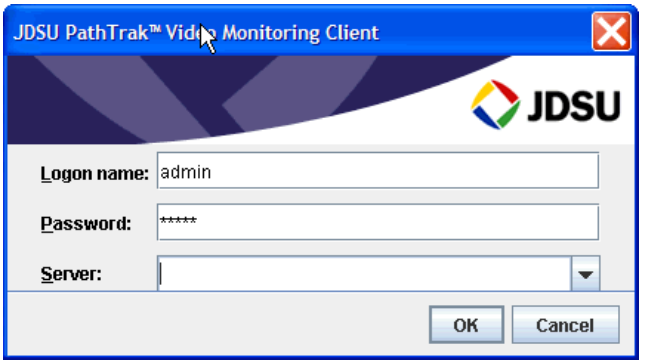

Figure 9 JDSU PathTrak™ Video Monitoring Client Logon dialog box

NOTE

The default logon name is **admin** and the password is **admin**.

2 In the Logon name text box, type **your logon name or the default logon name**.

3 In the Password text box, type **your password or the default password**.

NOTE

Localhost cannot be used on a remote Client PC.

4 In the Server text box, type **PC name** or the **IP address** of the PathTrak™ Video Monitoring Server.

5 To logon, click **OK**.

The “welcome to JDSU PathTrak™ Video Monitoring Client” page (Figure 10) is displayed.

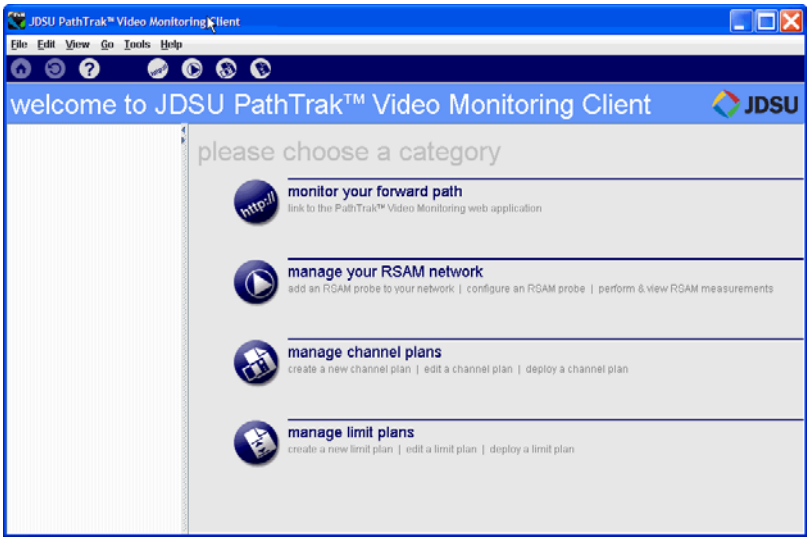

Figure 10 “welcome to JDSU PathTrak™ Video Monitoring Client” page

6 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, click on the **manage your RSAM network** text or icon.

The “manage your RSAM network” page (Figure 11) is displayed.

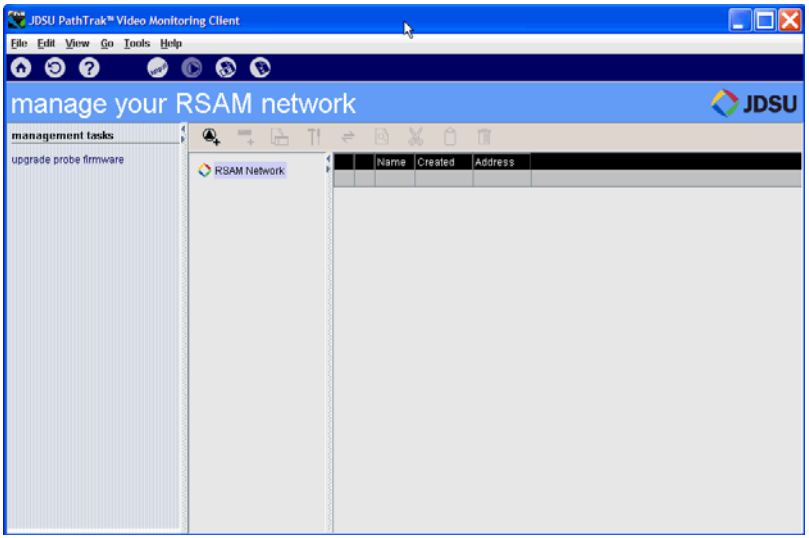

Figure 11 manage your RSAM network page

7 From the “manage your RSAM network” page, right click on the **RSAM Network** text.

A shortcut menu is displayed (Figure 12).

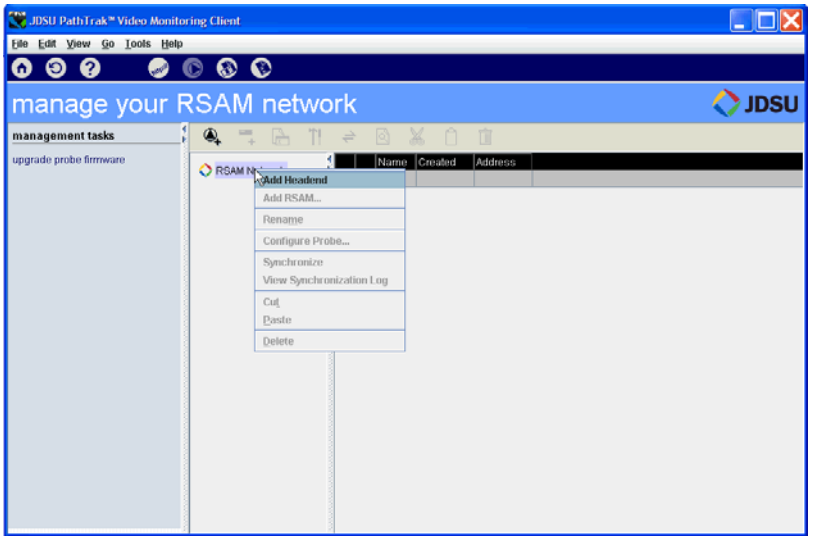

Figure 12 manage your RSAM network page

8 From the shortcut menu, select **Add Headend**.

A New Headend symbol is displayed (Figure 13) with your RSAM network hierarchy.

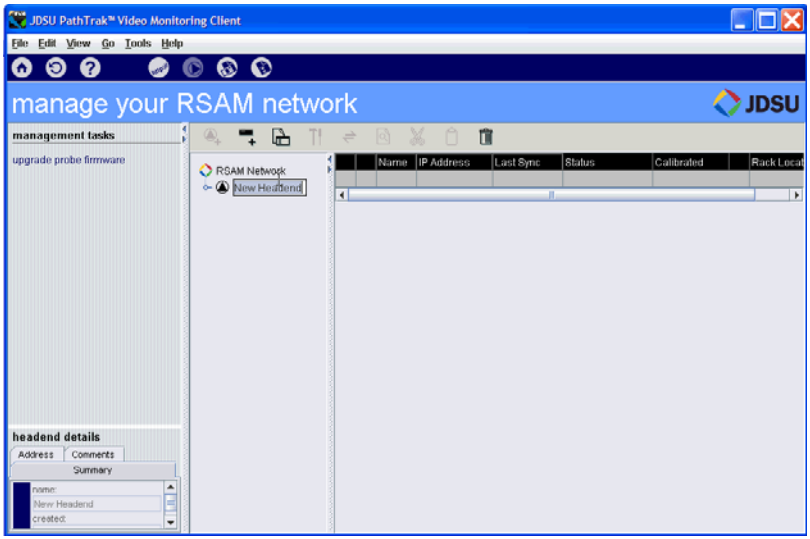

Figure 13 manage your RSAM network page

9 For the newly displayed headend, type a **new name**.

10 Right click on the **renamed headend**.

A shortcut menu is displayed (Figure 14).

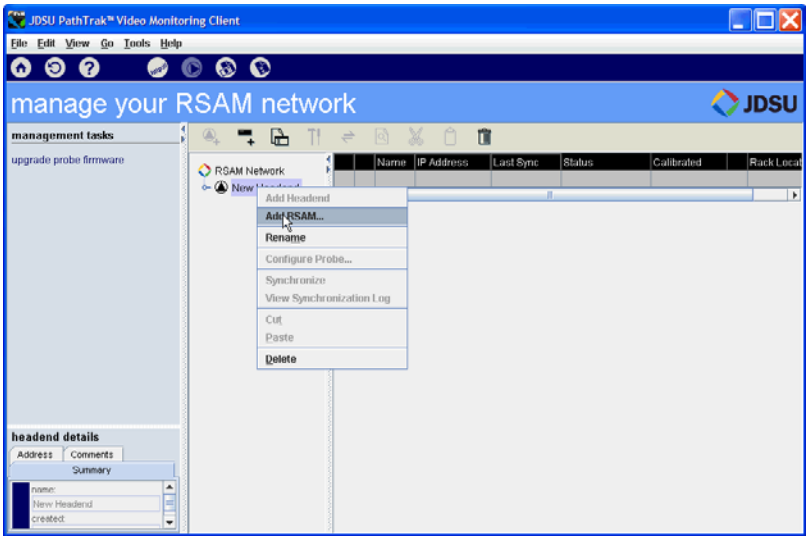

Figure 14 manage your RSAM network page

11 From the shortcut menu, select **Add RSAM**.

The “add an RSAM to this headend” page is displayed (Figure 15).

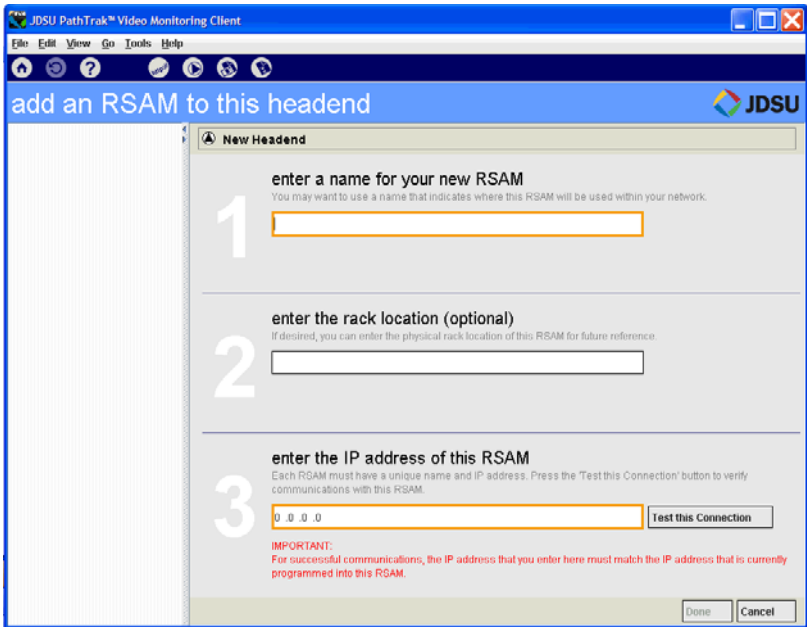

Figure 15 add an RSAM to this headend page

12 Type a **name** for your new RSAM.

You may want to use a name that indicates where this RSAM will be used within your network.

NOTE

The name text box allows you to type up to 31 ASCII characters. All printable ASCII characters are valid, except: **\ : / * ? < “ > |**

13 Type a **rack location**. (optional)

If desired, you can enter the physical rack location of this RSAM for future reference.

NOTE

The rack location text box allows you to type up to 31 ASCII characters. All printable ASCII characters are valid, except: **\ : / * ? < “ > |**

14 Type an **IP address** for your new RSAM.

Each RSAM must have a unique name and IP address.

15 To verify communications with this RSAM after entering the correct IP address, click **Test this Connection**.

NOTE

For successful communications, the IP address that you enter must match the IP address that is currently programmed into this RSAM.

After you select “Test this Connection” a return informational box is displayed stating “connection is working properly”. If an error is displayed, please verify the following.

a Ensure the IP address of the RSAM matches the IP you enter in “enter the IP address of this RSAM”.

b Ensure the RPC port 111 is open on your network and on your RSAM.

c Ensure that the RSAM is turned on.

d Ensure that the network cable is connected to the RSAM. Also make sure that the Ethernet cable is in good operating condition.

e Ping the RSAM from a command prompt on your PathTrak™ Video Monitoring Server.

16 To complete your RSAM addition and to return to the previous page, click **Done**.

The “manage your RSAM network” page is displayed (Figure 16).

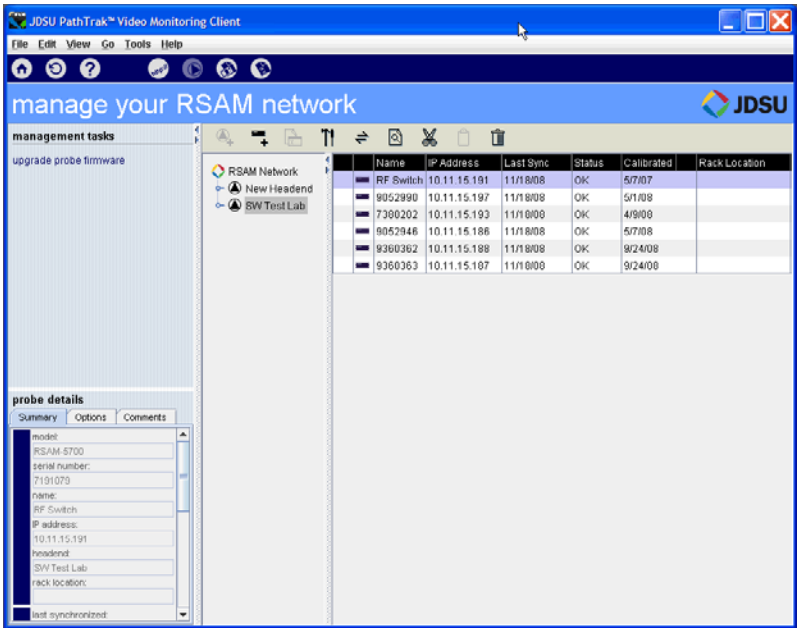

Figure 16 manage your RSAM network page

The status column will state Sync Pending.

17 On the right side of the page, select the **RSAM**.

18 After you select the RSAM, click the **synchronize** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon's function.

NOTE

If the synchronization process fails, check the port settings on the servers and routers as described in Table 7 on page 11.

Adding an ISS

To add an ISS to the PathTrak™ Video Monitoring Server software

1 Record the **dip switch settings** on the **ISS selector switch** you are adding for later use.

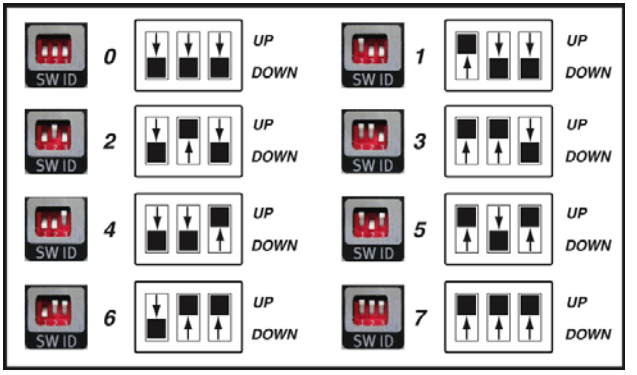

Figure 17 ISS dip switch settings

2 On the desk top, double click on the **PathTrakVM Client** icon.

The JDSU PathTrak™ Video Monitoring Client Logon dialog box (Figure 18) is displayed.

