

Virtual CD v9
Network Management Server





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Introduction

Foreword

Thank you for choosing Virtual CD Network Management Server, or “Virtual CD NMS” for short.

Virtual CD NMS is a powerful tool for centralized administration of the Virtual CD clients in your network. With Virtual CD NMS you can assign licenses to individual virtual CDs, to ensure that only the permitted number of instances can be used at any one time. Other features let you analyze usage data to optimize this licensing. Functions such as locking and releasing both virtual and physical drives give you selective control over the use of CDs, which is especially important in schools, for example.

This documentation gives you a detailed description of how Virtual CD NMS works, and how you can work with it.

The documentation is divided into the following sections:

Introduction: Provides an overview and general information.

Installation and Configuration of the Network Management Server: Describes the installation and basic configuration of all Virtual CD NMS components.

Working with Virtual CD NMS: Takes a closer look at how the program works and describes advanced settings for all Virtual CD NMS features.

Legal Notices



If you use Virtual CD with CDs or DVDs that are under license, then creating multiple virtual images from a given CD/DVD or using multiple instances of a given virtual CD simultaneously on more than one computer may constitute a breach of the software licensing agreement you entered into with the manufacturer of the CD/DVD in question. Make sure to check the licensing agreements you have with the CD/DVD manufacturer(s) for detailed information.

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Document Conventions

For added clarity in these texts, this documentation uses the following conventions: Texts quoted from the program (buttons, menu items, dialog texts, etc.) are in **bold** type.

Information that is particularly important is marked by one of the symbols shown below. The information in these notes is essential for trouble-free operation of the software.



Notes or procedures that are especially important are marked by the „exclamation point“ symbol you see here.



Tips and tricks for simplifying procedures are marked by the „lightbulb“ symbol shown here.

In some cases, step-by-step examples are given of certain tasks or configuration procedures. These steps are marked as follows:



Step 1



Step 2

What Virtual CD NMS can do for you

Virtual CD Network Management Server – or Virtual CD NMS, for short – gives you an extensive array of features for centralized control of Virtual CD program functions on the client stations in your network.

These features include:

Centralized management: The central Administration program shows you at a glance who has inserted which virtual or physical CDs in which CD drives. It also lets you insert and eject virtual CDs.

License control for registered virtual CDs: The license control function ensures that each virtual CD can be used only in the number of instances you specify.

Assigning profiles: You can assign binding profiles to users, stations and user/station groups. For example, you can specify which virtual CD drives are available for particular clients under Virtual CD TS.

Usage data: Virtual CD NMS can keep track of who uses which virtual CDs when, and for how long. You can switch this feature on and off as desired.

Monitoring virtual CD drive activity: The data throughput monitor shows you the amount of data currently being read by a particular virtual CD drive on a selected client station. This feature lets you check CD drives for activity.

Distributing Virtual CD software to client machines: You can use the Virtual CD NMS Client Distributor to install Virtual CD on clients in the network.

Automatic distribution of Virtual CD licenses to Virtual CD clients: Virtual CD NMS can distribute Virtual CD program licenses to clients.

Group control of Virtual CD clients: You can have actions executed on the basis of user or station group membership.

Direct access to the main Virtual CD programs: Important Virtual CD programs can be opened by clicking on a link in the NMS Administration sidebar.

Microsoft Windows Vista: The latest versions of Virtual CD and Virtual CD NMS provide unlimited support for the new Windows Vista operating system from Microsoft.

New Features in Version 9

This section lists the new features available and the differences between the latest Virtual CD Network Management Server, v9, and the previous version.

Your suggestions have played an important role in our development of the new features in Virtual CD NMS. The result is an optimized administration tool for managing Virtual CD clients in the network.

Revised User Interface

The user interface has been extensively revised. Links to Virtual CD programs have been integrated in the Tasks sidebar, simplifying access to important program functions. New interface designs have been added to enable „Vista-capable“ display options.

Administration of Virtual and Physical Drives

Not only virtual drives, but also the physical drives available to your clients can be locked to prevent access, and released as needed. In a school environment, for example, you may wish to use these functions to block users from installing programs that are on CDs.

Integration of Virtual CD v6, v7 and v9 FS and Virtual CD v6, v7 and v9 TS Server Software

Virtual CD NMS can be used in conjunction with Virtual CD v6, v7 and v9 File Server editions and Virtual CD v6, v7 and v9 Terminal Server editions. You can use Virtual CD NMS to assign licenses to virtual CDs stored on the file server. Furthermore, v9 program versions can retrieve their license codes from NMS.

On-line Version Update Check

Virtual CD NMS can help you stay up to date by checking automatically at specified intervals, or on your command, for newer VCD program versions so you can download program updates as soon as they become available.

Creating Station and User Groups

This new feature lets you group your stations and your users for streamlined management. For example, you can group the stations that belong to a particular department in your company or that require access to a certain set of virtual CDs.

