

IBM NetBAY Virtual Console Software

Installer and User Guide





INSTRUCTIONS

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



- **IBM NetBAY Virtual Console Software
Installer and User Guide**

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Product Overview

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Chapter 1: Product Overview

About the NetBAY Virtual Console Software

The IBM® NetBAY™ Virtual Console (VC) software is a cross-platform management application that allows you to view and control the Remote Console Manager (RCM) and all its attached servers. The cross-platform design ensures compatibility with most popular operating systems and hardware platforms. The VC software provides secure switch-based authentication, data transfers and username/password storage. Each RCM handles authentication and access control individually for more decentralized system control.

The VC software utilizes browser-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 RCMs, 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.

NOTE: Throughout the documentation and Virtual Console software user interface, you will see the word appliance used generically to describe the RCM.

Features and Benefits

Easy to install and configure

The VC software is designed for easy installation and operation. Auto-discovery of managed RCMs 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 RCMs simple and straightforward.

Powerful customization capabilities

Tailor the VC 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 RCM management

The VC software allows you to add and manage multiple RCMs in one system. Once a new RCM is installed, you can configure switch parameters, control and pre-empt user video sessions and execute numerous control functions, such as rebooting and upgrading your RCM. From the intuitive Management Panel, you can enable Simple Network Management Protocol (SNMP) traps, configure servers and cascade switches as well as manage user databases.

|



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Chapter 2: Installation

Getting Started

Before installing your VC software, refer to the following lists to ensure that you have all the items that came with your software as well as all other items necessary for proper installation.

Supplied with the VC software

Your VC software package contains the following items:

- NetBAY Virtual Console Software CD
- NetBAY Virtual Console Software Installer and User Guide (on CD)
- RCM/Virtual Console Software Quick Installation Guide
- Download Instructions

Supported operating systems

The VC software is supported on the following operating systems:

- Microsoft® Windows® 2000 Workstation - Service Pack 2
- Microsoft Windows 2000 Server - Service Pack 2
- Microsoft Windows NT® 4.0 Workstation - Service Pack 6a
- Microsoft Windows NT 4.0 Server - Service Pack 6a
- Microsoft Windows XP (Home and Professional)
- Redhat Linux® 7.1 (2.7 Kernel)
- Redhat Linux 7.2 (2.7 Kernel)

PC hardware configuration requirements

The following list contains the PC hardware configuration requirements for running the VC software on the supported operating systems. Configurations with less than the recommended requirements are not supported.

- 500 MHz Pentium III
- 128 MB RAM
- 10 or 100 BaseT NIC
- XGA Video with graphics accelerator
- Desktop size must be a minimum of 800 x 600
- Color palette must be a minimum of 256 colors

Installing the VC Software

The VC software application can be installed on Microsoft Windows NT, Windows 2000, Windows XP and Linux platforms. Follow these instructions to install the VC software on the desired platform.

To install on Microsoft Windows NT, 2000 or XP:

1. Insert the VC 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 Redhat Linux:

1. Insert the VC 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:

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

```
mount -t iso9660 -ro mode=0555 <unit> <mount point>
```

Replace **<unit>** 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
```

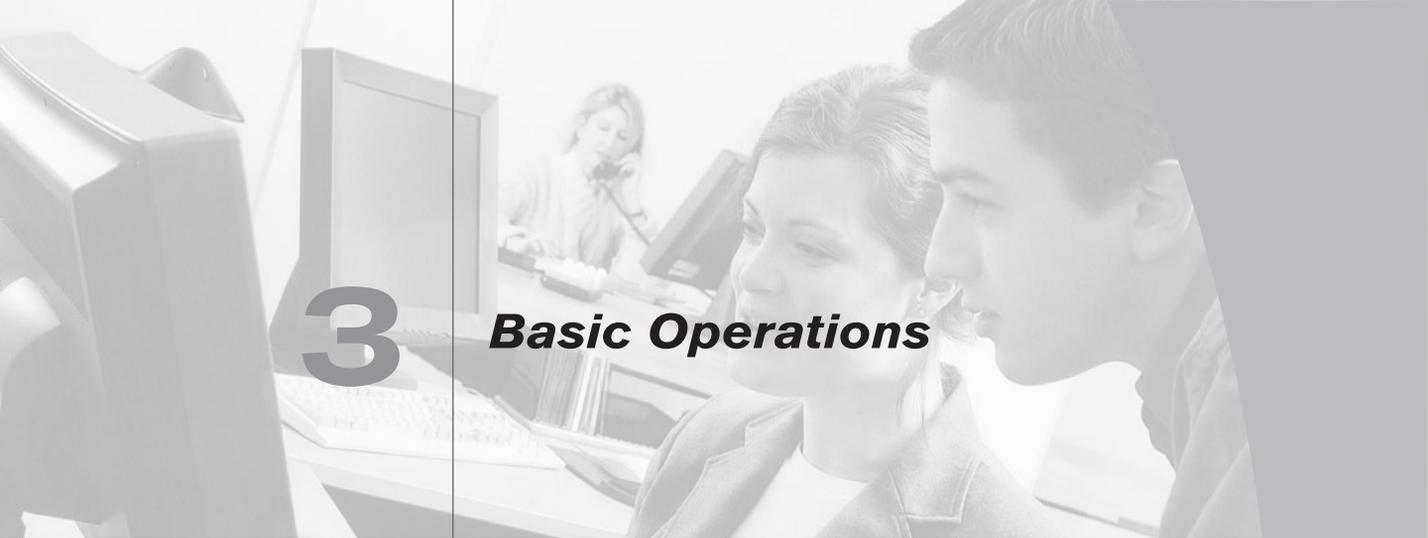
- b. Execute the following command to change the working directory to the mount point:

```
cd /mnt
```

- c. Execute the following command to start the install program:

```
sh./linux/setup.bin
```

2. Follow the on-screen instructions.



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Basic Operations

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Chapter 3: Basic Operations

Launching the VC Software

To launch the VC software on all Microsoft Windows operating systems:

Select *Start - Programs - IBM NetBAY Virtual Console Software*. The VC software will launch.

To launch the VC software on Redhat Linux (7.1 and 7.2):

From the application folder (`/usr/lib/IBM_NetBAY_Virtual_Console/`), execute the following command:

```
./IBM_NetBAY_Virtual_Console
```

-or-

From (`/user/bin`), execute the following link:

```
./IBM_NetBAY_Virtual_Console
```

-or-

If a desktop shortcut was created on installation, double-click the shortcut and then select *Run*. The VC software will launch.

Navigating the VC Software

The VC software consists of several components: the VC Explorer, the Video Session Viewer (Viewer) and the Management Panel (MP). Once you launch the VC software, the main VC Explorer window appears. The VC 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 VC 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* in this chapter.

When you select an RCM, you can click the *Manage RCM* task button in the VC Explorer to launch the MP. This component enables you to configure and control your RCM. For more information, see Chapter 4.

Viewing your system in the VC Explorer

The VC Explorer is divided into several panes: the View Selector buttons, 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 need to complete. Figure 3.1 highlights these navigation features.

Click one of the View Selector buttons to view your system organized by categories: Appliances, Devices, Sites or Folders. The VC Explorer's default display is user-configurable. For more information, see *Customizing the VC*

Explorer Window in this chapter. If you don't customize the default display, the VC Explorer will open to the Server view once you have added your first RCM.

NOTE: The Group Selector pane does not appear under the Appliances button and only appears under the Devices button when you have more than one type of server connected to your RCM.

VC Explorer Window Features

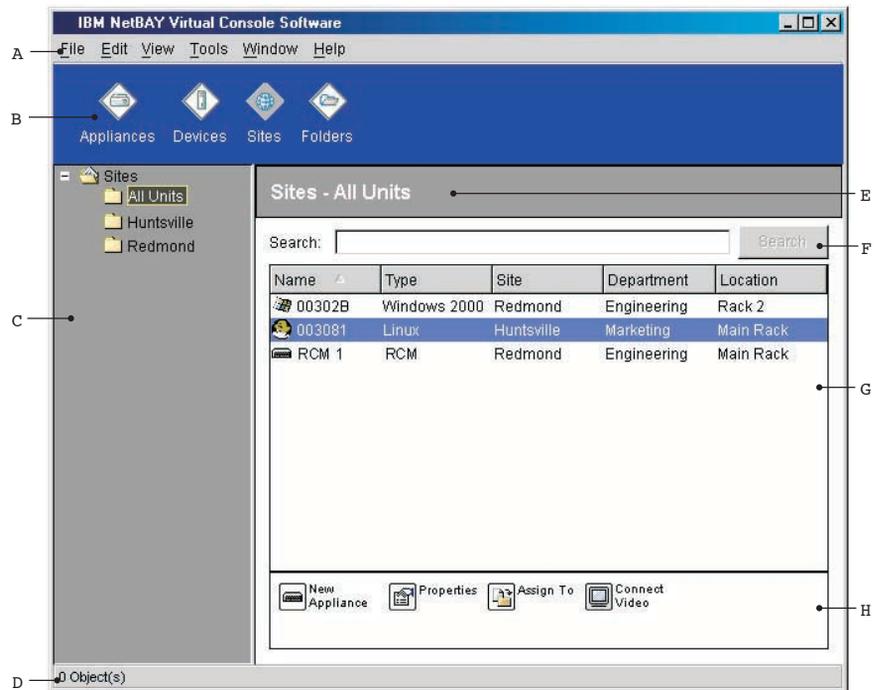


Figure 3.1: VC Explorer Window

- A. Menu bar: Allows you to access many of the features in the VC software.
- B. View Selector tabs: Contains four View Selector tabs for choosing the VC Explorer view.
- C. Group Selector pane: Contains a tree view representing the groups that are available for the current View Selector button. The selected group controls what is displayed in the Unit Selector pane when the Appliances, Devices, 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 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.

RCM Quick Setup Checklist

The following list is an overview of the steps you will follow to set up and configure your RCM system. Each of these steps is explained in detail in separate topics throughout this and the RCM Installer and User Guide.

To set up the RCM: (See the *RCM Hardware Installer and User Guide*)

1. Adjust mouse acceleration on each server to *Slow* or *None*.
2. Install the RCM hardware, connect Conversion Option (CO) cables and connect the keyboard, monitor and mouse to the analog port.
3. Connect a terminal to the configuration (serial or 101 notation) port on the back panel of the RCM and set up network configuration (set network speed and address type). The IP address can be set from the VC software.
4. Using the analog workstation, input all server names via OSCAR® for IBM.

To set up the VC software: (See this Installer and User Guide)

1. Install the VC software on each remote workstation.
2. From one remote workstation, launch the VC software.
3. Click the *New Appliance* task button to add the new switch to the VC 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*. The VC software will find the RCM and all CO cables attached to it. These names will display in the VC Explorer.
4. Set properties and group servers as desired into locations, sites or folders through the VC Explorer.
5. Create user accounts through the MP.
6. Once one remote workstation is set up, select *File - Database - Save* to save a copy of the database with all the settings.
7. From the second remote workstation, click *File - Database - Load* and browse to find the file you have saved. Select the file and click *Load*.
8. If the analog user (via OSCAR) adds, deletes or renames any CO cables after you have loaded this file, you can resynchronize your local database with OSCAR by clicking the *Manage RCM* task button and clicking the *Resync* button under *Settings - Devices*.
9. To control a server attached to your RCM, select the desired server in the VC Explorer and click the *Connect Video* task button to launch a server session in the Video Session Viewer.
10. Adjust the size (select *View - Manual Scale*) and quality (select *Tools - Manual Video Adjust*) of the server video in the Video Session Viewer.

Adding an RCM

Before you can access a unit through the VC software, you must add it to the VC software database. Once an RCM is added, it appears in the Unit list. You may either manually add or discover an RCM.

To add a new RCM with an assigned IP address:

1. Select *File - New - Appliance* from the VC Explorer menu.
-or-
Click the *New Appliance* task button. The New Appliance Wizard appears. Click *Next* to continue.
2. You are prompted to indicate whether the RCM has an assigned IP address or not. Click *Yes* and then click *Next*.
3. The *Find RCM* window appears. Type the IP address and click *Next*.

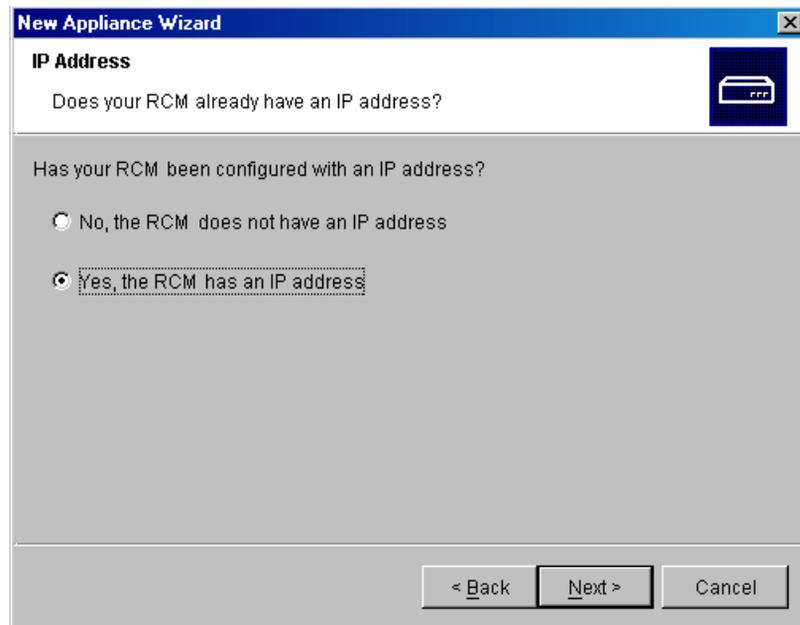


Figure 3.2: Locate RCM Dialog Box

4. The VC software will search for the indicated unit as well as all the powered COs and server names you associated with it in OSCAR, if any. If you want to search for unpowered COs, you can access the Resynch feature under the Devices category in the MP and click the *Include Offline Conversion Option cables* checkbox. For more information, see *Viewing server connections* in Chapter 4. Click *Next*.
5. The *Configure Cascade Switches* dialog box appears if the VC software

detects an attached legacy switch. This box contains a list of all CO cable eIDs (Electronic Identification Number) retrieved from the RCM and the cascade 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 pulldown menu.

- a. The *Existing Cascade Switches* field contains a list of all the current switches defined in the database. Click *Add*, *Delete* or *Modify* to alter the list.
- b. Associate the appropriate switch from the pulldown menus for each CO that has a switch attached.

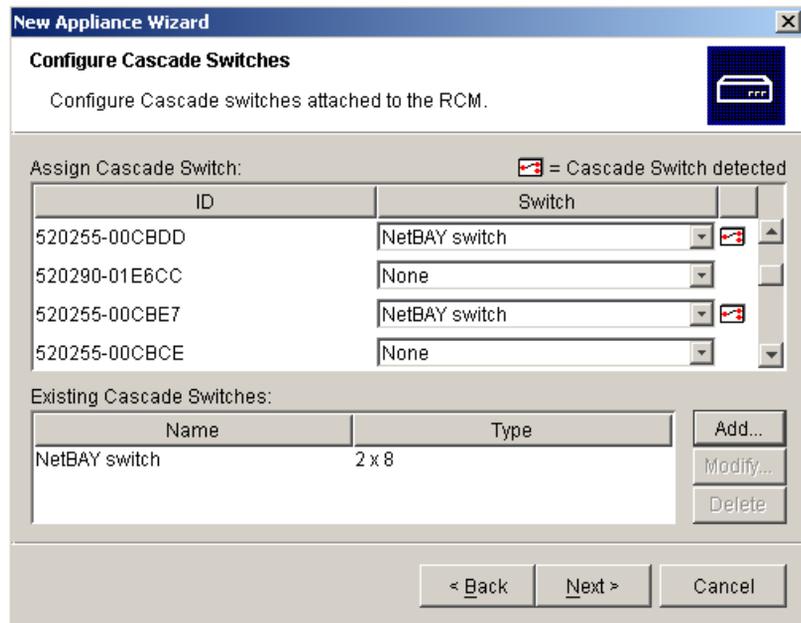


Figure 3.3: Configure Cascade Switches Dialog Box

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

To add a new RCM that does not have an assigned IP address:

1. Select *File - New - RCM* from the VC Explorer menu.
-or-