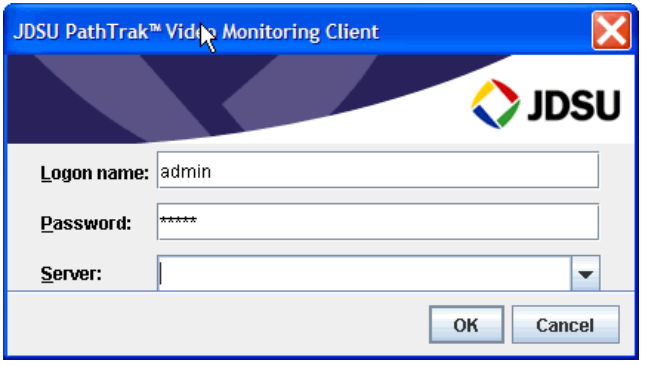

Figure 18 JDSU PathTrak™ Video Monitoring Client Logon dialog box

NOTE

The default logon name is **admin** and the password is **admin**.

3 In the Logon name text box, type **your logon name or the default logon name**.

4 In the Password text box, type **your password or the default password**.

NOTE

Localhost cannot be used on a remote Client PC.

5 In the Server text box, type **PC name** or the **IP address** of the PathTrak™ Video Monitoring Server.

6 To logon, click **OK**.

The “welcome to JDSU PathTrak™ Video Monitoring Client” page (Figure 19) is displayed.

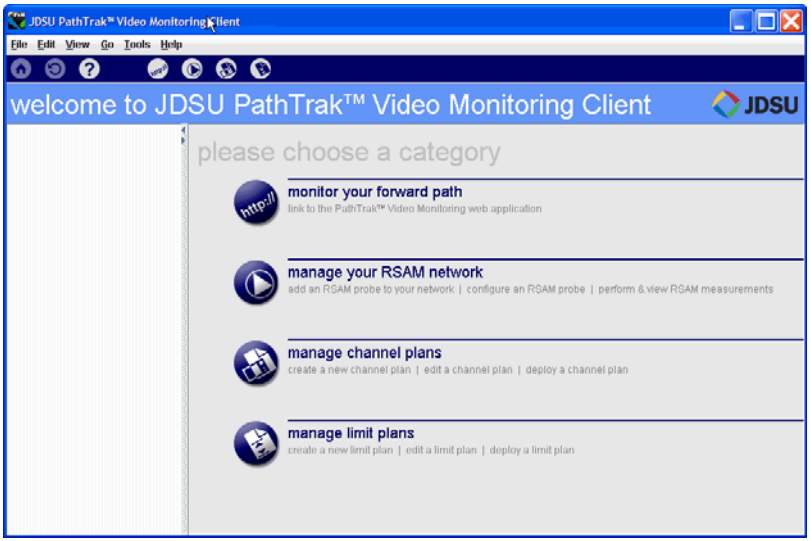

Figure 19 “welcome to JDSU PathTrak™ Video Monitoring Client” page

7 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, click on the **RSAM remote access** text or icon.

The “manage your RSAM network” page is displayed.

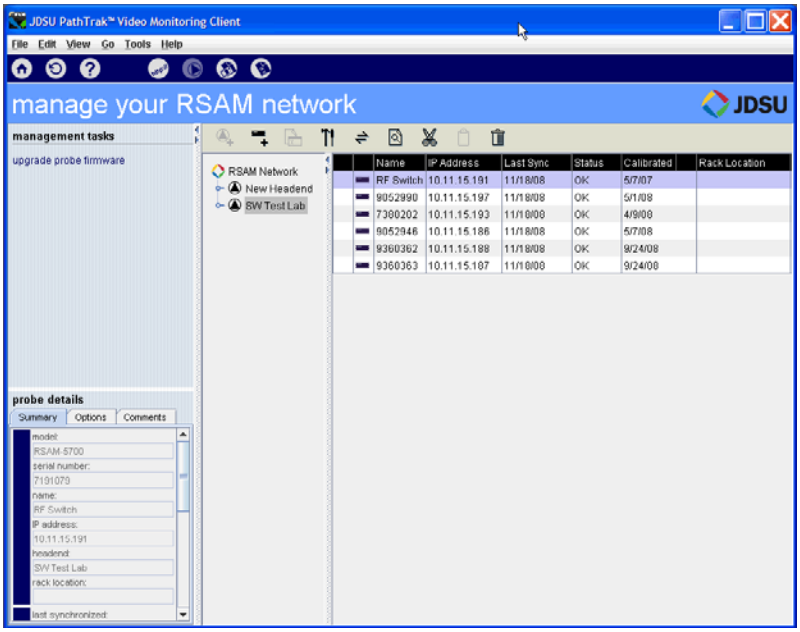

Figure 20 manage your RSAM network page

8 From the “manage your RSAM network” page, double click on the **RSAM** that is represented on the right side of the page.

The “configure this RSAM” page is displayed.

9 Select the **RF Switches tab** on the “configure this RSAM” page.

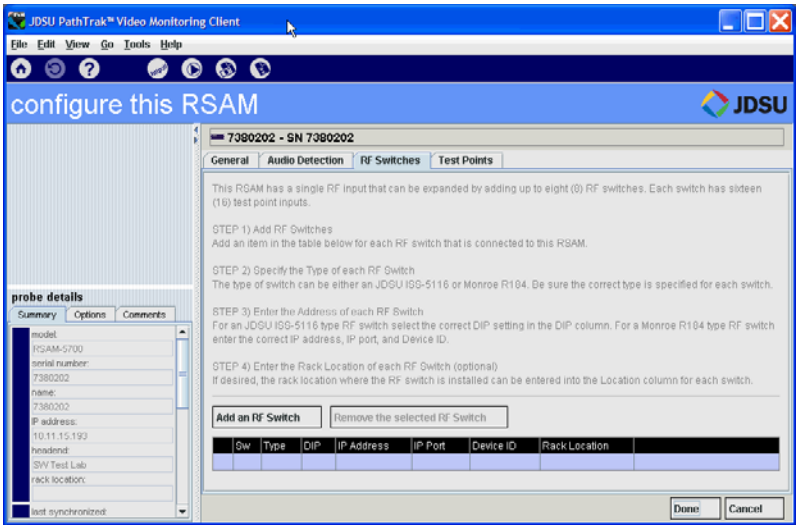

Figure 21 configure this RSAM page

10 On the “configure this RSAM” page RF Switches tab, click **Add an RF Switch**.

Switch one is displayed.

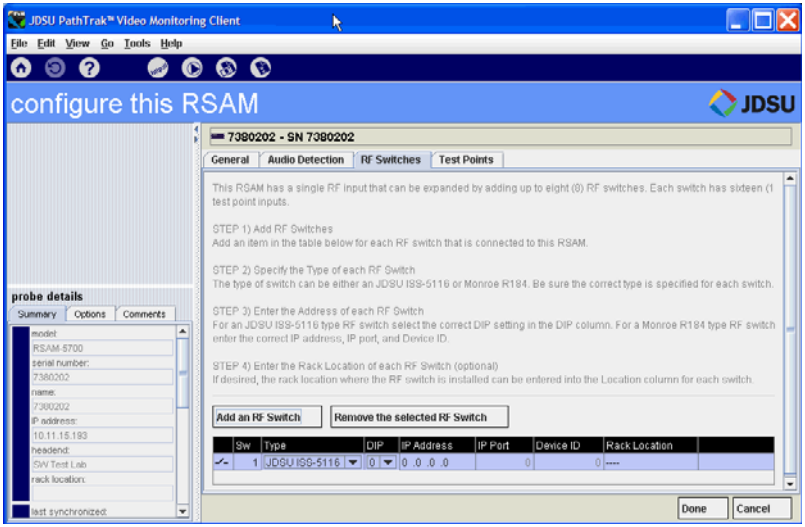

Figure 22 configure this RSAM page

11 To match your ISS dip switch hardware setting that you recorded earlier in this procedure, select the **DIP column** down arrow and select the **number** that matches your **ISS dip switch hardware setting**.

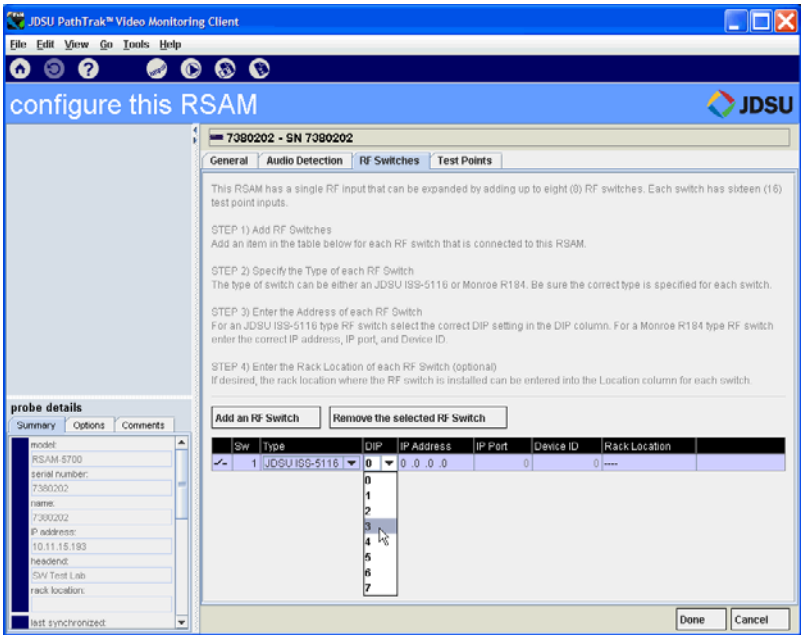

Figure 23 ISS dip switch settings

12 To add another switch, click **Add an RF Switch**.

Switch two is displayed.

13 To complete your ISS addition and to return to the previous page, click **Done**.

The RSAM will synchronize. When the sync process completes, the status column will display the text OK, and the switches are added to the PathTrak™ Video Monitoring software.

NOTE

If the synchronization process fails, check the port settings on the servers and routers as described in Table 7 on page 11.

14 To verify double click on the **RSAM icon**.

15 To return to the “manage your network” page without saving your edits, click **Cancel**.

PathTrak™ Video Monitoring Software Configuration

6

This chapter provides instruction on how to create a new channel plan, along with step by step procedures on creating and deploying limit plans. Topics discussed in this chapter are as follows:

Creating a new channel plan

PathTrak™ Video Monitoring comes with a default Sample NCTA channel plan installed. You will want to create a custom channel plan that matches your channel lineup.

To create a custom channel plan

1 On the desk top, double click on the **PathTrak™ Video Monitoring Client** icon.

The JDSU PathTrak™ Video Monitoring Logon dialog box (Figure 24) is displayed.

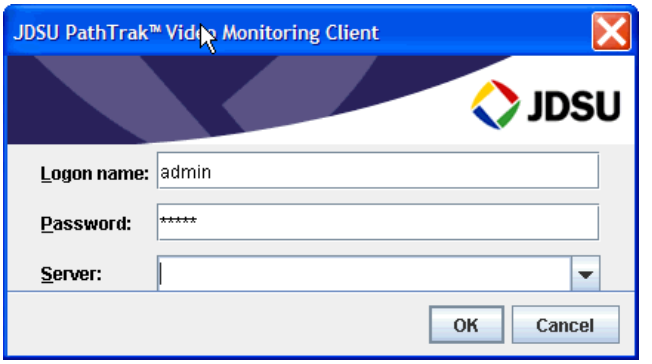

Figure 24 JDSU PathTrak™ Video Monitoring dialog box

NOTE

The default logon name is **admin** and the password is **admin**.

2 In the Logon name text box, type **your logon name or the default logon name**.

3 In the Password text box, type **your password or the default password**.

NOTE

Localhost cannot be used on a remote Client PC.

4 In the Server text box, type **PC name** or the **IP address** of the PathTrak™ Video Monitoring Server.

5 To logon, click **OK**.

The “welcome to JDSU PathTrak™ Video Monitoring Client” page (Figure 25) is displayed.

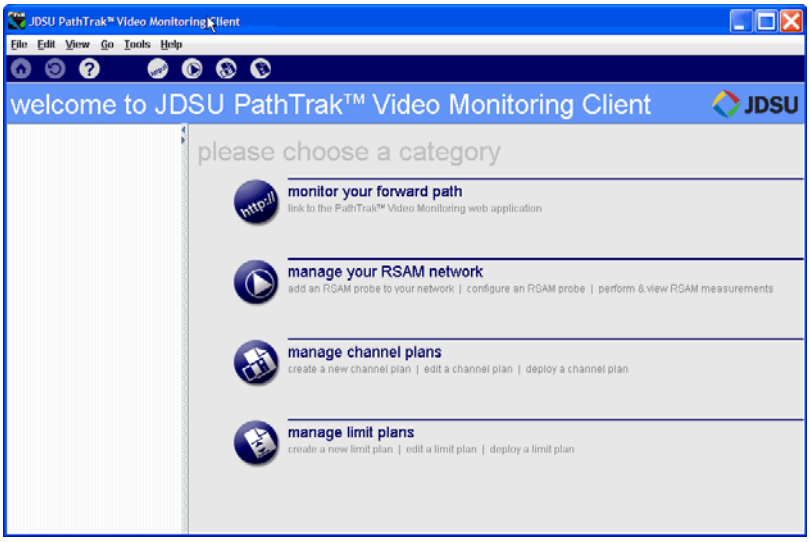

Figure 25 “welcome to JDSU PathTrak™ Video Monitoring Client” page

6 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, click on the **manage channel plans** text or icon.

The “manage channel plans” page is displayed.

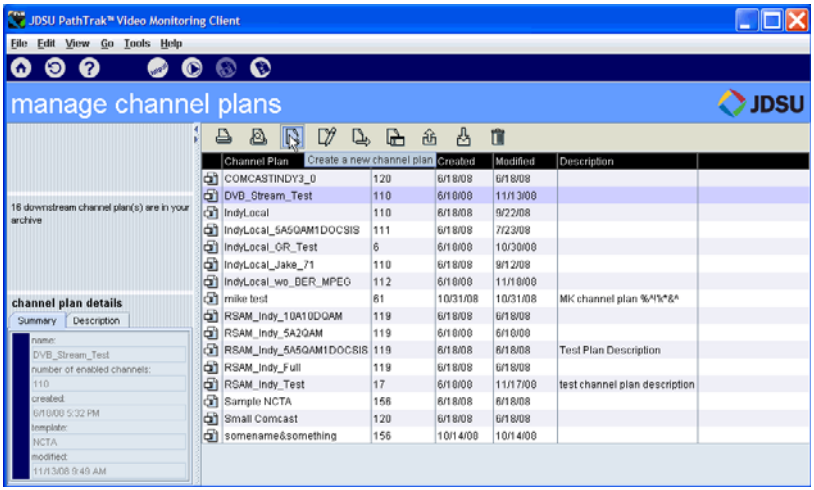

Figure 26 manage channel plans page

7 From the “manage channel plans” page, click on the **create a new channel plan** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon’s function.