Expanded Administration Controls for Virtual CD Program Licenses

You can distribute Virtual CD licenses for client stations on the basis of user name, station, or user/station group membership. You can also let NMS distribute license codes to Virtual CD v9 FS and TS. Server license codes in use now have a separate window in NMS Administration.

Using Scripts

You can have Virtual CD NMS run scripts on client stations when clients log in; for example, to distribute important information to your users.

Assigning Profiles

Virtual CD NMS lets you create and assign binding profiles for users, user groups, stations, and station groups. For example, you might make a profile called „Guest“ that permits users to run the Virtual CD Management program, but not to create new virtual CDs or to burn Smart Virtual CDs. The latest NMS version also has a large number of new settings options available for configuring profiles. For example, you can activate or deactivate the availability of individual Virtual CD programs on client stations.

Logbook Function

Virtual CD NMS has its own event log. You can define whether or not errors, warning and/or messages concerning actions executed are logged. The logbook is useful for troubleshooting in the event of difficulties; for example, if a particular virtual CD cannot be inserted.

Print Functions

You can print or save a variety of user data and logbook entries. For example, you can print the details on existing user profiles. This can be useful for keeping track of your user profiles.

Client Distributor

The Client Distributor is an all-new software deployment tool in Virtual CD NMS that lets you install Virtual CD on your client machines while working from a single centralized point.

Virtual CD NMS Licensing

Virtual CD NMS is licensed on a per-server basis. In other words, you can install one Virtual CD NMS server in your network for each NMS license code you purchase.

This licensing applies specifically to the VCD NMS service. The license code you purchase must be entered during installation of the service. If you do not have a license at the time of installation, the installation problem is halted.

To enter a different license code at a later date, select **NMS Licensing...** from the Help menu in NMS Administration.



Unlike the previous versions, Virtual CD NMS v9 does not have a „demo“ operating mode. Rather, the Virtual CD NMS program comes in two different versions: one is a full version, and the other is a test version with limited functionality. The test version cannot be upgraded to a full version through the addition of a license code.



Any number of clients can log on to a single Virtual CD NMS installation.



Virtual CD program licenses for Virtual CD clients must be acquired separately; they are not included in the Virtual CD NMS package.

System Requirements

The following system specifications are required for running Virtual CD NMS.

For the Virtual CD NMS service:

- ✓ Windows 2000 Server, or
- ✓ Windows 2003 Server

For Virtual CD NMS Administration:

- ✓ Windows 2000 Professional, or
- ✓ Windows XP Professional, or
- ✓ Windows Vista Professional
- ✓ At least 256 MB RAM
- ✓ The latest Service Pack available for the operating system used
- ✓ Microsoft Internet Explorer version 6 or later.
- ✓ Display resolution: 1024 x 768 or higher.

Virtual CD installation on the client station (NOT included with the Virtual CD NMS software)

Virtual CD NMS v9 supports all of the following versions and editions:

- ✓ Virtual CD v5, build 5.0.4 and later
- ✓ Virtual CD v6
- ✓ Virtual CD v6 FS
- ✓ Virtual CD v6 TS
- ✓ Virtual CD v7
- ✓ Virtual CD v7 FS
- ✓ Virtual CD v7 TS
- ✓ Virtual CD v8
- ✓ Virtual CD v9
- ✓ Virtual CD v9 FS
- ✓ Virtual CD v9 TS



Virtual CD Network Management Server is made for use with Virtual CD program versions 5.0.4 and later. We recommend using the latest Virtual CD version available, however (currently v9), to ensure that you can benefit from the full array of functions offered by Virtual CD NMS. This is particularly important when running Virtual CD NMS on Windows Vista. We cannot guarantee that pre-v9 versions will perform correctly in Windows Vista.

Technical Support

If you have any problems with Virtual CD, please check the manual, the on-line Help and our continuously updated Web pages at www.virtualcd-online.com for information.

Virtual CD Online: <http://www.virtualcd-online.com/>

Knowledge Base: <http://www.virtualcd-online.com/kbase>

Support Forum: <http://www.virtualcd-online.com/support>

You opinion is important to us, as are your questions, suggestions and criticism. Please use the Virtual CD forum to let us know what you think.

Installation and Configuration of the Network Management Server

Notes on Installation

Because Virtual CD NMS is a **client/server application**, there are two components to install: Virtual CD NMS service and Virtual CD NMS Administration.

To install VCD NMS, place the installation CD in a CD drive and wait a moment for Windows to detect it and run the Setup program.

If the autoplay function is switched off in the computer, or if you are installing from a downloaded file, run the EXE file to start installation.

Installation of a Virtual CD program on the client computers is required. See “System Requirements” for a list of compatible versions. You can install Virtual CD on clients after installing NMS, using the Virtual CD NMS Client Distributor.

In the client installations, you need to enter the name of the server running the Virtual CD NMS service and the port used for communication and specify whether the client machine will obtain its Virtual CD user license from Virtual CD NMS or has its own license number stored locally.

