

Congratulations on purchasing your Virtual CD Server™ from Academy Computer Services, Inc. This system takes up a small amount of space, but replaces millions of pages of text. Gigabytes of information are less than a second away. Your new server system features:

- High Speed CD-ROM drive drives fully compatible with ISO 9660.
- StorPoint CPU with 10/100Base-T Ethernet connection for fast network access.
- Large RAM cache and powerful Bay PC processor.
- Up to 250 users.
- Tower enclosure with ample power for all drives and cooling fans for long drive life.



WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This manual explains how to install your new Virtual CD Server™. You will need to:

1. Unpack and check the shipment.
2. Connect the unit to the network.
3. Image CDs for network access.
4. Make imaged discs available to research software.

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Unpacking the Virtual CD Server™

Carefully unpack your shipping box:



WARNING: Server units can weigh as much as 30 pounds and should be lifted by two individuals. Observe the practice of bending the knees, not the back. Be certain both people have a firm grasp on the unit itself, not just the plastic wrap or other packing materials. Such materials will slide over the component and could cause the unit to drop. Dropping the tower will result in equipment damage and possible personal injury.

Check to see that the shipment is complete.

Virtual CD Server™

Large box:

Virtual CD Server™

Accessory Bag:

Black Power Cord

SCSI Terminator

Category 5 Ethernet Patch Cable w/ RJ45 connector

Axis StorPoint User's Guide
w/ Axis Online CD

This Installation Guide

Figure 1, Package Contents

Place your server on a sturdy, flat surface. Academy recommends placement off the floor away from possible dust contamination. If your package is incomplete or irregular in any way, please contact Academy without delay at **800-385-6442**.

System Prerequisites

You will need the following network components:

- Windows 3x/95/98/NT™, Novell NetWare™, UNIX™, or Macintosh™ network using 10/100Base-TX
- TCP/IP enabled on the workstation that will administer the Virtual CD Server™.
- An Internet web browser loaded on the administration workstation.
- Ethernet patch cable to attach the Virtual CD Server™ to the network.



WARNING: Before working with your computer or tower, unplug all units from their power receptacles. Failure to do so will result in personal or equipment injury. Also, to avoid static shock damage to either tower or computer, touch a bare metal portion of that system's chassis before touching any electronic component. Failure to do so could damage the equipment.

Connecting to the Network

Physical Connection

1. Insert the Category 5 Ethernet patch cable into the RJ-45 connector at the rear of the Virtual CD Server™. Insert the other end into a network hub.
2. Connect the power cable to the Virtual CD Server™ and plug it into the power strip or outlet. Use of a surge protector is strongly recommended for long system life.
3. Turn on the Virtual CD Server™.

Assign the IP Address

The Virtual CD Server™ must be assigned a valid IP Address. There are two different methods to perform this task: Dynamic and WinPoint. Both methods are detailed below. Select the method that is best for your network needs and follow the instructions.

Dynamic

The Virtual CD Server™ will dynamically acquire an IP address if your network currently uses DHCP, BOOTP or RARP. No further action is needed.

WinPoint

WinPoint is a program created by Axis to assign

Install the WinPoint Program

1. Insert the Axis Online CD
2. There is an Autorun feature on the CD. If this launches, select the Software link. Then select the Axis WinPoint to start the setup process.
3. If the Autorun feature does not launch, open My Computer or the Windows Explorer and browse to the CD. Double-click on the Index.html file. Select the Software link. Select the Axis WinPoint link. Click on the Software Button in the Install software section
4. Follow the steps of the Setup Wizard
 - 4.1. Close the Installation program when complete.

Set the IP Address

1. If the SetupWizard has created a desktop icon, click on the icon to begin the program. As WinPoint starts, the network is browsed, and all Virtual CD Servers are displayed in the window.
 - 1.1. If no Virtual CD Servers display in the window select WinPoint Settings from the File menu.
 - 1.2. Use the radio buttons in the "Network Protocol to locate servers with" section to narrow the search area.
 - 1.3. Click on Apply. Click on OK.
 - 1.4. Select the View menu and the Refresh option.
2. Highlight the Virtual CD Server Icon
3. Select the File menu.

4. Select the Set Internet Address option. Enter the correct IP Address. Enter the Router address if one is in use. Enter the Subnet Mask.
5. Click on the Submit button.
6. Restart the Virtual CD Server.

Administration

After the IP address has been set, the Virtual CD Server may be administered via a web browser.