The “create a new channel plan” page is displayed.

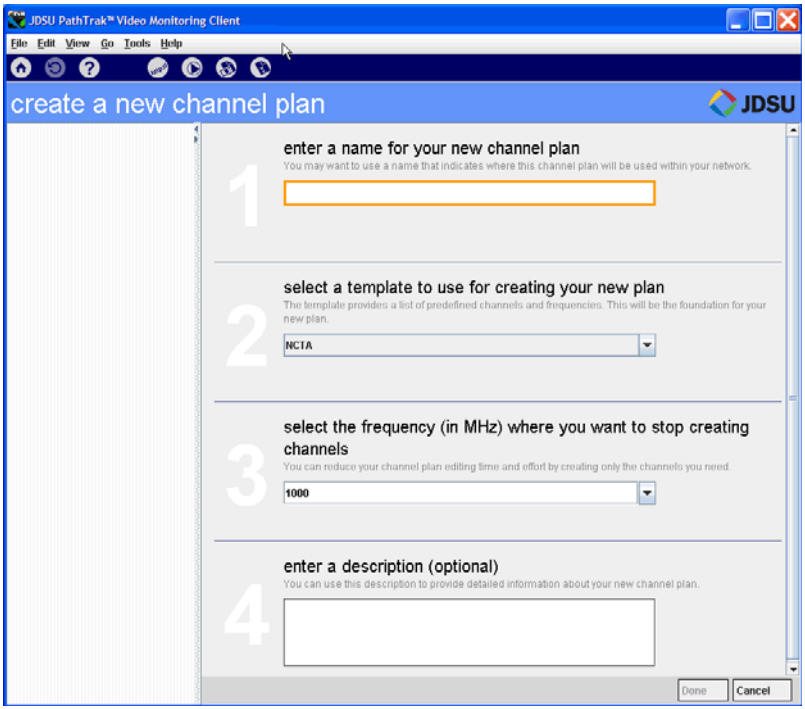

Figure 27 create a new channel plan page

8 In the space provided to name your new channel plan, type up to **31 alphanumeric characters**.

9 In the “select a template to use for creating your new plan” drop down box, select a **channel plan template**.

The plan you create is based on a channel plan template. By starting with a channel plan template, you can easily modify the plan to meet your needs. The default plan template is region-specific and should correspond to a plan frequently used in your locale.

10 In the “select the frequency (in MHz) where you want to stop creating channels” drop down box, select a **frequency**.

NOTE

To directly type your own stop frequency (between 4 and 1000 MHz), double-click the value in the box to make it editable, type your numeric value, and press **Enter**.

The default stop frequency for channel plan creation is 1000 MHz - meaning that the plan will stop creating channels at 1000 MHz. You may wish to create a smaller plan by selecting a lower stop frequency.

11 In the “enter a description (Optional)” text box, type up to 255 alphanumeric characters of **information about the channel plan**.

12 To complete your new plan creation and to return to the manage channel plans page, click **Done**.

The “manage channel plans” page is displayed.

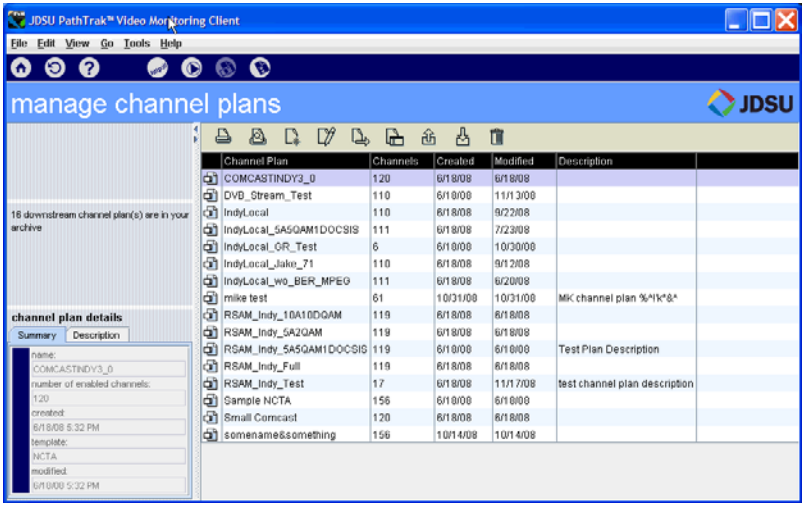

Figure 28 manage channel plans page

13 To customize your channel lineup, double click on the **channel plan** that you just created.

The “edit this channel plan” page is displayed.

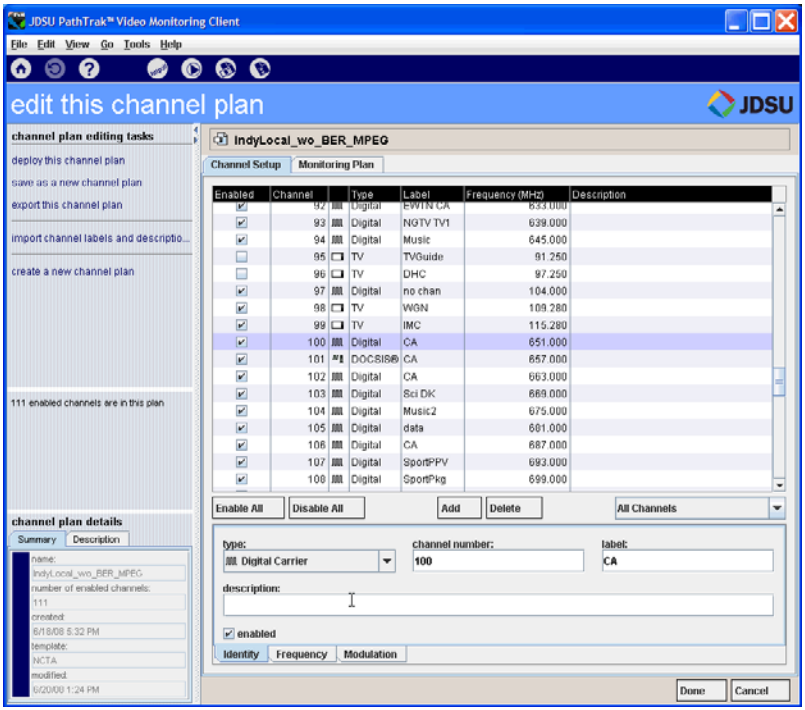

Figure 29 edit this channel plan page

On the "edit this channel plan" page, there are 2 tabs. If you need guidance in setting up the channel plan, select help on the menu bar when you are on the create channel plan page.

14 After you have completed setting up the channel plan, select the **Monitoring Plan** tab.

The RSAM uses your auto test plan to perform its monitoring.

15 Select the **channels** that you want to monitor and deselect any **channels** that you do not want to monitor.

Placing a check mark in the MPEG column of the digital channels will allow these channels to be monitored for MPEG Priority 1, 2 and 3 errors.

NOTE

The default scan time is set to 10 seconds per channel. Each additional channel selected will add to the scan time. The scan time is configurable.

16 Refer to "Configuring MPEG" on page 79 for instructions on how to change its settings.

17 Click **Done**.

A dialog box is displayed asking whether you want to deploy the channel plan.

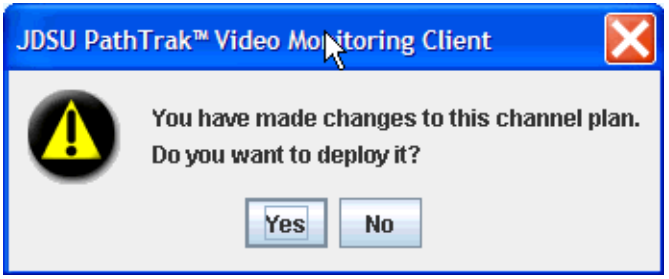

Figure 30 PathTrak™ Video Monitoring Information dialog box

18 Click **Yes**.

19 Select the **RSAMs** that you want to deploy the channel plan to.

20 Click **Done**.

21 On the edit this channel plan page if it is still displayed, click **Done**.

The channel plan has been deployed to the RSAMs that you selected.

22 To complete the deployment, click the **manage your RSAM network** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon's function.

The "manage your RSAM network" page is displayed. All of your RSAMs are listed on this page.

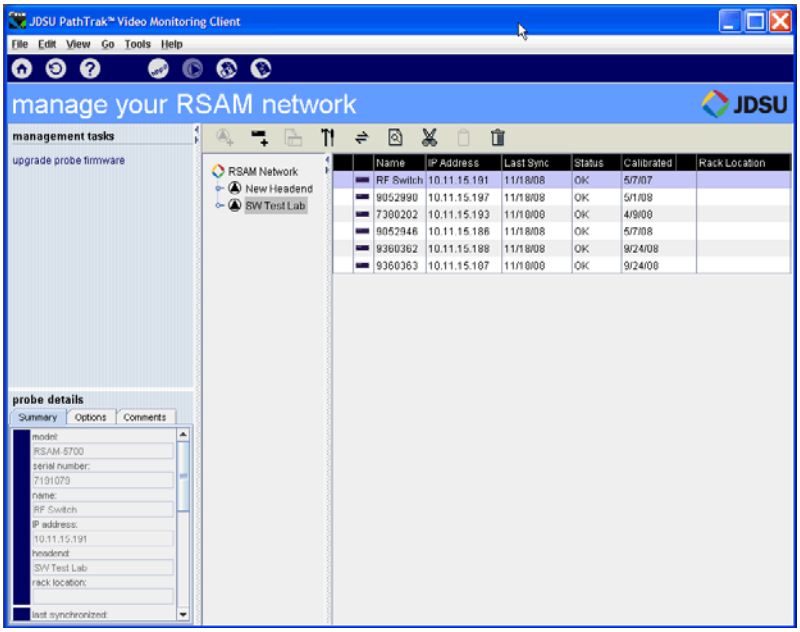

Figure 31 manage your RSAM network page

23 Double click on an **RSAM** that you just deployed the channel plan to.

The “configure this RSAM” page is displayed.

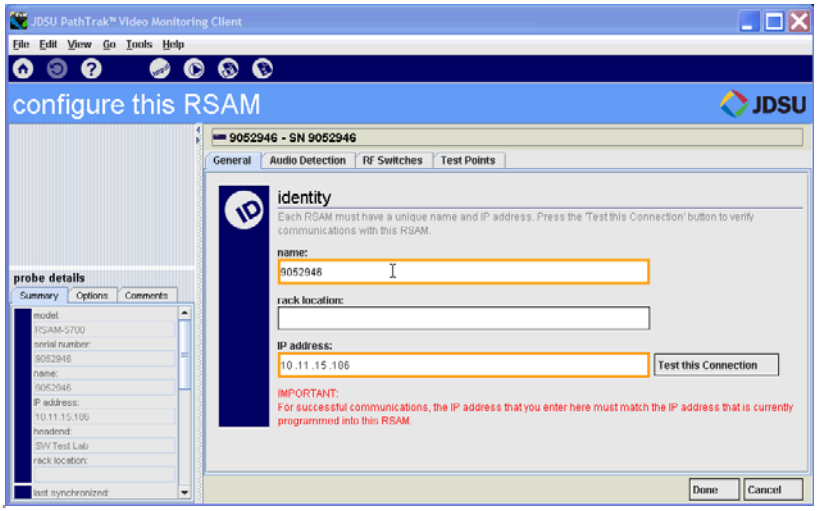

Figure 32 configure this RSAM page

24 On the “configure this RSAM” page, select the **Test Points** tab.

25 On the “configure this RSAM” page, select the **Monitoring** tab.

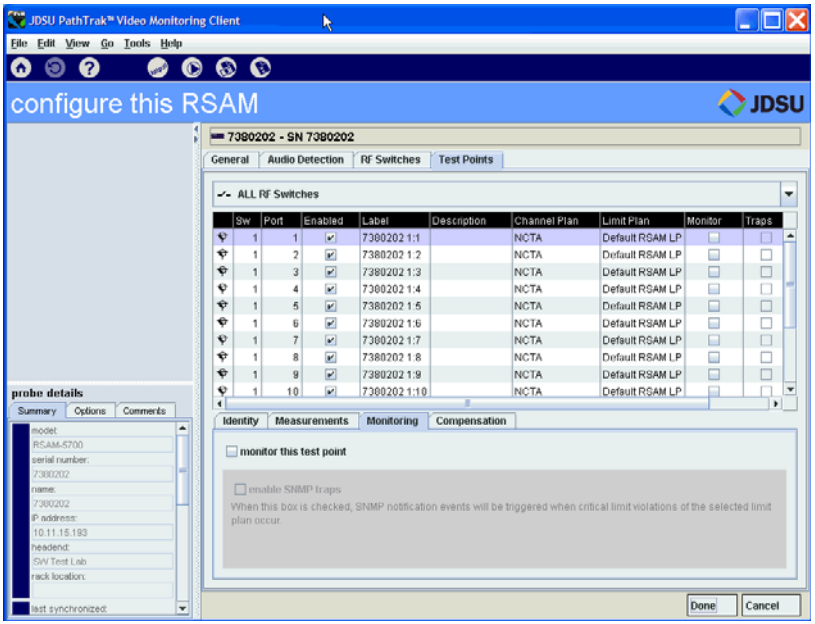

Figure 33 configure this RSAM page

On the “configure this RSAM” page, you will find a listing of all of your switches. It is possible to have up to 32 individual nodes connected.

26 In the “Enabled” column un-check any **nodes** that will not be actively monitored.

This will allow for a faster round trip scan time.

27 In the “Monitor” column, enable the **nodes** that you desire to monitor.

28 Put a check mark in the traps column, on **selected nodes**, for the SNMP notification.

29 Click the **Measurement tab**.

30 Select the **channel plan** that you previously deployed.

Plans with the same name may be displayed.

31 Select the plan with the ***** next to it.

You have the ability to give each node a separate channel plan. So follow the same procedure for each port.

32 When you have completed this process, click **Done**.

The “manage your RSAM network” page is displayed.

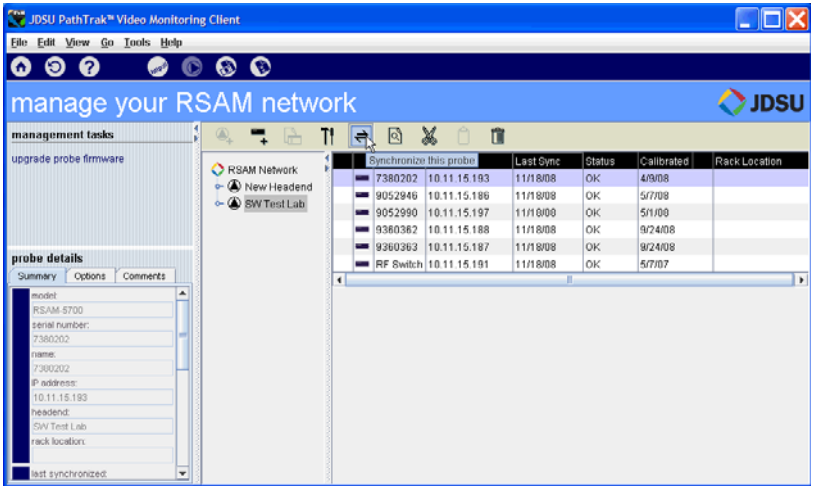

Figure 34 manage your RSAM network page

33 To initiate the synchronizing process, click the **synchronize** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon’s function.