Installation and configuration must be carried out in the following order:

1. Installation of the Virtual CD NMS service
2. Installation of the Virtual CD NMS Administration program
3. Configuration of Virtual CD clients

Update

The procedure to follow to upgrade an earlier version of Virtual CD NMS depends on whether you have NMS v7 or the Virtual CD OPS program (v6).

Installing NMS v9 over NMS v7



Install Virtual CD NMS v9. While setting up NMS system components, the installation program detects your NMS v7.



A window opens prompting you to specify whether existing data shall be used with the new version. The Virtual CD NMS v7 service is automatically set to “manual”

and deactivated. NMS v9 runs automatically and is ready to operate with your VCD clients.

3

After installation you can delete the old database directory share to prevent confusion.

4

Share the Virtual CD NMS v9 data directory.

5

The first time you run the Administration program following this update, you are prompted to configure the connection data for use with the Virtual CD NMS v9 server.

6

All stations that had connected to Virtual CD NMS v7 now automatically connect to Virtual CD NMS v9, provided the same port was specified in the v9 installation as was used with v7.



If you have any problems using the new version in your VCD system, uninstall Virtual CD NMS v7. Versions 7 and 9 are not compatible. This means, among other things, that NMS v7 CD Administration cannot run in conjunction with the NMS v9 server.

Installing NMS v9 over Virtual CD OPS

There are two ways to upgrade OPS to NMS v9. The first and easier of the two methods is to uninstall Virtual CD OPS and then install Virtual CD NMS on the same server. In this case, the following conditions apply:

1

The Virtual CD license code that you entered for OPS is automatically transferred to Virtual CD NMS Administration.

2

If the same server and port are used, your Virtual CD clients will connect to Virtual CD NMS automatically.

3

Statistical data compiled with Virtual CD OPS cannot be transferred to Virtual CD NMS.

4

As in the case of a new installation, you need to enter the server name and port in the Administration program, specify the virtual CDs to be made available to clients, and share the **Data** directory. For details on sharing a directory, please see „Installing the Virtual CD NMS Service“ and „Installing Virtual CD NMS Administration“ in this manual.

5

Once the above configurations are completed, save the settings and restart Virtual CD NMS Administration.

The second method is to leave the Virtual CD OPS installation unchanged and install Virtual CD NMS on a different server. The advantage of this method is that you can keep the statistics data collected with VCD OPS. The disadvantage is that you have to configure all of the Virtual CD clients that will communicate with Virtual CD NMS.

In this case, you can gradually migrate your system from OPS to NMS.

Installing the Virtual CD NMS Service

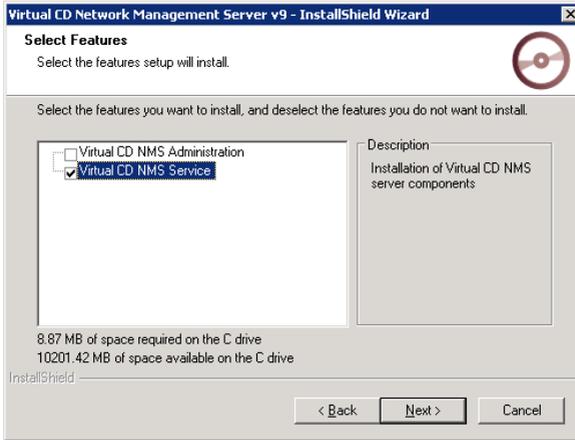
Installation and configuration of the Virtual CD NMS Service are described step by step in the following:

1

Choose the server on which you wish to install the Virtual CD NMS service and then run the installation program on that server.

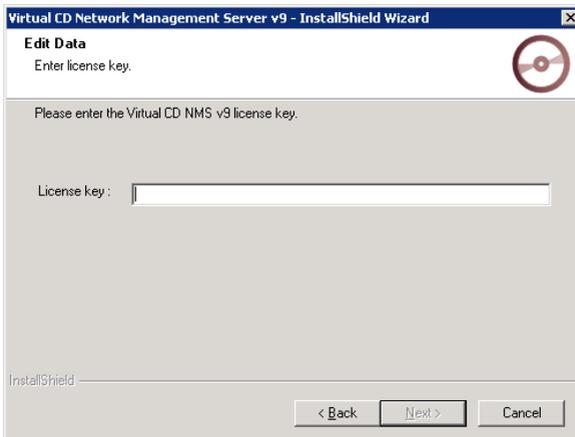
2

Following initialization of the Setup program and prompts for setting the language and installation directory, a dialog opens for selecting the program components to be installed. Select “Virtual CD NMS Service.”



