Dell™ 2161DS-2/4161DS

Remote Console Switch

Remote Console Switch Software User's Guide

Notes and Cautions

Notes, Notices, and Cautions

NOTE: A NOTE indicates important information that helps you make better use of your computer.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

Model 2161DS-2/4161DS Console Switch

July 2005

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4 Managing Your Remote Console Switch

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Product Overview

About the Remote Console Switch Software

The Dell™ Remote Console Switch Software is a cross-platform management application that allows you to view and control the Dell 2161DS-2/4161DS Remote Console Switch and all attached servers. The cross-platform design ensures compatibility with most popular operating systems and hardware platforms. The Remote Console Switch Software provides secure switch-based authentication, data transfers, and username/password storage. Each switch handles authentication and access control individually for more decentralized system control.

The Remote Console Switch Software utilizes Explorer-like navigation with an intuitive split-screen interface, providing you with a single point of access for your entire system. From here, you can manage your existing switches, install a new switch or launch a video session to a system server. Built-in groupings such as Servers, Sites, and Folders provide an easy way to select the units to view. Powerful search and sort capabilities allow you to easily find any unit.

Features and Benefits

Easy to Install and Configure

The Remote Console Switch Software is designed for easy installation and operation. Auto-discovery of managed switches enables you to install new units in minutes. Wizard-based installation and online help simplify initial system configuration. The intuitive graphical interface makes managing and updating switches simple and straightforward.

Powerful Customization Capabilities

Tailor the Remote Console Switch Software to fit your specific system needs. Take advantage of built-in groups or create your own. Customize unit and field names, icons, and macros for maximum flexibility and convenience. Using names that are meaningful to you makes it easy to quickly find any system unit.

Extensive Remote Console Switch Management

The Remote Console Switch Software allows you to add and manage multiple switches in one system. Once a new switch is installed, you can configure switch parameters, control and preempt user video sessions, and execute numerous control functions, such as rebooting and upgrading your switch. From the intuitive Management Panel (MP), you can enable Simple Network Management Protocol (SNMP) traps, configure servers and tiered switches, as well as manage user databases.

The Remote Console Switch Software is designed to be compatible with the Dell OpenManage™ IT Assistant Event Viewer, allowing system administrators to consolidate system event reports.

Interoperability with Avocent Products

The Remote Console Switch Software can also be used to manage Avocent® A1000R and A2000R Remote Console Switches allowing increased flexibility in the management of systems.

In addition, the Remote Console Switch Software includes support for Avocent IQ Modules (AVRIQ's), expanding the range of server types that can be managed. The addition of support for Avocent AVRIQ's means that the following connections are now supported:

- PS/2 (Dell Server Interface Pod (SIP) and Avocent AVRIQ)
- USB (Dell SIP and Avocent AVRIQ)
- Serial (Avocent AVRIQ)
- Sun (Avocent AVRIQ)

NOTE: Dell SIPs are not supported on Avocent A1000R and A2000R Remote Console Switches.

2

Installation

Getting Started

Before installing your Dell™ Remote Console Switch Software, refer to the following lists to ensure that you have all the items that shipped with your software as well as all other items necessary for proper installation.

Supplied with the Remote Console Switch Software

Your Dell 2161DS-2/4161DS Console Switch package contains the following items:

- Dell Remote Console Switch User Documentation and Remote Console Switch Software CD
- Remote Console Switch Software User's Guide (on CD)
- Remote Console Switch Installation Instructions
- Download Instructions
- Safety Booklet

Supported Operating Systems

The Remote Console Switch Software is supported on the following operating systems:

- Microsoft® Windows® 2000 Workstation Service Pack 4
- Microsoft Windows 2000 Server Service Pack 4
- Microsoft Windows XP (Home and Professional) Service Pack 2
- Microsoft Windows Server 2003 Service Pack 1
- Red Hat Enterprise Linux 3.0 WS
- Red Hat Enterprise Linux 4.0 WS
- SuSE Linux Enterprise Server 8
- SuSE Linux Enterprise Server 9
- SuSE Linux 9.2
- SuSE Linux 9.3

System Hardware Configuration Requirements

The following list contains the hardware configuration requirements for running the Remote Console Switch Software on the supported operating systems. Configurations with less than the recommended requirements are not supported.

- 500 MHz Intel® Pentium® III
- 256 MB of RAM
- 10 or 100BaseT NIC (100 recommended)
- XGA Video with graphics accelerator
- Desktop size must be a minimum of 800 x 600
- Color palette must be a minimum of 65,536 (16-bit) colors

Supported Browsers

The Remote Console Switch Software is supported with the following browsers:

- Microsoft Internet Explorer 5.0 or higher
- Netscape Navigator 6.0 or higher
- Mozilla 1.4 or higher
- Firefox 1.0 or higher

Installing the Remote Console Switch Software

The Remote Console Switch Software can be installed on Windows 2000, Windows 2003 Server, Windows XP and Linux platforms. Follow these instructions to install Remote Console Switch Software on the desired platform.

To install on Windows 2000, 2003, or XP:

1. Insert the Remote Console Switch Software CD-ROM into your CD-ROM drive. If AutoPlay is supported and enabled, the setup program will start automatically.
   -or-
   If your system does not support AutoPlay, set the default drive to your CD-ROM drive letter and execute the following command to start the install program (replace drive with your CD-ROM drive letter):

   ```
   drive:\WIN32\SETUP.EXE.
   ```

2. Follow the on-screen instructions.

To install on Linux:

1. Insert the Remote Console Switch Software CD-ROM into your CD-ROM drive.
2. If AutoMount is supported and enabled, proceed to step 3.
   -or-
   If your system does not support AutoMount:

   Mount the CD-ROM volume by executing the following command:

   mount -t iso9660 -ro mode=0555 <device> <mount point>

   Replace device with the name of the CD-ROM on your machine and mount point with the name of the desired mount point. For example, to mount a CD-ROM which is the second IDE unit on /mnt, execute the command:

   mount -t iso9660 -ro mode=0555 /dev/hdb /mnt
3. At the command line, execute the following command to change the working directory to the mount point:

   cd /mnt
4. Execute the following command to start the install program:

   sh ./linux/setup.bin

   Follow the on-screen instructions.

3

Basic Operation

Launching the Remote Console Switch Software

To launch the Dell™ Remote Console Switch Software on all Microsoft® Windows® systems:

Select **Start - Programs - Dell Remote Console Switch Software**. Remote Console Switch Software will launch.

To launch the Remote Console Switch Software on Linux:

From the application folder (/usr/lib/Dell_Remote_Console_Switch_Software by default), enter the following command:

```
./Dell_Remote_Console_Switch_Software
```

-or-

From (/user/bin), enter the following link:

```
./Dell_Remote_Console_Switch_Software
```

-or-

If the product was installed in a directory other than the default, then execute the following command from a shell:

```
<path>/Dell_Remote_Console_Switch_Software
```

-or-

If a desktop shortcut was created on installation, double-click the shortcut.

The Remote Console Switch Software will launch.

Navigating the Remote Console Switch Software

The Remote Console Switch Software consists of several components: the Remote Console Switch Software **Explorer** (**Explorer**), the **Video Session Viewer (Viewer),** and the **Management Panel (MP)**. Once you launch Remote Console Switch Software, the **Explorer** window appears. The **Explorer** window allows you to view, access, manage, and create custom groupings for all the supported units in your data center.

When you select a server, you can click the **Connect Video** task button in the Explorer to launch the Viewer. This component allows you to control the keyboard, monitor, and mouse functions of individual servers. For more information, see "Accessing and Managing Your Servers" on page 24.

When you select a Remote Console Switch, you can click the **Manage Remote Console Switch** task button in the Explorer to launch the MP. This component enables you to control each individual Remote Console Switch. For more information, see "Managing Your Remote Console Switch" on page 57.

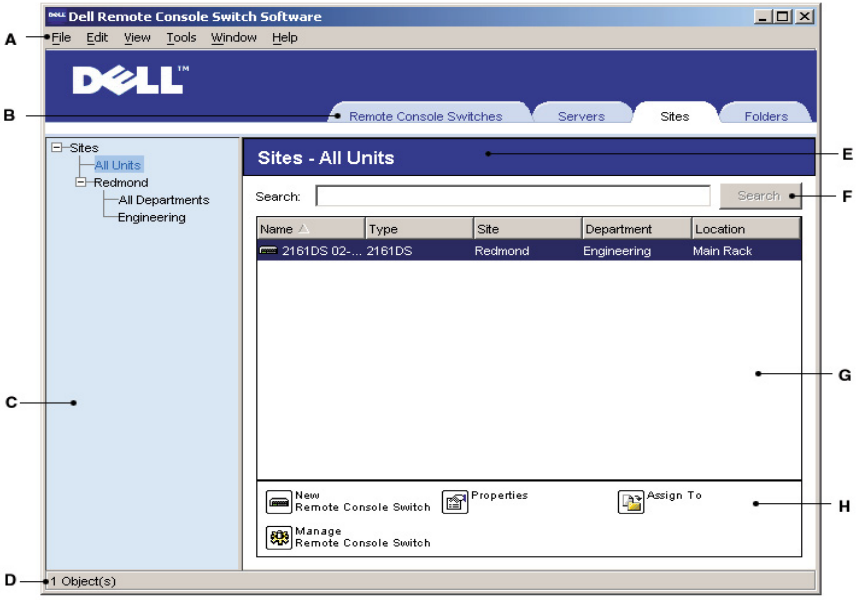
Viewing Your System in the Explorer

The Explorer is divided into several panes: the **View Selector** tabs, the **Group Selector** pane, and the **Unit Selector** pane. The content of these panes will change based on the type of unit selected or the task you wish to complete. Figure 3-1 highlights these navigation features.

Click one of the **View Selector** tabs to view your system organized by categories: **Remote Console Switches, Servers, Sites** or **Folders**. The Explorer's default display is user-configurable. You can have it automatically open to any one of these four tabs. For more information, see "Customizing the Explorer Window" on page 54. If you do not customize the default display, the Explorer will open to the **Server** view once you have added your first Remote Console Switch.

Explorer Window Features

Figure 3-1. Explorer Window



A **Menu bar:** Allows you to access many of the features in the Remote Console Switch Software.

B **View Selector tabs:** Contains four **View Selector** tabs for choosing the Explorer view.

C **Group Selector pane:** Contains a tree view representing the groups that are available for the current **View Selector** tab. The selected group controls what is displayed in the **Unit Selector** pane when the **Remote Console Switches**, **Sites** or **Folder** tabs are selected.

D **Status bar:** Displays the number of units shown in the **Unit** list.

E **Unit Selector pane:** Contains the **Search** bar, **Unit** list, and **Task** buttons appropriate for the selected view or group.

F **Search bar:** Allows you to search the database based on the text entered in the search box.

G **Unit list:** Displays a **Unit** list of units contained in the currently selected group, or the results of the search executed from the **Search** bar.

H **Task buttons:** Contains buttons representing tasks that can be executed. Some buttons are dynamic based on the type of unit(s) selected in the **Unit** list while other buttons are fixed and always present.

Remote Console Switch Quick Setup Checklist

The following list is an overview of the steps you will follow to set up and configure your Remote Console Switch system. Each of these steps is explained in detail in separate topics throughout the Remote Console Switch Hardware and OSCAR® User's Guide and Remote Console Switch Software User's Guide.

NOTE: The Remote Console Switch Software can be used to manage Avocent® A1000R and A2000R Remote Console Switches. Therefore, all procedures outlined in this document refer to both Remote Console Switch and Avocent Remote Console Switches. Exceptions are noted where applicable.

NOTE: Please ensure that all your Remote Console Switches have been upgraded to the most recent version of the firmware. For information on upgrading Remote Console Switch firmware see "Upgrading Firmware" on page 73.

To set up the Remote Console Switch: (See the Remote Console Switch Hardware and OSCAR® User's Guide)

1. Adjust mouse acceleration on each server to **Slow** or **None**.
2. Install the Remote Console Switch hardware, connect a Server Interface Pod (SIP) or Avocent® AVRIQ to each server or tiered switch. Connect each SIP or Avocent AVRIQ to the Remote Console Switch with CAT 5 cabling and connect the keyboard, monitor, and mouse connectors to the analog port of the Remote Console Switch.
3. Connect a terminal to the configuration (serial) port on the back panel of the Remote Console Switch and set up network configuration (set network speed and address type). The IP address can be set here or from the Remote Console Switch Software. Dell recommends using a static IP address for ease of configuration.

4 Using the local port configuration, input all server names via the On-Screen Configuration and Activity Reporting interface (OSCAR®).

NOTE: For 2161DS-2 and 4161DS Console Switches, names can be modified from the **Servers** category or the **MP**. For more information, see "Modifying a Server Name" on page 69.

To set up the Remote Console Switch Software: (See the Installation section of this guide.)

1 Install the Remote Console Switch Software on each client workstation.

2 From one client workstation, launch the Remote Console Switch Software.

3 Click the **New Remote Console Switch** task button to add the new switch to the Remote Console Switch Software database. If you configured the IP address as described above, select **Yes, the product already has an IP address**, otherwise select **No, the product does not have an IP address**. Remote Console Switch Software will find the Remote Console Switch and all SIPs attached to it. These names display in the Explorer.

NOTE: In addition to adding and managing Dell Remote Console Switches using the Remote Console Switch Software, you can also add and manage Avocent® A1000R and A2000R switches.

4 Set properties and group servers as desired into locations, sites or folders through the **Explorer.**

5 Create user accounts through the **MP**.

6 Once one client workstation is set up, select **File - Database - Save** to save a copy of the database with all the settings.

7 From the second client workstation, click **File - Database - Load** and browse to find the file you have saved. Select the file and click **Load**.

8 If the local user (via OSCAR®) adds, deletes or renames any SIPs after you have loaded this file, you can resynchronize your local database with OSCAR® by clicking the **Manage Remote Console Switch** task button and clicking the **Resync** button under the **Settings - Server** tab.

9 To control an attached server select it, in the Explorer, and click the **Connect Video** task button to launch a server session in the **Viewer**.

10 Adjust the resolution (select **View - Manual Scale**) and quality (select **Tools - Manual Video Adjust**) of the server video in the **Viewer**.

Adding a Remote Console Switch or Avocent Remote Console Switch

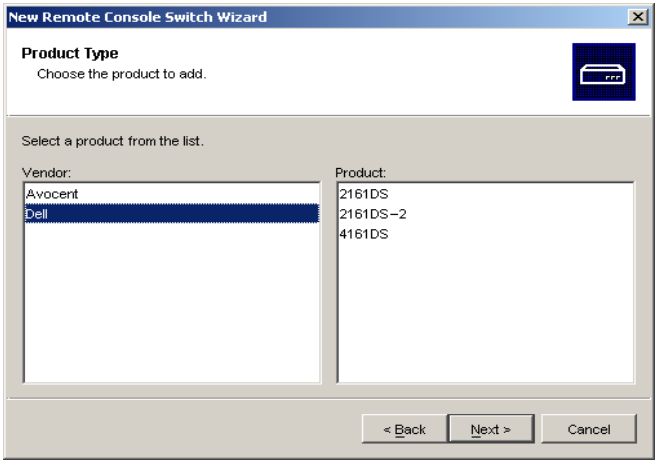
In addition to the Dell Remote Console Switch, the Remote Console Switch Software can also be used to manage Avocent® A1000R and A2000R Remote Console Switches. Therefore, as part of the process of adding a Remote Console Switch to your Remote Console Switch Software database, you will be prompted to select the vendor and product type for the switch you want to add.

Before you can access a unit through the Remote Console Switch, you must add it to the Remote Console Switch Software database. Once a Remote Console Switch or Avocent Remote Console Switch is added, it appears in the **Unit** list. You may either manually add or discover a Remote Console Switch.

To add a new Remote Console Switch with an assigned IP address:

1. Select **File - New - Remote Console Switch** from the Explorer menu.
   -or-
   Click the **New Remote Console Switch** task button. The New Remote Console Switch Wizard appears.
2. Click **Next** to continue. The **Product Type** dialog box appears and prompts you to select the Remote Console Switch vendor and product.

Figure 3-2. Product Type Dialog Box

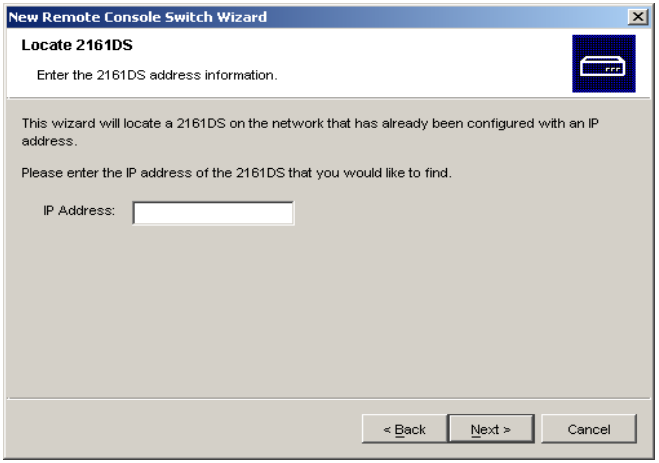


3. Select a **Vendor**. For each vendor, the supported product names appear in the **Product** list. Select a product.

NOTE: In Figure 3-3, a 2161DS Console Switch has been selected. Each dialog box in the **New Remote Console Switch Wizard** indicates the type of switch you have selected from the **Product** list.

4. Click **Next**.
5. You are prompted to indicate whether the Remote Console Switch has an assigned IP address or not. Click **Yes** and then click **Next**.
6. The **Locate** window appears. Type the IP address and click **Next**.

Figure 3-3. Locate Digital Dialog Box



7 The Remote Console Switch Software searches for the indicated unit as well as all the powered SIPs, Avocent AVRIQ's, and server names you associated with it in OSCAR®, if any. If you want to search for unpowered SIPs or Avocent AVRIQs, you can access the Resync feature under the **Servers** category in the **MP** and click to enable the **Include Offline SIPs** check box. For more information, see "Viewing and Resynchronizing Server Connections" on page 67.