NOTE

If the synchronization process fails, check the port settings on the servers and routers as described in Table 7 on page 11.

After sync, allow time for all the channels to be scanned and for the data to be collected before analyzing the information.

Creating and deploying limit plans

To create a new limit plan for your system

1 On the desk top, double click on the **PathTrak™ Video Monitoring Client** icon.

The JDSU PathTrak™ Video Monitoring Logon dialog box (Figure 24) is displayed.

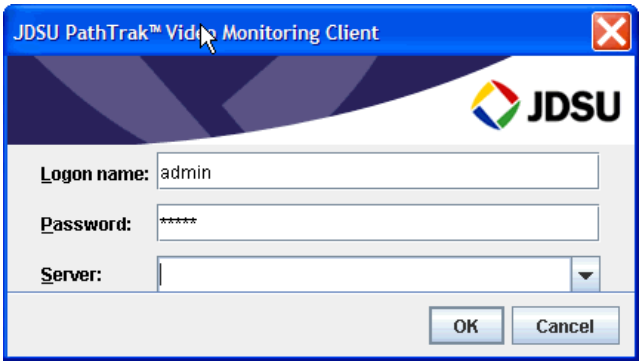

Figure 35 JDSU PathTrak™ Video Monitoring dialog box

NOTE

The default logon name is **admin** and the password is **admin**.

2 In the Logon name text box, type **your logon name or the default logon name**.

3 In the Password text box, type **your password or the default password**.

NOTE

Localhost cannot be used on a remote Client PC.

4 In the Server text box, type **PC name** or the **IP address** of the PathTrak™ Video Monitoring Server.

5 To logon, click **OK**.

The “welcome to JDSU PathTrak™ Video Monitoring Client” page (Figure 25) is displayed.

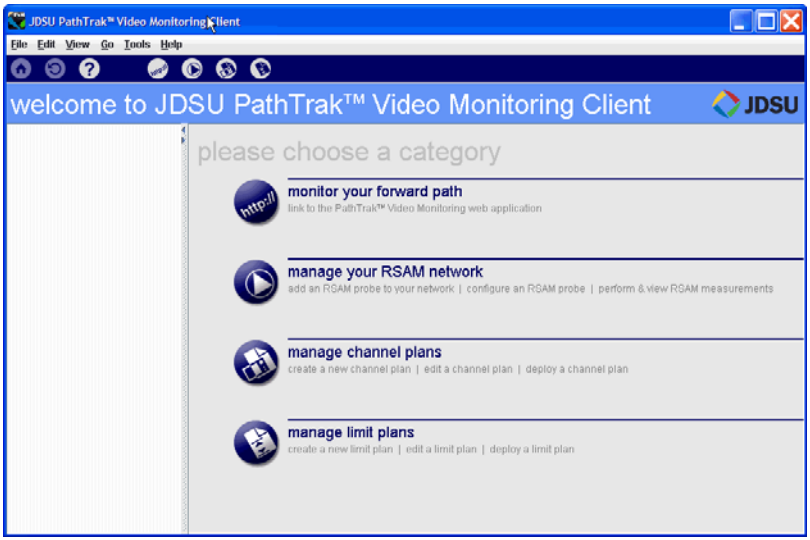

Figure 36 “welcome to JDSU PathTrak™ Video Monitoring Client” page

6 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, click on the **manage limit plans** text or icon.

The “manage limit plans” page is displayed.

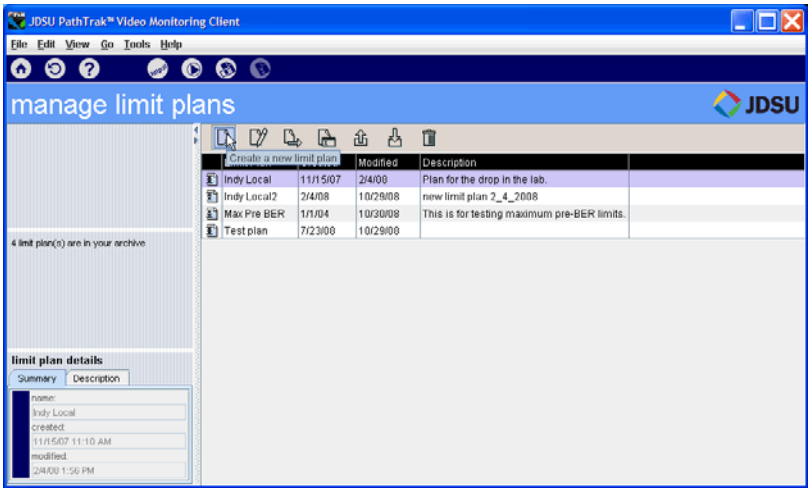

Figure 37 manage limit plans page

7 On the “manage limit plans” page select the **create a new limit plan** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon’s function.

The “create a new limit plan” page is displayed.

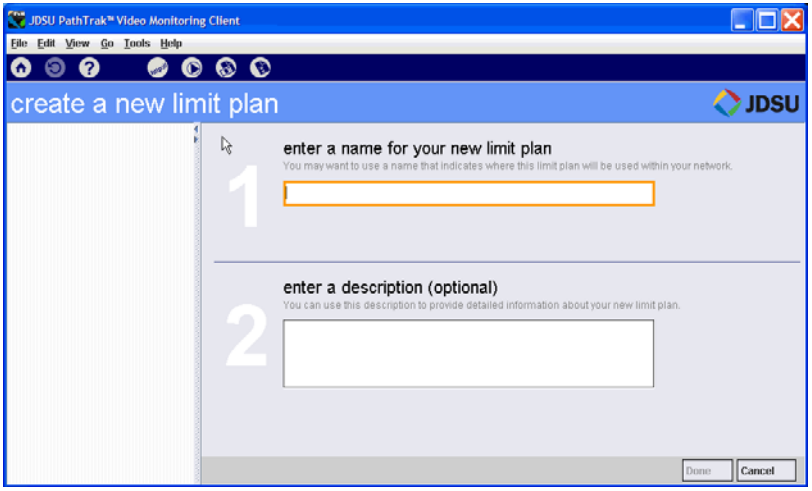

Figure 38 create a new limit plan page

8 After the limit page opens, select an **RSAM** for the type of limit plan.

9 Type a **name** for your limit plan.

10 Type **more details** about your limit plan.

11 Click **Done**.

The “manage limit plans” page is displayed. This page lists all of your limit plans.

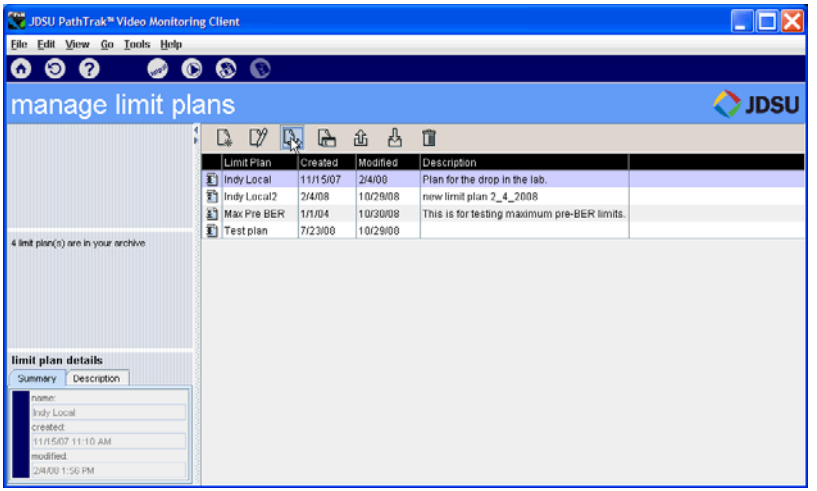

Figure 39 manage limit plans page

12 Right click on the plan that you just created and select **Deploy Plan**

The “deploy this RSAM limit plan” page will display.

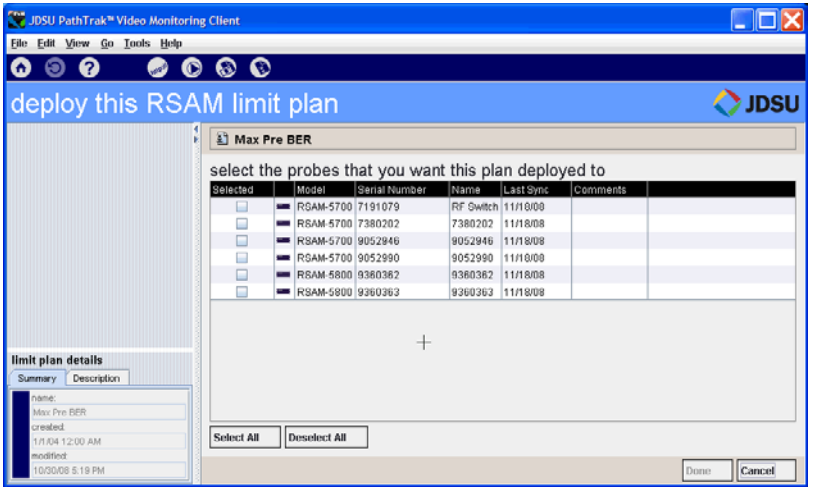

Figure 40 deploy this RSAM limit plan page

13 Select the **RSAMs** that you want to deploy the limit plan to.

14 Click **Done**.

15 Select **RSAM** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon's function.

The "manage your RSAM network" page is displayed. All of your RSAM are listed on this page.

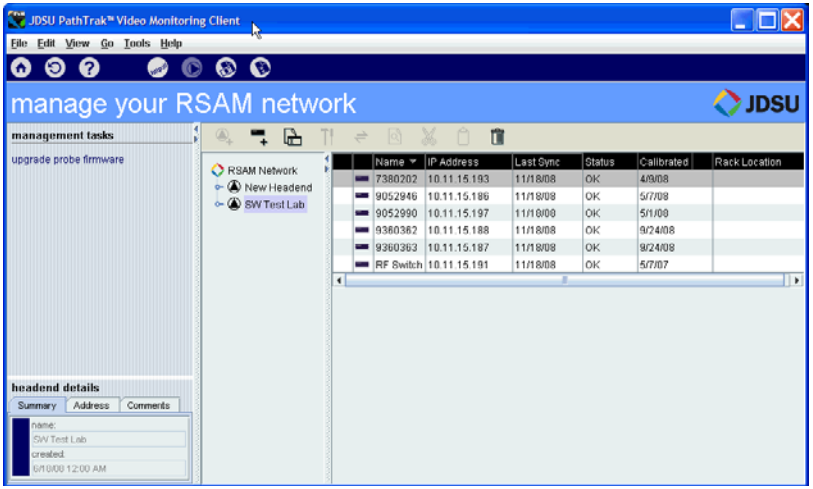

Figure 41 manage your RSAM network page

16 Double click the **RSAM** that you want to deploy the limit plan to and select the **Measurement** tab.

17 Under the measurement tab locate the limit plan drop down box. Locate the **plan** that you just deployed.

The plan name may be displayed more than once in the drop down box but select the one with the * next to it.

18 You have the ability to give each node a **separate limit plan**. Follow the same procedure for each port.

19 To start synchronization, click **Done** or click the **synchronize** icon.

NOTE

Placing your mouse pointer on an icon will display a screen tip stating the icon's function.

NOTE

If the synchronization process fails, check the port settings on the servers and routers as described in Table 7 on page 11.

Please allow time for a complete scan cycle before the limit plan changes take effect.

Simple Network Management Protocol Setup

7

This chapter provides instructions to enable traps and the configuration of RSAM SNMP Communication. Topics discussed in this chapter are as follows:

Overview

You were shipped PathTrak™ Video Monitoring software on the installation disk. Also on that disk as a separate component is the MIB (Management Information Base) which allows you to receive SNMP notifications when limit violations have occurred. The MIB is used with a third party SNMP management application. Please follow the instructions of your third party SNMP management application to utilize and import the MIB.

Enabling Traps

To enable and monitor traps

1 On the desk top, double click on the **PathTrak™ Video Monitoring Client** icon.

The JDSU PathTrak™ Video Monitoring Logon dialog box (Figure 42) is displayed.

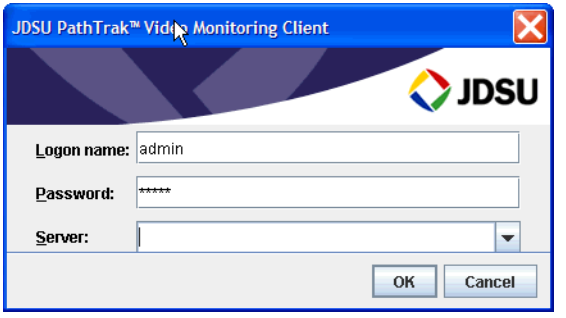

Figure 42 JDSU PathTrak™ Video Monitoring dialog box

NOTE

The default logon name is **admin** and the password is **admin**.

2 In the Logon name text box, type **your logon name or the default logon name**.

3 In the Password text box, type **your password or the default password**.

NOTE

Localhost cannot be used on a remote Client PC.

4 In the Server text box, type **PC name** or the **IP address** of the PathTrak™ Video Monitoring Server.

5 To logon, click **OK**.

The “welcome to JDSU PathTrak™ Video Monitoring Client” page (Figure 43) is displayed.

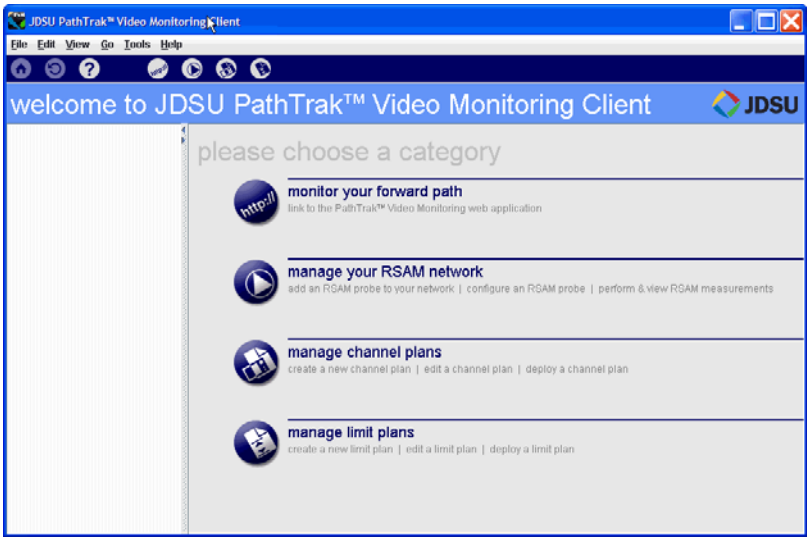

Figure 43 “welcome to JDSU PathTrak™ Video Monitoring Client” page

6 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, click on the **RSAM remote access** text or icon.