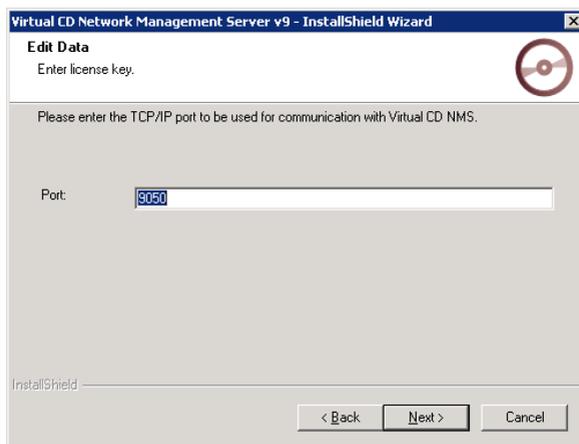
3

The next dialog prompts you to enter the license code for the Virtual CD NMS Service. If you do not enter a license code, the installation is halted and cannot continue.



4

The last page for configuration defines the port used for communication between the Virtual CD NMS Service and your Virtual CD clients and Virtual CD NMS Administration program. The default setting is Port 9050.



Make sure the port you select is available throughout your network. You can change this setting later, but since the port number must be entered on all VCD clients as well this could entail a lot of work, depending on the number of machines in your network that use Virtual CD.

5

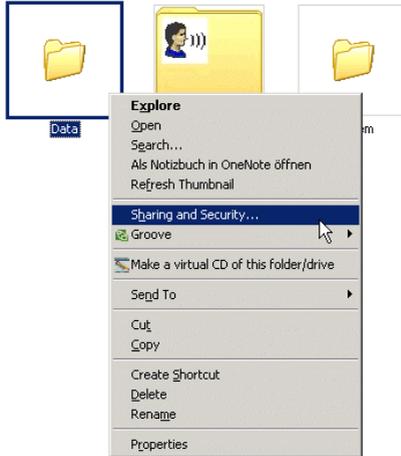
You can now proceed with the installation of the Virtual CD NMS Service. It is installed as a Windows service, with the designation “**Virtual CD NMS.**” If you need to change any of these settings, you can access the service from the Windows Control Panel under **Virtual CD v9 NMS Service.**



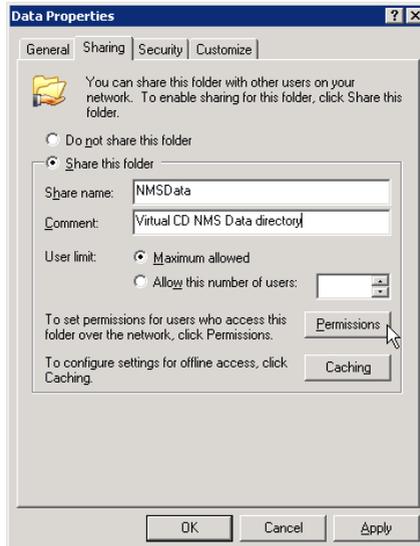
The Virtual CD NMS Service runs under the system account. No other permissions are required. Make sure the system account has full access privileges in the Virtual CD NMS folder so that it can read and write data in that directory.



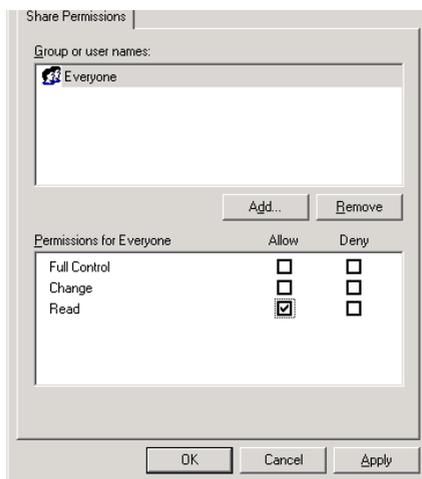
Following successful installation of the Virtual CD NMS service, you need to share the **Data** folder in the Virtual CD NMS directory so the service can communicate with the NMS Administration program.



The name you enter for the share must be subsequently assigned to the Virtual CD NMS data directory as well. Enter a description that identifies the share.



Virtual CD NMS Administration reads data directly in this directory. For this reason, network users that will be working with the NMS Administration program must have “read” privileges in this shared directory.



Write privileges are required in the **Data** directory for editing or deleting scripts, and creating or editing profiles in Virtual CD NMS Administration.

Installing Virtual CD NMS Administration

Following successful installation of the Virtual CD NMS Service, the next step is to install and configure the Virtual CD NMS Administration program. This procedure is described step by step in the following:

1

Select the workstation on which you wish to install Virtual CD NMS Administration. If desired, you can install this program on the same server that runs the Virtual CD NMS Service.

If you use the same server for installation, we recommend using the same directory as well. You also have the option of installing Virtual CD NMS Administration on any workstation, independent of the Virtual CD NMS Service.