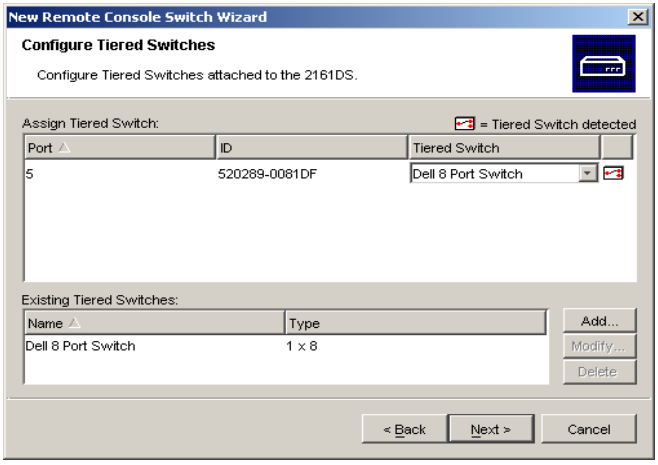
8 Click **Next**.

9 The **Configure Tiered Switches** dialog box appears if the Remote Console Switch Software detects an attached legacy switch. This dialog box contains a list of all SIP Electronic ID numbers (EIDs) retrieved from the Remote Console Switch and the tiered switches to which they are connected, if any. When this dialog box first displays, all the switches will be set to **None**. Switches detected will have an icon next to the drop-down list.

   a The **Existing Tiered Switches** field contains a list of all the current switches defined in the database. Click **Add, Modify, or Delete** to alter the list.

   b Associate the appropriate switch from the drop-down lists for each SIP or Avocent AVRIQ that has a switch attached.

Figure 3-4. Configure Tiered Switches Dialog Box



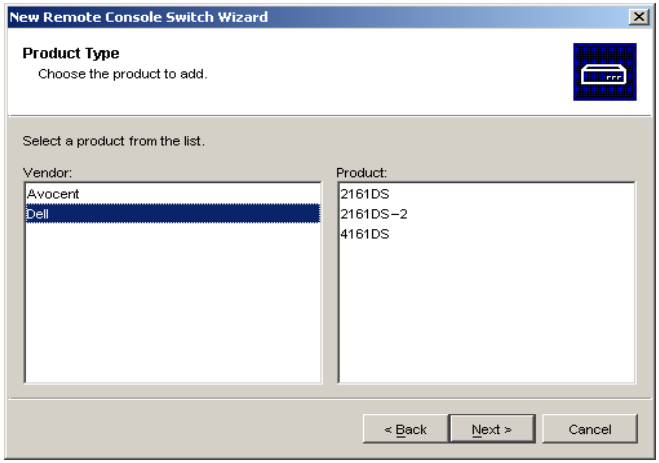
10 When you reach the final page of the **Remote Console Switch Wizard**, click **Finish** to exit and return to the main window. Your Remote Console Switch should now appear in the **Unit Selector** pane.

To add a new Remote Console Switch that does not have an assigned IP address:

1 Select **File - New - Remote Console Switch** from the Explorer menu.
-or-
Click the **New Remote Console Switch** task button. The New Remote Console Switch wizard appears.

2 Click **Next** to continue. The **Product Type** dialog box appears and prompts you to select the Remote Console Switch vendor and product.

Figure 3-5. Product Type Dialog Box



3 Select a **Vendor**. For each vendor, the supported product names appear in the **Product** list. Select a product and click **Next**.

4 You are prompted to indicate if the Remote Console Switch has an assigned IP address. Click **No** and then click **Next**.

5 The **Network Address** window appears. Type the IP address, subnet mask, and gateway you wish to assign to the unit and click **Next**.

NOTE: The 2161DS Console Switch supports BootP (Bootstrap Protocol) and static IP addressing. Dell recommends that IP addresses be reserved for each unit and that they remain static while the 2161DS Console Switch units are connected to the network. The 2161DS Console Switch does not support dynamic IP address assignment or BootP emulation through DHCP. DHCP is supported for both 2161DS-2 and 4161DS appliances.

6 The **Select Remote Console Switch** window appears, prompting you to select the unit to add from the list of new Remote Console Switches that were found. Select the product and then click **Next**.

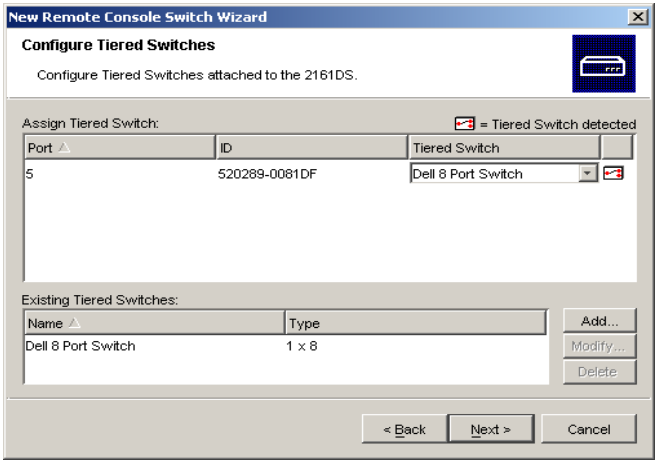
7 The **Configuring Remote Console Switch** window appears to indicate whether the IP information was successfully configured. If the configuration was successful the Remote Console Switch Software will search for the new Remote Console Switch as well as all SIPs, AVRIQs, and server names associated with it. Click **Next**.

8 The **Configure Tiered Switches** dialog box appears if the Remote Console Switch Software detects an attached legacy switch. This dialog box contains a list of all SIP and Avocent AVRIQ EIDs retrieved from the Remote Console Switch and the tiered switches to which they are connected, if any.

   a The **Existing Tiered Switches** field contains a list of all the current switches defined in the database. You may add to, delete or modify the list.

   b Associate the appropriate switch from the drop-down lists for each SIP that has a switch attached.

Figure 3-6. Configure Tiered Switches Dialog Box



9 When complete, click **Finish** to exit the Wizard and return to the main window. Your Remote Console Switch should now be in the **Unit Selector** pane.

To discover a Remote Console Switch:

1 Select **Tools - Discover** from the Explorer menu. The Discover Wizard appears. Click **Next** to continue.

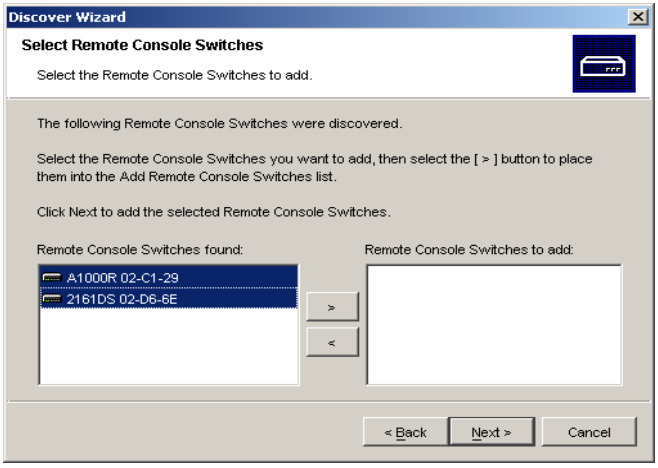
2 The **Address Range** page appears. Type the range of IP addresses you wish to search on the network in the **To** and **From** boxes. Use the IP address dot notation xxx.xxx.xxx.xxx. Click **Next** to continue.

3 The **Searching Network** progress bar appears. Progress text indicates how many addresses have been probed from the total number specified by the range and the number of Remote Console Switches or Avocent Remote Console Switches found. If one or more new Remote Console Switches or Avocent Remote Console Switches are discovered, the Wizard shows the Select Remote Console Switches to Add page. From this page, you can choose the Remote Console Switches to add to the local database.
   -or-

If no new Remote Console Switches were found (or if you clicked **Stop**), the **Wizard** will show the **No New Remote Console Switches Found** page and you will need to add the switch manually. For more information, see the previous procedure.

4 Click the Remote Console Switch(es) you wish to add and click the **Add (>)** button to move the selection to the **Remote Console Switches to Add** list.

Figure 3-7. Select Remote Console Switches to Add Dialog Box



5 Repeat step 4 for all Remote Console Switches you wish to add. Click **Next** to continue.

6 The **Adding Remote Console Switches** progress bar appears while the new switches are being added. Once all of the selected switches have been added to the local database, the **Discover Wizard Completed** page appears. Click **Finish** to exit the Wizard and return to the main window. Your new switches should now be in the **Unit Selector** pane.

7 If one or more switches could not be added to the local database for any reason (including if you clicked **Stop** during the add process), the **Discover Wizard Not All Remote Console Switches Added** page appears. This page will list all of the switches that you selected and the status for each. The status will indicate if a Remote Console Switch was added to the local database and if not, why the process failed. Click **Done** when you are finished reviewing the list.

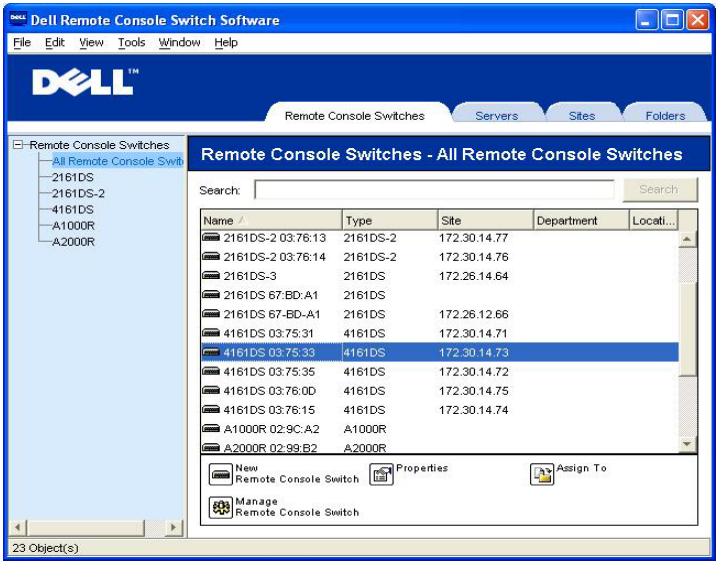
NOTE: If a Remote Console Switch already exists in the database with the same IP address as a discovered unit, then the discovered switch will be ignored and will not display on the next Wizard page.

Accessing Your Remote Console Switch

When you click the **Remote Console Switches** tab, you will see a list of the switches currently defined in the local database. To access a Remote Console Switch, you must first log into it by typing a username and password. The default username is Admin (case sensitive) with no password. Once you have logged in to a particular Remote Console Switch, the Remote Console Switch Software will cache the username and password in memory for the duration of the Remote Console Switch Software session.

NOTE: You can clear the login credentials an re-login under another username and password by selecting **Tools - Clear Login Credentials**.

Figure 3-8. Remote Console Switch View Tab Selected



To log into a Remote Console Switch:

1. Click the **Remote Console Switches** tab in the Explorer.
2. Double-click a Remote Console Switch in the **Unit Selector** pane.
   -or-
   Select a Remote Console Switch from the **Unit Selector** pane, and click the **Manage Remote Console Switch** task button.
   -or-
   Right-click on a Remote Console Switch in the **Unit Selector** pane. A pop-up menu appears. Select **Manage Remote Console Switch**.
   -or-
   Click a Remote Console Switch in the **Unit Selector** pane and press <Enter>.

3. A login prompt appears. Type your username and password. If this is the first time you have accessed the Remote Console Switch or you have not assigned a username and password, type the default username, Admin (case sensitive), with no password.
4. Click **OK** to access the Remote Console Switch. This launches the MP. For more information about the MP, see "Managing Your Remote Console Switch" on page 57.
   -or-
   Click **Cancel** to exit without logging in.

To search for a Remote Console Switch in the system:

1. Click the **Remote Console Switch** tab and insert your cursor in the search text box.
2. Type the search information. This can be the Remote Console Switch name or any information you have entered in the other **Unit Selector** list headings such as **Type** or **Location** or IP Address.
3. Click the **Search** button. The results appear in the **Unit** list.
4. Review the results of your search.

   -or-

   Click the **Clear Results** button to display the entire list again.

To auto search by typing in the **Unit** list:

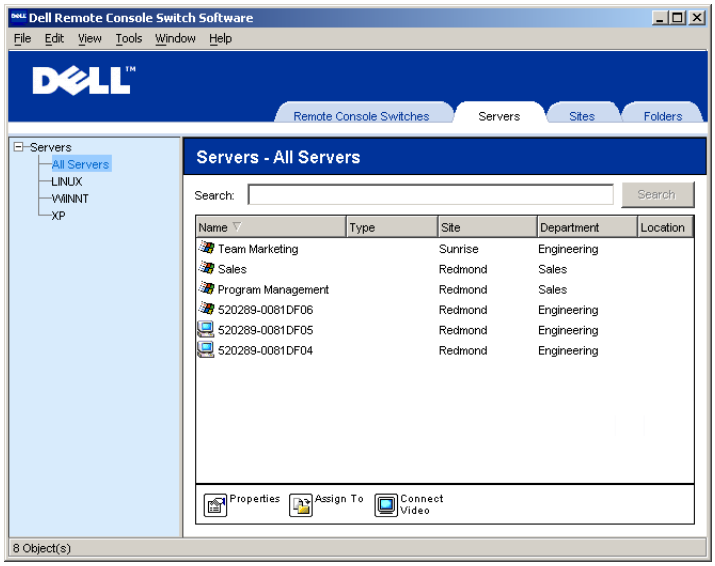
1. Click the **Remote Console Switch** tab.
2. Type the first few characters of a Remote Console Switch name. The highlight will move to the first Remote Console Switch beginning with those characters. If you pause for a second or more between letters, the function will reset itself and you can begin to type the first few characters of the next Remote Console Switch.

Accessing and Managing Your Servers

The **Servers** tab displays a list of servers defined in the database. The **Group Selector** pane appears displaying a tree view containing all of the unique server types that are defined in the database. The **Group Selector** pane only appears if two or more server types are defined. You can either click **All Servers** or click on a folder to view all the servers of a particular type. When you select a server and click the **Connect Video** task button, the **Viewer** launches. The **Viewer** allows you full keyboard, monitor and mouse control over a server.

You can also scan through a customized list of servers by enabling individual servers to appear in the **Thumbnail Viewer.** This view contains a series of thumbnail frames, each containing a small, scaled, non-interactive version of a server's screen image. For more information, see "Viewing Multiple Servers Using the Scan Mode" on page 35.

Figure 3-9. Server View Tab Selected



To access a server:

1. Click the **Servers** tab in the Explorer.
2. Select a server to access in the **Unit Selector** pane.
3. Click the **Connect Video** task button.
   -or-
   Right-click on the server. A pop-up menu appears. Select **Connect Video**.
   -or-
   Double-click the server name.
   -or-
   Press <Enter>. The **Viewer** launches in a new window.

To search for a server in the system:

1. Click the **Servers** tab and insert your cursor in the search text box.
2. Type the search information. This can be the server name or any information you have entered in the other **Unit Selector** list headings such as **Type** or **Location**.
3. Click the **Search** button. The results appear in the **Unit** list.
4. Review the results of your search.
   -or-
   Click the **Clear Results** button to display the entire list again.

To auto search by typing in the **Unit** list:

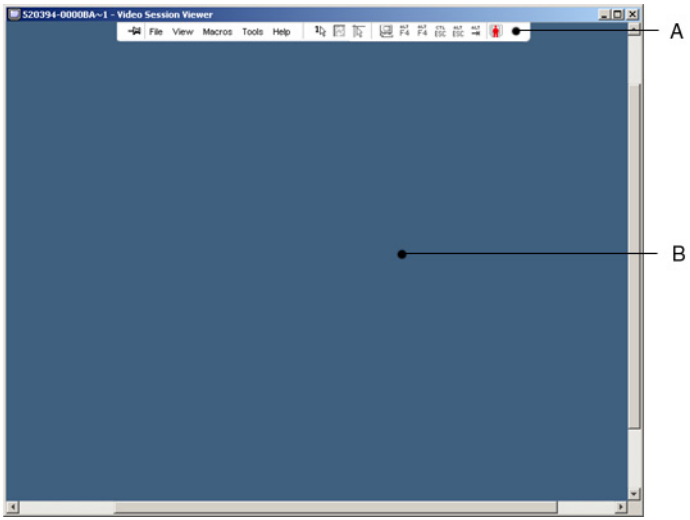
1. Click the **Servers** tab.
2. Type the first few characters of a server name. The highlight will move to the first server beginning with those characters. If you pause for a second or more between letters, the function will reset itself and you can begin to type the first few characters of the next server.

Interacting With the Server Being Viewed

Once you have connected to a server, you will see the desktop window of the server on your screen. This opens in a separate window. You will see two cursors, the local cursor and the server's cursor. You may need to align these if they do not move together or adjust the video if they seem to jump about. From this window, you will be able to access all the normal functions of this server as if you were sitting right in front of it. You may also perform **Viewer**-specific tasks such as sending special macro commands to the server.

Viewer Window Features

Figure 3-10. Viewer Window

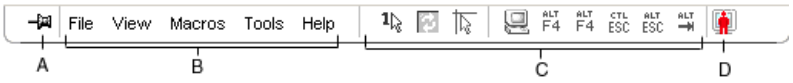


A **Menu bar:** Access many of the features in the Viewer.

B **Accessed server desktop:** Interact with your server through this window.

Viewer Menu bar

Figure 3-11. Viewer Menu Bar



A **Thumbtack:** Click to lock the menu bar in place. This prevents the menu bar from hiding once you have moved the mouse cursor away from the menu bar.

B **Menu Options:** The menus provides access to functions available through the Viewer.

C **Toolbar Buttons:** You may add up to 10 buttons to the tool bar. These buttons allow you to provide easy access to defined functions and keyboard macros. By default, the Align Local Cursor, Refresh Image, and Single Cursor Mode buttons are displayed.

D **Connection Status Indicator:** The connection status indicator indicates how the user is connected to the appliance for this server. For more information see "Connection Sharing" on page 44.

Connection Status Indicator	Sharing Mode
	Exclusive Mode
	Active Connection (normal, non-sharing, non-exclusive session)
	Active Sharing (Primary User)
	Active Sharing (Secondary User)
	Passive Sharing
	Stealth Mode

Adjusting the Viewer

You can adjust the **Viewer** settings to match your requirements. This includes adjustment of the video resolution, toolbar settings, and keyboard macro settings.