Click the *New Appliance* task button. The New Appliance Wizard appears. Click *Next* to continue.
2. You are prompted to indicate if the RCM has an assigned IP address. Click *No* and then click *Next*.
3. The *Network Address* window appears. Type the IP address, subnet mask

and gateway for the unit and click *Next*.

4. The *Select RCM* window appears, prompting you to select the unit to add from the list of new RCMs that were found. Select the product and then click *Next*.
5. The *Configuring RCM* window appears to indicate whether the IP information was successfully configured. If the configuration was successful, the VC software will search for the new RCM as well as all COs and server names associated with it. Click *Next*.
6. The *Configure Cascade Switches* dialog box appears if the VC software detects an attached switch. This box contains a list of all CO cable eIDs retrieved from the RCM and the cascade switches to which they are connected, if any.
 - a. The *Existing Cascade Switches* field contains a list of all the current switches defined in the database. You may add, delete or modify the list.
 - b. Associate the appropriate switch from the pulldown menus for each CO that has a switch attached.

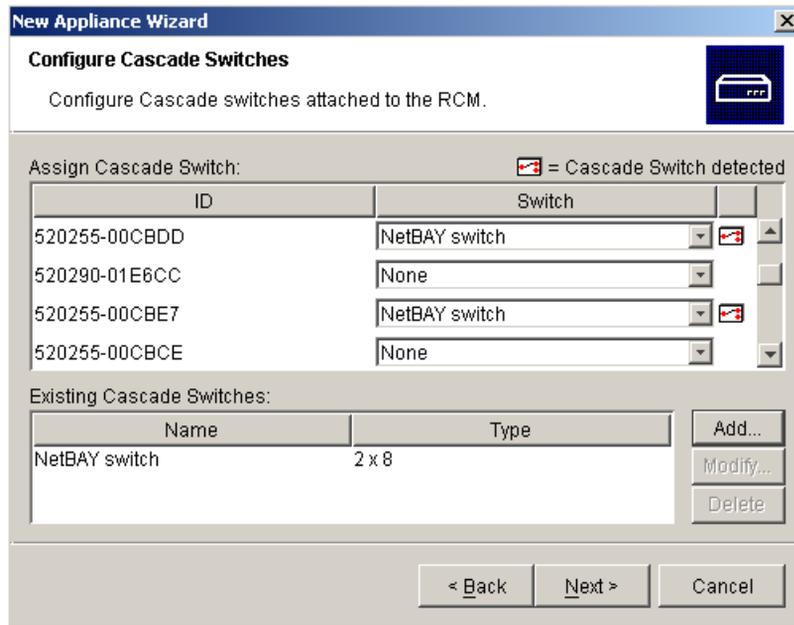


Figure 3.4: Configure Cascade Switches Dialog Box

7. When complete, click *Finish* to exit the Wizard and return to the main window. Your RCM should now be in the Unit Selector pane.

To discover an RCM:

1. Select *Tools - Discover* from the VC Explorer menu. The Discover Wizard appears. Click *Next* to continue.
2. The Address Range page appears. Type the range of IP addresses 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. If one or more new RCMs are discovered, the Wizard shows the Select RCMs to Add page. From this page, you can choose the RCMs to add to the local database.
-or-
If no new RCMs were found (or if you clicked *Stop*), the Wizard will show the No New RCMs Found page and you will need to add the switch manually. For more information, see the previous procedure.
4. Click on an RCM to add and click the *Add (>)* icon to move the selection to the RCMs to Add list.
5. Repeat step 4 for all RCMs you would like to add. Click *Next* to continue.
6. The Adding RCMs 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 switch should now be in the Unit Selector pane.
 - a. The Discover Wizard will not automatically find servers attached to the RCM. After running the Discover Wizard, you must click the *Resync* button in the Management Panel to find servers attached to RCM. For more information, see *Resynchronizing the server listing* in Chapter 4.
-or-
If one or more switches could not be added to the local database for any reason (including if you pressed *Stop* during the add process), the Discover Wizard Not All RCMs Added page appears. This page will list all of the switches that you selected and the status for each. The status will indicate if an RCM was added to the local database and if not, why the process failed. Click *Done* when you are finished reviewing the list.

NOTE: If an RCM 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 RCM

When you click the Appliances button, you will see a list of the RCMs currently defined in the local database. To access an RCM, you must first log into it by typing in a username and password. Once you have logged in to a particular RCM, the VC software will cache the username and password in memory for the duration of the VC software session.

NOTE: You can clear the login credentials by selecting *Tools - Clear Login Credentials*.

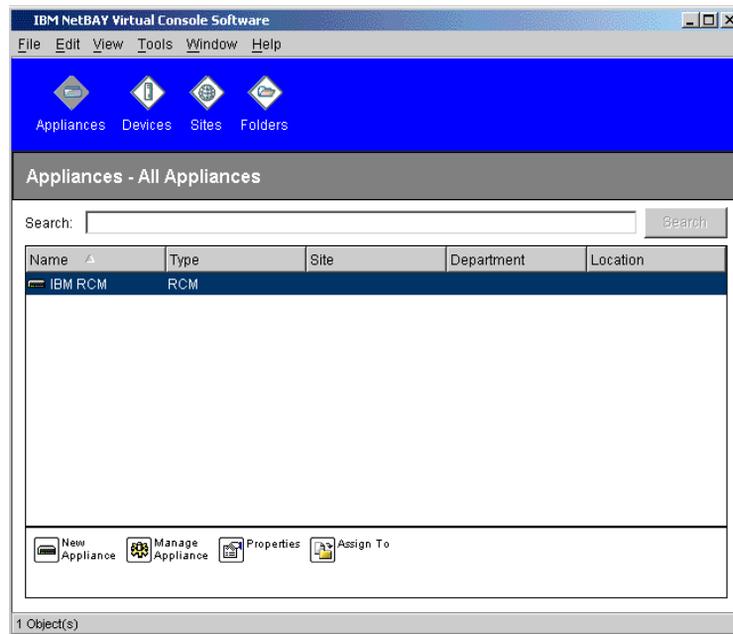


Figure 3.5: Appliance View Button Selected

To log into an RCM:

1. Click the *Appliances* button in the VC Explorer.
2. Double-click on an RCM from the Unit Selector pane.
-or-
Select an RCM, and then click the *Manage RCM* task button.
-or-
Right-click on an RCM. A pop-up menu appears. Select *Manage RCM*.
-or-
Click an RCM in the Unit Selector pane and press **Enter**.
3. A password prompt appears. Type in your username and password.
4. Click *OK* to access the RCM. This launches the MP. For more information about the MP, see Chapter 4.

-or-

Click *Cancel* to exit without logging in.

Accessing and Managing Your Devices

The Devices button displays a list of servers defined in the database. The Group Selector pane appears if two or more device types are defined. Click *All Devices* or click on a folder to view all the devices 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.

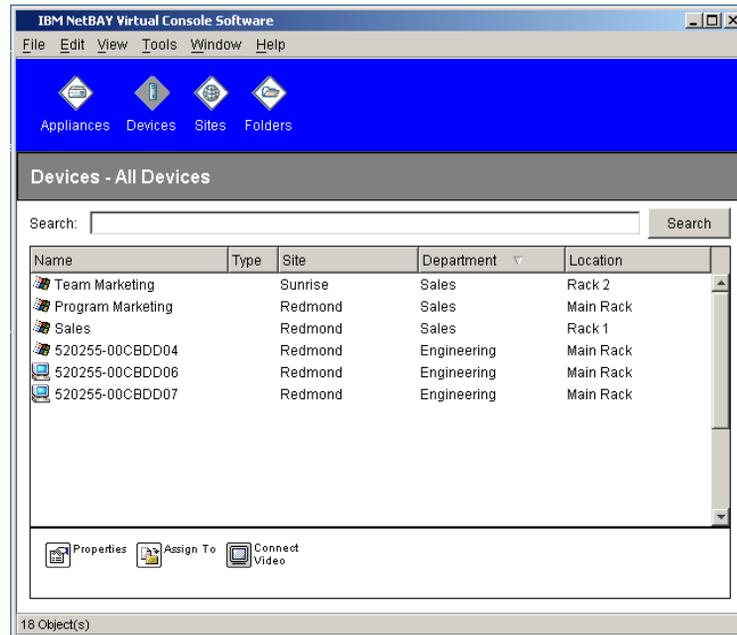


Figure 3.6: Devices View Button Selected

To access a server:

1. Click the *Devices* button in the VC 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 on the server.

-or-

Press **Enter**. The Viewer launches in a new window.

To search for a server in the system:

1. Click the *Devices* button and insert your cursor in the search text box.
 2. Type the information you want to search. 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 *Devices* button.
2. Begin typing 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 from the VC Explorer. 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.

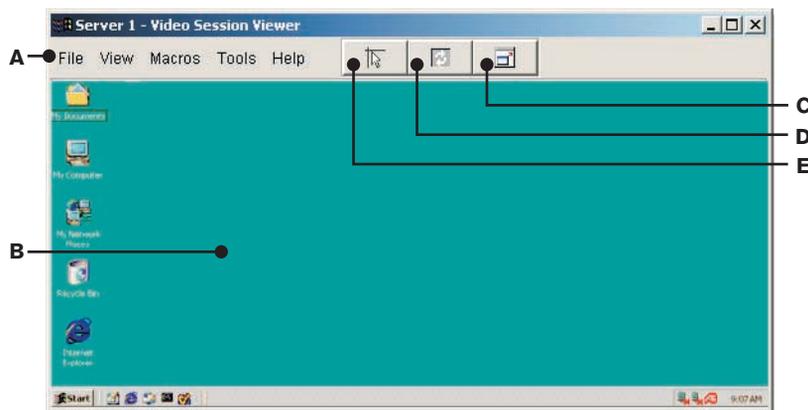
Viewer Window Features

Figure 3.7: Video Viewer Window

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

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

- C. Full screen mode button:** Expand the accessed server desktop to fill the entire screen.

- D. Refresh video button:** Regenerate the digitized video image of the server desktop.

- E. Align local cursor button:** Match up the tracking of the local cursor to the remote server cursor.

Expanding and refreshing your Viewer

You can adjust your view using the three buttons at the top of the Viewer window. The first button allows you to align the mouse cursors, the second is to refresh the video and the third allows you to expand the Viewer window to encompass the entire screen. If you choose to expand the Viewer window, the menu bar will disappear, but you will still see a small floating palette with these three buttons and the macros pulldown menu.



Figure 3.8: Full Screen Toolbar

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 *Full Screen Mode* button.

-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:

Click the *Full Screen Mode* button on the floating toolbar 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 window size

The Viewer allows you to set up automatic or manual scaling for the Viewer window. When Auto Scale is selected, the desktop window stays the same size and the server image is scaled to fit the window. When Manual Scale is selected, you will see a pop-up containing a selection of supported window sizes from which you may choose one.

To adjust the size of the Viewer window:

From the menu, select *View - Auto Scale* to allow the server image to be scaled automatically.

-or-

From the menu, select *Manual Scale*, then choose the dimension to scale the window.

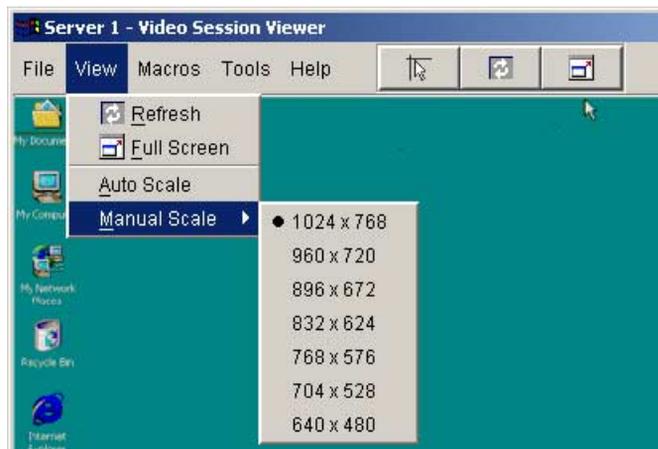


Figure 3.9: Viewer Manual Scale

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 alter the video for your specific needs.

Manual Video Adjust Dialog Box Options

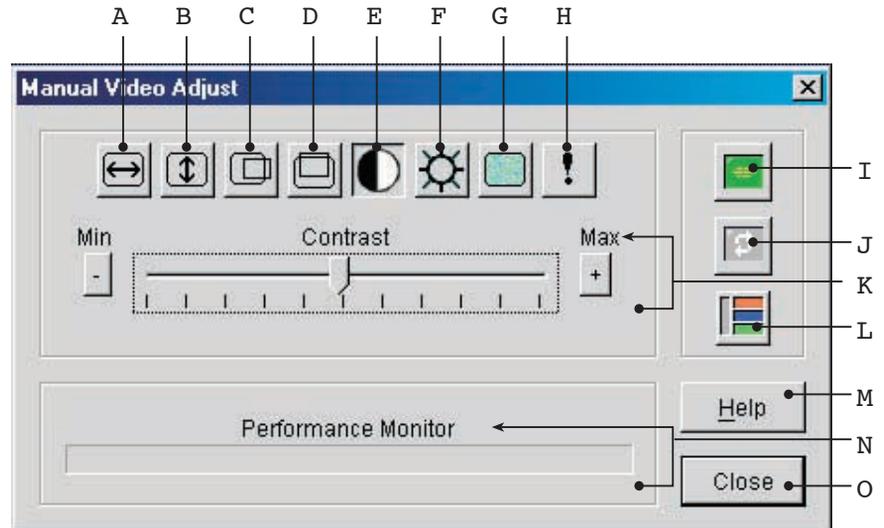


Figure 3.10: Manual Video Adjust Dialog Box

A. Image Capture Width	I. Automatic Video Adjustment
B. Image Capture Height	J. Refresh Image
C. Image Capture Horizontal Position	K. Adjustment bar
D. Image Capture Vertical Position	L. Video Test Pattern
E. Contrast	M. Help button
F. Brightness	N. Performance Monitor
G. Noise Threshold	O. Close box
H. Priority Threshold	

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 a feature 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.

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.

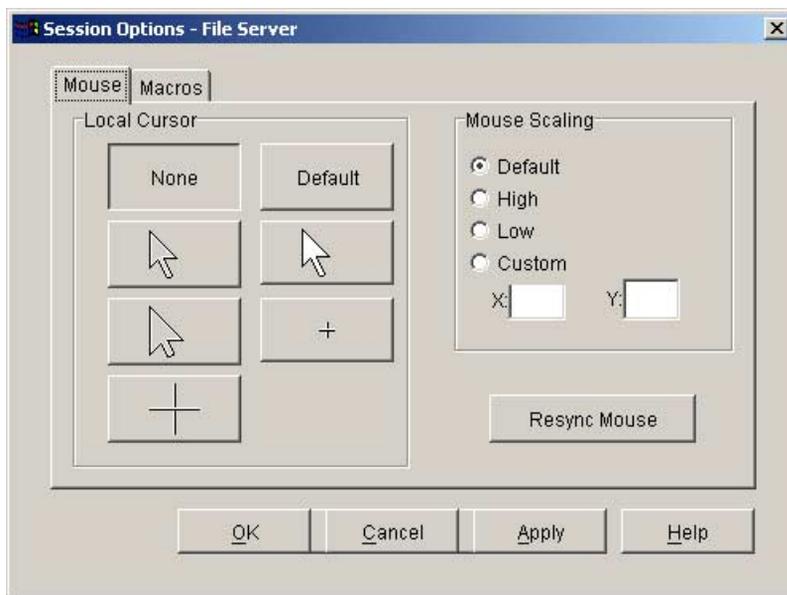


Figure 3.11: Viewer Mouse Session Options Dialog Box

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 a mouse scaling value 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 5.00.

Aligning or resynchronizing the mouse

If you find that your mouse no longer responds properly, you can align to re-establish proper tracking or resynchronize the mouse. Resynchronizing causes the RCM to simulate a mouse reconnect at the server as if you had

disconnected and then reconnected the mouse. Alignment causes the local cursor to be aligned with the cursor on the remote server.

NOTE: If the server does not support the ability to disconnect and reconnect the mouse (almost all newer PCs do), then the mouse will become disabled and the server will have to be rebooted.

To realign the mouse:

Click the *Align Local Cursor* button on the Viewer toolbar.

To resynchronize the mouse:

1. Select *Tools - Session Options* in the Viewer. The Session Options dialog box appears.
2. Click the *Mouse* tab.
3. Click the *Resync Mouse* button. A dialog box appears prompting you to confirm.
4. Click the *Reset Mouse Connection at the Server* checkbox and click *OK*.

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 pulldown menu as well as change the set that displays by default.



Figure 3.12: Viewer Macro Menu Expanded

To send keystrokes to the server:

Select the *Macro* menu in the Viewer and choose keystrokes to send to the server. Figure 3.12 shows the default macros that ship with the VC software. If you do not see the keystroke you need, select *Configure* to access the Macros dialog box. Here you can create, modify, delete and group macros.

To change the default Macro group:

1. Select *Tools - Session Options* in the Viewer. The Session Options dialog box appears.
2. Click the *Macros* tab.

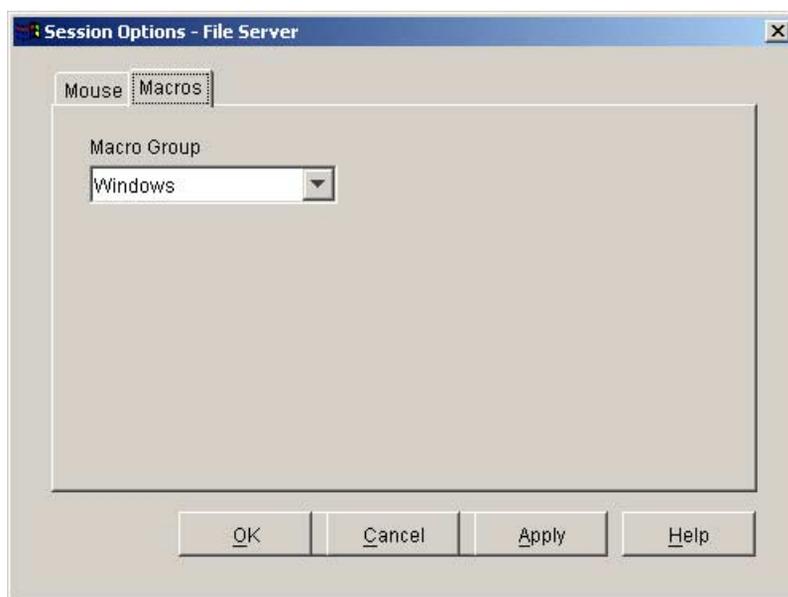


Figure 3.13: Viewer Session Options Dialog Box - Macro Tab

3. Select a macro group from the pulldown list to appear in the Macro menu and click *OK*.

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* from the Viewer. The Macros dialog box appears.

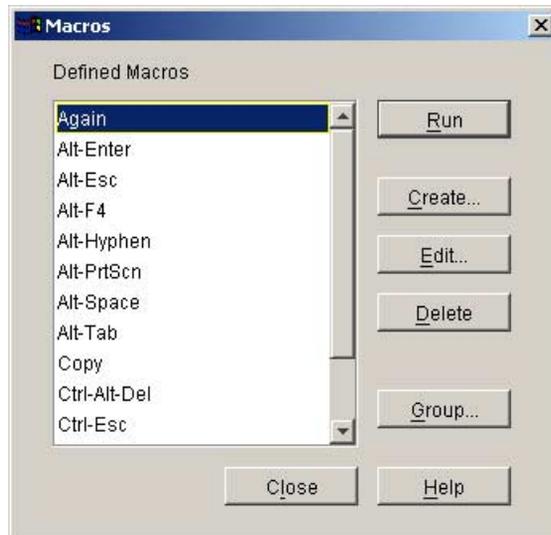


Figure 3.14: Viewer Macro Dialog Box

2. Click *Create*. The Create/Edit Macros dialog box appears.

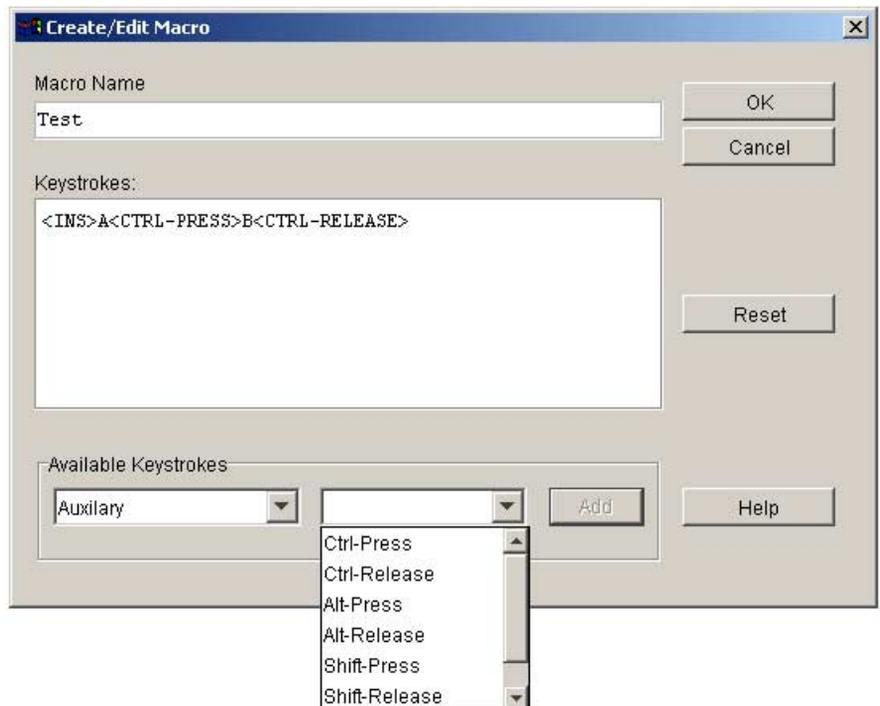


Figure 3.15: Viewer Create/Edit Macro Dialog Box

3. Type the name of the macro in the Macro Name field.
4. Type the keystrokes to send in the Keystrokes field.
-or-
Select the desired category and keystrokes from the list of Available Keystrokes and click *Add*.
5. 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; you can alter either of these two 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* from the Viewer. The Macros dialog box appears.
2. Click *Group*. The Macro Groups dialog box appears.

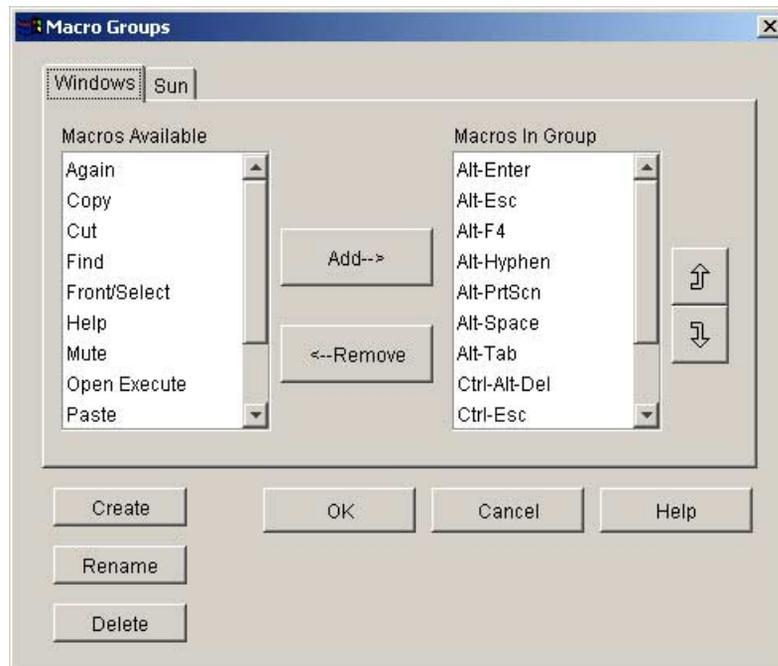


Figure 3.16: Viewer Macro Groups Dialog Box

3. Click *Create*. A dialog box appears prompting you to name the new macro group.

4. Type in 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* from the Viewer. The Macros dialog box appears.
2. Click *Group*. The Macro Groups dialog box appears.
3. Click the macro group tab to alter. Windows and Sun are the default tabs. If you have created a new group, you will see a tab for this group as well.
4. Click on the macro 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 to order it with the other macros.
5. Repeat step 4 until all the macros to be grouped appear in the Macros In Group box.
6. 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.

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 VC 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 view it in a browser window instead of through the Viewer. The Information tab allows you to enter information about the server including a server description, contact information and any comments you would like to add. Lastly, the Connections tab displays the connection that will be used for a specific server.

NOTE: You can also change the properties of your RCM. For more information, see Chapter 4.

To change server properties:

1. Select an individual server in the Unit Selector list.
2. Select *View - Properties* from the VC Explorer menu.
-or-
Click the *Properties* task button. The Properties dialog box appears.

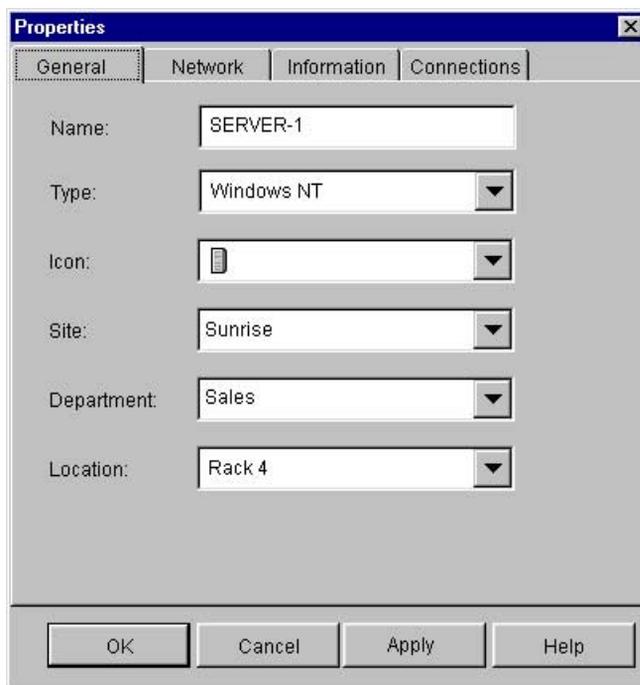


Figure 3.17: Server General Properties Tab

3. Type in the name of the server. Duplicate names are not allowed.
4. (Optional) Select the server type. If the selection is not in the pulldown, type the name of the new server type in the text field. Once entered, the option becomes available in the pulldown 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 pulldown, type the name of the new assignment in the text field. Once entered, the option becomes available in the pulldown for future assignment.