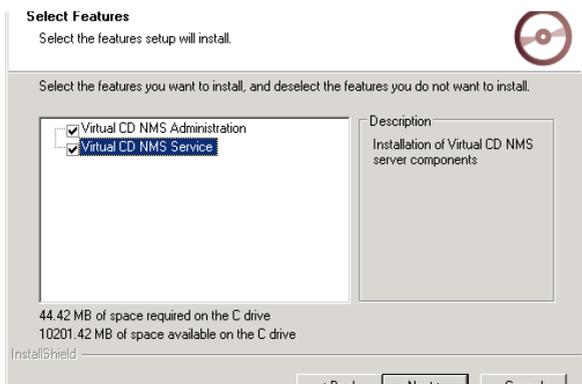
You can install Virtual CD NMS Administration on as many machines as you wish, but it can only run in **one** instance per Virtual CD NMS service. If Virtual CD NMS Administration is already running when you try to start it, a message window opens to inform you of this fact; no second instance is opened.

2

Following initialization of the Setup program and prompts for setting the language and installation directory, a dialog opens for selecting the program components to be installed. Select “Virtual CD NMS Administration.”

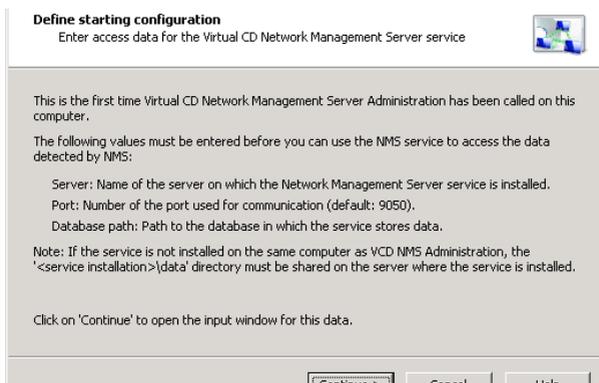


If you are installing Virtual CD NMS Administration and the Virtual CD NMS Service on the same server, you can do so simultaneously by selecting both components here.



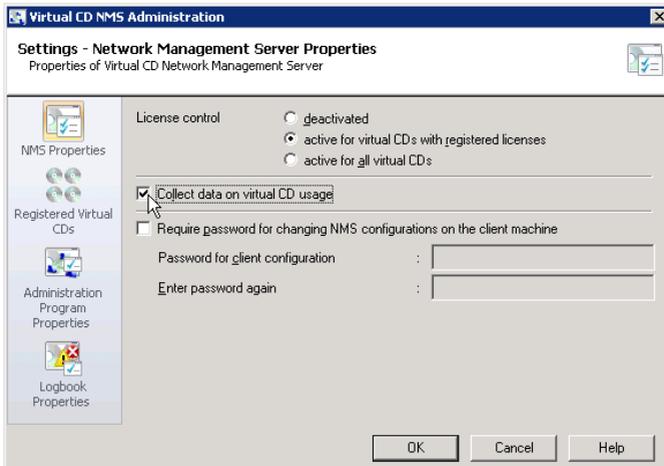
3

Once Virtual CD NMS Administration has been installed, open the program to configure its settings. A startup wizard opens and prompts input of the required data. The subsequent window lets you enter data for the administration program properties.



The following values must be entered to ensure functional communication between NMS Administration and the Virtual CD NMS Service:

1. The server on which the Virtual CD NMS Service is installed.
2. The port used for communication with the service.
3. Database path (share) on which the service stores data (see “Installing the Virtual CD NMS Service” in this manual for details on this share).



Enter this path in UNC syntax to ensure that it can be accessed by all stations.



The last step is to specify the virtual CDs that will be managed in Virtual CD NMS. To do this, open the **Registered Virtual CDs** window and click on **New** to open a dialog for selecting the desired configuration file (**VCDImg.dat**).

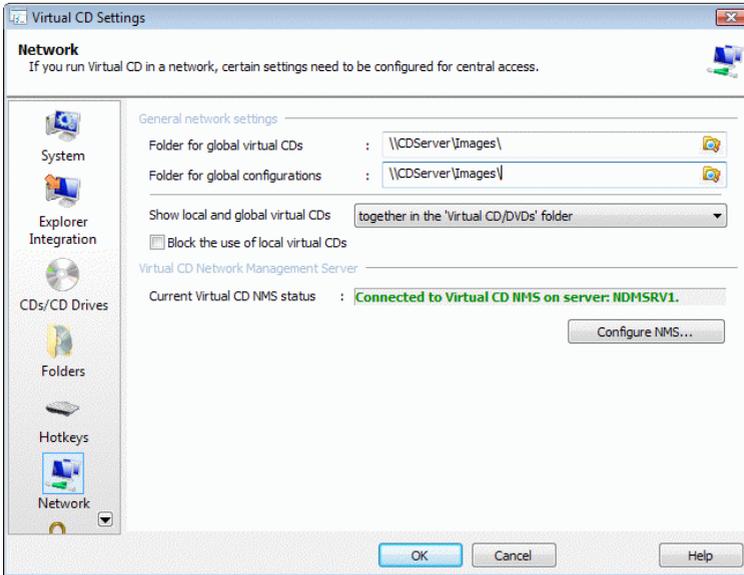


Make sure the path to the Virtual CD configuration file(s) is given in UNC syntax; otherwise, accessibility might not be ensured.