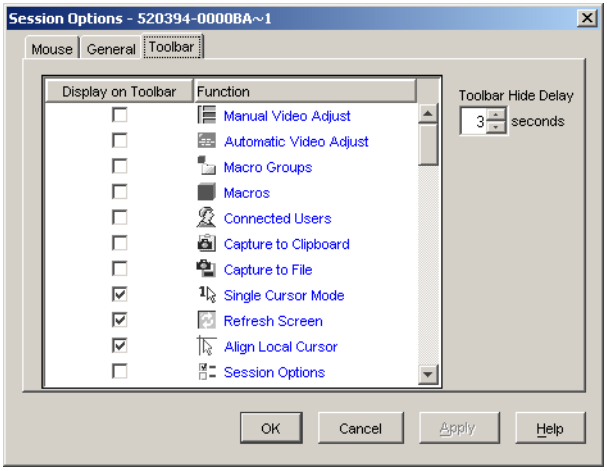
Adjusting the Viewer Tool bar

You may add up to 10 buttons to the toolbar. These buttons allow you to provide easy access to defined function and keyboard macros. By default, the **Align Local Cursor, Refresh Image**, and **Single Cursor Mode** buttons are displayed.

To add buttons to the toolbar:

1. From the **Tools** menu, choose **Session Options.** The Session Options toolbar is displayed.
2. Click the **Toolbar** tab.
3. Click to select the items you want to add to the **Viewer** toolbar.
4. Click **OK** to accept the changes and return to the **Viewer** main window.

Figure 3-12. Session Options Dialog Box - Toolbar Tab



Setting the Toolbar Hide Delay Time

Unless the **Thumbtack** button has been clicked, the toolbar will disappear when you remove the mouse cursor. You can change the interval between the removal of the mouse cursor and the disappearance of the toolbar by adjusting the **Toolbar Hide Delay** time.

To change the **Toolbar Hide Delay** time:

1. From the **Tools** menu, choose **Session Options.** The Session Options toolbar is displayed.
2. Click the **Toolbar** tab.
3. In the **Toolbar Hide Delay** field, type the number of seconds for which you want the toolbar to display, after the mouse cursor is removed.
   - or -
   Using the **Up** and **Down** button, click to increase or decrease the number of seconds for which you want the toolbar to display, after the mouse cursor is removed.
4. Click **OK** to accept the change you have made and return to the **Viewer** main window.

Expanding and Refreshing Your Viewer

By default, there are three buttons that display on the **Viewer** toolbar that allow you to adjust the **Viewer** display. The first button allows you to set the **Viewer** to **Single Cursor Mode**. This allows you to use the mouse in the **Viewer** as if it was the mouse on the server. When the Viewer is set to Single Cursor mode the local cursor is not displayed.

NOTE: Single Cursor mode operates on Windows platforms only.

The second button allows you to align the mouse cursors, the third allows you to refresh the video.

Figure 3-13. Viewer Toolbar- Display Adjustment Buttons

To set the Viewer to Single Cursor mode:

In the **Viewer** toolbar, click the **Single Cursor Mode** button.

To align the mouse cursors:

Click the **Align Local Cursor** button on the Viewer toolbar. The local cursor will align with the cursor on the remote server.

To refresh the screen:

Click the **Refresh Image** button on the Viewer toolbar.
-or-
From the Viewer menu, select **View - Refresh**. The digitized video image will be completely regenerated.

To enter full screen mode:

Click the **Maximize** button in the top right-hand corner of the **Viewer**.
-or-
From the **Viewer** menu, select **View - Full Screen**. The desktop window will disappear and only the accessed server desktop will be visible. The screen will be resized up to a maximum of 1024x768. If the desktop has a higher resolution, then a black background will surround the full screen image. The floating toolbar will appear.

To exit full screen mode:

Press <Esc> to exit full screen mode and return to the desktop window.

Adjusting the Viewer Window

You can adjust both the size and quality of the server's **Viewer**. You can also expand your **Viewer** to fit the entire screen or refresh the view at any time.

Adjusting the Viewer Resolution

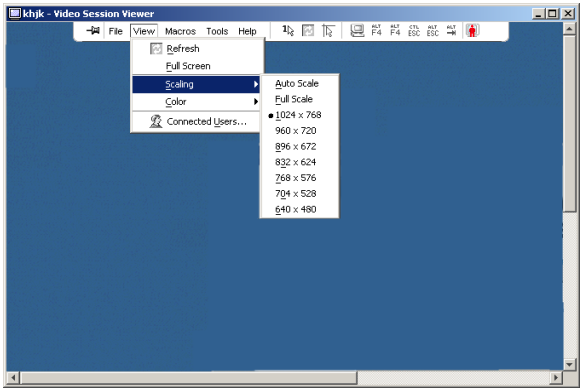
If **Auto Scale** is enabled, the Remote Console Switch Software automatically adjusts the display when the **Viewer** window size changes during a session. When you access a channel using sharing, the display is adjusted to match the input resolution selected by the primary user of that channel. This prevents the primary user's display from being affected. If the resolution changes any time during a session, the display is adjusted automatically.

When **Full Scale** is selected, the **Viewer** adjusts to the screen resolution of the server and sets the screen size accordingly, up to a maximum resolution of 1024 x 768.

To adjust the size of the **Viewer** window:

From the menu bar, select **View - Scaling - Auto Scale** to allow the server image to be scaled automatically.
or
From the menu bar, select **View - Scaling - Full Scale**
or
Select a screen resolution from the **Scaling** sub-menu.

Figure 3-14. Viewer Scaling



Adjusting the Video Quality

The **Viewer** offers both automatic and manual video adjustment capability. Generally, the **Automatic Video Adjustment** will optimize the video for the best possible view. However, you may wish to alter the video for your specific needs. Use the slider bar for large adjustments and the **Plus (+)** and **Minus (-)** buttons are designed for fine-tuning adjustments.

Adjusting Color Depth

NOTE: The **Color** command may only be used by the primary user. The command is not available to non-primary users who are sharing the session.

NOTE: If Background Refresh is enabled from the Session Options dialog, the color depth will be set automatically to Best Color Available and cannot be changed.

The **Color** sub-menu allows you to set the color depths at which the digital image can be compressed. The 2161DS-2 and 4161DS Remote Console Switches support the Dambrackas Video Compression (DVC) algorithm, which enables the Remote Console Switch Software users to adjust the number of viewable colors in a remote session window. You may choose to display more colors for the best fidelity, or fewer colors to reduce the volume of data transferred on the network.

The **Viewer** window can be viewed using the **Best Color Available (slower updates)**, **Best Compression (fastest updates)**, a combination of **Best Color** and **Best Compression** or in **Grayscale**.

The color depths of individual ports and channels can be specified by selecting the **View - Color** command in a **Remote Session** window. These settings are saved individually per port and channel.

To set the color depth:

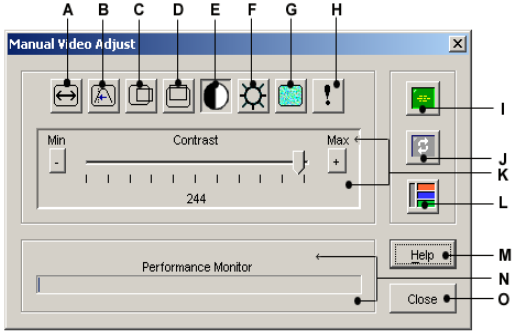
From the **View** menu, choose **Color** and select a color depth from the **Color** sub-menu.

To manually adjust the video quality of the **Viewer** window:

1. Select **Tools - Manual Video Adjust**. The **Manual Video Adjust** dialog box appears.
2. Click the icon for the feature you wish to adjust.
3. Move the slider bar or click the **Minus (-)** or **Plus (+)** buttons to adjust the parameter for each icon pressed. The adjustments will display immediately in the **Viewer** window.
4. When finished, click **Close** to exit the **Manual Video Adjust** dialog box.

Manual Video Adjust Dialog Box Options

Figure 3-15. Manual Video Adjust Dialog Box



A Image Capture Width

B Pixel Sampling Fine Adjust

C Image Capture Horizontal Position

D Image Capture Vertical Position

E Contrast

F Brightness

G Noise Threshold

H Priority Threshold

I Automatic Video Adjustment

J Refresh Image

K Adjustment bar

L Video Test Pattern

M Help button

N Performance Monitor

O Close box

Minimizing Remote Video Session Discoloration

When establishing remote video sessions, pixel discolorations may occur due to network conditions. This condition occurs most often with a solid color background. This condition is minimized by using a black background. If a color background is used, a small number of pixels on the screen will be discolored or white.

To minimize remote video pixel discoloration:

1. On the client system, launch the Remote Console Switch Software.
2. From the Management screen, go to **Tools - Manual Video Adjust**.
3. Choose contrast or brightness.
4. Incrementally, adjust the contrast and brightness until the image quality improves.
5. A noise threshold setting is also available under **Tools - Manual Video Adjust** for fine incremental adjustments.

NOTE: Reducing the noise threshold to zero causes constant video refresh, high network usage and a flickering video. Dell recommends that the noise threshold be set to the highest level that allows efficient system performance, while still being able to recover pixel colors over which the mouse cursor travels.

NOTE: When adjusting the noise threshold, use the slider bar for large adjustments and the Plus (+) and Minus (-) buttons at the ends of the slider bar for fine-tuning.

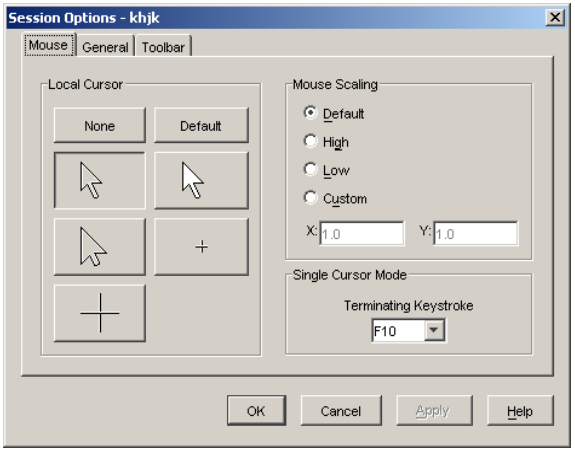
Improving Screen Background Color Display

You may experience inconsistent color display when viewing target servers where photographic images or color-intense gradient backgrounds have been selected. We recommend that you select a solid color display background via the operating system for optimal display quality and performance.

Adjusting the Mouse

The **Viewer** allows you to select between five different mouse cursor options, set up mouse scaling and resynchronize your mouse should it no longer track properly. Dell recommends turning off the local cursor by setting the **Local Cursor** option to **None**. This will leave only one cursor on the screen, the remote cursor, and will simplify navigation.

Figure 3-16. Viewer Mouse Session Options dialog box



Setting Mouse Scaling

You can choose between three preset mouse scaling options or set your own custom scaling. The three preset settings are: **Default (1:1), High (2:1) or Low (1:2)**. In a 1:1 scaling ratio, every mouse movement on the desktop window will send an equivalent mouse movement to the server. In a 2:1 scaling, the same mouse movement will send a 2X mouse movement. In a 1:2 scaling, the value will be 1/2X.

To set custom mouse scaling:

1. Select **Tools - Session Options**. The **Session Options** dialog box appears.
2. Click the **Mouse** tab.
3. Click the **Custom** radio button. The **X** and **Y** fields become enabled.
4. Type the mouse scaling values you wish in the **X** and **Y** fields. For every mouse input, the mouse movements are multiplied by the respective X and Y scaling factors. Valid input ranges are 0.25 to 3.00.

Minimizing Mouse Trailing

During a remote video session, as the mouse moves on the screen, some pixels will remain discolored. This condition is referred to as mouse trailing, and is due to varying levels of network and other noise in different environments. To minimize mouse trailing, you may need to reduce the **Noise Threshold** in the **Manual Video Adjust** dialog box.

To reduce the Noise Threshold:

1. Select **Tools - Manual Video Adjust**. The **Manual Video Adjust** dialog box appears.
2. Click the **Noise Adjust Threshold** icon for the feature you wish to adjust.
3. Using the mouse, move the slider bar to the center of the scale, and then down to zero.
4. Use the **Plus (+)** and **Minus (-)** buttons at the end of the slider bar to fine-adjust the noise threshold to just above zero.

NOTE: Leaving the noise threshold at zero triggers constant video refresh, resulting in high network usage and a flickering video. It is recommended that the noise threshold be set at the highest level that allows efficient system performance, while still being able to recover pixel colors that the mouse cursor travels over.

NOTE: When adjusting the noise threshold, the slider bar is used for large adjustments and the **Plus (+)** and **Minus (-)** buttons at either end of the slider bar for fine-tuning.

Improving Mouse Performance

If you are experiencing slow mouse response during a remote video session, you may want to deactivate the mouse acceleration in the operating system of the target server.

Microsoft Windows 2000 Default Mouse Drivers:

1. Select **Start - Settings - Control Panel**.
2. Double-click the **Mouse** icon.
3. Click on the **Motion** tab.
4. Adjust mouse speed to the exact midpoint of the slider bar.
5. Click **OK**. Use the **Align Local Cursor/Mouse** button in the **Viewer** to resynchronize the mouse.

Microsoft Windows XP and Server 2003 Default Mouse Drivers:

1. Select **Start - Settings - Control Panel**.
2. Double-click the **Mouse** icon.
3. Click on the **Pointer Options** tab.
4. Adjust mouse speed to the exact midpoint of the slider bar.
5. In the Acceleration setting, select the **Off** radio button.
6. Click **OK**. Use the **Align Local Cursor/Mouse** button in the **Viewer** to resynchronize the mouse.

Intellipoint Drivers (Only for Windows based Operating Systems):

1. Select **Start - Settings - Control Panel**.
2. Double-click the **Mouse** icon.
3. Cycle through the tabs until the pointer speed slider is displayed.
4. Adjust the mouse speed to the exact midpoint of the slider bar.
5. Click the **Advanced** button.
6. Click the **Acceleration** check box to turn off acceleration.
7. Click **OK**. Use the **Align Local Cursor/Mouse** button in the **Viewer** to resynchronize the mouse.

Red Hat Linux:

1. Select the **Mouse** settings from the **Desktop Controls**.
2. Set **Acceleration** to 1.0.
3. Apply the changes and use the **Align Local Cursor/Mouse** button in the **Viewer** to resynchronize the mouse.

Reducing Mouse Cursor Flickering

If the video driver on the Remote Console Switch Software client machine does not support DirectDraw and the **DirectDraw** option in the Remote Console Switch Software has been activated, the mouse cursor will flicker on the screen. The Remote Console Switch Software factory default has DirectDraw disabled. If the video driver on the client system supports DirectDraw and the additional performance is desired, follow the instructions below to enable DirectDraw.

To enable or disable DirectDraw:

1. In the Explorer window, select **Tools - Options**.
2. Click to enable or disable the **DirectDraw** check box.
3. Click **OK**.
4. Restart the Remote Console Switch Software.

Viewing Multiple Servers Using the Scan Mode

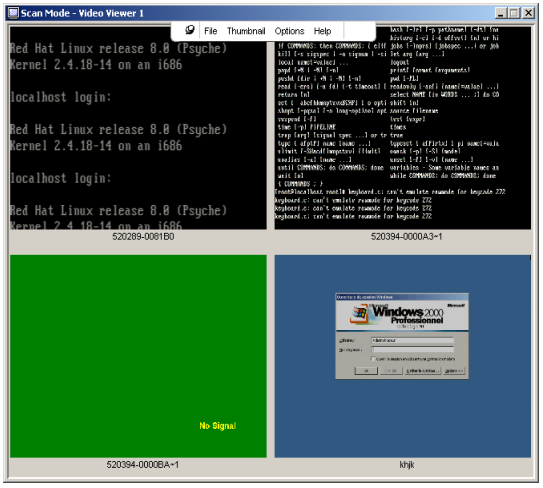
The Viewer allows you to simultaneously view multiple servers through the Thumbnail Viewer of the **Scan** mode. This view contains a series of thumbnail frames, each containing a small, scaled, non-interactive version of a server's screen image. The server name displays below each thumbnail as well as the status indicator.

Scanning Your Servers

Using the **Thumbnail** Viewer, you can set up a scan sequence of up to 16 servers to monitor your servers. The scan mode moves from one thumbnail image to the next, logging into a server and displaying an updated server image for a user-specified length of time (**View Time Per Server**), before logging out of that server and moving on to the next thumbnail image. You can also specify a scan delay between thumbnails (**Time Between Servers**). During the delay, you will see the last thumbnail image for all servers in the scan sequence, though you won't be logged into any servers.

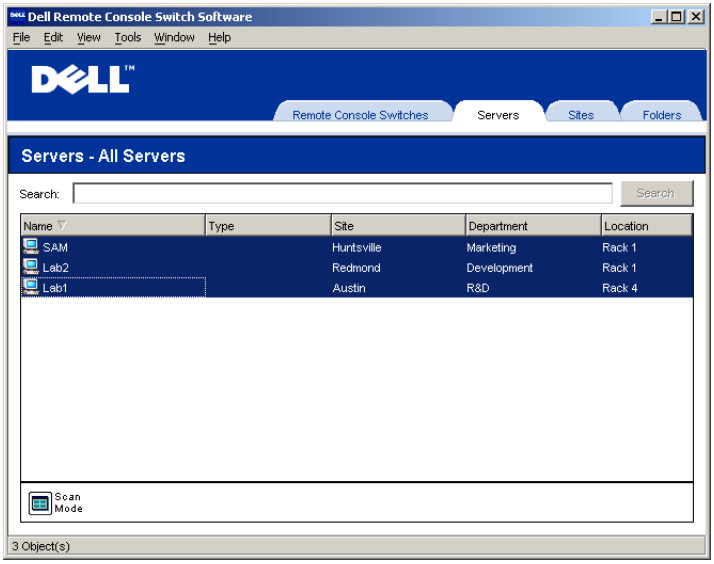
An indicator light at the bottom of each frame displays the status of the server. The default thumbnail size is based on the number of servers in the scan list.

Figure 3-17. Viewer - Thumbnail Viewer



Scan mode is a lower priority than an active connection. If you have an interactive session with a server, that server will be skipped in the scan sequence and the scan mode will proceed to the next server. No login error messages will appear. Once the interactive session is closed, then the thumbnail will be included in the scan sequence again. If another user has an active connection to a server, the server will be skipped and a red "X" will be displayed in the indicator light below the frame.

Figure 3-18. Viewer - Scanning Servers



To access the Scan mode:

1. Select the **Servers, Sites** or **Folders** tab.
2. Select two or more servers in the **Unit Selector** pane by pressing the <Shift> key.
   -or-
   Press the <Ctrl> key. The **Scan Mode** task button appears.
3. Click the **Scan Mode** task button. The **Thumbnail Viewer** window appears.