1. Open the workstation web browser. Enter the Name of the Virtual CD Server™ in the browser's address field. For example *http://xxx.xxx.xxx.xxx* or *http://192.168.1.104*. The user View File page will open.
2. Click on the Admin button to access the Administrator pages.
 - 2.1. The default user and password is *root* and *pass*.
3. The This StorPoint page will open. This page links to all other Administration pages. On this page the SCSI devices, and general hardware and software information is listed

This StorPoint

This page displays information about the Virtual CD Server 8i. Caching options are set by clicking on the Settings button.

Settings

A new browser window will open when the Settings button is selected. There are four tab selections in this window: General, Date & Time, SCSI, and Caching & Archiving.

General

Create new a Server password

Date & Time

Use the drop down list to edit the Time Zone.

Time can be acquired through two methods: Automatically and Manually. Use the radio buttons to select a method. If Automatic NTP time is chosen, enter the NTP server in the box provided.

SCSI

The SCSI bus mode can be modified on this page.

Caching & Archiving

Caching is the process of copying CD-ROM data to a hard drive. There are three caching modes: Partial, Mirror, and Archive.

Only Archived CDs are available after the physical CD has been ejected. Partial and Mirror caches require that the physical CD-ROM remain in the drive bay.

A **Partial** cache will copy the directory structure of the CD-ROM onto the hard drive. This permits faster browsing of the CD-ROM. The size of the cache file can be entered using the drop down list.

A **Mirror** cache copies all of the CD-ROM data to the hard drive. This permits faster user access of the data, as hard drives respond faster than CD-ROMs. The Mirror process is executed in the background. If a user attempts to access a disc during the cache process, the response will be from the physical CD-ROM.

If a Mirror cache has been requested, but there is not enough space on the hard drive to store all the data, the system will default to a Partial cache.

Archive caching is established through the Disc & Drives web page.

Disc & Drives

The CD-ROM and Cached CD contents of the Virtual CD Server 8i are managed from this page. There are two methods of viewing this information: Discs and File System, and Drives.

Access Control

The **Discs and File System** selection displays a directory tree structure. Network share access control can be managed from this view. Access rights to the network share, or the volume, can be modified on this page. In addition, the Eject, Description, and Archive functions for the volume can be modified on this page.

The **Drives** selection displays each physical CD-ROM drive bay. The drive number is assigned using the SCSI bus number, and the SCSI ID number. Devices on the first bus begin with the letter A. Devices on the second bus begin with the letter B. Access rights to both physical drive bays and the volume (CD-ROM) inserted into the drive can be modified on this page. In addition, Eject, Description, Auto-Archive, Sorting, and Lock functions can be modified on this page.

When access rights are assigned to a drive, any CD-ROM volume inserted into the drive bay will inherit those rights. In addition, the CD-ROM will be shared on the network using the drive bay name, not the volume name of the CD-ROM.

Auto Archiving

This option is instituted in the **Drives** view. When a check is placed in the Auto Archiving box, any disc placed into that drive bay is automatically copied to hard drive. If the physical CD-ROM is removed the Archived CD is still available to the network.

Deleting an Archived CD

1. Open the **Discs and file system** view.
2. **Remove the check** in the Archive box of the disc to be deleted.

Locking the Drive Bay

Locking the drive bay will disable the eject button on the front of the physical drive bay. However, the drive may still be ejected from the **Drive** or **Discs and file system** pages. A CD-ROM can be ejected even it is in use.

1. Open the **Drives** view.
2. Place a check in the **Lock** box of the drive bay to be locked.
3. All drive bays can be locked by clicking on the **Lock All** button.

Network Settings

This page allows the Virtual CD Server 8i to be configured for a specific network environment. Please see the section of this guide titled "Configuration Options" for more information.

The **Wizard** will ask a series of questions and use the for input to modify the network protocols.

The **Detailed View** allows for manual editing of protocol information.

Event Log

The Event Log lists system events and errors.

Statistics

This page details the current system configuration and network usage.

Support

This page has a series of links for standard technical support questions and answers

Help Contents

This page has a series of links to standard administration questions and answers.

Configuration Options

NetWare Networks (NCP)

The Virtual CD Server 8i can function in three modes.