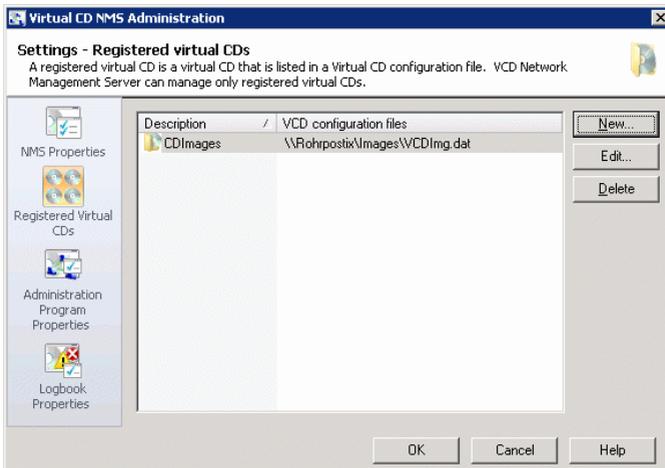


The configuration file you specify here must be stored in the global configuration path indicated on the **Network** page of the Virtual CD Settings on the client machine. If it is not, this may cause errors in program operation.

Global configuration path in the **Virtual CD v9 settings**:



Virtual CD configuration path in the **Virtual CD NMS settings**:



This concludes the basic configuration of Virtual CD NMS. Now you can open Virtual CD NMS Administration to register your first Virtual CD clients.

Configuring Virtual CD Clients

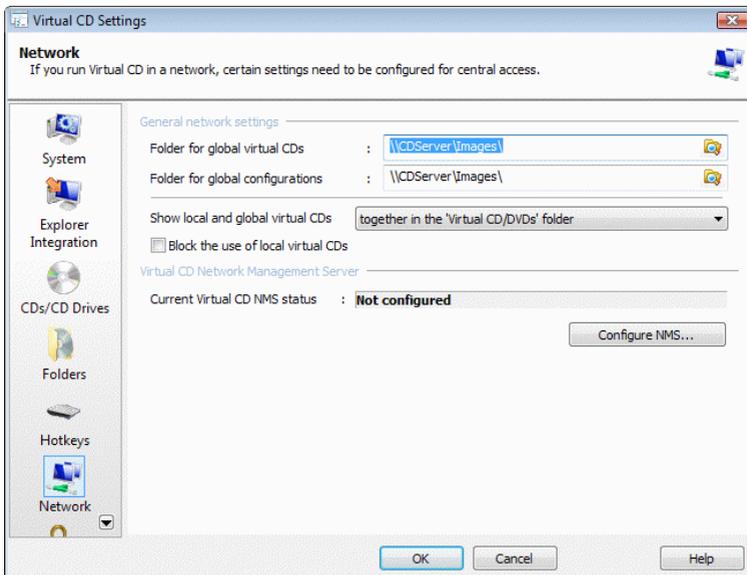
Once you have installed and configured the Virtual CD NMS components, you need to configure certain Virtual CD settings on your client stations for communication with Virtual CD NMS.



Prerequisite for this step is the previous installation and network integration of Virtual CD on the client machines. For detailed information on the configuration of your Virtual CD program, consult the Virtual CD documentation. If Virtual CD has not yet been installed on your client machines, this can be done quickly and easily using the Virtual CD NMS Client Distributor. (For details on the Client Distributor, please see „Distributing Virtual CD to Client Stations“ in this manual.)

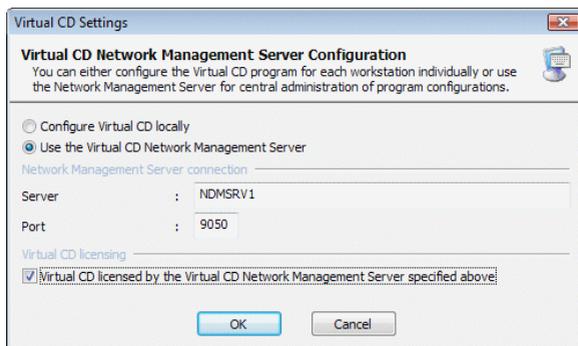


To register a Virtual CD client in Virtual CD NMS, begin by opening **Virtual CD Settings** on the client station, either from the **View** menu or the **Quick Start** button in the system tray. Open the **Network** page of the settings and click on **Configure NMS...** in the „Virtual CD Network Management Server“ section.



2

In the dialog that opens, select the setting: „Virtual CD uses a Virtual CD Network Management Server.“ This activates the subsequent input fields. Enter the server and port for communication with the Virtual CD NMS Service.