Thumbnail View Status Indicators

The green LED indicates that a server is currently being scanned. The red X indicates that the last scan of the server was not successful. The scan may have failed due to a credential or path failure (the server path on the Remote Console Switch was not available), or because of some other reason. When the mouse pointer is placed on the red X a tool tip appears and indicates the reason for the failure.

Setting up your Scanning Preferences

To set scan preferences:

1. From the Thumbnail Viewer, select **Options - Preferences.** The **Preferences** dialog box appears.
2. Enter the time each thumbnail will be active during the scan (10 to 60 seconds) in the **View Time Per Server** box.
3. Enter the length of time the scan stops between each server (5 to 60 seconds) in the **Time Between Servers** box.
4. Click **OK**.

Navigating the Thumbnail Viewer

When you highlight an individual thumbnail frame and select the **Thumbnail** menu, you can launch an interactive session to that server, add that server to the scan sequence or set the login credentials for that server. The **Options** menu allows you to access scanning preferences as well as pause the scan and set the thumbnail size for all servers.

To launch a server Video session:

1. Select a server thumbnail.
2. From the Thumbnail Viewer, select **Thumbnail - [server name] - View Interactive Session.**
   -or-

   Right-click a server thumbnail and select **View Interactive Session**. That server's video will be launched in an interactive **Viewer** window.

To enable or disable a server in the scan sequence:

1. Select a server thumbnail.
2. From the Thumbnail Viewer, select **Thumbnail - [server name] - Enable**.
   -or-

   Right-click a server thumbnail and select **Enable**. That server will be included/excluded in the server thumbnail scan sequence.

NOTE: The Enable menu item state can be toggled from checked (enabled) to unchecked (disabled) each time it is selected.

NOTE: If a server is being accessed by a user, the **Enable** menu will be disabled for that server thumbnail.

To pause or restart a scan sequence:

1. From the Thumbnail Viewer, select **Options - Pause Scan**. The scan sequence will pause at the current thumbnail if the Thumbnail Viewer has a scan in progress or will restart the scan if currently paused.

To change the thumbnail size:

1. From the Thumbnail Viewer, select **Options - Thumbnail Size**.
2. Select the desired thumbnail size from the menu.

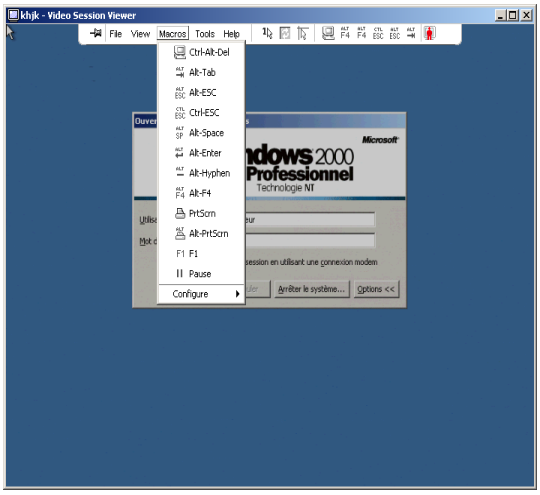
Using Macros to Send Keystrokes to the Server

The **Macros** menu in the Viewer allows you an easy way to send multiple keystrokes to the server. The Viewer provides a list of default keystroke selections. However, you may set up your own macros by using the **Configure** option at the bottom of the **Macros** drop-down list as well as change the set that displays by default.

To send keystrokes to the server:

Click the **Macro** menu in the Viewer and choose the name of the macro containing the keystrokes you wish to send to the server. Figure 3-19 shows the default macros that ship with the Remote Console Switch Software. If you do not see the name of the macro you wish, select **Configure > Macros** to access the **Macros** dialog box. Here you can create, modify, delete and copy macros.

Figure 3-19. Viewer Macro Menu Expanded



To change the default Macro group:

1. Select **Macros - Configure - Macro Groups** in the Viewer. The **Macro Groups** dialog box appears.
2. Select **Windows** or **Sun** from the **Defined Groups** list.
3. Click to select the **Display on Menu** check box.
4. Click **Close**.

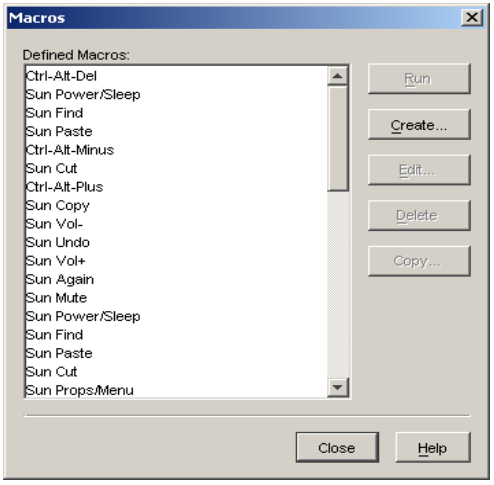
Creating New Macros

You can create custom macro keystrokes as well as modify and delete existing macros through the **Macros** dialog box.

To create a new macro:

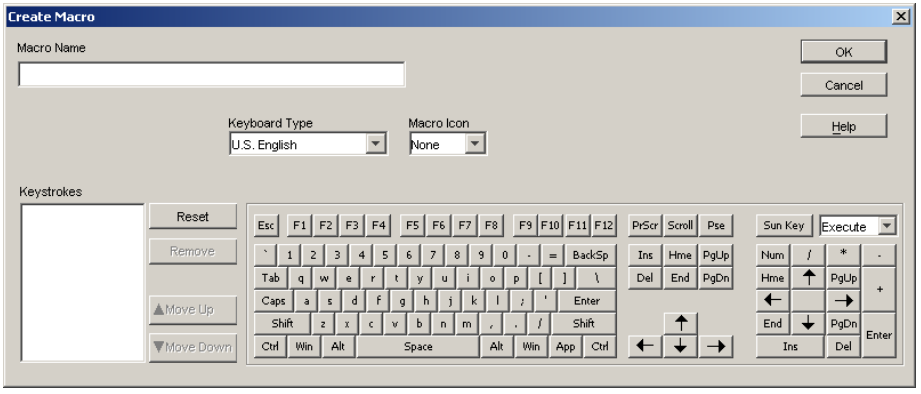
1. Select **Macros - Configure - Create** from the **Viewer**. The **Macro** dialog box appears.

Figure 3-20. Viewer Macros dialog box



2 Click **Create**. The **Create Macro** dialog box appears.

Figure 3-21. Create Macro dialog box



3 Type the name of the macro in the **Macro Name** field.

4 Select the keyboard layout from the **Keyboard Type** list.

5 Select the icon that will appear to denote the macro from the **Macro Icon** list.

6 Using the on-screen keyboard, type the keystrokes you wish to send in the **Keystrokes** field.

7 Click **OK** to accept the macro and return to the **Macros** dialog box.
-or-
Click **Reset** to erase all the keystrokes entered in the **Keystrokes** box.

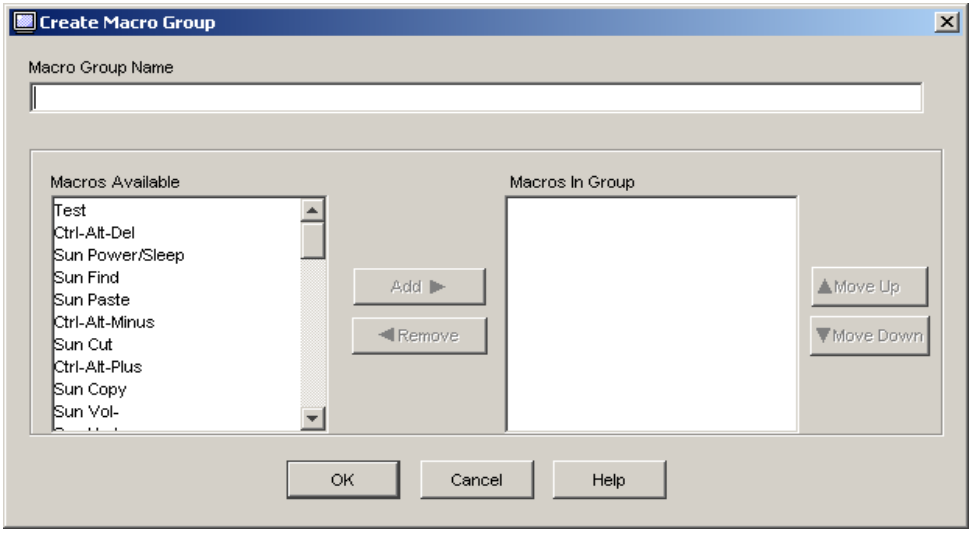
Grouping Macros

The **Macro Groups** dialog box allows you to arrange macros into logical groups. Macro groups for Windows and Sun are already predefined. However, you can alter these groups or create an entirely new group. You can also rename and delete groups that have been previously created.

To create a macro group:

1. Select **Macros - Configure - Macro Groups** from the Viewer. The **Macro Groups** dialog box appears.
2. Click **Create.** The **Create Macro Group** dialog box is displayed.

Figure 3-22. Viewer Create Macro Group Dialog Box



3. Type a name. Click **OK** to save the name and return to the **Macro Groups** dialog box. A tab with the new name appears.

To add macros to an existing group:

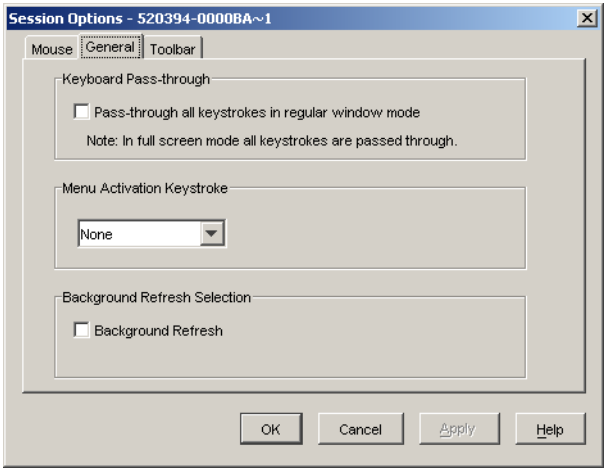
1. Select **Macros - Configure - Macro Groups.** The **Macro Groups** dialog box is displayed.
2. Click to select a pre-defined macro group and click **Edit.** The **Edit Macro Group** dialog box is displayed.
3. Click on the macro you wish to add from the **Macros Available** pane on the left side of the dialog box. Click the **Add** button. The macro appears in the **Macros in Group** box. Use the **Move Up** and **Move Down** buttons to move the macro up or down.
4. Repeat step 3 until all the macros you grouped appear in the **Macros In Group** box.
5. Click **OK** to accept the macro group and return to the **Macros** dialog box.
   -or-
   Click **Cancel** to leave this dialog box without saving changes.

Session Options General Tab

The **General** tab in the Session Options dialog box allows you to control the **Keyboard Passthrough** option in non-full screen mode, the **Menu Activation Keystroke** and the **Background Refresh** selection.

The **Keyboard Pass-through** check box allows you to specify whether **Keyboard Pass-through** mode is enabled, or not. The **Keyboard Pass-through** option is not selected by default.

Figure 3-23. Session Options - General Tab



The **Menu Activation Keystroke** list allows you to select a keystroke that activates the toolbar.

The Background Refresh check box allows you to specify whether background refreshing occurs. When this option is selected the **Viewer** is sent a constant stream of data from the device whether or not a change has occurred on the device.

Screen Capturing

The **Viewer** allows you to capture the contents of the screen and to save it to a file or to copy it to the clipboard.

To capture a screen as a file:

1. In the **Viewer,** choose **File - Capture to File.** The **Save** dialog is displayed.
2. Browse to the location where you want to save the file.
3. In the **File Name** field, type a file name and click **Save**.

To copy a screen to the clipboard:

In the **Viewer,** choose **File - Capture to Clipboard.** The image is saved to the clipboard and can be pasted into a document or image editing application.

NOTE: The Capture to Clipboard function is not available in Linux.

Preemption

Preemption provides a means for users with sufficient privilege to take control of a server from another user with lesser or equal privilege.

NOTE: No time period will be displayed in cases where the server being viewed is attached to an Avocent A1000R or Avocent A2000R.

NOTE: All users sharing the connection that is being preempted will be warned, but only the primary user will be able to reject the preemption (if allowed).

Table 3-1 outlines the preemption scenarios and detailed scenarios in which preemption requests can be rejected.

Table 3-1. Preemption Scenarios

Current User	Preempted by	Preemption can be rejected
Remote User	Local User	No
Remote User	Remote Administrator	No
Remote User	Remote Console Switch Administrator	No
Remote Console Switch Administrator	Local User	Yes
Remote Console Switch Administrator	Remote Console Switch Administrator	Yes
Remote Administrator	Local User	No
Remote Administrator	Remote Administrator	Yes
Remote Administrator	Remote Console Switch Administrator	No
Local User	Remote Administrator	Yes
Local User	Remote Console Switch Administrator	Yes

Preemption of Remote User by a Remote Administrator

If a remote administrator attempts to access a server that is being accessed by a remote user, a message appears asking that the administrator waits while the user is informed that they will be preempted. The remote user cannot reject the preemption request and will be disconnected. The time period given before disconnection is defined by the Video session preemption timeout setting in the **Session** dialog box. For information, see "Changing Global Network and Session Parameters" on page 58.

NOTE: No time period will be displayed in cases where the server being viewed is attached to an Avocent A1000R or Avocent A2000R.

Preemption of a Local User/Remote Administrator by a Remote Administrator

If an administrator attempts to access a server that is being accessed by the local user or by another remote administrator with equal privileges, the currently connected user can accept or reject the preemption request. A message appears asking the connected local user or remote administrator whether they want to accept the preemption request. If the preemption request is rejected a message appears informing the remote administrator that their request has been rejected and that they cannot access the server.

NOTE: If the server being viewed is attached to an Avocent A1000R or A2000R the user is not given the option to accept or reject preemption.

NOTE: In scenarios where a preemption request can be rejected, the **Session Preemption Request** dialog box will appear. This dialog allows you to accept the preemption request by clicking the Accept button or to reject the preemption request by clicking the Reject button or by closing the dialog box.

Connection Sharing

Connection sharing allows multiple users to interact with a target device at the same time. When you are a primary user, you may be notified by a dialog box that another user would like to share your connection. You may select **Yes** to accept sharing, **No** to reject sharing, or click the **Passive Share** box to allow the new user to share without having any control over the connection.

When you attempt to open a video session with a device that is already being viewed by another user, you are notified that the device is already being viewed. Depending on the configuration of sharing settings, you may be offered the option to share or preempt the video session. You may also be offered the option to open a stealth video session.

NOTE: Stealth video sessions are passive Video sessions, where the primary user is not aware of the presence of the secondary user. The ability to open a stealth video session is governed by the privilege of the user. If a user can preempt another user, they can also open a Stealth video session.

Access to the device is governed by the nature of the current user's connection to the device. There are two types of Video Session users: a Primary user and up to 11 simultaneous Secondary users (a single 2161DS-2 or 4161DS appliance supports up to 12 simultaneous sessions across all attached servers). Only the Primary user can accept or reject preemption requests for all users sharing a connection. The Primary user also maintains control of video parameters and the display resolution of the Video session.

Secondary users may be either Active users who have the ability to input mouse and keyboard data, or Passive users who may not input mouse and keyboard data.

If **Automatic Sharing** is enabled on the Remote Console Switch, Secondary Users do not need the permission of the Primary User to join the session.

If a Primary user leaves the session then the oldest Secondary user with Active user privileges will become the Primary user. If there are no Secondary users with Active user privileges sharing the session when the Primary user leaves the session, then the session will be closed.

For more information about configuring connection sharing, see "Changing Global Network and Session Parameters" on page 58.

Exclusive Mode

Exclusive Mode allows you to have exclusive control of a Video session. When in **Exclusive Mode**, no other user can share the session (except in **Stealth** mode). If other users are sharing the session when you select **Exclusive Mode,** you are warned that selecting **Exclusive Mode** will cause the other users to become disconnected from the session.

NOTE: Only the Primary user can request an Exclusive session. If other users are sharing at the time Exclusive Mode is requested, they are disconnected, regardless of the Primary users access level.

To open a Video session in **Exclusive** mode:

In the **Viewer,** choose **Tools - Exclusive Mode**.

Changing Server Properties

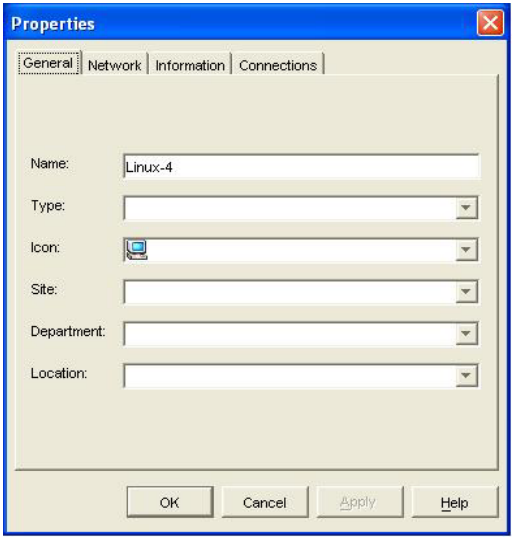
You can alter individual server properties from the **Properties** dialog box including **General, Network, Information**, and **Connections**. The **General** tab allows you to change the server name, server type and the icon that will be used to display the server in the Remote Console Switch Software. You may also assign the server to a site, location or folder. The **Network** tab lets you set a browser URL for that server if you want to launch a browser to the server's web server instead of launching a Viewer session. The **Information** tab allows you to enter information about the server including a server description, contact information and any comments you might wish to add. Lastly, the **Connections** tab displays the physical connection path that is used to access this server and the connection type, such as video.

NOTE: You can also change the properties of your Remote Console Switch. For more information, see "Changing Remote Console Switch Properties" on page 79.

To change server properties:

1. Click the **Server** tab and then select an individual server in the **Unit Selector** list.
2. Select **View - Properties** from the Explorer menu.
   -or-
   Click the **Properties** task button.
   -or-
   Right-click the server and select **Properties**. The **Properties** dialog box appears.