7. (Optional) Click the *Network* tab and type in the URL 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 3.18: Server Network Properties Tab

8. (Optional) Click the *Information* tab and type in a description of the unit. There are no rules for the type of information that you may enter here.



Figure 3.19: Server Information Tab

9. (Optional) Click the *Connections* tab to view the connection that will be used to access this server. Figure 3.20 shows a connection to a server. Figure 3.21 shows a server connected to Channel 1 of a legacy switch.

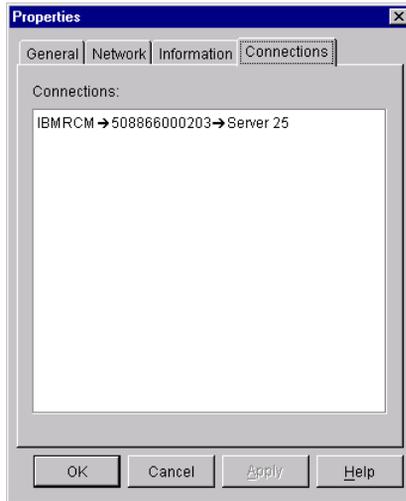


Figure 3.20: Server Connection Example

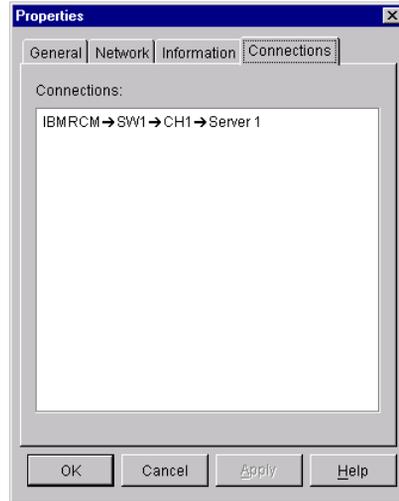


Figure 3.21: Switch Connection Example

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 VC 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 Property 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 buttons allow you to organize and manage your RCMs and servers by custom groups. Site organization is based on where your devices are located and refers to the column headings Site and Department, which can be customized to suit your needs. See *Modifying custom field names*

in this chapter. Folders are a way to create a customized organizational system for individual devices. 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.

The column headings are customizable. Figures 3.22 and 3.23 show examples of how you might use the default field name values. You may change them to fit your own organization. Figure 3.24 shows an example of customized field names.

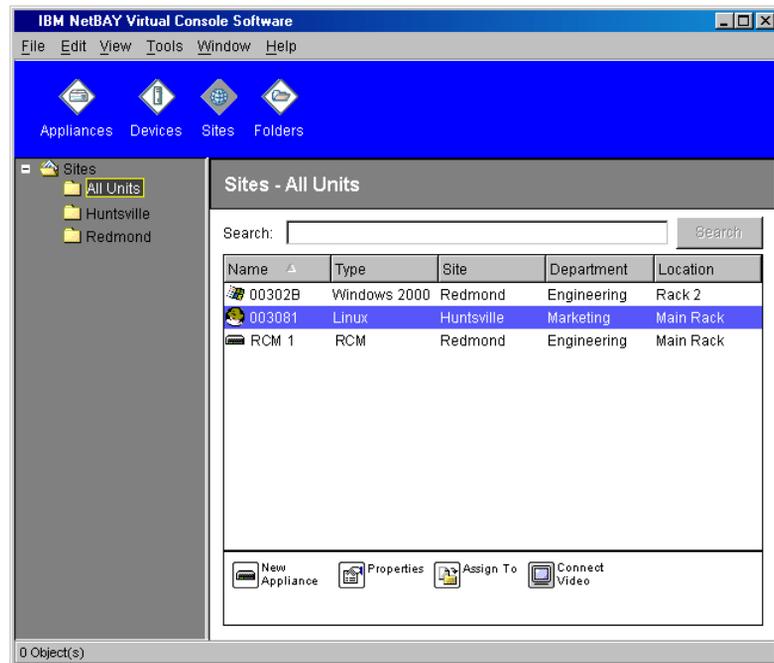


Figure 3.22: Sites View Button Selected

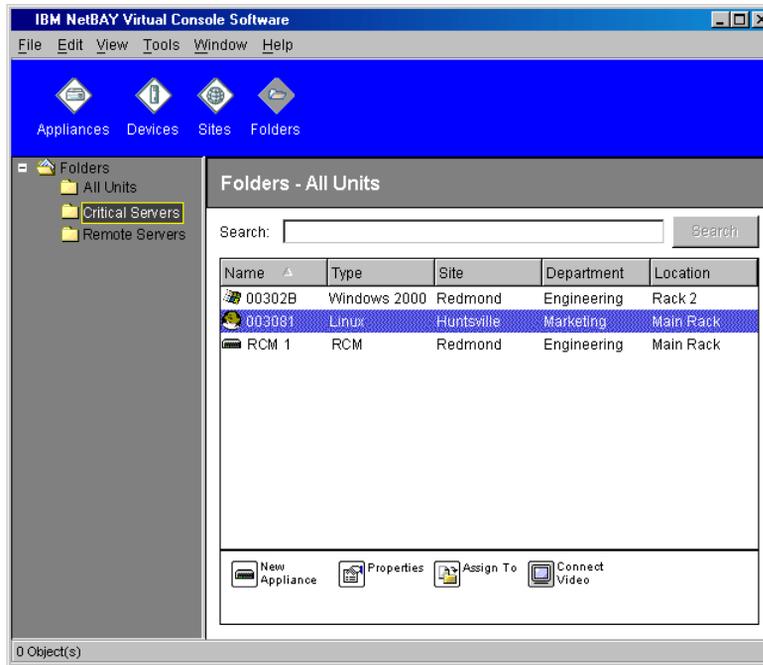


Figure 3.23: Folders View Button Selected

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 RCMs 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.

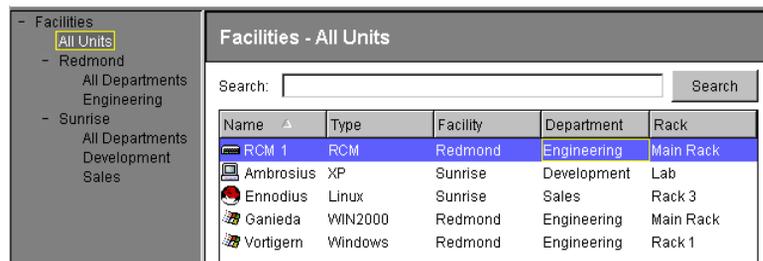


Figure 3.24: Example of Modified Custom Fields

To modify a custom field label:

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

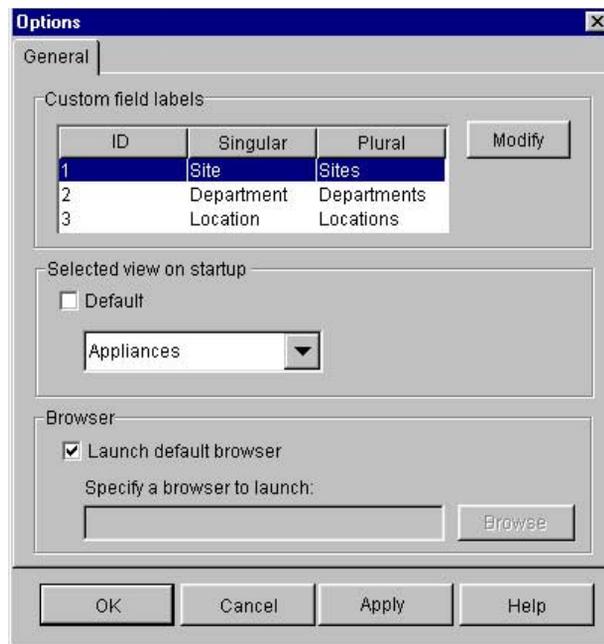


Figure 3.25: Options Dialog Box - Custom Field Labels

2. Select a field label 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 VC Explorer menu.
-or-
Click the *Properties* task button. The Properties dialog box appears.
2. Click the *General* tab and select the pulldown menu for Site, Department or Location. If a name is not in the pulldown menu, 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 button.
2. Click on the *Folders* node and select *File - New - Folder*.
-or-
Right-click on the *Folders* node and select *New Folder*. The New Folder dialog box appears.
3. Type in 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 an RCM or server to a Site, Location or Folder. This menu item is only enabled when a single RCM 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 VC Explorer menu.
-or-
Click the *Assign To* task button.
-or-
Right-click on a unit and select *Assign To*. The Assign To dialog box appears.



Figure 3.26: Assign To Dialog Box

3. Select the site, location or folder category from the pulldown menu.
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, location or folder:

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 works 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 dependant on what is currently selected. You can select and rename an RCM 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 VC software, the OSCAR server list at the analog station becomes out of date. Resynching will not work in this instance. Servers should be deleted or renamed from OSCAR and then resynchronized in the VC software.

To delete an RCM or server:

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

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

1. Select the device type, site, department or folder to delete from the Group Selector pane.
2. Select *Edit - Delete*.
-or-
Press the **Delete** 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 device type, site, department or folder:

1. In the Group Selector pane, click on the device type, site, department or folder to rename.
2. Select *Edit - Rename*. The Rename dialog box appears.
3. Type in a name from 1 to 32 characters long. Names 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, including the same name with different cases, 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 VC Explorer Window

The VC Explorer window can be resized at any time. Each time you launch the application, the VC 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 VC 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 VC Explorer is started the divider will appear in its default location. See *Appendix B* 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 the startup option, the VC Explorer will determine which view to display. If you have one or more servers defined, the *Devices* button will appear by default. If you do not, the *Appliances* button will appear.

When *Default* is unchecked, the VC Explorer will display the view selected in the pulldown menu shown below the checkbox. The pulldown menu contains the following values: *Appliances*, *Devices*, *Sites*, and *Folders*. The pulldown menu is only enabled when the checkbox is unchecked.

To modify the selected view on startup:

1. Select *Tools - Options* from the VC Explorer menu. The Options dialog box appears.
2. Select *Appliances*, *Devices*, *Sites* or *Folders* from the pulldown menu.
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 VC Explorer. The Options dialog box appears.
2. Deselect the *Launch Default Browser* checkbox. 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 remote workstation running the VC software contains a local database that records the information that you enter about your units. If you have multiple remote workstations, you may configure one station and then save a copy of this database and load it into the other stations to avoid unnecessarily reconfiguring each station. You may also export the database for use in another application.

Saving a database

The VC 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 remote 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 Management Panel 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.

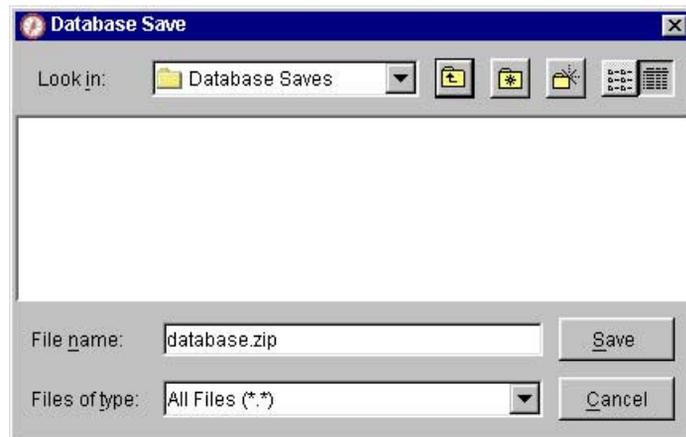


Figure 3.27: Database Save Dialog Box