The “manage your RSAM network” page is displayed.

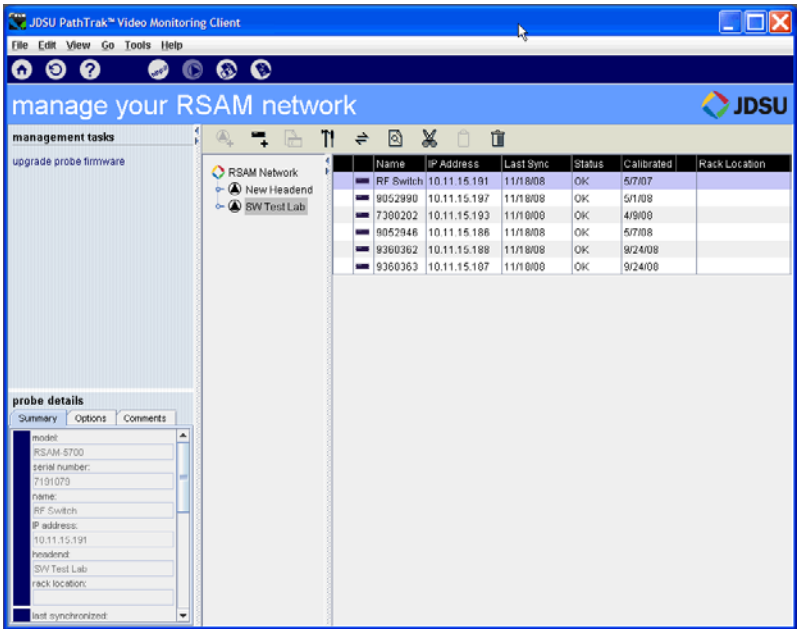

Figure 44 manage your RSAM network page

7 On the “manage your RSAM network” page, double click on an RSAM row.

The “configure this RSAM” page is displayed.

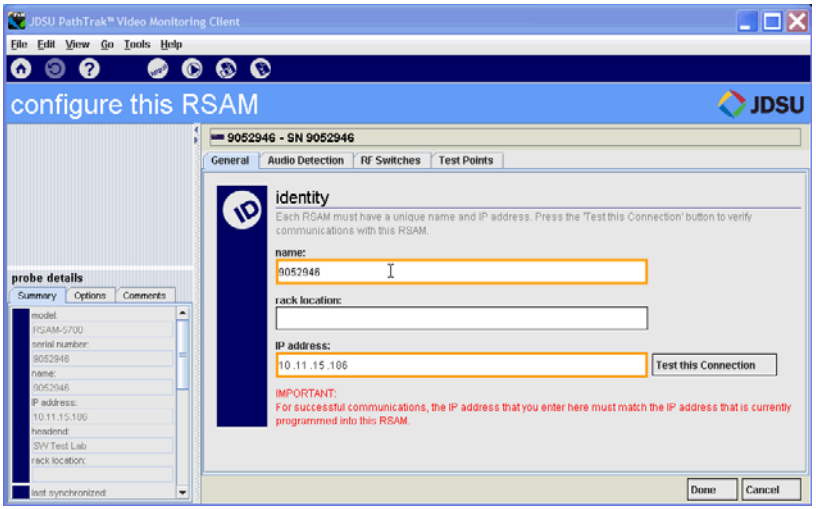

Figure 45 configure this RSAM page

8 On the “configure this RSAM” page, select the **Test Points** tab.

9 On the “configure this RSAM” page, select the **Monitoring** tab.

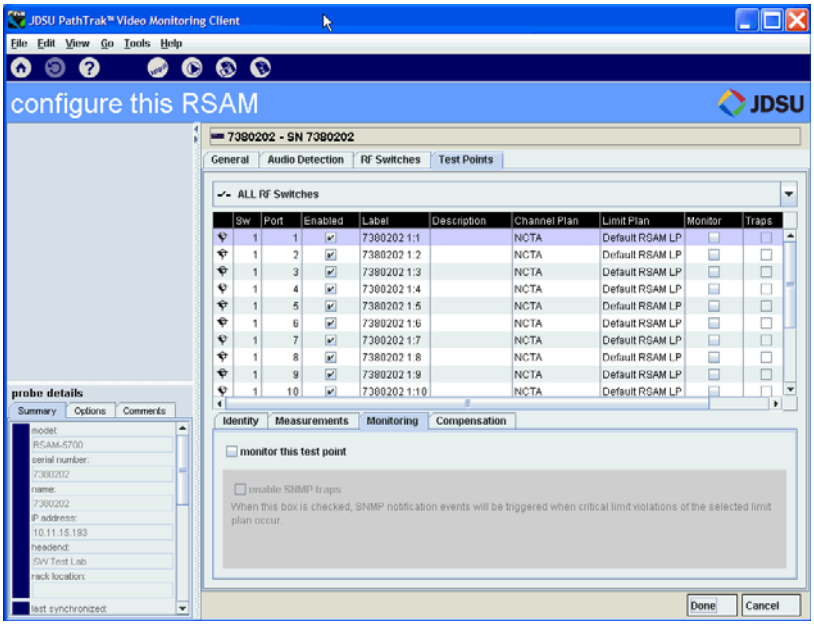

Figure 46 configure this RSAM page (with installed switch)

10 In the Test Points tab view, place a **check mark** in the “Monitor” column of the ports you want to monitor.

11 In the Monitoring tab, place a **check mark** in the “enable SNMP traps” check box.

NOTE

If a switch was not added to your RSAM selecting the “Test Points” and “Monitoring” tab will display an “enable SNMP traps” check box instead of a “All RF Switches” table. (Refer to Figure 47 on page 59)

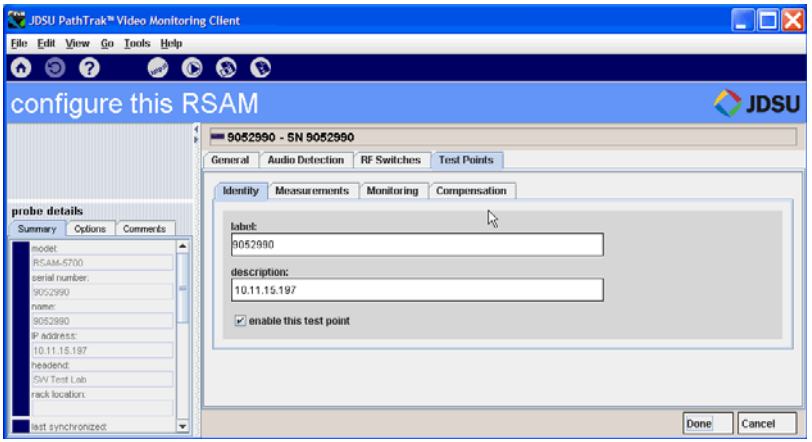

Figure 47 configure this RSAM page (without switch)

12 Click **Done**.

13 Synchronize your **RSAM**.

NOTE

If the synchronization process fails, check the port settings on the servers and routers as described in Table 7 on page 11.

RSAM SNMP Communication Configuration

The RSAM supports up to 5 trap destinations. These destinations are the IP Address(s) of the Operational Support Systems (OSS) or Network Management Systems (NMS) where the traps are to be received.

To register a destination with the RSAM you will need to use a Management Information Base (MIB) browser application to communicate with the RSAM via SNMP.

To configure the RSAM to send traps

1 Set the **IP Address** of the tool to point to the **RSAM**.

2 Set the read community string to **public**.

3 Set the write community string to **private**.

4 To Register an IP address, set the status field of the trap destination table to **4**.

5 To remove a registration set the status field of the trap destination table to **6**.

6 The Object ID (OID) for setting the status field is built as follows:

- 1.3.6.1.4.1.4100.2.2.300.6.1.2.aaa.bbb.ccc.ddd where aaa.bbb.ccc.ddd is the IP Address where the traps are to be sent.
- Up to 5 trap destinations can be registered this way.
- Example: to register a trap receiver at the IP address 172.1.2.3
- You should set the status to 4 for the oid: 1.3.6.1.4.1.4100.2.2.300.6.1.2.172.1.2.3

Figure 48 on page 61 is a sample illustration of what was stated above. Your SNMP tool will probably look different from this illustration. The purpose of Figure 48 on page 61 is to provide you a visual indication of the fields that need to be populated and what they should be populated with.

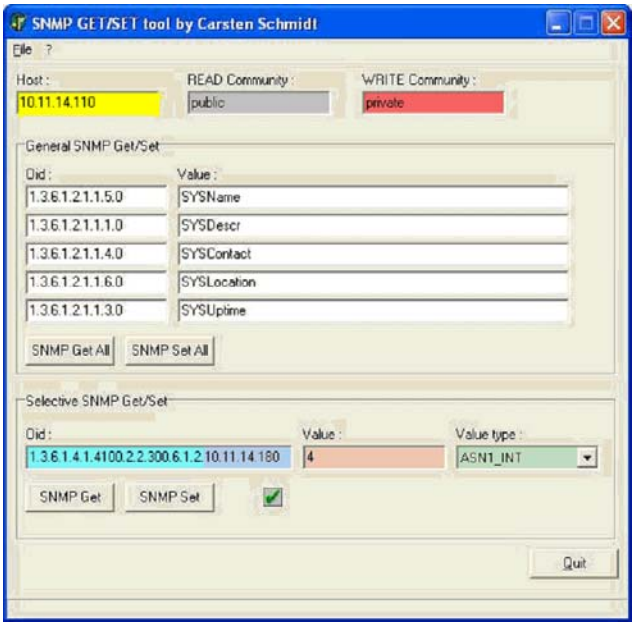

Figure 48 SNMP GET/SET tool dialog box

- The host is the IP address of the RSAM.
- Read Community String is: **public**
- Write Community String is: **private**
- The IP address of the trap destination must be included with the **OID** as indicated.
- The Value must be **4**. (6 will remove a destination address)
- The Value type is **ASN1_INT**

PathTrak™ Video Monitoring Initial User Interface Tasks

8

This chapter provides instructions on initial user interface tasks. Topics discussed in this chapter are as follows:

Accessing the PathTrak™ Video Monitoring application

You are now ready to access the PathTrak™ Video Monitoring application software. There are two ways to open the PathTrak™ Video Monitoring application.

To open the PathTrak™ Video Monitoring application

1 If you are logged into the PathTrak™ Video Monitoring Server, type http://localhost/PathTrakVM in your Internet Explorer Web browser.

NOTE

If you are not logged into the PathTrak™ Video Monitoring Server substitute the IP or the machine name for the word localhost.

OR

2 On the JDSU PathTrak™ Video Monitoring Client page, select the **monitor your forward path** icon or text.

The “PathTrak™ Video Monitoring” logon web page (Figure 49) is displayed.

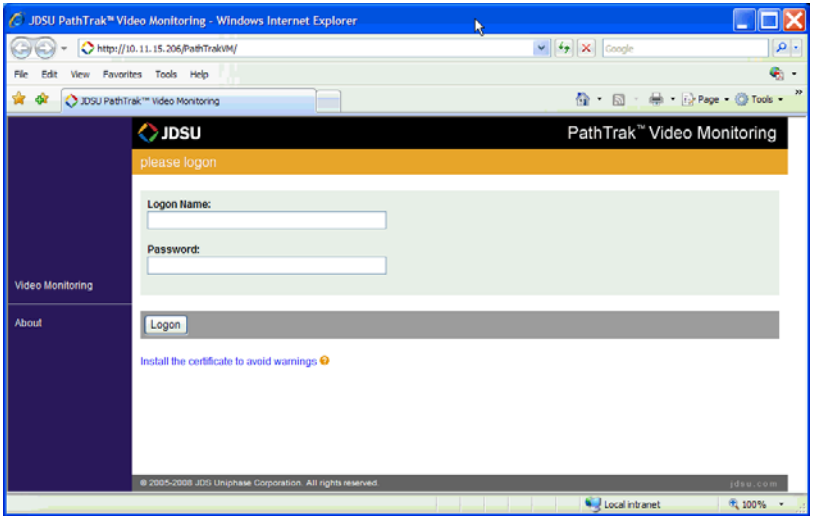

Figure 49 PathTrak™ Video Monitoring logon page

NOTE

The default Logon Name and Password when shipped is as follows:

- Default Logon Name: **admin**
- Default Password: **admin**

NOTE

When you first ran the PathTrak™ Video Monitoring install program, the default Web port was 80. If you change the Web access port from port 80 to some other port, you will need to include that port number in the URL, i.e. http://localhost:8082/PathTrakVM/. If you kept it at the standard Web port of 80, you do not need to put the port ID in the URL

NOTE

It is highly recommended you install the security certificate before you logon to the PathTrak™ Video Monitoring System. To install the security certificate, refer to “Installing the security certificate” on page 65.

Installing the security certificate

1. On the PathTrak™ Video Monitoring logon web page Logon Name text box (Figure 50), type **your logon name or the default logon name**.
2. On the PathTrak™ Video Monitoring logon web page Password text box, type **your password or the default logon name**.
3. On the PathTrak™ Video Monitoring logon web page, click on the **install the certificate to avoid warnings** link.

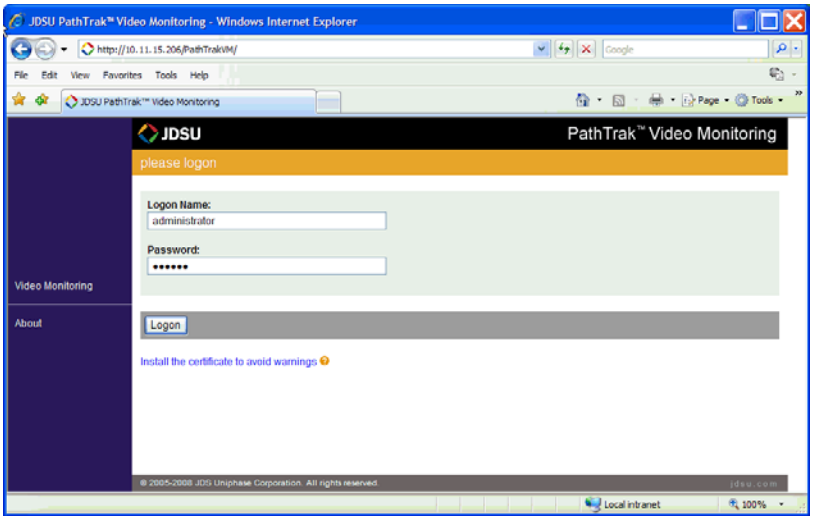

Figure 50 PathTrak™ Video Monitoring logon page

The File Download - Security Warning dialog box (Figure 51) is displayed.

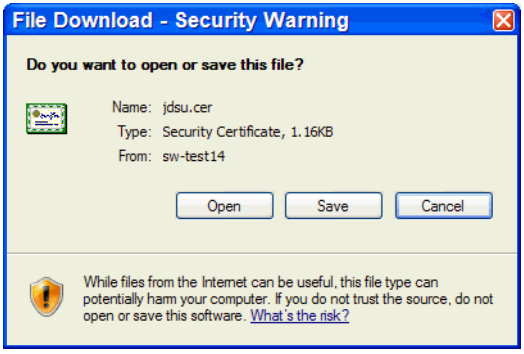

Figure 51 File Download - Security Warning dialog box

4 In the File Download - Security Warning dialog box, click **Open**.

A certificate Information dialog box (Figure 52) is displayed.