Figure 3-24. Server General Properties tab



3 Type the name of the server. Duplicate names are not allowed.

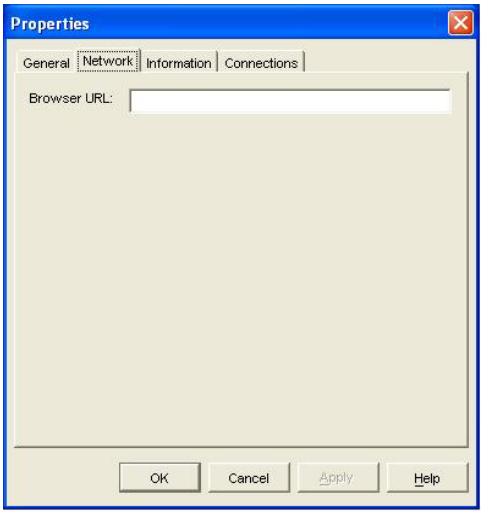
4 (Optional) Select the server type. If the selection is not in the drop-down list, type the name of the new server type in the text field. Once entered, the option becomes available in the drop-down list for future assignment.

5 Select the icon to display for the unit.

6 (Optional) Assign a server to a site, department or location. If an option is not in the drop-down list, type the name of the new assignment in the text field. Once entered, the option becomes available in the drop-down list for a future assignment.

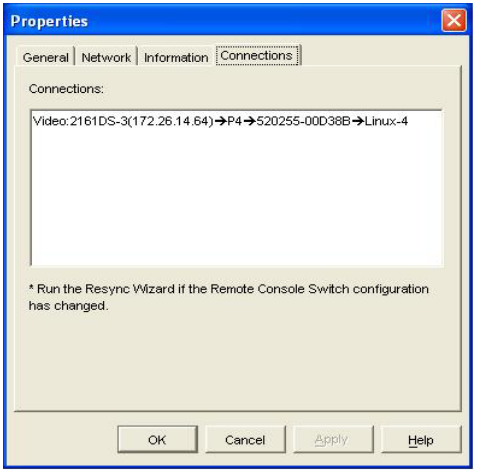
7 (Optional) Click the **Network** tab and type the URL you want to use when establishing a browser connection to the server. If the field contains a value, then the **Browser** button appears in the task bar allowing you to launch the browser to that specified URL.

Figure 3-25. Server Network Properties Tab



8 (Optional) Click the **Information** tab and type a description of the unit. You can enter any information in the following fields.

- **a** In the **Description** field, enter 0 to 128 characters.
- **b** In the **Contact** field, enter 0 to 128 characters.
- **c** In the **Contact Phone Number** field, enter 0 to 64 characters.
- **d** In the **Comments** field, enter 0 to 256 characters.
- **e** Server Information Properties Tab.



9 Click on the **Connections** tab to view the connections of the server. Connections properties are available only for servers and are read-only. The display indicates the physical connection path that is used to access this device and the connection type, such as video.

10 When finished, click **OK** to save the new settings.
-or-
Click **Cancel** to exit without saving the new settings.

Accessing a Server via a Browser Window

You can configure your system to open a server connection in a browser window. You must first select a server and define a URL in the **Properties** dialog box. Then, when you select the server, the **Browse** task button appears. You can select the browser to use in the **Explorer's Options** dialog box.

To launch the server URL in a browser window:

1 Select a server in the **Unit Selector** pane.

2 If you have defined a URL for this server in the **Properties** dialog box, the **Browse** task button appears. Click the **Browse** task button. The URL you identified will launch in a browser window.

Organizing Your System

The **Sites** and **Folders** view tabs allow you to organize and manage your Remote Console Switches and servers by custom groups. Site organization is based on where your servers are located and refers to the column headings **Site** and **Department**, which can be customized to suit your needs. See "Modifying Custom Field Names" on page 50. Folders are a way to create a customized organizational system for individual servers. For example, you might want to create a folder for critical servers or for remote servers.

You may change the order and sorting of the **Unit Selector** list by clicking in the column header. An upward-pointing arrow in a column header indicates that the list is sorted by that field name in ascending order. A downward-pointing arrow indicates the list is sorted by that field name in descending order.

You can customize the column headings. Figure 3-26 and Figure 3-27 show examples of how you might use the default field name values. You may change them to fit your own organization. Figure 3-28 shows an example of customized field names.

Figure 3-26. Sites View Tab Selected

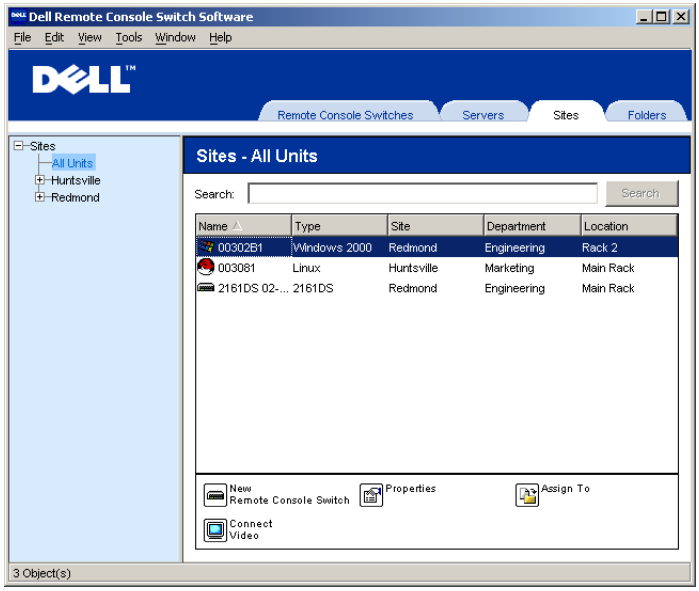
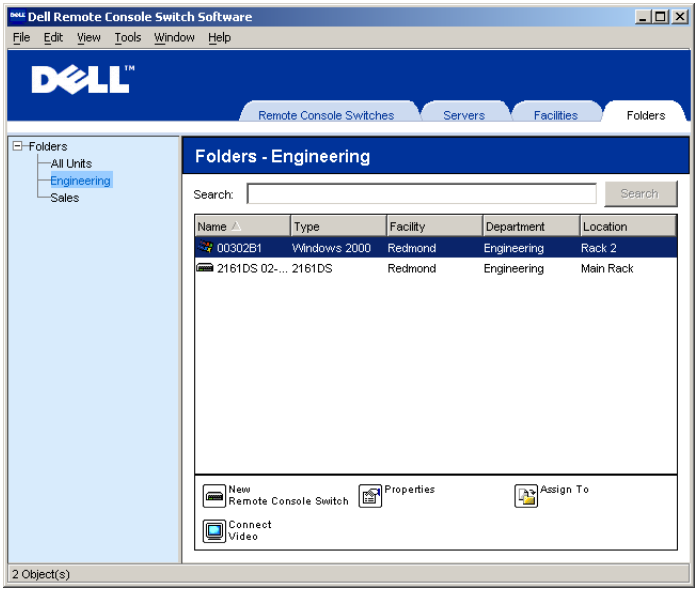


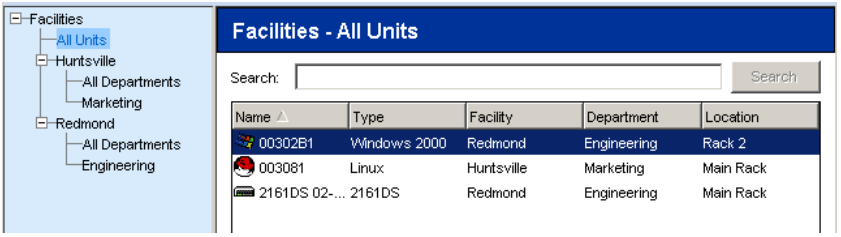
Figure 3-27. Folders View Tab Selected



Modifying Custom Field Names

Custom field names allow you to change the **Site, Department,** and **Location** column heading names that appear in the **Group** and **Unit Selector** panes. This allows you to group Remote Console Switches and servers in ways that are meaningful to you. The **Department** field is a subset of **Site**. If you customize these field names, you should keep this hierarchy in mind.

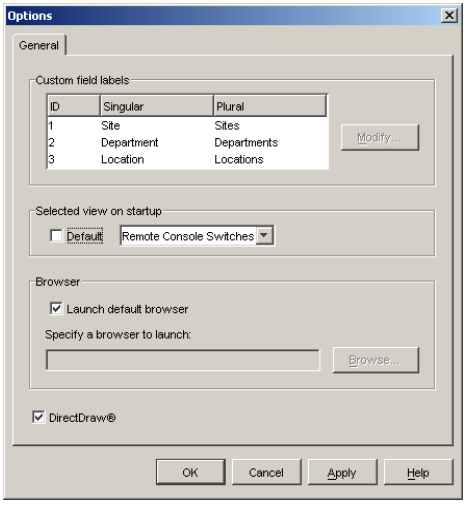
Figure 3-28. Example of Modified Custom Fields



To modify a custom field label:

1 Select **Tools - Options** from the Explorer menu. The **Options** dialog box appears.

Figure 3-29. Options Dialog Box - Custom Field Labels



2 Select the field label you wish to modify and click the **Modify** button. The **Modify Custom Field Label** dialog box appears.

3 Type the singular and plural versions of the field label. The length can be from 1 to 32 characters. A blank value is not allowed. Spaces are permitted in the middle but leading and trailing spaces are not allowed.

4 Click **OK** to save the new field label.
-or-
Click **Cancel** to exit without saving changes.

To create a new site, department or location:

1. Select **View - Properties** from the Explorer menu.
   -or-
   Click the **Properties** task button. The **Properties** dialog box appears.
2. Click the **General** tab and select the drop-down list for **Site, Department** or **Location**. If a name is not in the drop-down list, type the name you want in the text field. The name can be from 1 to 32 characters long. Names are not case sensitive and can consist of any combination of characters entered from the keyboard. Spaces are permitted in the middle but leading and trailing spaces are not allowed. Duplicate names are not allowed.
3. Click **OK**. The new site, department or location appears in the **Group Selector** pane.

To create a new folder:

1. Select the **Folders View Selector** tab.
2. Click the **Folders** node and select **File - New - Folder.**
   -or-
   Right-click the **Folders** node and select **New Folder**. The **New Folder** dialog box appears.
3. Type a name for the folder from 1 to 32 characters long. Folder names are not case sensitive and can consist of any combination of characters entered from the keyboard. Spaces are permitted in the middle but leading and trailing spaces are not allowed. Duplicate folder names are not allowed at the same level but are allowed across different levels.
4. Click **OK**. The new folder appears in the **Group Selector** pane.

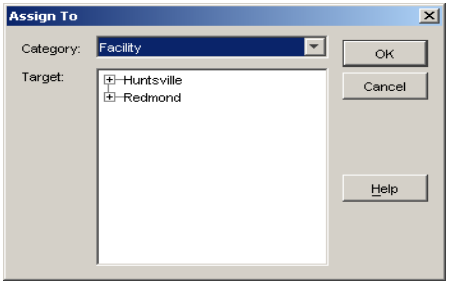
Assigning a Unit to a Site, Location, or Folder

You can assign a Remote Console Switch or server to a **Site, Department, Location** or **Folder**. This menu item is only enabled when a single Remote Console Switch or server is selected in the **Unit Selector** pane. These custom targets are defined in the **General Properties** dialog box.

To assign a unit to a site, location or folder:

1. Select a unit in the **Unit Selector** pane.
2. Select **Edit - Assign** from the Explorer menu.
   -or-
   Click the **Assign To** task button.
   -or-
   Right-click a unit and select **Assign To**. The **Assign To** dialog box appears.

Figure 3-30. Assign To Dialog Box



3 Select the site, location, or folder category from the drop-down list.

4 Select the target from the list of available targets to which the unit can be assigned within the chosen category. This could be empty if no site, location or folder has been defined in the local database.

5 Click **OK** to save the assignment.
-or-
Click **Cancel** to exit without saving changes.

To drag and drop a unit into a site, department, location or folder:

1 Click and hold on a unit in the **Unit** list. Drag the item to the node in the tree view of the **Group Selector** pane. Release the mouse button. The item now appears in the **Unit** list when you click that node.

NOTE: A unit cannot be moved to All Departments, All Units or the root Sites node. Units can only be moved one at a time.

Deleting and Renaming

The delete function is context-sensitive based on what is currently selected in the **Group** and **Unit Selector** panes. When you select and delete a unit in the **Unit** list, the unit is removed from the local database. When you select and delete an item in the tree view of the **Group Selector** pane, you will delete **Server Types**, **Sites**, **Departments,** and **Folders**. However, none of the actions result in units being deleted from the local database.

The rename function is also context-sensitive. You can select and rename a Remote Console Switch or a server from the **Unit** list. You can select and rename server types, sites, departments, and folder names in the tree view of the **Group Selector** pane.

NOTE: If you delete or rename a server through the Remote Console Switch Software, the OSCAR® server list at the Console Switch becomes out of date. Re-synchronizing will not work in this instance. Servers should be deleted or renamed from OSCAR® and then re-synchronized in the Remote Console Switch Software.

To delete a Remote Console Switch or server:

1. Select the unit(s) you wish to delete from the **Unit Selector** pane.
2. Select **Edit - Delete**.
   -or-
   Press the <Del> key on your keyboard. A dialog box appears confirming the number of units to be deleted. If you are deleting a Remote Console Switch, the dialog box includes a **Delete Associated Servers** check box. Click to enable/disable the check box as desired.
3. Click **Yes** to confirm the deletion. Additional message prompts may appear depending on your configuration. Respond as appropriate. The Remote Console Switch or server is deleted.
   -or-
   Click **No** to cancel.

To delete a server type, site, department or folder:

1. Select the server type, site, department or folder you wish to delete from the **Group Selector** pane.
2. Select **Edit - Delete**.
   -or-
   Press the <Del> key on your keyboard. A dialog box appears confirming the number of units that will be affected by this deletion.
3. Click **Yes** to confirm the deletion. Additional message prompts may appear depending on your configuration. Respond as appropriate. The element is deleted.
   -or-
   Click **No** to cancel.

To rename a unit, site, department or folder:

1. In the **Group Selector** pane, click on the server, site, department or folder you wish to rename.
2. Select **Edit - Rename**. The **Rename** dialog box appears.
3. Type a name from 1 to 32 characters long. Names are not case sensitive and can consist of any combination of characters entered from the keyboard. Spaces are permitted in the middle but leading and trailing spaces are not allowed. Duplicate names are not allowed, with two exceptions: department names can be duplicated across different sites and folder names can be duplicated across different levels.
4. Click **OK** to save the new name.
   -or-
   Click **Cancel** to exit without saving changes.

Customizing the Explorer Window

The **Explorer** window can be resized at any time. Each time you launch the application, the **Explorer** window opens to its default size and location. You can manually resize the window while the application is running, but the information is not saved. The next time Explorer is started, it will come up in its default size and location.

A split-pane divider that runs from top to bottom separates the **Group Selector** pane and the **Unit Selector** pane. You can move the divider left and right to change the viewing area of the **Group Selector** pane and the **Unit Selector** pane. Each time Explorer is started the divider will appear in its default location. See "Appendix B: Keyboard and Mouse Shortcuts" on page 85 for divider pane and tree view control mouse and keyboard shortcuts.

Modifying the Selected View on Startup

When **Default** is checked under the **Selected** view on startup option, the Explorer will determine which view to display. If you have one or more servers defined, the **Servers** tab will appear by default. If you do not, the Remote Console Switches tab will appear.

When **Default** is unchecked, the Explorer will display the view selected in the drop-down list shown below the check box. The drop-down list contains the following values: **Remote Console Switches**, **Servers**, **Sites**, and **Folders**. The drop-down list is only enabled when the check box is disabled.

To modify the selected view on startup:

1. Select **Tools - Options** from the Explorer menu. The **Options** dialog box appears.
2. Select **Remote Console Switches**, **Servers**, **Sites** or **Folders** from the drop-down list.
3. Click **OK** to save the new startup view.
   -or-
   Click **Cancel** to exit without saving changes.

Changing the Default Browser

You can specify which browser launches when viewing a server URL in a browser window. You have the option of using the default browser for your system, or you can select a specific browser to launch for that server.

To change the default browser:

1. Select **Tools - Options** from the Explorer menu. The **Options** dialog box appears.
2. Click to disable the **Launch Default Browser** check box. The **Browse** button is enabled.
3. Click the **Browse** button and navigate to the browser.
4. Click **OK** to save the new browser selection.
   -or-
   Click **Cancel** to exit without saving changes.

Managing Your Local Databases

Each client workstation running the Remote Console Switch Software contains a local database that records the information that you enter about your units. If you have multiple client workstations, you may wish to configure one station and then save a copy of this database and load it into the other stations to avoid having to reconfigure each station. You might also wish to export the database for use in another application.

Saving a Database

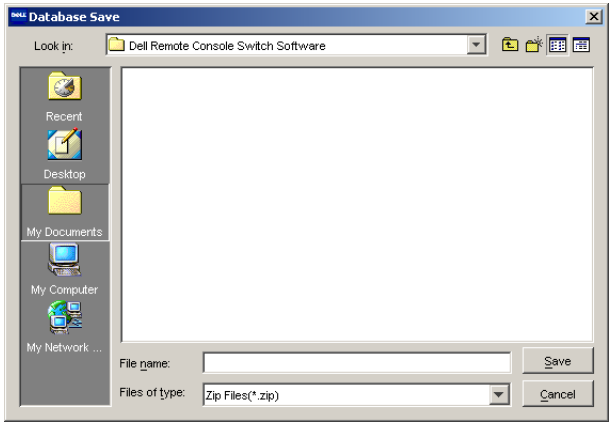
The Remote Console Switch Software allows you to save a copy of the local database. The saved database can then be loaded back to the same computer where it was created, or it can be loaded onto another client workstation. The saved database is compressed into a single Zip file.

While the database is being saved, no other activity is allowed. All other windows including **Video Session** windows and **MP** windows must be closed. If other windows are open, a message will appear prompting you to either continue and close all open windows or quit and cancel the database save process.

To save a database:

1 Select **File - Database - Save**. The **Database Save** dialog box appears.

Figure 3-31. Database Save Dialog Box



2 Select a database to save.

3 Type a file name and browse to a location to save the file.

4 Click **Save**. A progress bar appears during the save. When finished, a message appears indicating that the save was successful and you are returned to the main window.

Exporting a Database

This function allows you to export fields from the local database to an ASCII Comma Separated Value file (CSV) or Tab Separated Value file (TSV). The following database fields will be exported.

Remote Console Switch Flag
Type
Name
Address
Custom Field 1
Custom Field 2
Custom Field 3
Description
Contact Name
Contact Phone #
Comments Browser URL

NOTE: The **Address** field only applies to **Remote Console Switches** and the **Browser URL** field only applies to servers. In the exported file, the **Address** field data will be empty for servers and the **Browser URL** field data will be empty for Remote Console Switches.