2. Select a database to save.
3. Type in a file name and choose 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.

Exported Database Fields

RCM 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 RCMs 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 RCMs.

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

To export a database:

1. Select *File - Database - Export* from the VC Explorer menu. The Database Export dialog box appears.
2. Select a database to export.
3. Type in a file name and browse to the location to save the exported file.
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 VC Explorer menu. The Database Load dialog box appears.
2. Browse to select a database 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 RCM

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Chapter 4. Managing Your RCM

Once you have installed a new RCM, you have the ability to view and configure unit parameters, view and control currently active video sessions and execute a variety of control functions such as rebooting and upgrading your RCM. This is accomplished through the Management Panel (MP). The MP has three tabbed panels: Settings, Status and Tools.

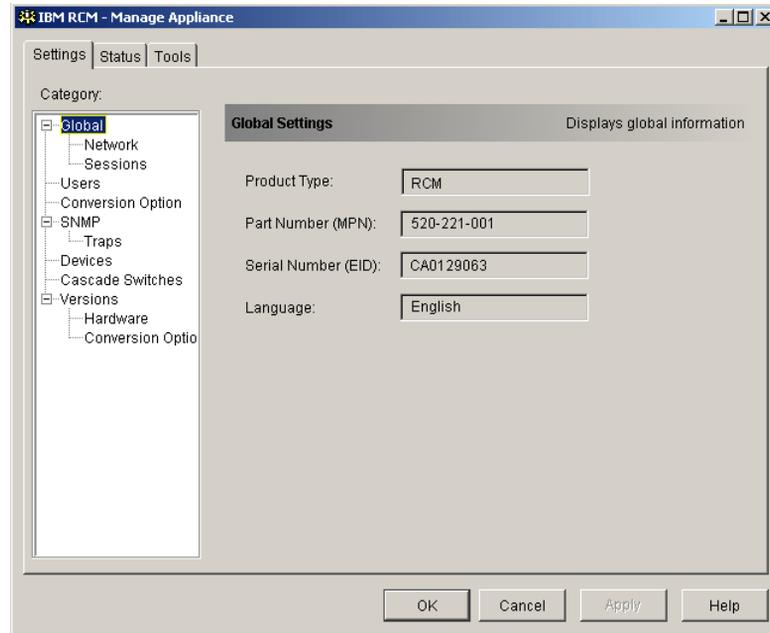


Figure 4.1: Management Panel Dialog Box

To access the MP:

1. Click the *Appliances* button in the VC Explorer.
2. Double-click on an RCM from the Unit Selector pane.
-or-
Select an RCM from the Unit Selector pane, and then click the *Manage RCM* task button.
-or-
Right-click on an RCM in the Unit Selector pane. A pop-up menu appears. Select *Manage RCM*.
-or-
Click an RCM in the Unit Selector pane and press **Enter**.
3. A password prompt appears. Type in your username and password and click *OK*.
4. The MP dialog box appears.

Viewing and configuring RCM parameters

The Settings button allows you to display an expandable list of categories covering a wide range of parameters for your RCM. 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 RCM.

Changing global network and session parameters

The Global category allows you to view the product type, part and serial number and language setting for the RCM. If you select the Network sub-category, you will be able to change the network settings including the IP address, subnet mask, gateway, LAN speed and BootP setting. If you select the Sessions sub-category, you can enable the Video session time-out to allow the RCM to close an inactive video session after a specified number of minutes.

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 RCM. You can add, modify or delete users in this listing.

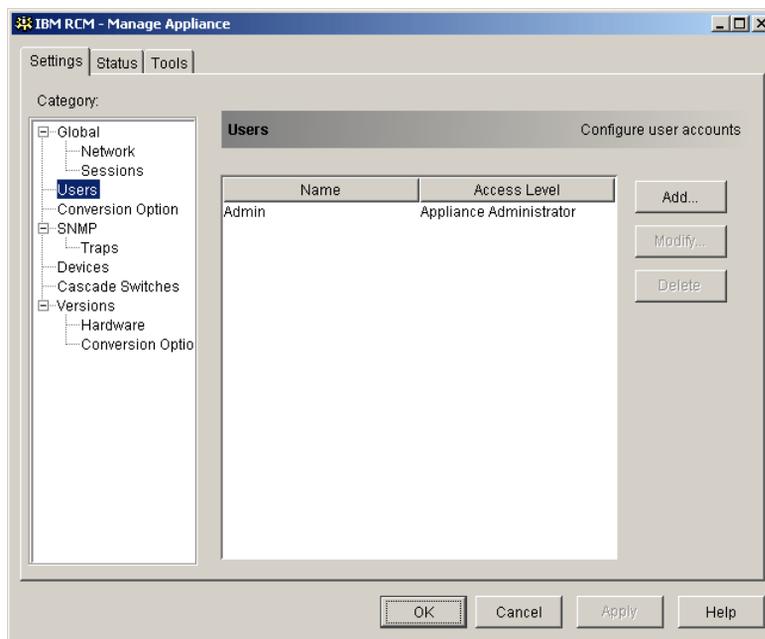


Figure 4.2: Users Dialog Box

To add or modify a user:

1. Click the *Users* category in the left column in 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 4.3: Add User Dialog Box**

3. Enter the username and password to assign to the user and then verify the password by typing it into the *Verify Password* field.
4. Select the appropriate access level for this user from the pulldown menu. If you select the *User* option, the Access Rights button appears.
 - a. Click the *Access Rights* button to select individual servers for that user. The User Access Rights dialog box appears.

**Figure 4.4: User Access Rights Dialog Box**

- b. Select a server in the left column for which this user should have access rights. Select the *Add* button.
 - c. Select a server in the right column from which to remove a 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 delete a user:

1. Click the *Users* category in the left column in the MP and then select the user(s) 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.

Viewing the Conversion Option (CO) cables

The Conversion Option category lets you view the CO cables in your system, their port and eID numbers as well as the computer type and keyboard layout. You can also view the CO status. A green circle indicates that the CO is online. A yellow circle means the CO is being upgraded and a Red X indicates that the CO is offline.

Enabling and configuring SNMP

SNMP (Simple Network Management Protocol) is a protocol used to communicate management information between network management applications and RCMs. Other SNMP managers (such as Tivoli and HP OpenView) can communicate with your RCM by accessing MIB-II (Management Information Base) and the public portion of the enterprise MIB. MIB-II is a standard MIB that many SNMP devices support. 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 RCM as well as receive SNMP traps from the switch. For more information on traps, see *Enabling individual SNMP traps* in this chapter. If you check *Enable SNMP*, the unit will respond to SNMP requests over UDP (User Datagram Protocol) port 161. Port 161 is the standard UDP port used to send and receive SNMP messages.

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 RCMs over a different network port.

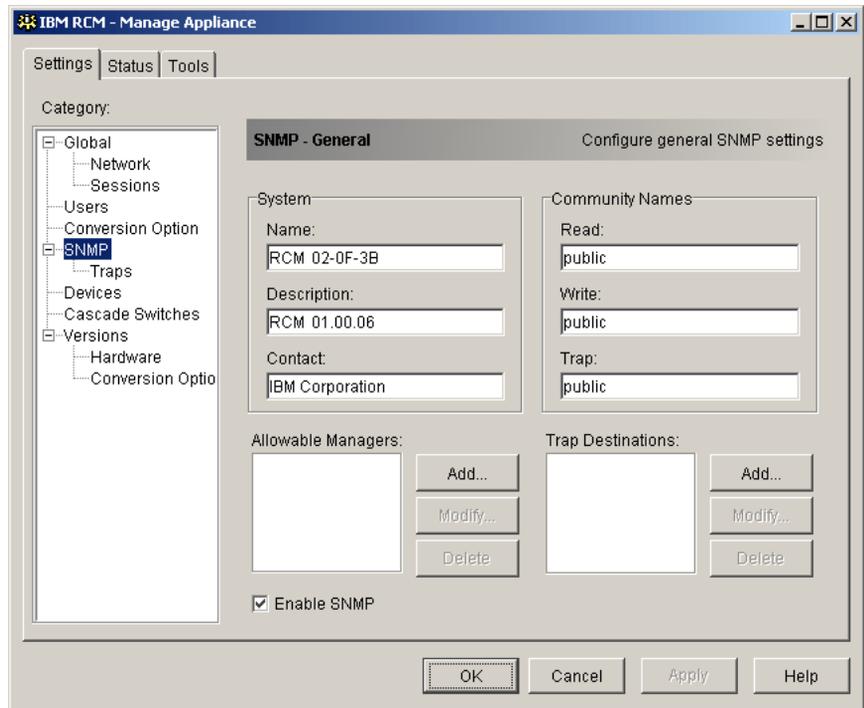


Figure 4.5: SNMP Configuration Dialog Box

To configure general SNMP settings:

1. Click the *SNMP* category in the left column in the MP.
2. Click the *Enable SNMP* checkbox to allow the RCM to respond to SNMP requests over UDP port 161.
3. Enter the system's fully qualified domain name in the Name field, as well as a description and node contact person in the System section.
4. Enter 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 UPD port 161 and act as passwords that protect access to the RCM. The values can be up to 64 characters in length.
5. Add up to four remote workstations that are allowed to manage this RCM or leave this blank to allow any station to manage the RCM.
 - a. Click the *Add* button to define an allowable manager. The Allowable Manager dialog box appears.
 - b. Type in the IP address of the management station to add.
 - c. Click *OK* to add a management station.
6. Add up to four remote workstations to which this RCM will send traps in the Trap Destination field.

- a. Click the *Add* button to define a trap destination. The Trap Destination dialog box appears.
 - b. Type in the IP address of the trap destination 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 RCM to a management station indicating that an unusual event has occurred in the RCM that may require further attention. You can specify what SNMP traps are sent to the management stations by simply clicking the appropriate checkboxes 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 RCM. You may select *Enable All* or *Disable All* to easily select or deselect the entire list.