- Bindery without authentication
- Bindery with authentication
- NDS

Bindery without Authentication

No configuration modifications are needed to access the Virtual CD Server 8i in this mode. The unit emulates a Novell 3x bindery server on the network. Client access is achieved by browsing Network Neighborhood and mapping to the Volumes volume. By default all users will be able to access all physical or Archived CDs.

Bindery with Authenticaiton

In this mode user names are authenticated by an existing Novell bindery server. The bindery server that is providing authentication must be designated.

1. Open the Network Settings page.
2. Click on Wizard.
3. Select NetWare (NCP)
 - 3.1. Click on Start.
4. Specify how the Virtual CD Server 8i should appear in the network.
 - 4.1. The default name is AXISxxxxxx_NW. To accept this default click on Next.
5. Place a check in the box to select Bindery authentication.
6. Enter the name of the bindery server that will provide authentication in the box.
7. Click on Finish.

NDS

1. Synchronize the NDS tree.
2. Open **Network Settings** page.
3. Click on **Wizard**.
4. Select **NetWare (NCP)**
 - 4.1. Click on **Start**
5. Enter server name (AXISxxxxxx_NW)
6. Select NDS or both NDS and Bindery
7. Select the NDS tree

Call 800-38-Logic for help



8. Select the context
9. Enter distinguished user name and password
10. Click on **Close** when done.
11. To confirm the NDS integration process, check the Virtual CD Server 8i event log for errors.

Windows Networks (SMB)

The Virtual CD Server 8i can function in two modes.

- User Level
 - Share Level
1. Open the Network Settings page
 2. Select Windows (SMB)
 - 2.1. Click on Start
 3. Enter Server name and Workgroup/domain name
 4. Select User Level or Share Level access control
 - 4.1. User level means that the Virtual CD Server 8i passes all user login requests to a PDC or BDC. Only the Administrator user is locally authenticated. The name of the authentication domain controller must be entered on the box provided, or all access requests will be denied.
 - 4.2. Share Level means that a password is assigned to each shared resource of the Virtual CD Server 8i. User requesting access will be required to enter the password.
 5. Click on Finish

Unix Networks (NFS)

No configuration modifications are needed to access the Virtual CD Server 8i in a Unix environment. If changes are preferred the following steps will open the modification page.

1. Open the **Network Settings** page.
2. Click on **Detailed View**.
3. Select the **Unix (NFS)** tab.
 - 3.1. Enable the protocol by placing a check in the provided box.
 - 3.2. Enter the default user ID.
 - 3.3. Enter the Authentication server address
 - 3.4. Enable the exporting of the root of volumes by placing a check in the provided box.
4. Click on the **OK** button when done.

Intranets (HTTP)

No configuration modifications are needed to access via a web browser. All CDs and the Administration page can be accessed by all users. If changes are preferred the following steps will open the modification page.

1. Open the **Network Settings** page.
2. Click on **Wizard**.
3. Select **Web (HTTP)**.
4. Click on **Start**.
5. To allow CDs and Archived CDs to be accessed through browsers place a check in the box.
 - 5.1. To remove all user access to the Administration web page place a check in the box.
6. Click on **Finish**.

Mac Networks (AFP)

1. Open the **Network Settings** page.
2. Click on **Wizard**.
3. Select **Macintosh (AFP)**.
 - 3.1. Click on **Start**.
4. If desired, modify the server name and Zone it will appear in.
5. Select the protocol the Virtual CD Server 8i will use: TCP/IP, AppleTalk or both.
6. Click on **Finish**.

Managing CDs

To Archive a CD

For an explanation of "Archiving" see the section of this guide titled "Caching & Archiving"

1. Open the web browser and http: to the IP address (i.e. **http://192.168.1.1**)
2. Open the Discs & Drives page.
3. Select how to Archive
 - 3.1. Discs and file System - individual disc gets archived
 - 3.2. Drives - any disc in that bay gets archived
4. Remove disc when the archive is complete.

To Delete an Archived CD

1. Open the web browser and http:// to the IP address (i.e. **http://192.168.1.1**)
2. Open the Disc & Drives page.
3. Select the Discs and File System view
4. Remove the check from Archive box next to the disc that is to be deleted.

Assigning Rights

Disc and Files System

Rights under the Disc and File System view are assigned to volumes only. A volume is the data on a CD-ROM. It is not the drive bay that holds/reads the CD-ROM.

General

The Name and Description of the volume, as it appears on the network, can be modified on this page. If, for licensing purposes the number of user allowed access to the volume must be limited, the maximum number of users may be entered here.