The first line of the exported file contains the column names for the field data. Each additional line contains the field data for a Remote Console Switch or server. The file will contain one line for each Remote Console Switch and server defined in the local database.

To export a database:

1. Select **File - Database - Export** from the Explorer menu. The **Database Export** dialog box appears.
2. Type a file name and navigate to the location where you wish to save the exported file.
3. Select the type of export format you wish from the **Files of Type** drop-down list.
4. Click **Export**. A progress bar appears during the export. When finished, a message appears indicating that the export was successful and you are returned to the main window.

Loading a Database

This function allows you to load a database that was previously saved. While the database is being loaded, no other activity is allowed. All other windows including **Video Session** windows and **Management Panel** windows must be closed. If other windows are open, a message appears prompting you to either continue and close all open windows or quit and cancel the database save process.

To load a database:

1. Select **File - Database - Load** from the Explorer menu. The **Database Load** dialog box appears.
2. Browse to select the database you wish to load.
3. Click **Load**. A progress bar appears during the load. When finished, a message appears indicating that the load was successful and you are returned to the main window.

4

Managing Your Remote Console Switch

The Management Panel

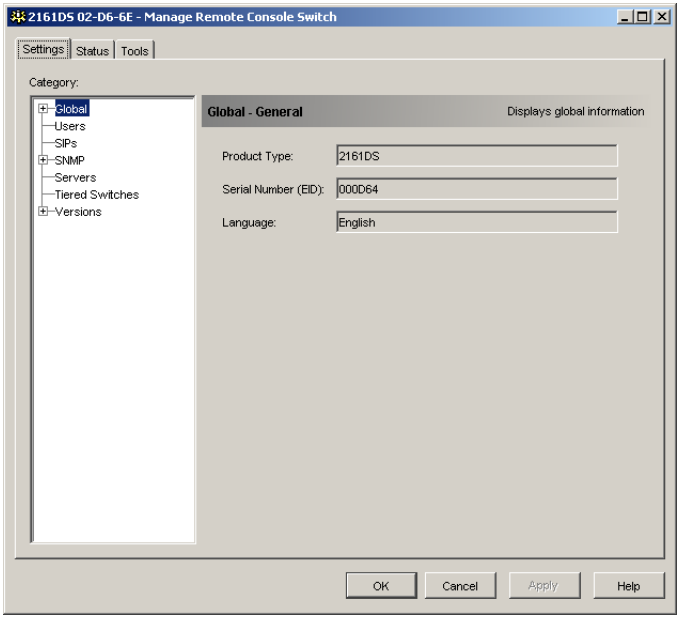
Once you have installed a new Remote Console Switch, you have the ability to view and configure unit parameters, determine who has access and control rights, view and control currently active video sessions and execute a variety of control functions such as rebooting and upgrading your Remote Console Switch. This is accomplished through the Management Panel (MP). The MP has three tabs: **Settings**, **Status,** and **Tools**.

NOTE: The Dell Remote Console Switch Software can be used to manage Avocent® A1000R and A2000R Remote Console Switches. Therefore, all procedures outlined in this document refer to both Remote Console Switch and Avocent Remote Console Switches. Exceptions are noted where applicable.

To access the MP:

1. Click the **Remote Console Switches** tab in the Explorer.
2. Double-click a Remote Console Switch from the **Unit Selector** pane.
   -or-
   Select a Remote Console Switch from the **Unit Selector** pane, and then click the **Manage Remote Console Switch** task button.
   -or-
   Right-click a Remote Console Switch in the **Unit Selector** pane. A pop-up menu appears. Select **Manage Remote Console Switch**.
   -or-
   Click a Remote Console Switch in the **Unit Selector** pane and press <Enter>. A password prompt appears.
3. Type your username and password and click **OK**. The **MP** dialog box appears.

Figure 4-1. Management Panel Dialog Box



Viewing and Configuring Remote Console Switch Parameters

The **Settings** tab allows you to display an expandable list of categories covering a wide range of parameters for your Remote Console Switch. When a category is selected from the list, the parameters associated with the category will first be read from the unit, the database or both. You will then be able to modify those parameters and send the changes securely back to the Remote Console Switch.

Changing Global Network and Session Parameters

The **Global** category allows you to view the product type, serial number, and language setting for the Remote Console Switch. If you select the **Network** sub-category, you will be able to change the network settings including the IP address, Subnet Mask, Gateway and LAN speed. The **Network** panel also allows you to enable or disable DHCP for connections on which DHCP is supported.

The **Sessions** sub-category allows you to apply controls to your video sessions.

By enabling the **Video session timeout option,** you allow the Remote Console Switch to close an inactive video session after a specified number of minutes. The **Video session preemption time out** option allows you to specify the time (5 - 120 seconds) for which a preemption warning message appears before a video session is preempted. For more information about preemption, see "Preemption" on page 43. If this option is not enabled, preemption occurs without warning.

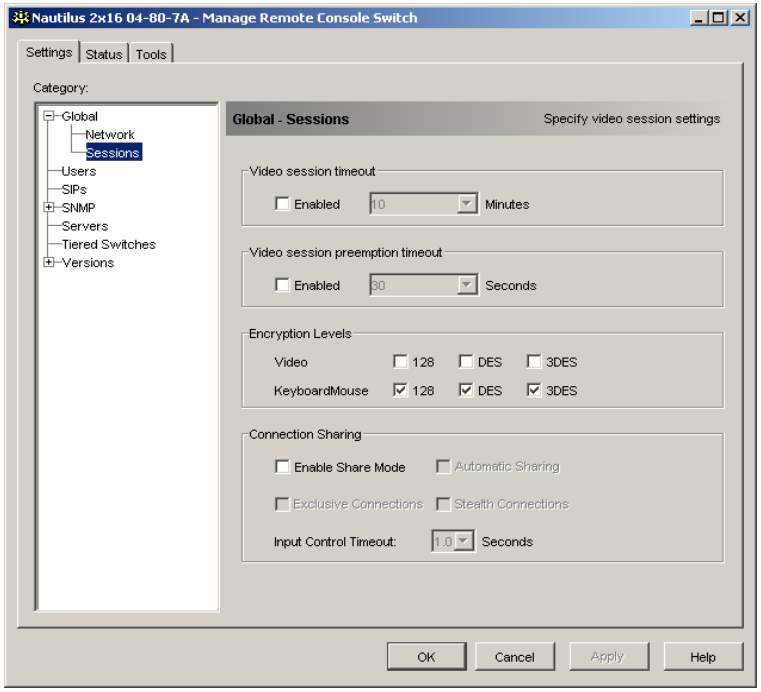
The **Encryption Levels** option allows you to specify the type of encryption to be used for video, keyboard, and mouse sessions. You can select multiple methods when a new client connection is requested. The Remote Console Switch negotiates for the highest enabled encryption method.

The **Connection Sharing** options indicate which sharing options are enabled. **Enable Share Mode, Automatic Sharing**, **Exclusive Connections,** and **Stealth Connections** all appear checked when the particular option is enabled. **Automatic Sharing**, **Exclusive Connections** and **Stealth Connections** are enabled only when **Enabled Share Mode** is selected. For more information, see "Connection Sharing" on page 44.

The **Input Control Timeout** option controls the time period allowed for between inputs from an active session before another session gains control. The values range from 1 to 50 tenths of a second and the option is only available if **Share Mode** is selected.

NOTE: Changes you make to session parameters affect future connection requests only, and not existing connections.

Figure 4-2. Global Sessions Dialog Box - 2161DS-2 Console Switch



NOTE: Preemption timeout, Video Encryption or Connection Sharing settings cannot be configured for Avocent A1000R and A2000R Remote Console Switches.

Setting Up User Accounts

When you select the **Users** category for the first time, the MP will retrieve and display a list of usernames and current access levels from the Remote Console Switch. You can add, modify or delete users in this listing. You can assign three access levels: **User, Administrator**, and **Remote Console Switch Administrator**. The **User** access level allows you to assign individual server access rights to a user.

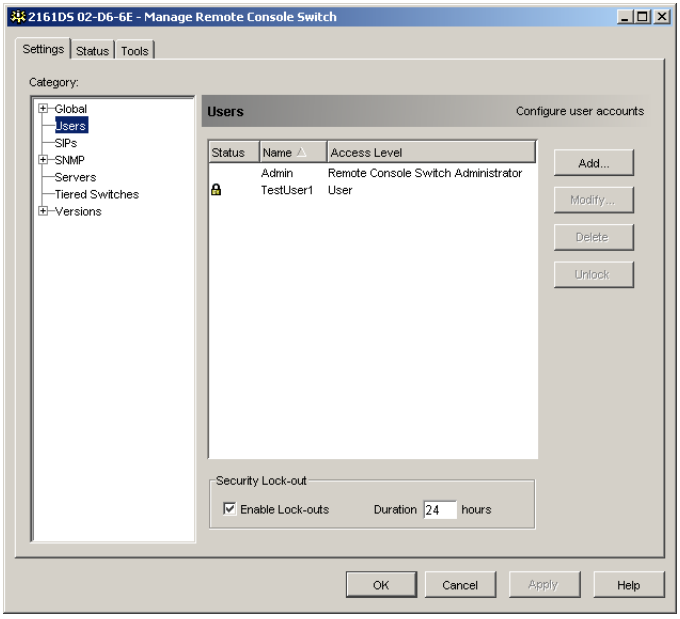
Users can become locked out by the **Security Lock-out** feature if they try to enter an invalid password five consecutive times. You can configure **Security Lock-out** settings as well as unlock any user through the Users category.

Table 4-1. User Access Level Rights

Operations	Remote Console Switch Administrator	Administrator	User
Preemption	All	Equal and lesser	No
Configure network & global settings (security mode, time-out, Simple Network Management Protocol (SNMP))	Yes	No	No
Reboot	Yes	No	No
FLASH upgrade	Yes	No	No
Administer User Accounts	Yes	Yes	No
Monitor server status	Yes	Yes	No
Target Device Access	Yes	Yes	Assigned by Admin

NOTE: Preemptions listed in Table 4-1 only apply to Remote Clients. They do not apply to users accessing the server locally.

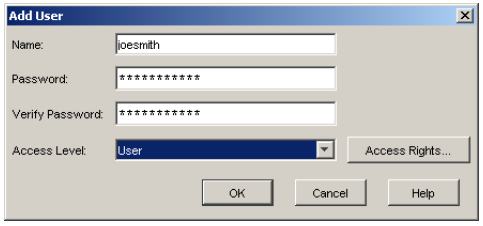
Figure 4-3. Users Dialog Box



To add or modify a user:

1. Click the **Users** category in the left column of the MP.
2. Click the **Add** button on the right side of the window to add a new user. The **Add User** dialog box appears.
   -or-
   Select a user and click the **Modify** button to modify a current user. The **Modify User** dialog box appears.

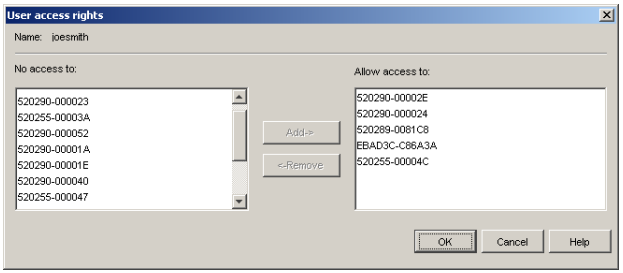
Figure 4-4. Add User Dialog Box



3. Type the username and password you wish to assign to the user and then verify the password by typing it in the **Verify Password** field.
4. Select the appropriate access level you wish for this user from the drop-down list. If you select the **User** option, the **Access Rights** button becomes active.

a Click the **Access Rights** button to select individual servers for that user. The **User Access Rights** dialog box appears.

Figure 4-5. User Access Rights Dialog Box



b Select a server in the left column for which this user should have access rights. Click **Add**.

c Select a server in the right column from which you wish to remove the user's access rights. Click the **Remove** button.

d Repeat steps a and b until the right column represents the appropriate server access for this user, and then click **OK**.

5 Click **OK** to save the settings and return to the main **MP** window.

To change the user password:

1 Select the **Users** category in the left column in the MP.

2 Select one user from the list and click the **Modify** button. The **Modify User** dialog appears.

3 Type the password for that user in the **Password** box and then repeat the password in the **Verify Password** box. The password must be between 5 and 16 characters long and contain both alpha and numeric characters of both upper and lower case.

4 Click **OK** to return to the MP.

5 Click **Apply** or **OK** to send the updated password to the appliance.

To delete a user:

1 Click the **Users** category in the left column of the MP and then select the user(s) you wish to delete.

2 Click the **Delete** button on the right side of the **MP Users** window. A confirmation window appears.

3 Click **Yes** to confirm the deletion.
-or-
Click **No** to exit the window without deleting the user.

Locking and Unlocking User Accounts

If a user enters an invalid password five consecutive times, the **Security Lock-Out** feature will temporarily disable that account. If a user attempts to log in again, the software client application displays an appropriate error message.

NOTE: All accounts (user, administrator, and remote console switch administrator) are subject to this lock-out policy.

A remote console switch administrator can specify the number of hours (1 to 99) that accounts will remain locked. When **Enable Lock-outs** is unchecked, the security lock-out feature will be disabled and no users will be locked out.

If an account becomes locked, it will remain locked until the duration time has elapsed, the remote console switch is power-cycled or an administrator unlocks the account via the MP. An Administrator may unlock only user accounts, whereas a Remote Console Switch Administrator may unlock any type of account.

To unlock an account:

1. Select the **Users** category in the MP.
2. Select the user to unlock.
3. Click the **Unlock** button. The lock icon next to the username will disappear.
4. Click **OK** or **Apply**. This allows the user to log in again.
   -or-
   Click **Cancel** to exit without saving.

To specify the length of time a user account remains locked:

1. Click the **Users** category in the MP.
2. Click to enable the **Enable Lock-outs** check box.
3. Type the number of hours that a user will be locked out (1 to 99).

To disable the Security Lockout feature:

1. Select the **Users** category in the MP.
2. Click the **Enable Lock-outs** check box. The **Duration** field is disabled.

NOTE: Disabling Security Lock-out will have no affect on users that are already locked out.

Viewing the SIPs and Avocent AVRIQs

The Server Interface Pods (SIPs) category lets you view the SIPs and Avocent AVRIQs in your system, their port and Electronic ID number (EID) as well as the computer type and keyboard layout.

You can also view the SIP status. A green circle indicates that the SIP is online. A yellow circle indicates the SIP is being upgraded and a red X indicates that the SIP is offline. To clear offline SIPs click **Clear Offline** and click **OK** when prompted.

The **Language** button displays the Language dialog, in which you can set language and keyboard parameters for all the Sun/USB SIPs of the whole appliance.

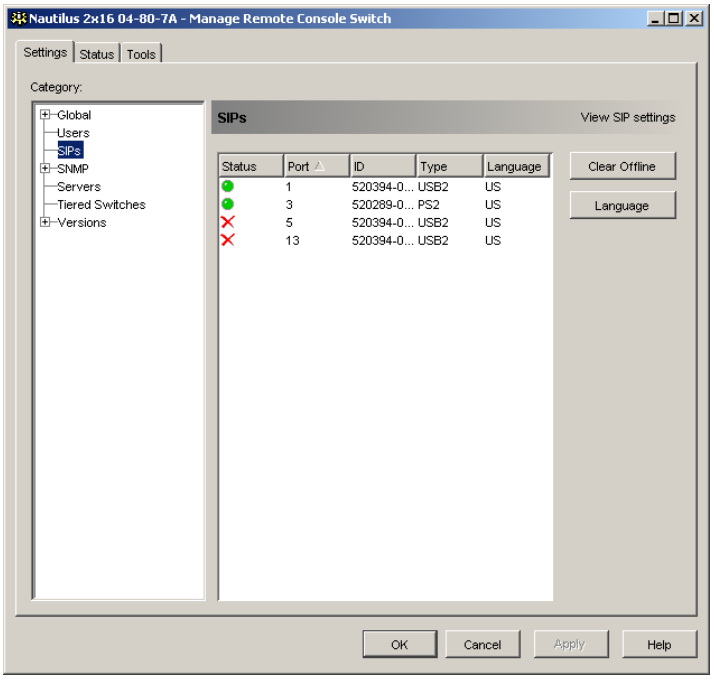
NOTE: The **Clear Offline** button is not displayed when managing Avocent A1000R and A2000R Remote Console Switches.

NOTE: It is not possible to clear Offline SIPs or Avocent AVRIQs that are attached to a tiered analog Console Switch.

NOTE: This operation will clear all offline SIPs on the Remote Console Switch, including those associated with any powered down Servers.

NOTE: User access rights will also be updated to remove the Servers associated with the cleared offline SIPs.

Figure 4-6. SIPs Dialog Box - 2161DS-2 Console Switch



NOTE: The Remote Console Switch supports Avocent AVRIQs as well as Dell SIPs. Therefore, although Dell SIPs are available with PS/2 and USB connections, the addition of Avocent AVRIQs provides support for Sun and Serial connections.

NOTE: To determine if an item identified as PS2 or USB is a Dell SIP or an Avocent AVRIQ, access the **SIPs Versions** panel. For more information see "SIPs Subcategory" on page 71.

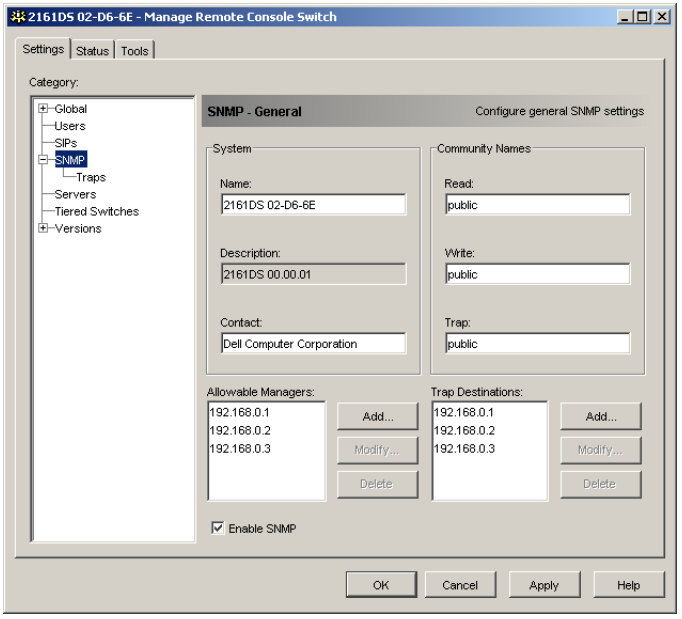
Enabling and Configuring SNMP

SNMP is a protocol used to communicate management information between network management applications and Remote Console Switches. Other SNMP managers can communicate with your Remote Console Switch by accessing MIB-II and the public portion of the enterprise MIB. When you select the **SNMP** category for the first time, the MP will retrieve the SNMP parameters from the unit.