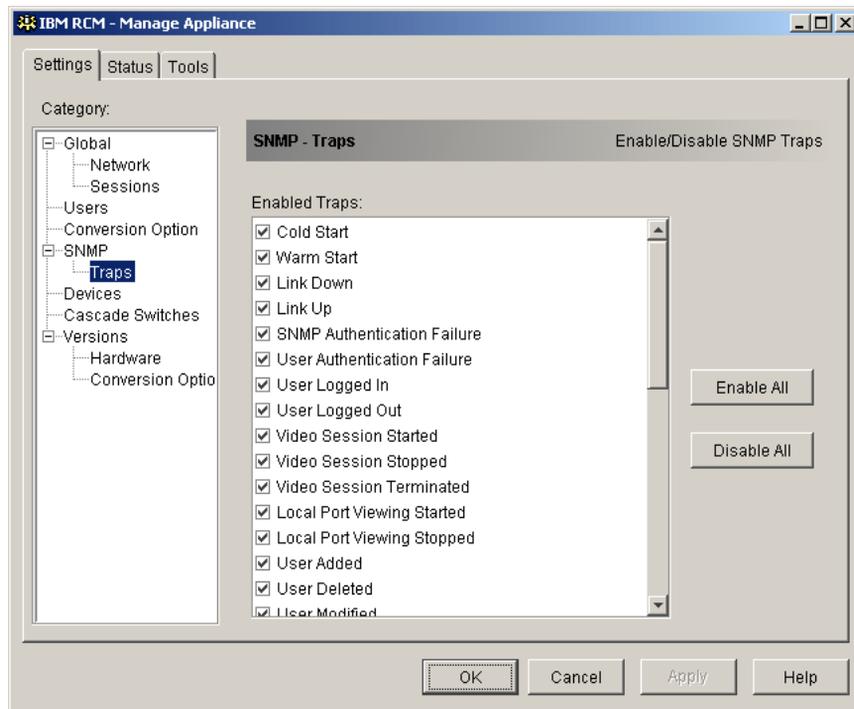


Figure 4.6: Traps Dialog Box

Viewing server connections

When you select the *Devices* category for the first time, the MP will retrieve the servers that exist in the VC software database as well as information on how the servers are connected to the selected RCM.

The Connection column displays the current server connection. This can be to either a CO cable or a cascade switch. If connected to a CO cable, the CO's eID will display in the Connection column. If connected to a cascade 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 CO or Switch in the Connection column, the Viewer will launch.

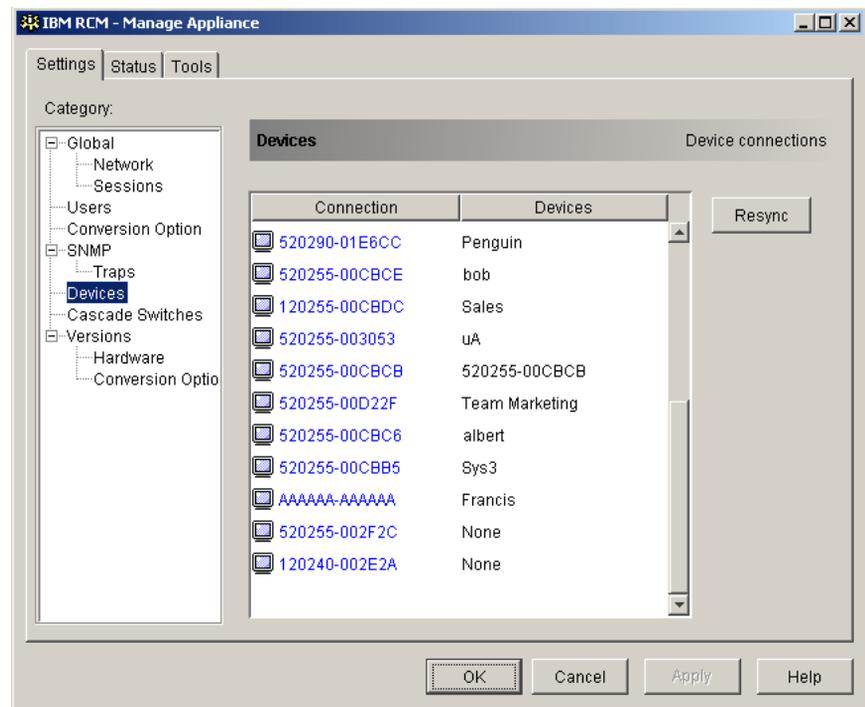


Figure 4.7: Devices Dialog Box

Resynchronizing the server listing

You may need to periodically resynchronize the database on your remote workstation with the database stored in the RCM. Do this if the analog user has changed server names or if CO cables have been added or moved.

NOTE: This procedure only resynchronizes your own remote workstation. If you have multiple remote workstations, save your resynchronized local database and load it into the other remote 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*.
2. A warning message displays indicating that the database will be updated to match the current configuration in the RCM. Your current local database names will be overridden with the switch names. Click *Next*.
3. A polling RCM message box appears with a progress bar indicating that the switch information is being retrieved.
4. If no changes were detected in the RCM, a completion dialog box appears telling you there were no changes detected. Click *Finish* to exit.
-or-
If changes were detected in the RCM, the Detected Changes dialog box appears. Click *Next*.
 - a. If a cascade switch was detected, the *Enter Cascade Switch Information* dialog box appears. Select the type of switch connected to the RCM from the pulldown menu. If the type you are looking for is not available, you can add it via the *Add* button. For more information, see *Configuring cascade switch connections* in this chapter.
-or-
If no cascade switch was detected, then the Detected Changes dialog box will be displayed.
 - b. Click *Next* to update the database.
 - c. When the update is finished, a completion dialog box appears. Click *Finish* to exit.

Viewing cascade switches

The Cascade Switches category lets you view, add, modify and delete the cascade switches in your system.

To configure a cascade switch connection:

1. Click the *Cascade Switches* category in the left hand column in the MP.
2. Click the pulldown list next to the switch and select the switch type to assign.
-or-
If the switch type isn't in the pulldown list, add a switch to the *Existing Cascade Switches* list by clicking the *Add* button.
 - a. The Add Cascade Switch dialog box appears. Type the name of the switch and select the switch type from the list.
 - b. Click *OK* to add the switch. The switch should now be in the Existing Switches list and in the Switch pulldown list.
3. Repeat step 2 for each switch that you wish to configure.
4. When finished, click *OK* to save the new settings.
-or-
Click *Cancel* to exit without saving.

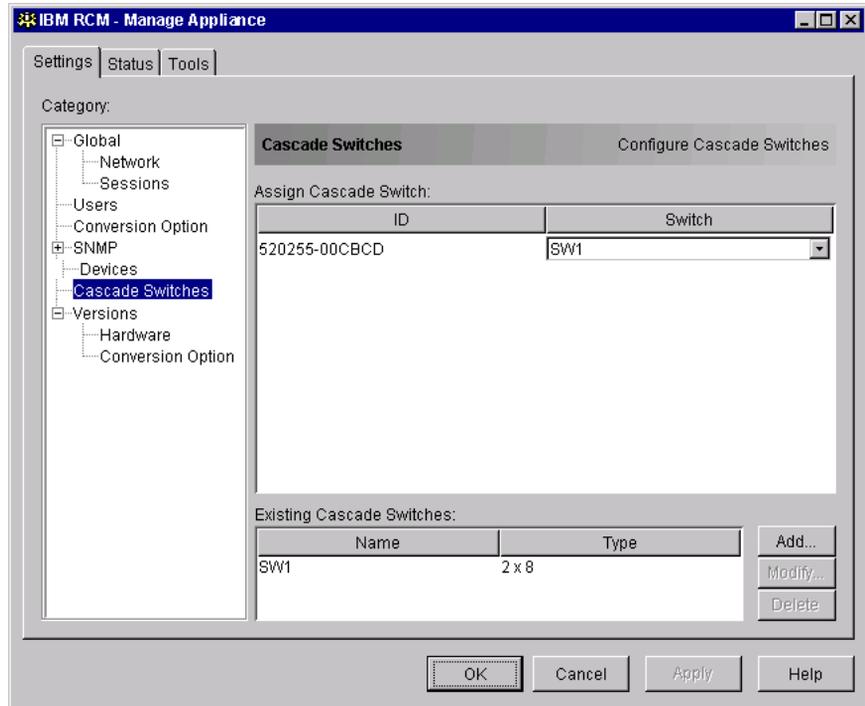


Figure 4.8: Configure Cascade Switches Dialog Box

Upgrading firmware

You can upgrade the firmware for either the RCM or the CO cables. The CO cables 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.

Viewing RCM Version information

When you select the Version category for the first time, the MP will retrieve the firmware versions from the selected RCM. The Hardware sub-category displays the version information for the unit itself. The COs sub-category allows you to view and upgrade all of the CO cables in the system.

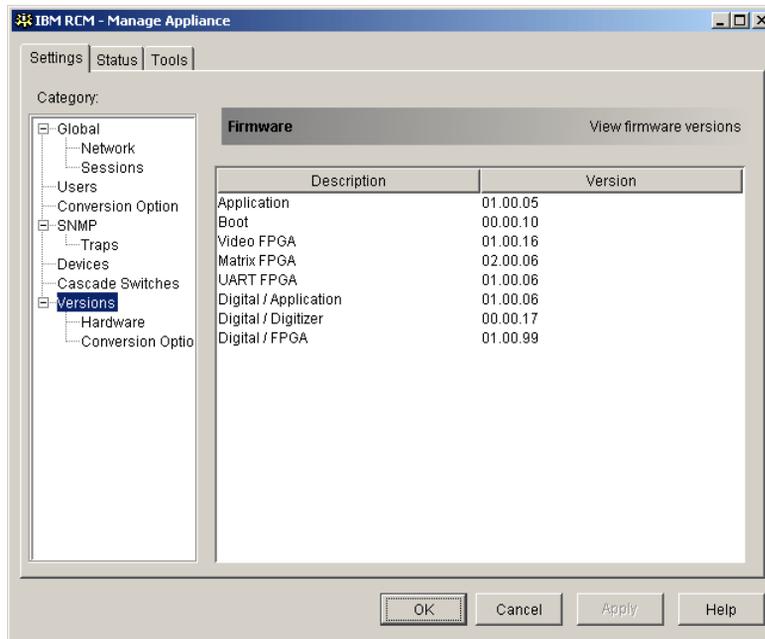


Figure 4.9: Firmware Version Dialog Box

To upgrade RCM firmware:

1. Click the *Tools* tab in the MP. The Tools dialog box appears.
2. Click the *Upgrade RCM Firmware* button. The Firmware Upgrade dialog box appears. Type in the TFTP (Trivial File Transfer Protocol) server IP address where the firmware is located as well as the firmware filename and directory location.



Figure 4.10: Upgrade Firmware Dialog Box

5. Click the *Upgrade* button. The Upgrade button becomes dimmed 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 RCM. 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 must reboot to use the new firmware.

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

ATTENTION: Do not turn off the RCM while it is rebooting.

To simultaneously upgrade multiple CO cables:

1. Click the *Tools* tab in the MP. The Tools dialog box appears.
2. Click the *Upgrade CO Firmware* button. The Upgrade CO Firmware dialog box appears.
3. Click the checkboxes in front of each type (KCO or CCO) of CO cable 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 CO upgrade. A *Firmware upgrade currently in progress* message displays until all of the selected CO cable 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 CO firmware individually:

1. Click the *Settings* tab in the MP.
2. Click the *Conversion Option* sub-category under Versions in the left column in the MP.
3. Select the *eID* pulldown menu and choose the CO cable for which you would like to view firmware information. The IDs displayed in the pulldown are a combination of the eID and either the server name or switch name, depending on what is attached to the CO cable. If the CO is not attached to anything, the pulldown will display *None*. Once selected, the firmware information appears in the Information box.
4. Compare it to the Firmware Available box to see the firmware upgrade available to the CO cable. If the CO cable requires upgrading, click the *Load Firmware* button.
5. 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.
6. Repeat steps 2-5 for each CO to upgrade.
7. 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 the users have been connected, the server name or CO to which they are connected and their system address.

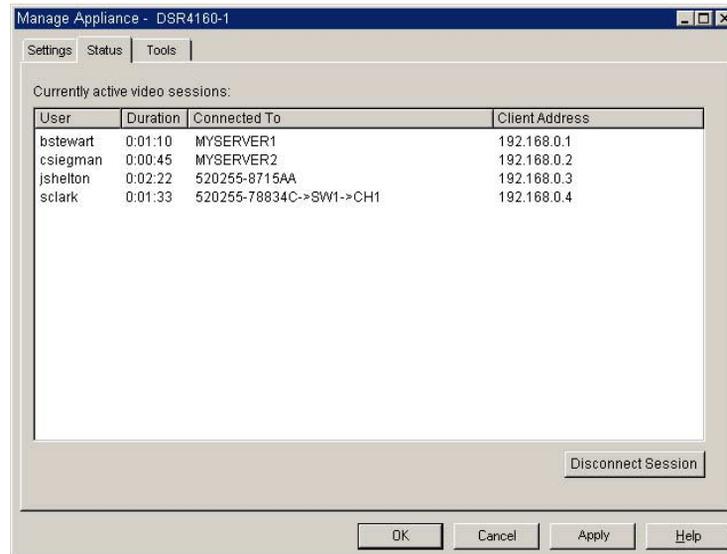


Figure 4.11: User Status Dialog Box