Distributing Virtual CD to Client Stations

Advanced configuration of the Network Management Server cannot be carried out before Virtual CD software has been installed and configured on the network clients. Starting with v9, Virtual CD NMS offers a tool for deploying Virtual CD on clients quickly and easily from a central location in your network. This new tool is called Virtual CD Client Distributor. The following provides a detailed description of the procedure for deploying Virtual CD with the Client Distributor. In our example, all of the client stations are within a single domain.

1

Before a Client Setup can be used for distribution, it must be created in the Virtual CD program. Prerequisite for this is that you have at least one installation of Virtual CD, in addition to your Virtual CD NMS program.



The Client Distributor can deploy only version 9 setups. The current version of the Client Distribution program supports installation only of Virtual CD. Virtual CD TS and FS cannot be distributed.

To carry out the deployment, you have to have administrator rights on the stations on which you wish to install Virtual CD.

You will also require access to the Admin\$ share, which administrator accounts have by default in standard Windows installations. The target stations must be running NT-based operating systems.



Windows NT is not supported by the Client Distributor program. The Client Distributor requires a Windows operating system in version 2000 or later.



In Windows Vista, you need to observe the altered conditions for user privileges entailed by the **User Account Control**. This generally does not affect access to the network as long as you have administrator rights on the target stations. When running NMS Administration in Windows Vista, you should make sure you have full administrator rights.

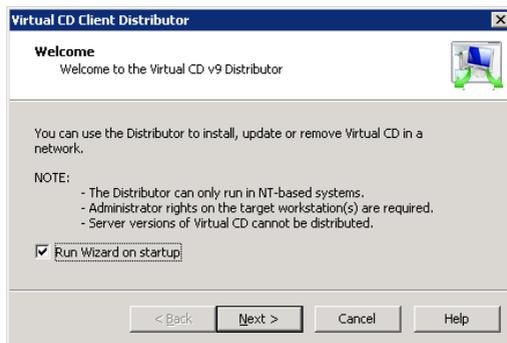


To run the wizard for creating Clients Setups, select **Create a Virtual CD Client Setup** in the **Virtual CD Programs** section of the Tasks sidebar in NMS Administration. The new Client Setup you generate is stored in a directory of your choice. (For details on creating Client Setups, please refer to the Virtual CD documentation.)



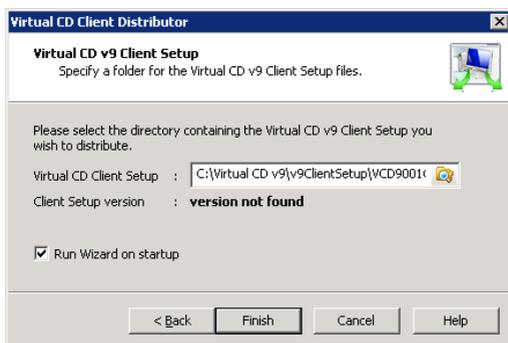
To run the Client Distributor, select **Distribute Virtual CD Clients** in the Tasks sidebar.

This opens a wizard for selecting the Client Setup to be distributed.



The **Run Wizard on startup** option determines whether or not this wizard opens automatically the next time you start up the Client Distributor. If this option is deactivated, you can run this wizard as needed, e.g., to select a different Client Setup,

by choosing **Select a Virtual CD Client Setup...** in the **File** menu. Select **Next** to open a dialog that lets you browse for the desired path.



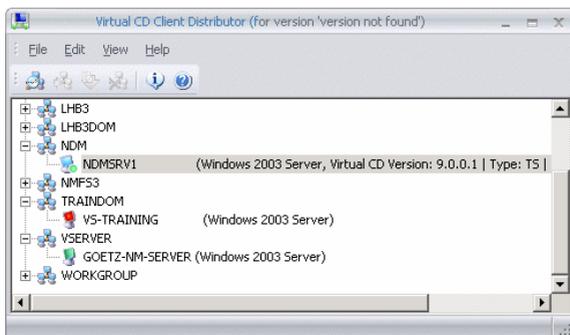
Enter the path to the Client Setup that you wish to distribute and click **OK** to confirm.



If you do not specify a Setup, the main window will still open when you click OK. You can check the Virtual CD versions running on your client stations, but you cannot deploy the software until you run the wizard again and select a Client Setup.



The main window shows all groups and stations in the network.



Client Distributor lets you check your stations before deploying the software, to find out which versions of Virtual CD they are running. A “green monitor” icon indicates that the station has been checked and is ready for installation with the Client Setup.

A red monitor indicates that the program was unable to check the version on the station. In such cases, we recommend checking the log file for details on the failed operation, including date, time, error message and error analysis.



You can also check an entire workgroup or domain by selecting it in the main window of the Client Distributor program and selecting **Check** from the Edit menu, the toolbar or the shortcut menu.



Once a station has been checked marked as ready for installation, you can select the **Install...** menu item to begin installation. The Client Distribution program copies the required files to the workstation and then starts a service that processes the installation automatically. Once the installation is completed, Virtual CD is ready for use on the workstation.