In this dialog box, you can enter system information and community strings. You may also designate which stations can manage the Remote Console Switch as well as receive SNMP traps from the switch. For more information on traps, see "Enabling Individual SNMP traps" on page 66 in this chapter. If you check **Enable SNMP**, the unit will respond to SNMP requests over UDP port 161.

NOTE: The MP does not use standard SNMP to control switches and therefore does not use UDP port 161. The MP uses a secure, proprietary protocol to communicate with the Remote Console Switches over a different network port. For more information, see "Appendix C: Ports Used by Console Switch Software" on page 87.

Figure 4-7. SNMP Configuration Dialog Box



To configure general SNMP settings:

1. Select the **SNMP** category in the left column in the MP.
2. Click to enable the **Enable SNMP** check box to allow the Remote Console Switch to respond to SNMP requests over UDP port 161.

3 Type the system's fully qualified domain name in the **Name** field, as well as a node contact person in the **System** section.

4 Type the **Read, Write,** and **Trap** community names. These specify the community strings that must be used in SNMP actions. The **Read** and **Write** strings only apply to SNMP over UDP port 161 and act as passwords that protect access to the Remote Console Switch. The values can be up to 64 characters in length.

5 Add up to four management workstations that are allowed to manage this Remote Console Switch or leave this blank to allow any station to manage the Remote Console Switch.

   a Click **Add** to define an allowable manager. The **Allowable Manager** dialog box appears.

   b Type the IP address of the management station that you wish to add.

   c Click **OK** to add a management station.

6 Add up to four management workstations to which this Remote Console Switch will send traps in the **Trap Destination** field.

   a Click **Add** to define a trap destination. The **Trap Destination** dialog box appears.

   b Type the IP address of the trap destination that you wish to add.

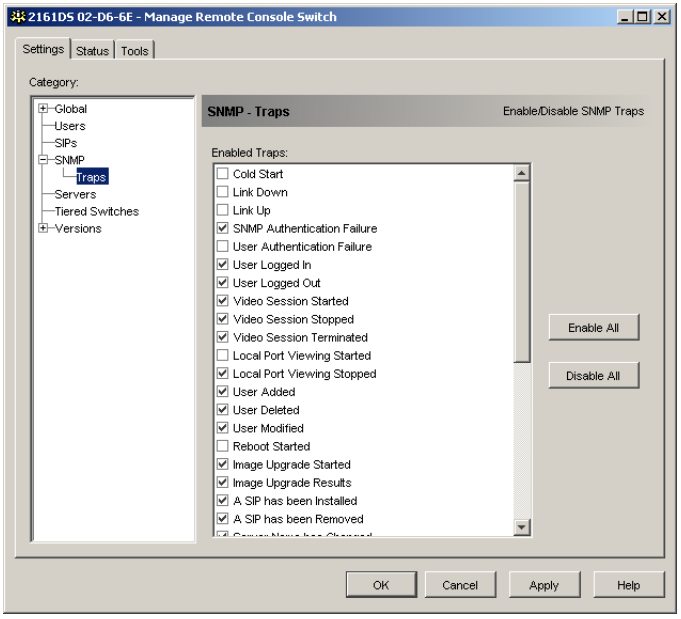
   c Click **OK** to add a trap destination.

7 Click **OK** to save the settings and close the window.
   -or-
   Click **Apply** to save the settings and remain in the open window.
   -or-
   Click **Cancel** to exit the window without saving.

Enabling Individual SNMP traps

An SNMP trap is a notification sent by the Remote Console Switch to a management station indicating that an event has occurred in the Remote Console Switch that may require further attention. The Dell OpenManage™ IT Assistant software is the event manager. You can specify what SNMP traps are sent to the management stations by simply clicking the appropriate check boxes in the list. When you select the **Traps** category for the first time, the MP will retrieve and display a list of SNMP traps from the Remote Console Switch. You can select **Enable All** or **Disable All** to easily select or deselect the entire list.

Figure 4-8. Traps Dialog Box

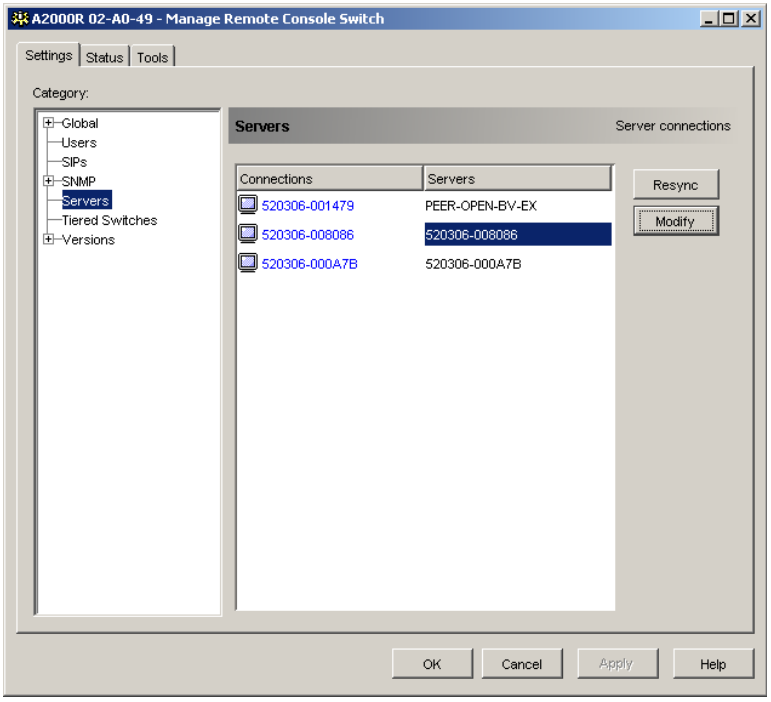


Viewing and Resynchronizing Server Connections

When you select the **Servers** category for the first time, the MP will retrieve the servers that exist in the Remote Console Switch Software database as well as information on how the servers are connected to the selected Remote Console Switch.

The Connection column displays the current server connection. This can be to either a SIP or a tiered switch. If connected to a SIP, the SIP's EID will display in the **Connection** column. If connected to a tiered switch, the switch and all of its channels will be displayed. If no unit is currently connected to the path, then this field will display as None. If you click either a SIP or switch in the **Connection** column, the Viewer will launch.

Figure 4-9. Servers Dialog Box



Resynchronizing the Server Listing

You may wish to periodically resynchronize the database on your client workstation with the database stored in the Remote Console Switch. Do this if the local user has changed server names or if SIPs have been added or moved.

NOTE: This procedure only re-synchronizes your own client workstation. If you have multiple client workstations, you may wish to save your re-synchronized local database and load it into the other client workstations to ensure consistency.

To resynchronize the server listing:

1. Click the **Resync** button in the **Server** category of the MP. The Resync Wizard launches. Click **Next**. A warning message displays indicating that the database will be updated to match the current configuration in the Remote Console Switch. Your current local database names will be overridden with the switch names. To include unpowered SIPs or Avocent AVRIQs in the re-synchronization, click to enable the **Include Offline SIPs** check box.
2. Click **Next**. A polling Remote Console Switch message box appears with a progress bar indicating that the switch information is being retrieved.

3 If no changes were detected in the appliance, a completion dialog box appears with this information.
-or-
If server changes were detected, then the **Detected Changes** dialog box will be displayed. Click **Next** to update the database.

4 If a cascade switch was detected, the **Enter Tiered Switch Information** dialog box appears. Select the type of switch connected to the appliance from the drop-down list. If the type you are looking for is not available, you can add it by clicking the **Add** button. For more information, see "Viewing and Configuring Tiered Switch Connections" on page 70.

5 Click **Next**. The completion dialog box appears.

6 Click **Finish** to exit.

Modifying a Server Name

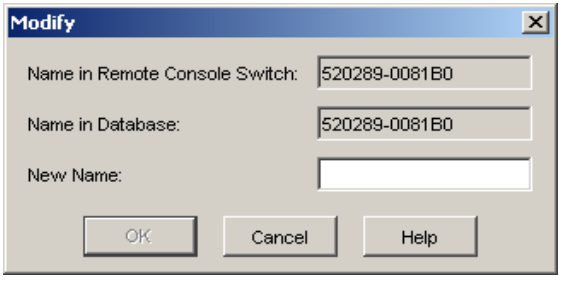
The Modify button in the Servers dialog allows you to rename a selected server. The dialog box allows you to change a server name from a remote workstation rather than from the OSCAR of the Remote Console Switch.

To modify a device name:

1 In the **Server** category, click to select the server whose name you wish to change.

2 Click **Modify.** The **Name Modify** dialog is displayed.

Figure 4-10. Name Modify Dialog Box



3 Type the name you want to assign to the server.

4 Click **OK.** The name you have supplied is updated in both the remote console switch and local client database.

Viewing and Configuring Tiered Switch Connections

The **Tiered Switches** category lets you view the tiered switches in your system, the SIP EID numbers as well as the type of switch it is.

To configure a cascade switch connection:

1. Select the **Tiered Switches** category in the left hand column in the MP.
2. Click the **Switch** drop-down list next to the SIP EID you want to configure and select the switch type you want to assign.
   -or-
   If the switch you want is not in the drop-down list, add a switch to the **Existing Switches** list by clicking the **Add** button.
3. Repeat step 2 for each switch that you want to configure.
4. When you have finished configuring the switches, click **OK** to save the new settings.
   -or-
   Click **Cancel** to exit without saving.

Adding and Modifying Tiered Switch Connections

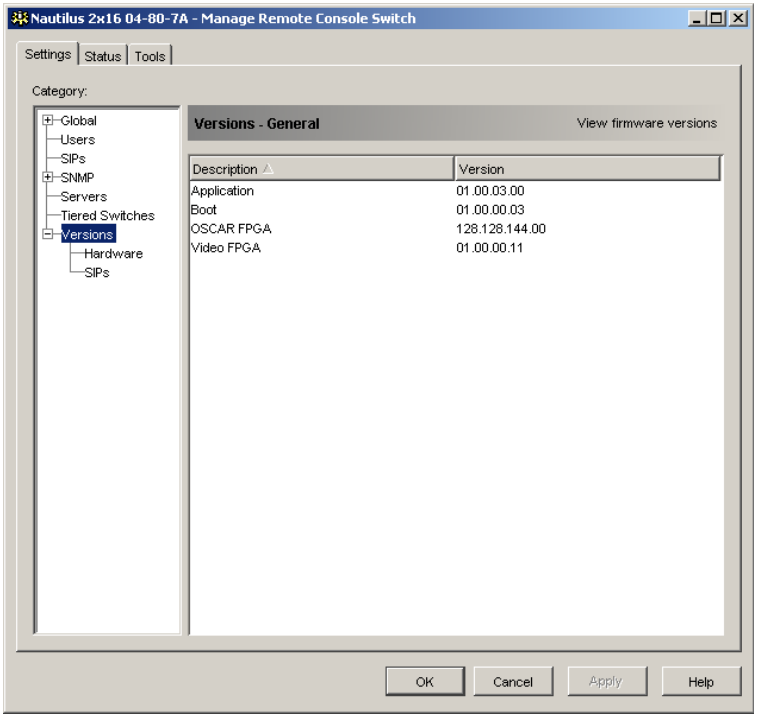
If the switch you want is not in the **Existing Switches** drop-down list, you can add a switch to the **Existing Switches** list as follows:

1. Click the **Add** button. The **Add Tiered Switch** dialog box appears.
2. Type the name of the switch and select the switch type from the list.
3. Click **OK** to add the switch. The switch should now be in the Existing Switches list and in the **Switch** drop-down list.

Viewing Remote Console Switch Version Information

When you select the **Version** category for the first time, the **MP** will retrieve the firmware versions from the selected Remote Console Switch.

Figure 4-11. Firmware Version Dialog Box



Hardware Subcategory

The **Hardware** sub-category displays the version information for the Remote Console Switch.

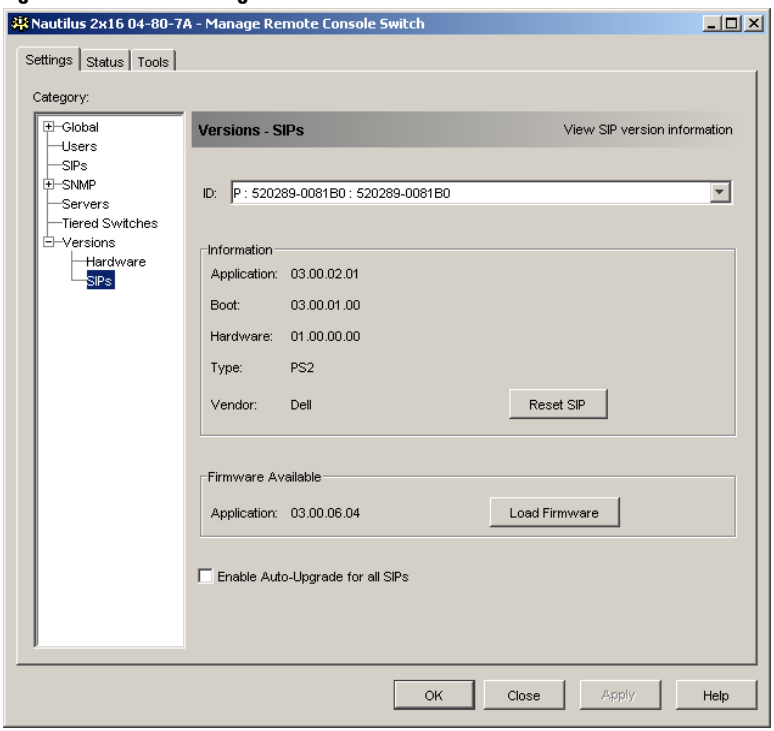
NOTE: To ensure that the full functionality of the Remote Console Software is available to you, please ensure that your Boot version is 4.0.0.0 or higher.

SIPs Subcategory

The **SIPs** sub-category allows you to view version information and upgrade all of the SIPs in the system. In addition, in the SIPs subcategory, you can reset SIPs that are connected to tiered switches.

For information about upgrading SIPs, see "Upgrading Firmware" on page 73.

Figure 4-12. SIPs Dialog Box 2161DS-2 Console Switch



NOTE: The **Vendor** field, and **Reset SIP** button are not displayed when managing Avocent A1000R and A2000R Remote Console Switches.

Resetting a SIP

On occasions when a tiered switch is not recognized by the Remote Console Switch, it may be necessary to reset the SIP which connects the tiered switch to the Remote Console Switch. This can be done using the **Reset SIP** button in the **SIPs** subcategory.

NOTE: PS/2 and USB SIPs are available. In addition the Remote Console Switch is compatible with all Avocent AVRIQs including Sun and serial AVRIQs.

NOTE: The **Reset SIPs** button is only enabled when the SIP type is PS/2 and when a firmware upgrade is not in progress.

NOTE: The **Reset SIP** button is not displayed when managing Avocent A1000R and A2000R Remote Console Switches.

NOTE: This procedure is only relevant where your Remote Console Switch system involves a PS/2 SIP attached to a tiered switch. On these occasions, it may be necessary to reset the SIP when the tiered switch is not recognized.

NOTE: If a reset is performed, when a Remote Console Switch is connected directly to a server and not a Cascade Switch, the mouse/keyboard may fail to respond. When this occurs, the target server requires a reboot.

To reset a SIP:

1. Select the **SIPs** subcategory from the **Versions** category in the left hand column in the MP.
2. Select the SIP you want to reset from the **ID** list.
3. Click **Reset**. A message appears warning you that this function is reserved for tiered switches and that resetting the SIP may result in the need to reboot the server.
4. Click **Yes** to continue.
   -or-
   Click **No** to return to the SIPs subcategory.

Upgrading Firmware

You can upgrade the firmware for either the Remote Console Switch or the SIPs. The SIPs can be upgraded individually or simultaneously. When an upgrade is initiated, you will see a progress bar. As long as an upgrade is in progress, you cannot initiate another.

The **Enable Auto-Upgrade for All SIPs** check box allows you to enable an auto-upgrade for SIP firmware. You can override the auto-upgrade at any stage using the **Load Firmware** button described in the next section.

NOTE: For the 2161DS-2 and 4161DS, you can upload new appliance firmware using ASMP (if supported) or TFTP file transfer protocols. ASMP file transfer allows you to select the firmware from a local file system. The 2161DS and Avocent A1000R and A2000R support the TFTP file transfer allows you to specify the TFTP server address and the name of the firmware file.

To upgrade Remote Console Switch firmware:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Upgrade Remote Console Switch Firmware** button.

   If you have made changes in the Settings panel of the MP, but have not yet applied them before starting an upgrade, a warning message prompts you to confirm the upgrade because the upgrade process requires an appliance reboot. If you do not apply the pending changes, they will be discarded before upgrading the firmware.