Web Security

Access rights to a volume may be inherited from the parent folder, or restricted by use of a password. By default all CD volumes are available on the main page of the Virtual CD Server 8i. To prevent this modify the HTTP network configuration

Windows Security

To Assign User Level Access Rights

1. Open the **Discs & Drives** page.
2. Select the **Disc and File System** view.
 - 2.1. To shield all volumes highlight the Volumes folder.
 - 2.2. To shield a particular volume highlight that volume in the file tree.
3. Click on **Access Rights**.

4. Select the **Windows Security** tab.
 - 4.1. Add permissions for any users and groups.
5. Click **OK**.

To Assign Share Level Access Rights

1. Open the **Discs & Drives** page.
2. Select the **Discs and File System** view.
 - 2.1. To shield all volumes highlight the Volumes folder.
 - 2.2. To shield a particular volume highlight that volume in the file tree.
3. Click on **Access Rights**.
4. Select the **Windows Security** tab.
 - 4.1. Enter the share name and access type (Read Only or Full) for the share.
5. Click **OK**.

Unix Security

1. Open the **Disc & Drives** page.
2. Select the **Disc and File System** view.
 - 2.1. To shield all volumes highlight the Volumes folder.
 - 2.2. To shield a particular volume highlight that volume in the file tree.
3. Click on **Access Rights**.
4. Select the **UNIX Security** tab.
5. Enter any description of the volume, as it appears on the network.
6. Use the radio buttons to select adding a Host Name or IP Address.
 - 6.1. Place the information in the appropriate box.
7. Click on the **Add** button.
8. Click on **OK**.

Mac Sharing

1. Open the **Disc & Drives** page.
2. Select the **Disc and File System** view.
 - 2.1. To shield all volumes highlight the Volumes folder.
 - 2.2. To shield a particular volume highlight that volume in the file tree.
3. Click on **Access Rights**.
4. Select the **Mac Sharing** tab.
5. Use the radio buttons to elect to share the volume.
 - 5.1. Enter the network share name.
6. Use the radio buttons to select the password options for the volume.
7. Click on **OK**.

Call 800-38-Logic for help

Drives

Rights under the Drives view are assigned to devices or the disc inserted into the device. When access rights are assigned to a drive, any CD-ROMs inserted into the drive bay inherit those rights. In addition, the CD-ROM will be shared on the network using the drive bay name, not the volume name of the CD-ROM.

Rights to volumes (CD-ROMs) can also be assigned using the Drives view. A radio button at the top of the Access Rights page permits the Disc (volume) or the Drive to be selected. The information below relates only to the Drive options.

General

The Name and Description of the Drive, as it appears on the network, can be modified on this page. If the number of user allowed access to the Drive must be limited due to licensing purposes, the maximum number of users may be entered here.

Web Security

Access rights to a Drive may be inherited from the parent folder, or restricted by use of a password. By default all Drives (with CD-ROMS inserted) are available on the main page of the Virtual CD Server 8i. To prevent this modify the HTTP network configuration

Windows Security

To Assign User Level Access Rights

1. Open the **Discs & Drives** page.
2. Select the **Drives** view
3. Select the Drive to be secured.
4. Click on **Access Rights**.
5. Open the **Windows Security** page.
 - 5.1. Add permissions for the users and groups you want to grant access.
6. Click **OK**.

To Assign Share Level Access Rights

1. Open the **Discs & Drives** page.
2. Select the **Drives** view
3. Select the Drive to be secured.
4. Click on **Access Rights**.
5. Open the **Windows Security** page.
 - 5.1. Enter the share name and access type (Read Only or Full) for the share.
6. Click **OK**.

Unix Security

1. Open the **Disc & Drives** page.
2. Select the **Drives** view.
3. Select the Drive to be secured.
4. Click on **Access Rights**.
5. Select the **UNIX Security** tab.
6. Enter any description of the volume, as it appears on the network.
7. Use the radio buttons to select adding a Host Name or IP Address.
 - 7.1. Place the information in the appropriate box.
8. Click on the **Add** button.
9. Click on **OK**.

Mac Sharing

1. Open the **Disc & Drives** page.
2. Select the **Drives** view.
3. Select the Drive to be secured.
4. Click on **Access Rights**.
5. Select the **Mac Sharing** tab.
6. Use the radio buttons to elect to share the volume.
 - 6.1. Enter the network share name.
7. Use the radio buttons to select the password options for the volume.
8. Click on **OK**.