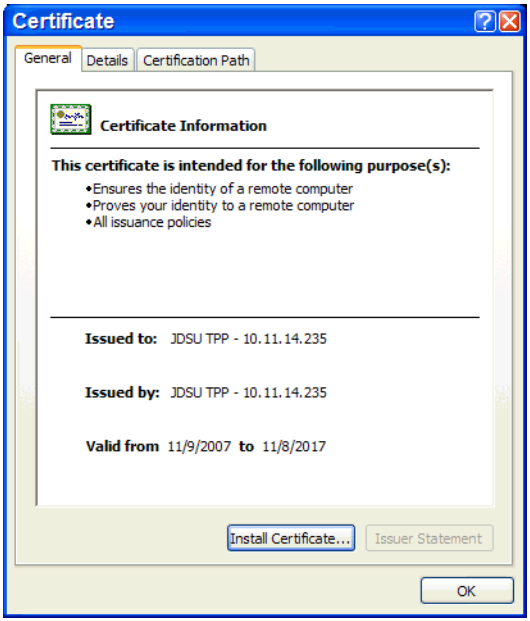

Figure 52 Certificate Information dialog box

5 In the Certificate Information dialog box, click **Install Certificate**.

A Welcome to Certificate Import Wizard dialog box (Figure 53) is displayed.

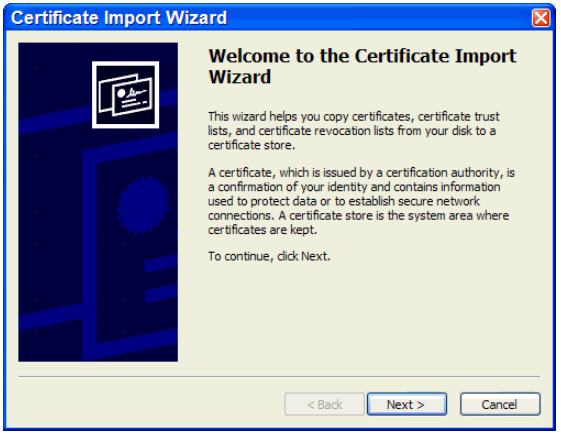

Figure 53 Welcome to Certificate Import Wizard dialog box

6 In the Welcome to Certificate Import Wizard dialog box, click **Next**.

The Certificate Import Wizard - Certificate Store dialog box (Figure 54) is displayed.

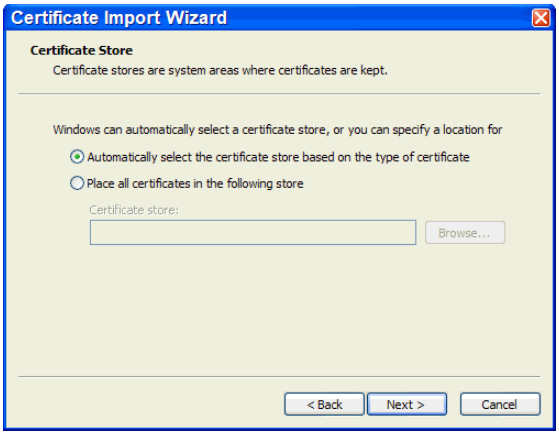

Figure 54 Certificate Import Wizard - Certificate Store dialog box

7 In the Certificate Import Wizard - Certificate Store dialog box, click **Automatically select the certificate store based on type of certificate** radio button.

8 Click **Next**.

The Certificate Import Wizard - Completing the Certificate Import Wizard dialog box (Figure 55) is displayed.

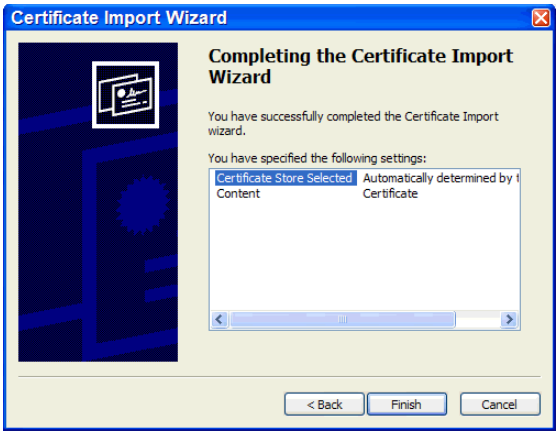

Figure 55 Certificate Import Wizard - Completing the Certificate Import Wizard dialog box

9 In the Certificate Import Wizard - Completing the Certificate Import Wizard dialog box, select **Certificate Store Selected**.

10 Select **Finish**.

An Import was successful dialog box (Figure 56) is displayed.

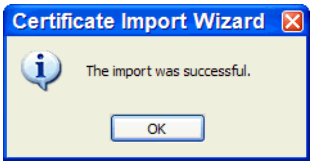

Figure 56 Import was successful dialog box

11 In the Import was successful dialog box, click **OK**.

12 In the Certificate Information dialog box (Figure 52), click **OK**.

Logging on to the PathTrak™ Video Monitoring application

You are now ready to logon to the PathTrak™ Video Monitoring application software. There are two ways to logon to the PathTrak™ Video Monitoring application.

To logon to the PathTrak™ Video Monitoring application

1 If you are logged into the PathTrak™ Video Monitoring Server, type http://localhost/PathTrakVM in your Internet Explorer Web browser.

NOTE

If you are not logged into the PathTrak™ Video Monitoring Server substitute the IP or the machine name for the word localhost.

OR

2 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, select the **monitor your forward path** icon or text.

NOTE

When you first ran the PathTrak™ Video Monitoring install program, the default Web port was 80. If you change the Web access port from port 80 to some other port, you will need to include that port number in the URL, i.e. http://localhost:8082/PathTrakVM/. If you kept it at the standard Web port of 80, you do not need to put the port ID in the URL

The “PathTrak™ Video Monitoring” logon web page (Figure 57) is displayed.

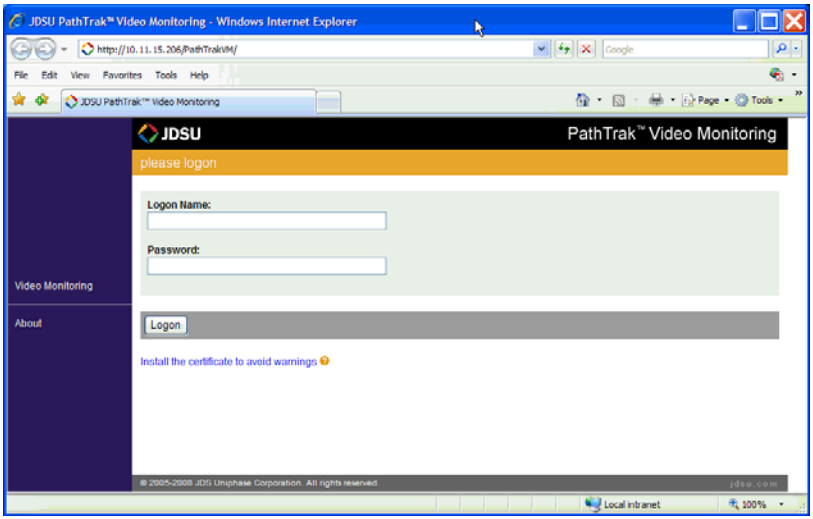

Figure 57 PathTrak™ Video Monitoring logon page

NOTE

The default Logon Name and Password when shipped is as follows:

- Default Logon Name: **admin**
- Default Password: **admin**

3 On the PathTrak™ Video Monitoring logon web page Logon Name text box (Figure 58), type **your logon name or the default logon name**.

4 On the PathTrak™ Video Monitoring logon web page Password text box, type **your password or the default password**.

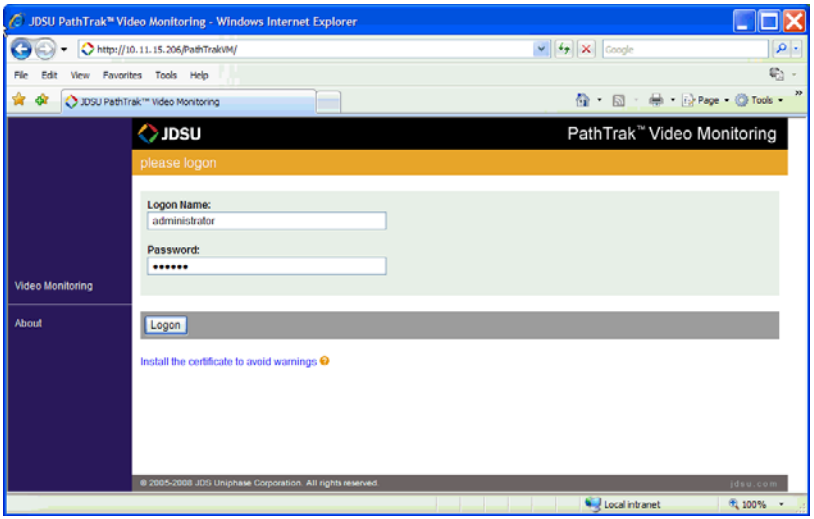

Figure 58 PathTrak™ Video Monitoring logon page

5 On the PathTrak™ Video Monitoring logon web page, click **Logon**.

The “PathTrak™ Video Monitoring” home web page (Figure 59) is displayed.

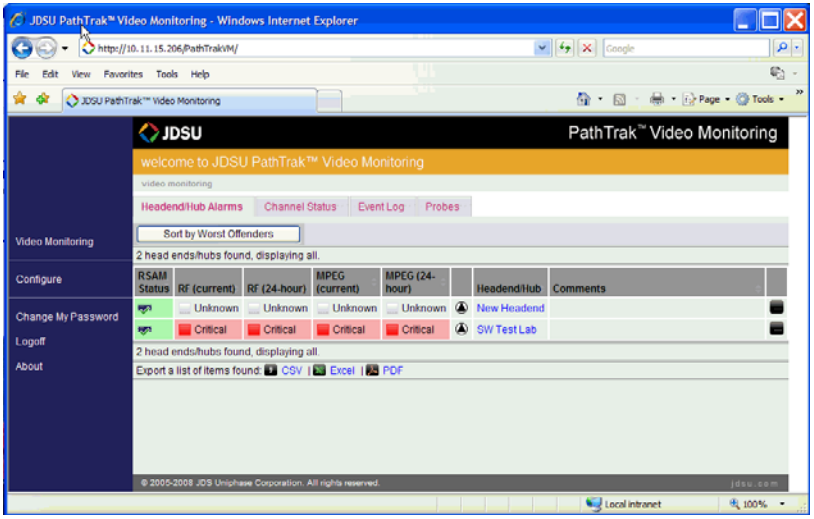

Figure 59 PathTrak™ Video Monitoring home web page

NOTE

It is highly recommended you install the Adobe SVG Viewer before you start navigating around the PathTrak™ Video Monitoring System. To install the Adobe SVG Viewer, refer to "Installing Adobe SVG Viewer" on page 73.

Installing Adobe SVG Viewer

The PathTrak™ Video Monitoring system will allow you to look at live and historical views in addition to other views. To do this Adobe SVG Viewer is used.

To install Adobe SVG Viewer

1. The first time you select a view, a statement is displayed to download Adobe SVG Viewer, select **Yes**.
2. From the file download box, select **Run**.

   OR
3. You can click on the following link and download it before using any of the display tools. http://www.adobe.com/svg/viewer/install/main.html.

   The "Adobe SVG" page (Figure 60) is displayed.

Installing Adobe SVG Viewer

1. Double-click the downloaded installer.
2. Follow the on-screen instructions.
3. If you are not using Internet Exporer for Windows, then you will need to restart your browser before viewing SVG.

Viewers

Language	Operating system	Version	Date
English	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
	RedHat Linux 7.1–9e	3.01 beta 3	12/2003
	Solaris 8	3.0 beta 1	11/2001
简体中文	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
繁體中文	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
Český	Win 98–XP	3.03	04/2005
Dansk	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
Deutsch	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
Ελληνικα	Win 98–XP	3.03	04/2005
Español	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
Français	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
Italiano	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
日本語	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001
	Mac 10.1–10.4	3.0	11/2001
한국어	Win 98–XP	3.03	04/2005
	Mac 8.6–9.1	3.0	11/2001

Figure 60 Installing Adobe SVG Viewer

4 Scroll down the page until **Installing Adobe SVG Viewer information** (Figure 60) is displayed.

5 Click on the **appropriate link** and follow the instructions.

You are now ready to start navigating the PathTrak™ Video Monitoring System.

Editing preferences

After you are logged on the PathTrak™ Video Monitoring page, you can begin to use and navigate to the collected information. You also have the ability to edit the video monitoring preferences.

To edit video monitoring preferences

1 If you are logged into the PathTrak™ Video Monitoring Server, type http://localhost/PathTrakVM in your Internet Explorer Web browser.

NOTE

If you are not logged into the PathTrak™ Video Monitoring Server substitute the IP or the machine name for the word localhost.

OR

2 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, select the **monitor your forward path** icon or text.

NOTE

When you first ran the PathTrak™ Video Monitoring install program, the default Web port was 80. If you change the Web access port from port 80 to some other port, you will need to include that port number in the URL, i.e. http://localhost:8082/PathTrakVM/. If you kept it at the standard Web port of 80, you do not need to put the port ID in the URL

The “PathTrak™ Video Monitoring” logon web page (Figure 61) is displayed.

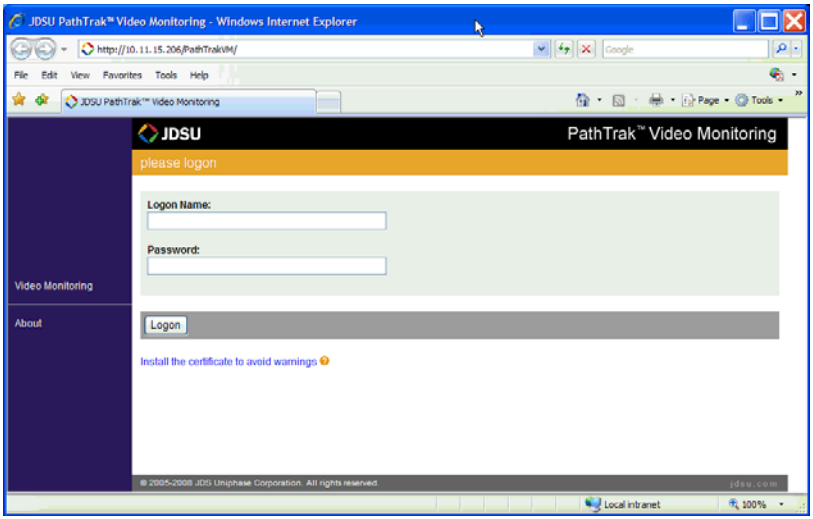

Figure 61 PathTrak™ Video Monitoring logon page

NOTE

The default Logon Name and Password when shipped is as follows:

- Default Logon Name: **admin**
- Default Password: **admin**

3 On the PathTrak™ Video Monitoring logon web page Logon Name text box (Figure 62), type **your logon name or the default logon name**.