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 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.

Rebooting your system

You can reboot the RCM 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 RCM.

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 RCM will now reboot.

Managing RCM configuration files

Configuration files contain all of the settings for an RCM. This includes network settings, CO configurations, SNMP settings and attached servers. You may save your configuration file and, should you ever need to replace your RCM, you can write 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* in this chapter.

To read and save a configuration file from an RCM:

1. Click the *Tools* tab in the MP. The Tools dialog box appears.
2. Click the *Save Appliance Configuration* button. The Save Appliance 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 configuration file is read from the RCM and saved to the desired location. A progress window displays.
5. 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 an RCM:

1. Click the *Tools* tab in the MP. The Tools dialog box appears.
2. Click the *Restore Appliance Configuration* button. The Restore Appliance Configuration File 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 configuration file is written to the RCM. A progress window displays.
5. 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 an RCM. You can save your user account database file and use it to configure users on multiple RCMs 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 enter this password when you write the file to a new unit.

To save a user database from an RCM:

1. Click the *Tools* tab in the MP. The Tools dialog box appears.
2. Click the *Save Appliance User Database* button. The Save Appliance 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 user database file is read from the RCM and saved to a location. A progress window displays.
5. When complete, a message appears prompting you to confirm the read completion. Once confirmed, the Save Appliance User Database dialog box will close and you are returned to the Tools window.

To restore a user database file to an RCM:

1. Click the *Tools* tab in the MP. The Tools dialog box appears.
2. Click the *Restore Appliance User Database* button. The Restore Appliance 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 user database file is written to the RCM. A progress window displays.
5. When complete, a message appears prompting you to confirm the write completion. Once confirmed, the Restore Appliance User Database dialog box will close and you are returned to the Tools window.

Changing RCM properties

You can alter individual RCM 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 an RCM but also to assign the switch to a site, location or department. The Network tab allows you to establish an IP address for that switch. The Information tab allows you to enter information about the RCM including a description, contact information and any comments you would like to add.

To change RCM properties:

1. Select an individual RCM in the Unit Selector list.
 2. Select *View - Properties* from the VC Explorer menu bar.
- or-

Click the *Properties* button.

-or-

Right-click on the switch and select *Properties* from the pop-up list. The Properties dialog box appears.

The screenshot shows a 'Properties' dialog box with the following fields and values:

- Name: APPLIANCE-1
- Type: RCM
- Icon: [Server Rack Icon]
- Site: Sunrise
- Department: Sales
- Location: Rack 4

Buttons at the bottom: OK, Cancel, Apply, Help.

Figure 4.12: RCM General Properties

3. Type in the name of the RCM. Duplicate names are not allowed.
4. Skip the Type field. This is read-only for RCMs.
5. Select the icon to display for the unit.
6. (Optional) Select the site, department and location to which you would like the RCM assigned. If a selection is not in the pulldown, type the name of the new assignment in the text field. Once entered, the option becomes available in the pulldown for future assignment.
7. Click the *Network* tab and type in the address of the RCM. 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 in the description of the unit. You are free to enter any information into these fields.
9. When finished, click *OK* to save the new settings.

-or-

Click *Cancel* to exit without saving.



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Appendices

Appendix A: Updating the VC Software

For optimal operation of your system, ensure that you have the latest version of the VC software available from the IBM Web site.

To update the VC software:

1. Download the update file from <http://www.ibm.com/pc/support>.
2. Double-click on the installer. The installer will check to see if a previous version of the VC 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. The Program Files, Shortcuts, Environment Variables, and on Windows 32 systems the Registry Entries, will be installed or will be 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. Environment Variables set by the installer are not permanent on Windows 32 platforms or Linux until you have logged out or rebooted the system.

Appendix B: Keyboard and Mouse Shortcuts

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.

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.

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.
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.

Appendix C: TCP Ports

The RCM retains the database of user accounts and permissions. All user authentication is done via port 2068 using the encryption viable Secure Socket Layer protocol. Digitized video data is sent via port 8192. Encrypted keyboard and mouse data is sent via port 2068.

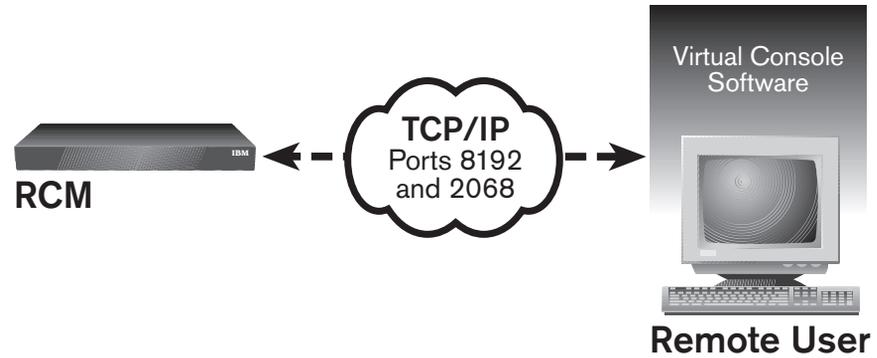


Figure C.1: TCP Port Communication

Appendix D: Notices

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When referring to processor storage, real and virtual storage, or channel volume, KB stands for approximately 1000 bytes, MB stands for approximately 1 000 000 bytes, and GB stands for approximately 1 000 000 000 bytes.

When referring to hard disk drive capacity or communications volume, MB stands for 1 000 000 bytes, and GB stands for 1 000 000 000 bytes. Total user-accessible capacity may vary depending on operating environments.

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