User Access

Windows Users

Most Windows applications require that a static drive mapping be used to access network resources. To make a drive letter:

1. Open **Network Neighborhood**.
2. Browse to locate the Virtual CD Server 8i. Double-click on the server icon.
3. To provide global access to all CD-ROMS
 - 3.1. Right-click on the Volumes volume.
 - 3.2. Select **Map Network Drive** from the pop-up menu.
 - 3.2.1. Place a check in the Reconnect at Logon box if desired.
4. Click on **OK**.

Mac Users

The Chooser is used to mount/access Imaged CDs.

1. Click on the **Apple** menu.
2. Select **Chooser**.
3. If AppleTalk is not currently active, click on the radio button to make it active.
4. Connect to the server.
 - 4.1. Select **AppleShare**. All Mac servers will appear in the right window.
 - 4.1.1. Highlight the Virtual CD Server 8i. Click on **OK**
 - 4.2. Select the Volume to mount. Click on **OK**
 - 4.2.1. By selecting the Volumes volume, all Imaged CDs will be accessible.
 - 4.3. A connection log in window will open.
 - 4.3.1. If no Macintosh security has been enabled, the default password is *pass*.
5. Select the Imaged CD(s) you want to mount and click on **OK**.

Unix Users

The Virtual CD Server 8i appears as any other server in the network. Normal commands are used to access the unit.

1. Create a directory for the Virtual CD Server 8i. `Mkdir <directory>`
2. Mount the Virtual CD Server 8i mount `<hostname>:/ <directory>`
3. Change into the directory to access the CD-ROMs.

If the Virtual CD Server 8i is at an IP address of 192.168.1.100 and the Volumes directory is being mounted the commands would be:

```
mkdir /volumes  
mount 192.168.1.100:/ /volumes
```

Technical Support

To Restore System Defaults

If the system password is forgotten, or a necessary network protocol is disabled and cannot be restored, the reset button can be used to restore the out-of-the-box system defaults. This button is located on the rear panel of the unit, near the Ethernet connector.

1. Turn off the Virtual CD Server 8i.
2. Press in and hold the Push button while turning on the unit.
3. Hold the Push button until the Network indicator flashes at regular two-second intervals.
4. Release the Push button and wait at least two seconds (one flash of the Network indicator).
5. Press in and hold the Push button for at least five seconds until the Network indicator remains constantly lit.
6. To restart the Virtual CD Server 8i, turn off the power, wait twenty seconds and then turn it back on again. It is now reset to the factory defaults.

Support Numbers

Academy Computer Services:

800-385-6442, Fax: 781-279-4262

Academy email:

primary@academycomputerservice.com

Web address:

www.LegalHardware.com

www.SchoolHardare.com



Call 800-38-Logic for help

Warranty and Disclaimer Information

Specifications subject to change without notice. All trademarks the property of their respective companies.

Warranty: One year parts and labor from date of purchase. This warranty is in lieu of all other express warranties which now or hereafter might otherwise arise with respect to this product, implied warranties, including those of merchantability, fitness for a particular purpose and non-infringement shall (A) have no greater duration than 1 year from the date of purchase (B) terminate automatically at the expiration of such period and (C) to the extent permitted by law be excluded. In the event this product becomes defective during the warranty period, the purchaser's exclusive remedy shall be repair. Incidental or consequential damages, including without limitation loss of data or inaccurate retrieval of data, arising from breach of any express or implied warranty are not the responsibility of Academy Computer Services, Inc. and, to the extent permitted by law, are hereby excluded both for property damage, and to the extent not unconscionable, for personal injury damage.

Options

Many installations require modifications or additions for optimal functionality. To this purpose we offer CD changers/jukeboxes, Macintosh interfaces, OS/2 drivers, Ornetix Software for CD management in Novell or Windows NT environments, dual channel SCSI cards for multiple towers, multiplexers, Virtual CD Towers using hard disks and other options too numerous to list. We have extensive experience with large and custom installations. Please call 800-385-6442 for a tailored quotation.

Recommendations for Further Study

Elshami, Ahmed M. Networking CD-ROMs. American Library Association. Chicago. IL. 1996. 800-545-2433 press 7 to order.

Ridge, Peter M. The Book of SCSI, A Guide for Adventurers. No Starch Press. Daly City. CA. 1995. 800-788-3123 to order.

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