4 On the PathTrak™ Video Monitoring logon web page Password text box, type **your password or the default password**.

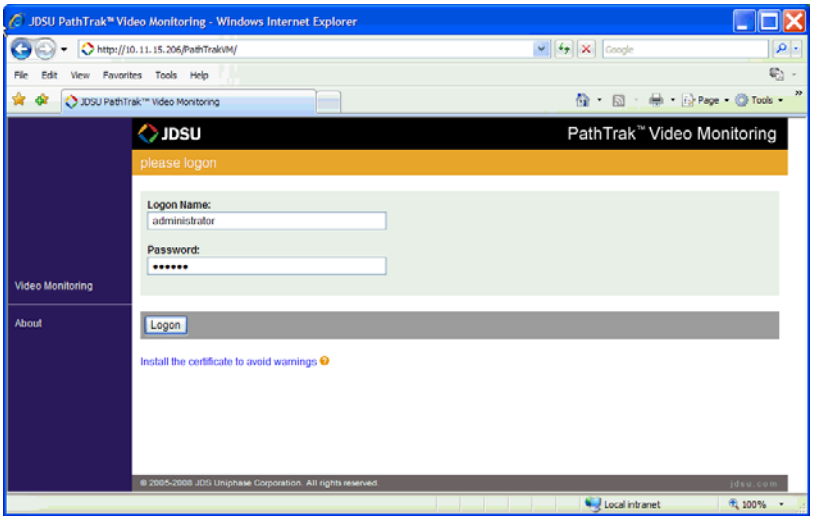

Figure 62 PathTrak™ Video Monitoring logon page

5 On the PathTrak™ Video Monitoring logon web page, click **Logon**.

The “PathTrak™ Video Monitoring” home web page (Figure 63) is displayed.

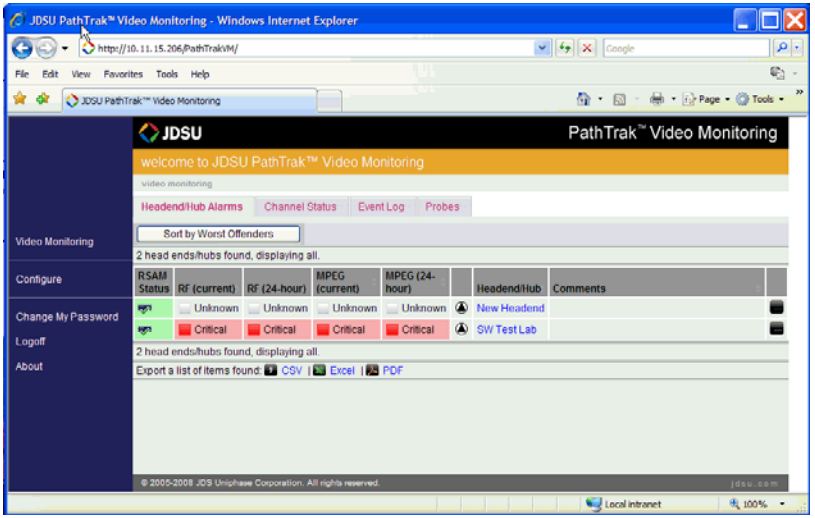

Figure 63 PathTrak™ Video Monitoring home web page

6 On the left panel, click **Configure**.

7 In the configure menu, click **system settings**.

The configure PathTrak™ Video Monitoring System preferences page is displayed.

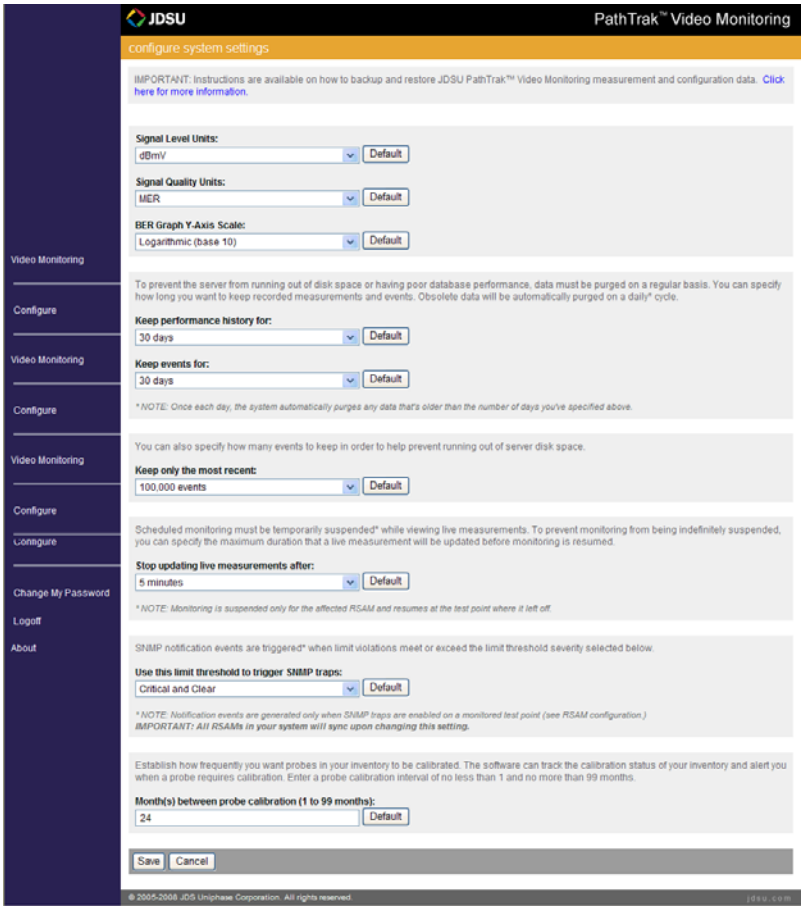

Figure 64 configure PathTrak™ Video Monitoring System preferences page

Preferences allow you to do the following.

- Set the number of days that the accumulated history is stored.
- Set the number of days that the accumulated events are stored.
- Specify how many events are stored.
- Set live measurement timeout.
- Set the SNMP threshold trigger type.

8 Click **Save**.

The PathTrak™ Video Monitoring page is displayed.

Configuring MPEG

After you are logged on the PathTrak™ Video Monitoring page, you can begin to use and navigate to the collected information. You also have the ability to edit the MPEG configuration.

To edit MPEG configuration

1 If you are logged into the PathTrak™ Video Monitoring Server, type http://localhost/PathTrakVM in your Internet Explorer Web browser.

NOTE

If you are not logged into the PathTrak™ Video Monitoring Server substitute the IP or the machine name for the word localhost.

OR

2 On the “welcome to JDSU PathTrak™ Video Monitoring Client” page, select the **manage your RSAM network** icon or text.

The “manage your RSAM network” page is displayed.

3 On “manage your RSAM network” page, click on the **PathTrak™ Video Monitoring System** link that is located in the “management tasks” area.

NOTE

When you first ran the PathTrak™ Video Monitoring install program, the default Web port was 80. If you change the Web access port from port 80 to some other port, you will need to include that port number in the URL, i.e. http://localhost:8082/PathTrakVM/. If you kept it at the standard Web port of 80, you do not need to put the port ID in the URL

The “PathTrak™ Video Monitoring” logon web page (Figure 65) is displayed.

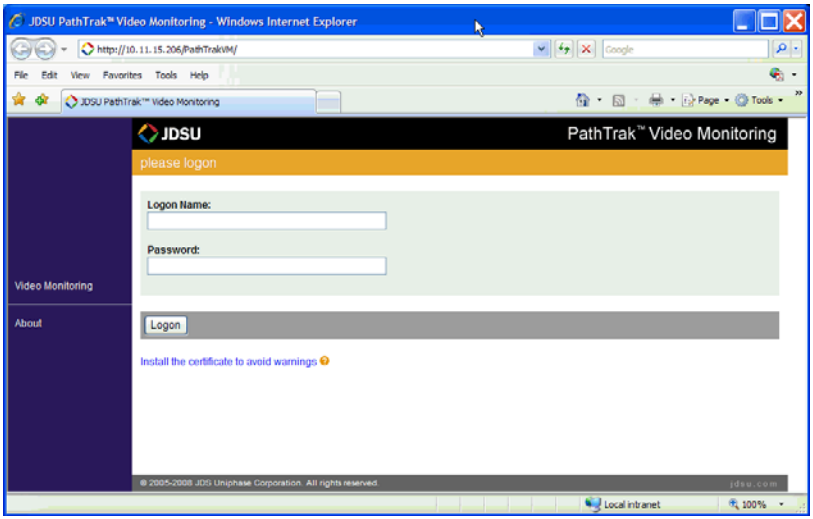

Figure 65 PathTrak™ Video Monitoring logon page

NOTE

The default Logon Name and Password when shipped is as follows:

- Default Logon Name: **admin**
- Default Password: **admin**

4 On the PathTrak™ Video Monitoring logon web page Logon Name text box (Figure 66), type **your logon name or the default logon name**.

5 On the PathTrak™ Video Monitoring logon web page Password text box, type **your password or the default password**.

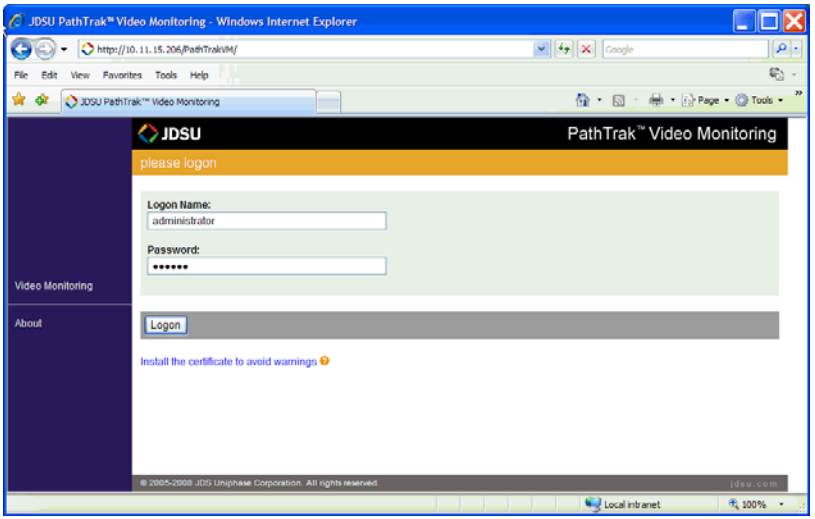

Figure 66 PathTrak™ Video Monitoring logon page

6 On the PathTrak™ Video Monitoring logon web page, click **Logon**.

The “PathTrak™ Video Monitoring” home web page (Figure 67) is displayed.

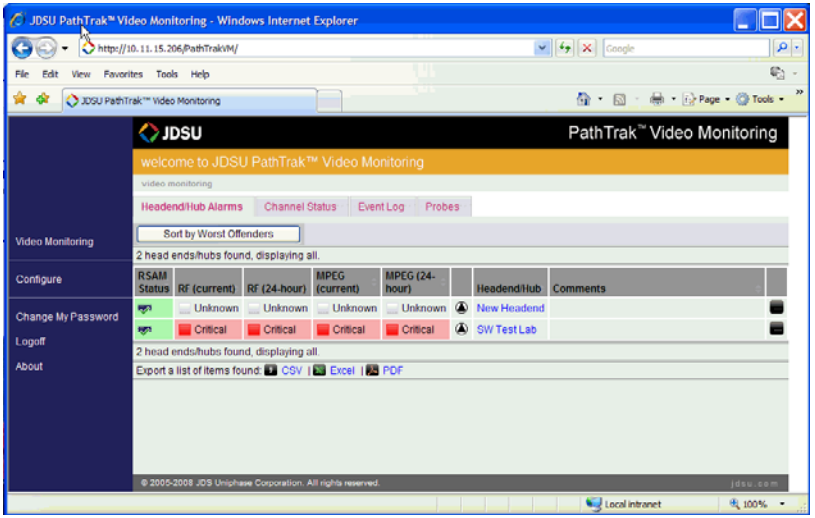

Figure 67 PathTrak™ Video Monitoring home web page

7 On the left panel, click **Configure**.

8 In the configure menu click **MPEG settings**.

The configure PathTrak™ Video Monitoring System preferences page (Figure 68) is displayed.

Figure 68 configure PathTrak™ Video Monitoring MPEG preferences page

Preferences allow you to do the following.

- Select the System information standard (ATSC or DVB)
- Select the Default CAT alarm state
- Select the Default SI alarm state
- Set the MPEG dwell time per channel
- Edit the Priority 1, 2, and 3 alarm severities

9 Click **Save**.

An information dialog box (Figure 69) is displayed that states "Save requires all RSAMs within the system to synchronize".

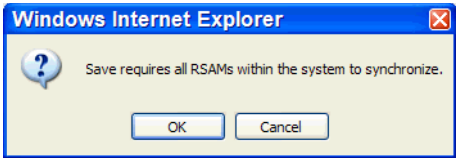

Figure 69 Information dialog box

10 Click **OK**.

The RSAMs will synchronize and the PathTrak™ Video Monitoring page is displayed.

NOTE

If the synchronization process fails, check the port settings on the servers and routers as described in Table 7 on page 11.

System Requirements

A

This appendix describes the PathTrak™ Video Monitoring requirements. Topics discussed in this appendix are as follows:

Server Specification Requirements

Table 8 PathTrak™ Video Monitoring Server Requirements

Parameter	Specification
Operating System	XP Professional SP3 32-bit, Windows Server 2003 SP2 32-bit, Windows Server 2008 R2 32 and 64 bit versions.
IP assignments	Static IP address
Web browser	Internet Explorer v7 or v8
Connectivity	100Base-T Fast Ethernet
Screen Resolution	1024 x 768 or higher

Table 9 Suggested PathTrak™ Video Monitoring Server Specifications

Parameter	Specification
Operating System	Windows 2008 Server R2 64 bit
Processor	2 GHz Minimum
RAM	4 GB
Hard Drive Speed	For faster performance a 7200 RPM SATA hard drive (3 MB/Sec) or faster is recommended.
Available Hard Drive Space	5 GB + 10 MB per RSAM per day of performance history
Screen Resolution	1280 x 1024

Operating systems and hardware platform requirements change over time. Please contact your JDS Uniphase Corporation representative for further information on the latest system requirements.

Client Specification Requirements

Table 10 PathTrak™ Video Monitoring Client Requirements

Parameter	Specification
Operating System	Windows XP SP3 Professional 32-bit, Windows Vista SP2 Business 32-bit, Windows 7 Professional 32 or 64 bit, Windows Server 2003 SP2, Windows Server 2008 R2 Enterprise 32 or 64 bit.
Web Browser	Internet Explorer v7 or v8
Connectivity	100Base-T Fast Ethernet
Screen Resolution	1024 x 768 or higher

Table 11 Suggested PathTrak™ Video Monitoring Client Specifications

Parameter	Specification
RAM	1 GB
Connectivity	100Base-T Fast Ethernet
Available Hard Drive Space	1 GB
Screen Resolution	1280 x 1024

Operating systems and hardware platform requirements change over time. Please contact your JDS Uniphase Corporation representative for further information on the latest system requirements.