   To apply those changes before the upgrade:

   a. Click **No** to cancel the appliance firmware upgrade.
   b. Click **Apply**.
   c. Click the **Upgrade Remote Console Switch Firmware** button.
      -or-
      To discard those changes before the upgrade, click **Yes**.

d The **Firmware Upgrade** dialog box appears. Select **TFTP Server** as the source, and type the Trivial File Transfer Protocol (TFTP) server IP address where the firmware is located as well as the filename and directory location.
or
Click **File System** and browse to the location on your file system where the FLASH file is located. Click **Open.**

Figure 4-13. Upgrade Firmware Dialog Box- TFTP Server

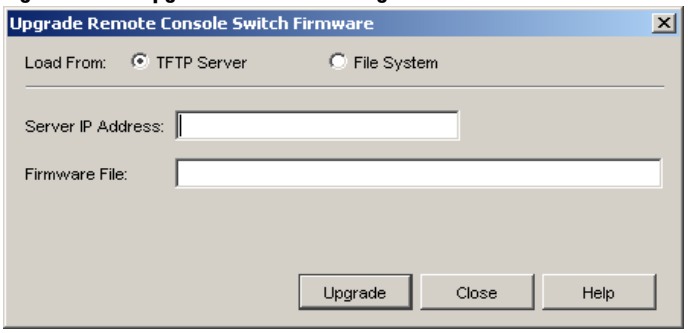
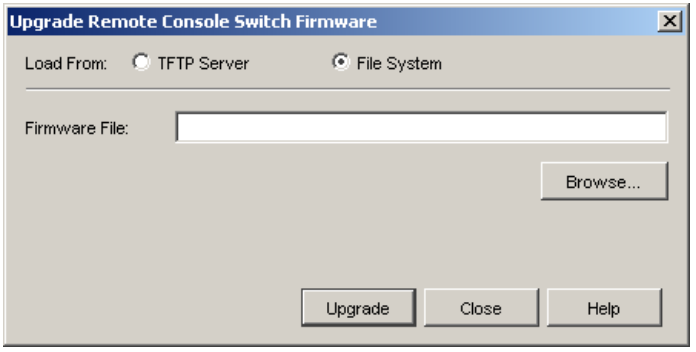


Figure 4-14. Upgrade Firmware Dialog Box - File System



3 Click the **Upgrade** button. The **Upgrade** button dims and a progress message appears.

4 When the upgrade is complete, a message prompting you to confirm a reboot appears. The new firmware will not be used until the switch reboots. Click **Yes** to reboot the Remote Console Switch. The **Upgrade Firmware** dialog box will display a progress message including a message that the reboot is complete.
-or-
Click **No** to reboot at a later time. You will need to reboot in order to use the new firmware.

5 Click **Close** to exit the **Upgrade Firmware** window.

NOTICE: Do not power down the Remote Console Switch while it is upgrading.

You can upgrade firmware for all SIPs of a given type.

To simultaneously upgrade multiple SIPs:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Upgrade SIP Firmware** button. The **Upgrade SIP Firmware** dialog box appears.
3. Click the check box in front of each type (PS/2,USB, Serial, or Sun) of SIP you wish to upgrade.
4. Click **Upgrade**. The **Upgrade** button dims. The Status column will display either In Progress or Succeeded, depending on the status of each SIP upgrade. A firmware upgrade currently in progress message displays until all of the selected SIP types are upgraded.
5. When complete, a message appears prompting you to confirm the upgrade completion. Once confirmed, the **Upgrade** button is again enabled.
6. Click **Close** to exit the **Upgrade Firmware** window.

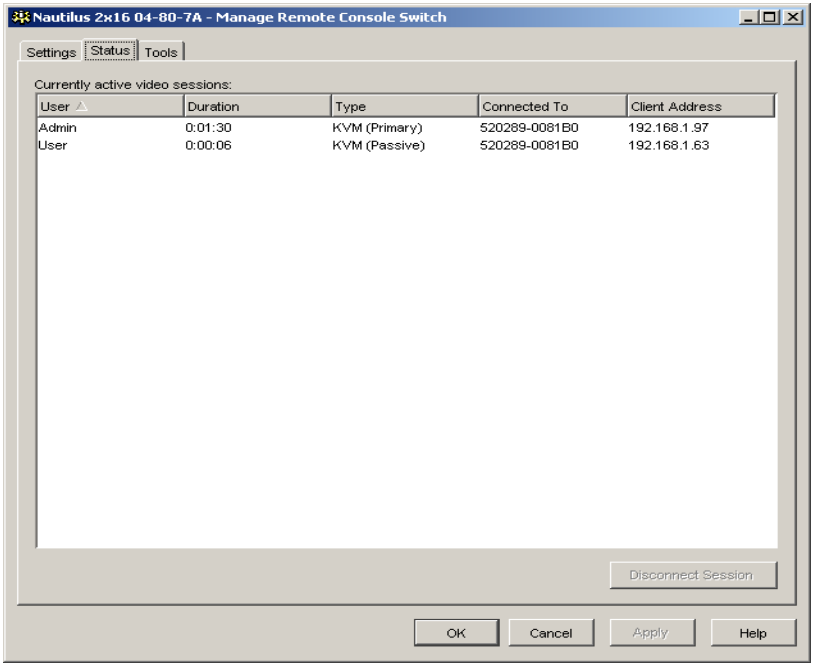
To upgrade SIP firmware individually:

1. Click the **Settings** tab in the MP.
2. Select the **SIPs** sub-category under **Versions** in the left column in the MP.
3. Click the **ID** drop-down list and choose a SIP for which you wish to view firmware information. The IDs displayed in the drop-down list are a combination of the EID and either the server name or switch name, depending on what is attached to the SIP. If the SIP is not attached to anything, the drop-down list will display None. Once selected, the firmware information appears in the **Information** box.
4. Compare the current information to the Firmware Available field to see the firmware upgrade available for the SIP. (You can load firmware even if the current and available versions are the same. In some cases, you can downgrade the SIP to an older, compatible version.)
5. Click the **Load Firmware** button.
6. The firmware upgrade begins. During the upgrade, a progress message is displayed below the **Firmware Available** box and the **Load Firmware** button will dim. When the upgrade is finished, a message appears indicating that the upgrade was successful.
7. Repeat steps 2-6 for each individual SIP you wish to upgrade.
8. When finished, click **OK**.

Controlling User Status

You may view and disconnect the current active user connections using the **Status** tab in the MP. You can view the length of time users have been connected, the server name or SIP to which they are connected and their system address. In addition to disconnecting a user session, the Remote Console Switch software also allows one user to take control of a server currently being used by another user. For more information, see “Preemption” on page 43.

Figure 4-15. User Status Dialog Box



To disconnect a user session:

1. Click the **Status** tab in the MP. The **User Status** dialog box appears.
2. Click one or more users that you wish to disconnect.
3. Click the **Disconnect Session** button. A message appears prompting you to confirm the disconnect command.
4. Click **Yes** to disconnect the user.
   -or-
   Click **No** to exit without completing the disconnect command.

NOTE: The appropriate level of access is required to disconnect a user.

Rebooting Your System

You can reboot the Remote Console Switch through the **Tools** tab in the MP. When clicked, **Reboot** will broadcast a disconnect message to any active users, then log out the current user and immediately reboot the Remote Console Switch.

To reboot your system:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Reboot** button. A message prompting you to confirm this reboot appears. Click **Yes** to confirm the request. The Remote Console Switch will now reboot.

Managing Remote Console Switch Configuration Files

Configuration files contain all of the settings for a Remote Console Switch. This includes network settings, SIP configurations, SNMP settings and attached servers. You may save your configuration file and, should you ever need to replace your Remote Console Switch, you can restore the configuration file to the new switch and avoid manually configuring it.

NOTE: User account information is stored in the user database, not in the configuration file. For more information, see "Managing User Databases" on page 78.

To read and save a configuration file from a Remote Console Switch:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Save Remote Console Switch Configuration** button. The **Save Remote Console Switch Configuration** dialog box appears.
3. Click **Browse** and navigate to a location to save the Configuration file. The location appears in the **Save To** field.
4. Click **Save**. The Enter Password window opens.
5. Enter a password in the Password field, then repeat the password in the Verify Password field. This password is requested when you restore this database to a Remote Console Switch. Click **OK**. The configuration file is read from the Remote Console Switch and saved to the desired location. A progress window displays.
6. When complete, a message appears prompting you to confirm the read completion. Click **OK** to return to the main window.

To restore a configuration file to a Remote Console Switch:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Restore Remote Console Switch Configuration** button. The **Restore Remote Console Switch Configuration** dialog box appears.
3. Click **Browse** and navigate to the location where you stored the saved configuration file. The file name and location appears in the **File name** field.
4. Click **Restore**. The Enter Password window opens.
5. Enter the password you created when the configuration database was saved. Click **OK**. The configuration file is written to the Remote Console Switch. A progress window displays.
6. When complete, a message appears prompting you to confirm the write completion. Click **OK** to return to the main window.

Managing User Databases

User database files contain all user accounts assigned in a Remote Console Switch. You can save your user account database file and use it to configure users on multiple Remote Console Switches by writing the user account file to the new switch.

NOTE: The user account file is encrypted and you will be prompted to create a password when you save the file. You will need to re-type this password when you write the file to a new unit.

To save a user database from a Remote Console Switch:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Save Remote Console Switch User Database** button. The **Save Remote Console Switch User Database** dialog box appears.
3. Click **Browse** and navigate to a location to save the user database file. The location appears in the **Save To** field.
4. Click **Save**. The Enter Password window opens.
5. Enter a password in the Password field, then repeat the password in the Verify Password field. This password is requested when you restore this database to a Remote Console Switch. Click **OK**. The user database file is read from the Remote Console Switch and saved to a location. A progress window displays.
6. When complete, a message appears prompting you to confirm the read completion. Once confirmed, the **Save Remote Console Switch User Database** dialog box will close and you are returned to the **Tools** window.

To restore a user database file to a Remote Console Switch:

1. Click the **Tools** tab in the MP. The **Tools** dialog box appears.
2. Click the **Restore Remote Console Switch User Database** button. The **Restore Remote Console Switch User Database** dialog box appears.
3. Click **Browse** and navigate to the location where you stored the saved user database file. The file name and location appears in the **File name** field.
4. Click **Restore**. The Enter Password window opens.
5. Enter the password you created when the user database was saved. Click **OK.** The user database file is written to the Remote Console Switch. A progress window displays.
6. When complete, a message appears prompting you to confirm the write completion. Once confirmed, the **Restore User Database File** dialog box will close and you are returned to the **Tools** window.

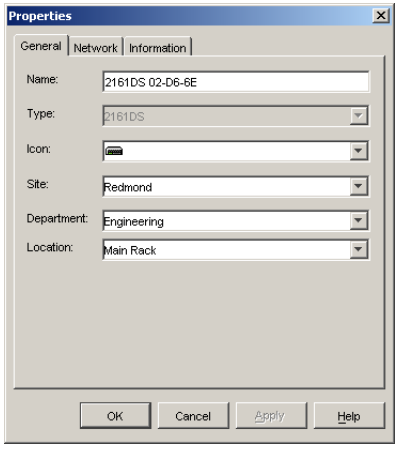
Changing Remote Console Switch Properties

You can alter individual Remote Console Switch properties whether you are logged into the switch or not. The **Properties** dialog box contains several tabs: **General, Network,** and **Information**. The **General** tab allows you not only to change the name and display icon for a Remote Console Switch but also to assign the switch to a site, location or folder. The **Network** tab allows you to change the IP address for that switch such as if you were to reconfigure your network. The **Information** tab allows you to enter information about the Remote Console Switch including a description, contact information and any comments you might wish to add.

To change Remote Console Switch properties:

1. Select an individual Remote Console Switch from the **Unit Selector** list.
2. Select **View - Properties** from the Explorer menu.
   -or-
   Click the **Properties** button.
   -or-
   Right-click on the switch and select **Properties** from the pop-up list. The **Properties** dialog box appears.

Figure 4-16. Remote Console Switch General Properties



3. Type the name of the Remote Console Switch. Duplicate names are not allowed.
4. Ignore the **Type** field. This is read-only for Remote Console Switches.
5. Select the icon to display for the unit.
6. (Optional) Select the site, department and location to which you wish the Remote Console Switch assigned. If the selection you wish is not in the drop-down list, type the name of the new assignment in the text field. Once entered, the option becomes available in the drop-down list for future assignment.

7. Click the **Network** tab and type in the address of the Remote Console Switch. This field can contain an IP dot notation or a domain name. Duplicate addresses are not allowed and the field cannot be left blank. You can enter up to 128 characters.
8. (Optional) Click the **Information** tab and type the description of the unit. You can enter any information in the following fields.
   a. In the **Description** field, enter 0 to 128 characters.
   b. In the **Contact** field, enter 0 to 128 characters.
   c. In the **Contact Phone Number** field, enter 0 to 64 characters.
   d. In the **Comments** field, enter 0 to 256 characters.You are free to enter any information you wish into these fields.
9. When finished, click **OK** to save the new settings.
   -or-
   Click **Cancel** to exit without saving.

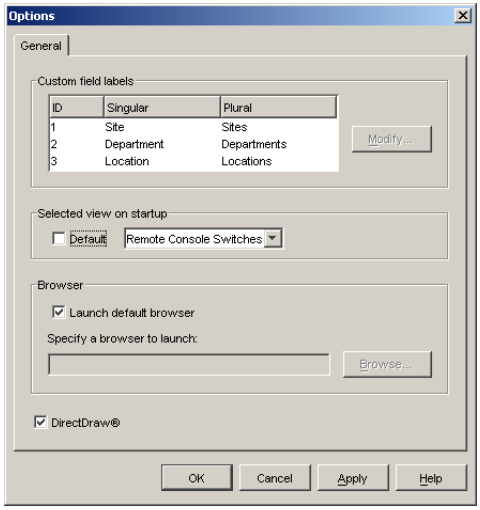
Changing DirectDraw Support (Windows Operating Systems Only)

The Remote Console Switch Software supports DirectDraw, a standard that allows direct manipulation of video display memory, hardware overlays and page flipping without the intervention of the Graphical Device Interface (GDI). This can result in smoother animation and improvement in the performance of display-intensive software.

However, if your machine has a software cursor or pointer shadow enabled, or if your video driver does not support DirectDraw, you may experience a flicker in your mouse cursor when over the title bar of the Viewer.

You can disable the software cursor or pointer shadow, load a new driver for your video card, or you can disable DirectDraw.

Figure 4-17. Options Dialog Box - DirectDraw



To disable DirectDraw:

1. Select **Tools - Options**. The **Options** dialog box appears.
2. Click to disable the **DirectDraw** check box.
3. Click **OK**.

NOTE: The **DirectDraw** check box will only appear for Windows based Operating Systems.

Appendix A: Updating the Remote Console Switch Software

For optimal operation of your system, ensure that you have the latest version of the Remote Console Switch Software available from Dell™ support website at **support.dell.com**.

To update the Remote Console Switch Software:

1. Download the update file from the Dell support website - **support.dell.com**.
2. Double-click on the installer. The installer will check to see if a previous version of the Remote Console Switch Software resides on your system.
3. If no previous version has been detected and a dialog box appears to confirm the upgrade, click **Continue**.
   -or-
   If a previous version is detected and a dialog box appears alerting you to another version of the product, click **Overwrite** to confirm the upgrade.
   -or-
   Click **Cancel** to exit without upgrading the software.
4. Installation commences. Program Files, Shortcuts, Environment Variables, and Registry Entries (Windows 32 systems only), will be installed or overwritten with the new files and settings of the current version.

NOTE: In order for the upgrade detection process to work, you must first either reboot or log out. Registry keys set by the installer are not permanent on Windows 32 platforms or Linux until you have logged out or rebooted the system.

B

Appendix B: Keyboard and Mouse Shortcuts

Table B-1. Divider Pane Keyboard and Mouse Shortcuts

Operation	Description
F6	Navigates between the split-screens and gives focus to the last element that had focus.
F8	Gives focus to the divider.
Left or Up Arrow	Moves the divider left if the divider has the focus.
Right or Down Arrow	Moves the divider right if the divider has the focus.
Home	Gives the right pane of the split-screen all of the area (left pane disappears) if the divider has the focus.
End	Gives the left pane of the split-screen all of the area (right pane disappears) if the divider has the focus.
Click + Mouse Drag	Moves the divider left or right.

Table B-2. Tree View Control Keyboard and Mouse Shortcuts

Operation	Description
Mouse Single-Click	Deselects the existing selection and selects the node the mouse pointer is over.
Mouse Double-Click	Toggles the expand/collapse state of an expandable node (a node that has children). Does nothing on a leaf node (a node that does not have children).
Up Arrow	Deselects the existing selection and selects the next node above the current focus point.
Down Arrow	Deselects the existing selection and selects the next node below the current focus point.
Spacebar	Alternately selects/deselects the node that currently has the focus.
Enter	Alternately collapses/expands the node that has focus. Only applies to nodes that have children. Does nothing if the node does not have children.
Home	Deselects the existing selection and selects the root node.
End	Deselects the existing selection and selects the last node displayed in the tree.

Table B-3. Keyboard and Mouse Operations for the Unit List

Operation	Description
Enter or Return	Launches the default action for the selected unit.
Up Arrow	Deselects current selection and moves selection up one row.
Down Arrow	Deselects current selection and moves selection down one row.
Page Up	Deselects current selection and scrolls up one page then selects the first item on the page.
Page Down	Deselects current selection and scrolls down one page then selects the last item on the page.
Delete	Performs the Delete function. Works the same as the Edit->Delete menu function. Please see that section for more information.
Ctrl + Home	Moves the focus and the selection to the first row in the table.
Ctrl + End	Moves the focus and the selection to the last row in the table.
Shift + Up Arrow	Extends selection up one row.
Shift + Down Arrow	Extends selection down one row.
Shift + Page Up	Extends selection up one page.
Shift + Page Down	Extends selection down one page.
Shift + Mouse Click	Deselects any existing selection and selects the range of rows between the current focus point and the row the mouse pointer is over when the mouse is clicked.
Ctrl + Mouse Click	Toggles the selection state of the row the mouse pointer is over without affecting the selection state of any other row.
Mouse double-click	Launches the default action for the selected unit.

C

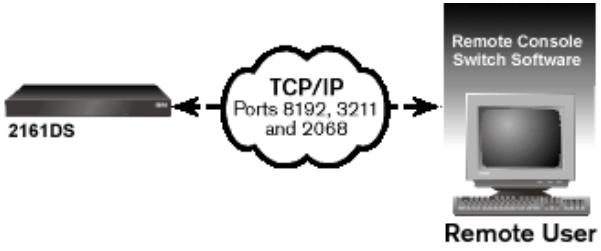
Appendix C: Ports Used by Console Switch Software

Table C-1 lists the port numbers that the software uses to communicate with the Remote Console Switches. This information can be used to configure firewalls to let the Remote Console Switch Software operate in the networks.

Table C-1: Ports Used by Remote Console Switches

Port Number	Appliance	Type	Purpose
3211	4161DS, 2161DS-2, 2161DS, A1000R or A2000R	TCP	Proprietary Management Protocol
3211	4161DS, 2161DS-2, 2161DS, A1000R or A2000R	UDP	Proproprietary Install and Discovery Protocol
2068	4161DS, 2161DS-2, 2161DS, A1000R or A2000R	TCP	Encrypted Keyboard and Mouse Data
2068	4161DS or 2161DS-2	TCP	Digitized Video Data
8192	2161DS, A1000R or A2000R	TCP	Digitized Video Data

Figure C-1. TCP Port Communication



NOTE: The TCP/IP ports are fixed and cannot be altered.

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