Server Socket Ports

The PathTrak™ Video Monitoring Server uses the following socket ports by default:

– Port 21 is used for FTP communication with the RSAM meters.
– Port 1099 is used for RMI communication with PathTrak™ Video Monitoring Clients..
– Ports 80 and 443 are used by Apache Tomcat service.
– Ports 81, 135-139 and port 445 are used for MVP-200 communication.

Customer Services

B

This chapter describes the customer services available through JDSU. Topics discussed in this chapter include the following:

About our services

JDSU offers an unmatched portfolio of services to deploy, support and innovate purchased equipment through its Customer Care and Global Services and Solutions organizations. Customer Care is standard with every product sale and consists of business hour technical assistance, in-warranty repair, calibration, and upgrade services. Global Services and Solutions provides professional services to optimize product capabilities and maximize efficiencies, including field engineering and deployment, technical training, product support, consulting and custom software development. Together these organizations supply the services necessary successfully utilize purchased equipment.

Customer care

Customer Care is accompanied with the sale of every JDSU product. Customer Care services include:

- Needs Analysis on Products and Services
- Comprehensive Product and Service Literature
- Pre-Sales Consulting
- Technical Assistance (Business Hour)
- Instrument Repair (Under Warranty Repair and Calibration Services)
- Immediate Return Authorizations

Contact a Customer Care representative through your local distributor or by accessing www.jdsu.com for information on upgrades, calibration, warranty policies or any of Global Services and Solutions offerings. Representatives also provide assistance with product repairs and returns.

Technical assistance (business hour)

Expert business hour technical support, including help with product configuration, circuit qualification, and complete network trouble sectionalization is provided with your product (refer to “Technical assistance” on page viii). For around-the-clock support, 7x24 technical assistance may be purchased through Global Services and Solutions FleetCare program (refer to “Product support” on page 95).

Instrument repair

Our service centers provide repair, calibration and upgrade services for under warranty equipment. JDSU understands the impact of equipment down time on operations and is staffed to ensure a quick turn-around. Available services include the following:

Product Repair — All equipment returned for service is tested to the same rigorous standards as newly manufactured equipment. This ensures products meet all published specifications, including any applicable product updates.

Calibration — JDSU's calibration methods are ISO 9001 approved and based on NIST standards.

Factory Upgrades — Any unit returned for a hardware feature enhancement will also receive applicable product updates and will be thoroughly tested, ensuring peak performance of the complete feature set.

Additional repair, calibration and upgrade services are available for purchase through Global Services and Solutions (Refer to "Product support" on page 95).

Equipment return instructions

Please contact your local Customer Care location via telephone or web site for Return or Reference Authorization to accompany your equipment. For each piece of equipment returned for repair, attach a tag that includes the following information:

- Owner's name, address, and telephone number.
- The serial number, product type, and model.
- Warranty status. (If you are unsure of the warranty status of your instrument, contact JDSU Customer Care.)
- A detailed description of the problem or service requested.
- The name and telephone number of the person to contact regarding questions about the repair.
- The return authorization (RA) number (US customers), or reference number (European Customers).

If possible, return the equipment using the original shipping container and material. If the original container is not available, the unit should be carefully packed so that it will not be damaged in transit; when needed, appropriate packing materials can be obtained by contacting

JDSU Customer Care. JDSU is not liable for any damage that may occur during shipping. The customer should clearly mark the JDSU-issued RA or reference number on the outside of the package and ship it prepaid and insured to JDSU.

Warranty information

The warranties described herein shall apply to all commercially available JDSU products. Any additional or different warranties shall apply only if agreed to by JDSU in writing. These warranties are not transferable without the express written consent of JDSU.

Software Warranty — JDSU warrants that Software Products licensed to Customer shall, under normal use and service, and for a period of ninety (90) days from the date of shipment of the Software to Licensee (the “Warranty Period”), perform in all material respects in accordance with the published specifications for such Software as established by JDSU. However, JDSU does not warrant that the Software will operate uninterrupted or error free, operate in the combination with other software, meet Customer’s requirements, or that its use will be uninterrupted.

JDSU’s obligation and Customer’s sole and exclusive remedy under this Software Warranty is limited to, at JDSU’s option, either (i) correcting the material errors reported to JDSU in writing by Customer during the Warranty Period and which JDSU is able to reproduce, (ii) replacing such defective Software, provided that JDSU received written notice of such defect within the Warranty Period, or (iii) provided that JDSU received written notice of such defect within the Warranty Period, terminating the License and, upon return to JDSU of the Software, Documentation and all other materials provided by JDSU under the applicable License, providing Customer with a refund of all charges paid with respect thereto. JDSU shall have no warranty obligations hereunder if (a) the Software is altered or modified or is merged with other software by Customer or any third party or (b) all or any part of the Software is installed on any computer equipment other than the Designated Server or used with any operating system for which the Software is not designed.

Services Warranty — JDSU warrants that the Services provided by JDSU, if any, shall be performed promptly, diligently and in a professional manner in accordance with the commercial standards of the industry. JDSU shall not, however, be responsible for any delays that are not due to JDSU’s fault or negligence or that could not have reasonably been foreseen or provided against.

WARRANTY DISCLAIMER — FOR HARDWARE, SOFTWARE, AND/OR SERVICES FURNISHED BY JDSU, THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTEES AND CONDITIONS, EXPRESS OR IMPLIED. JDSU SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, ON ANY HARDWARE, SOFTWARE, DOCUMENTATION OR SERVICES INCLUDING BUT NOT LIMITED TO WARRANTIES RELATING TO QUALITY, PERFORMANCE, NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AS WELL AS THOSE ARISING FROM ANY COURSE OF DEALING, USAGE OR TRADE PRACTICE. UNDER NO CIRCUMSTANCES WILL JDSU BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES RELATED TO BREACH OF THIS WARRANTY.

Global services and solutions

Global Services and Solutions markets a broad portfolio of services to enable customers to aggressively build their competitive advantage within the markets they serve. Global Services and Solutions innovative offerings respond to our customers' dynamic needs:

– System deployment and field engineering services
– Technical training
– Product support
– Consulting
– Custom software development
– Integrated service programs

Additional information can also be found on our web site under Services.

System deployment and field engineering

JDSU offers a range of support services for our centralized test systems, designed around the needs of the customer's network. Field engineering and deployment services provide a variety of options for implementing the test system into the network.

Deployment — Thorough deployment process covers the initial site survey through hardware and software installation, allowing rapid integration of systems product into customers' environment without the

use of their own resources. Deployment includes survey, configuration, installation of hardware and software, site planning, cabling, acceptance testing, staging, certification and system documentation.

Basic Service for Systems — In today's fast-paced world of communications, network operators are deploying increasingly complex communications test and management systems. JDSU's Basic Service for Systems is designed to provide the system experts, support and methodologies to facilitate the integration of systems products into customers' environments. Basic Service for Systems encompasses system deployment, training, software upgrades, technical assistance and repair. This service is subject to availability, please visit www.jdsu.com or contact Customer Care for additional information.

Training

JDSU delivers training in instructor-led or alternative learning formats that are flexible, convenient, and timely. Our training solutions portfolio consists of network-specific test and management tools for optical transport, cable, access, data, and wireless environments.

Instructor-led training:

Public courses (JDSU sites)

Public courses help participants quickly acquire fundamental skills or broaden their communications knowledge with advanced instruction. Our courses deliver the ideal mix of theory and practice.

On-site training (Customer site)

JDSU provides practical, customized instruction at the customer's designated site. Whether your goal is to shorten turn-up times or increase operation-wide efficiency, on-site training can be a cost-effective way to train from one to 10 participants. Prior to training, the instructor contacts the customer to ensure the course content is aligned with the organization's training needs. We conduct step-by-step reviews of current technologies and products to help both new and experienced technicians translate theory into practical, hands-on expertise.

When scheduling an on-site course, please note that JDSU requires a minimum commitment of two consecutive days of training. Courses that are only one day in duration may either be paired with another course for a minimum total of two training days, or presented on two consecutive days to different groups of participants.

Alternative learning:

Courseware licensing program and train-the-trainer

Recommended for customers with internal training departments, JDSU's Courseware Licensing Program is a fast, affordable alternative that allows our customers to train their own staff using JDSU's courseware. Each course provides comprehensive instructor and participant materials to ensure consistent content delivery for the length of the agreement. A critical part of Courseware Licensing is the Train-the-Trainer program, which prepares the organization's own instructors to deliver JDSU training courses. Courseware Licensing is sold in increments of one, two, or three years.

Computer-based training (CBT)

By blending learning with technology, JDSU's CBT program provides our customers with a cost-effective way to learn technology fundamentals and product applications. Topics include ATM, Frame Relay, ISDN, LAN Basics, Fiber Optics, and more. CBTs are designed to complement both public and on-site training; they can serve to prepare students for classroom JDSU courses or be used after instructor-led training to reinforce learning. In addition to our pre-packaged CBTs, JDSU custom-develops CBTs to meet your organization's training needs.

To enroll in a course or for more information on the variety of JDSU training programs available, call 1-800-638-2049 or visit www.jdsu.com and complete the Training Requirement Form.

Product support

To continue repair, maintenance and upgrades after a product's warranty expires, JDSU offers a variety of product support plans.

FleetCare — Designed for customers with ten or more JDSU products, FleetCare extends each product's initial factory warranty to include repair parts, labor and one-way shipping. FleetCare allows customers to upgrade the base package with a variety of options, including Calibration Plans, Calibration Plan with Manager, Loaners, 7x24 Technical Assistance and Software Enhancement Agreements.

Software Enhancement Agreements — In response to new developments in technology, JDSU continually upgrades and revises the software that drives many of its products. Software Enhancement

Agreements automatically ships the latest software revisions, releases and upgrades to ensure products are operating at the most technologically advanced level.

Product Maintenance Agreements — Yearly repair and calibration maintenance agreements simplify billing and help ensure equipment is always operating at optimum levels. Product maintenance agreements can be used to extend a current warranty or provide protection for out-of-warranty units.

Repair Pricing Options — For out-of-warranty repairs, JDSU offers two additional pricing options: time and material pricing and flat rate pricing. Under time and material pricing, customers are billed for the actual cost of the repair, making this a cost-effective method for minor repairs. Under flat rate pricing, customers pay a fixed service charge to repair unit failures (excluding damage or abuse).

Consulting services

To quickly improve our customer's efficiency and productivity, JDSU offers personalized consulting programs designed to meet specific client needs. Our consulting staff will work as part of your team, providing a valuable blend of subject matter proficiency, an in-depth test and measurement systems perspective, and trusted telecommunications industry vision.

Methods and Procedure Development — JDSU's Methods and Procedure Development services include consulting with your staff and assessing your network plant's current test and turn-up procedures. After evaluating the skill level of your workforce in specific technologies and procedures, a JDSU team of experts identifies potential areas of improvement and makes appropriate recommendations in a formal implementation plan. Depending on your staff 's level of expertise, test procedures can be written to any level of detail, from general methods and procedures to detailed "button-by-button" test and network equipment-specific procedures. In addition, JDSU's experts offer hands-on training for your field technicians and can resolve specific problems at the central office. JDSU develops test plans and procedures for Service Providers, End-users and Manufacturers of Network Equipment.

Test Automation — With JDSU's Test Automation Development, a team of experts can develop customized automated and remote testing solutions so that you can keep your network functioning at peak levels. After consulting with you, the JDSU team can determine which

of JDSU's test and analysis equipment and automation platforms can best streamline your testing processes, data analysis, and test result storage methods. The consulting team can develop and integrate automated testing applications on customers' currently installed computer platforms that match existing methods and procedures. A JDSU team of consultants can assist customers throughout every stage of the development and implementation of automated and remote testing solutions. Services range from developing automated scripts to integrating customized software applications to developing drivers to automated manufacturing tests.

On-site Test and Measurement Service — JDSU On-site Test and Measurement Service provides testing expertise to expedite the implementation, turn-up, and provisioning of network services. Applying their knowledge to your specific network requirements, JDSU's network consultants can quickly verify transmission systems' implementation, assess a fiber plant's suitability for advanced services, future-proof your system. Because incomplete testing often results in crippling losses of revenue, carriers and providers must operate their networks with a very low margin of error. Difficulties in ensuring network performance are further compounded when technicians must employ unfamiliar yet critical test and measurement processes. But with JDSU's dedicated, highly skilled team of professionals providing communications test and measurement solutions, your staff can concentrate on performing value-added services that will maximize your profitability.

Integrated service programs

Service Dollars (North America only) — To deliver the highest level of support with your product purchase, JDSU offers Service Dollars. Services Dollars can be purchased at anytime, for each JDSU instrument. If purchased at the same time as your product, Service Dollars are discounted 20 percent. This is a significant savings, as Service Dollars can be used towards the purchase of any of Global Services and Solutions offerings. Service Dollars are also flexible in the fact that they can be purchased at anytime and then used later towards the specific service that best fits your support needs.

Glossary

A

ACSII — American Standard Code for Information Interchange

ATSC — Advanced Television Systems Committee

B

BER — bit error rate

C

CAT — Conditional Access Table

CD — compact disc

CPU — central processing unit

CRC — cyclic redundancy check

D

DIP — switch (dual in-line package)

DNS — Digital Transport Stream

DVB — Digital Video Broadcasting

DVD — digital versatile disc or digital video disc

F

FTP — File Transfer Process

G

GUI — Graphical User Interface. Layout of commands in a user-friendly environment. ***See also*** UI (user interface).(user interface).

H

HTTP — HyperText Transfer Protocol

HTTPS — HyperText Transfer Protocol Secure

I

IP — Internet Protocol

ISS — JDSU Input Selector Switch

M

MAC address — Media Access Control address

MER — Modulation Error Rate

MIB — Management Information Base

MPEG — Moving Picture Experts Group

N

NTCA — National Cable & Telecommunication Association

NIC — Network Interface Card

NMS — Network Management Systems

O

OS — Operationg System

OSS — Operational Support System

P

PAT — Program Association Table

PC — Personal Computer

PCR — Program Clock Reference

PID — Program Identifier

PMT — Program Map Table

PSIP — Program and System Information Protocol

PTS — Program Time Stamp

PVM — JDSU PathTrak™ Video Monitoring

Q

QAM — Quadature Amplitude Modulation

R

RF — Radio Freqency

RMI — Remote Method Invocation

RPC — Remote Procdure Call

S

SI — Service Information

SNMP — Simple Network Management Protocol

SVG — Scalable Vector Graphics

T

TCP — Transmission Control Protocol

TS — Transport Stream

TTL — Transistor Transistor Logic

U

UDP — User Datagram Protocol

UI — User Interface. Layout of commands in a user-friendly environment. ***See also*** GUI (graphical user interface).

V

VGA — Video Graphics Array

VHO — Video Hub Office

VSO — Video Servicing Office

W

WEB — World Wide Web

X

XP — Windows eXPerience

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