The Client Distributor can also be used to deinstall Virtual CD on your network workstations. To do this, select **Uninstall**.



Similar to installation, the deinstallation process is supported only for Virtual CD v9. The Client Distributor can neither install nor deinstall earlier versions.

Following deinstallation of Virtual CD, the workstation has to be restarted. This is indicated in the main window of the Client Distributor by a yellow monitor icon.

The Client Distributor also has an update function that you can use to make sure each workstation has the latest release of the Virtual CD version it runs. If the version installed by the Client Setup is a later release than that on a workstation, the Client Distributor can update that installation.

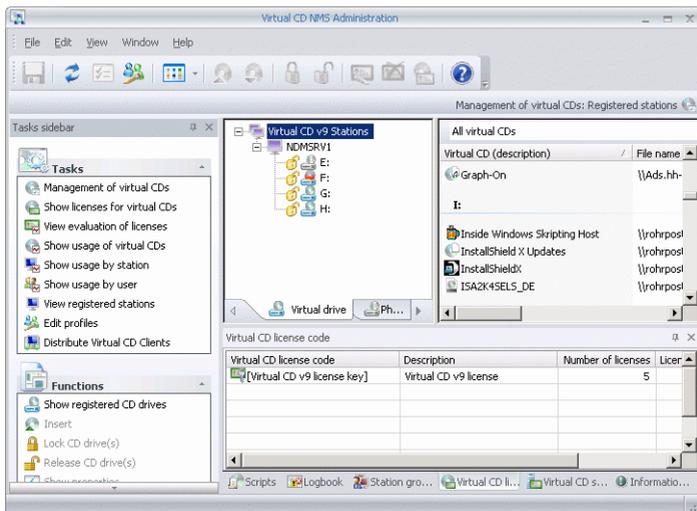


The update function is available for use only with Virtual CD v9.

Whenever an updated release of v9 becomes available, you can make a new Client Setup to update your v9 clients. Please keep in mind, however, that the update function merely updates the installation; it does not take any modification of settings into account. If you have modified settings in the Virtual CD setup, you need to perform a complete installation rather than an update.

Remarks on Installation

Once you have completed the basic configuration steps and registered at least one Virtual CD client, your Virtual CD NMS Administration window should look something like this:



We recommend double-checking the settings for server and port before you configure the client stations; if a mistake is made and must be corrected on every single station, this could amount to a lot of extra work. For example, if you configure 50 clients to work with Virtual CD NMS and then change the name of the NMS server, you have to enter the new name on every one of the 50 stations to enable communication between the clients and Virtual CD NMS.

Virtual CD FS

Virtual CD FS versions 6, 7 and 9 can be integrated in your Virtual CD NMS v9 system.

The advantages of using the two programs together include:

- Expanded licensing CDs functions for all virtual CDs
- Management of server licenses (v9 only)
- Centralized administration

Notes on Installing Virtual CD FS

When you install Virtual CD FS, you have to enter a license code for it even though you will be using it in conjunction with Virtual CD NMS, possibly with the automatic

licensing feature active. The Virtual CD FS service that makes virtual CD drives available requires a locally stored license code. Version 9 of Virtual CD FS can retrieve a license code from NMS. This option can be configured during installation.



The setup program will not continue until a local Virtual CD FS license code has been entered. Starting with Version 9, Virtual CD FS no longer has a demo mode. A separate test version of the program is available for testing purposes. It is not possible to activate the full range of functions by entering a license code in a test version.



For details on the installation and configuration of Virtual CD FS, please refer to the Virtual CD FS documentation.

When you run a Virtual CD FS v9 server in conjunction with Virtual CD NMS Administration, the Virtual CD FS server is automatically added to the default **Virtual CD v9 FS Servers** group in Virtual CD NMS.



You can assign the server to a group you create yourself, if desired.

Functions available for the Virtual CD FS server:

For the most part, you can use the same functions for Virtual FS servers as those that are available for the Virtual CD client stations registered in NMS.

The following functions are *not* available for Virtual CD FS:

- Distribution of scripts
- Assignment of profiles



When using Virtual CD FS in conjunction with Virtual CD NMS, we recommend locking the drives on the file server. This prevents users who connect over Virtual CD NMS from inadvertently ejecting the CDs that are in file server drives.

Virtual CD TS

Virtual CD TS versions 6, 7 and 9 can be integrated in your Virtual CD NMS v9 system.

When you run Virtual CD TS v9 in conjunction with Virtual CD NMS, the Virtual CD TS server is automatically added to the default **Virtual CD v9 TS Servers** group when it registers in Virtual CD NMS.



The display shows the existing TS servers and active sessions.

You can assign Virtual CD TS servers to a group you create yourself, if desired.

The advantages of using Virtual CD NMS and Virtual CD TS together include:

- Centralized administration.
- Central management of TS server licenses using NMS.
- The functions available for NMS client stations are also available for clients in Virtual CD TS sessions.
- Every client station that logs on in a terminal server session is automatically assigned a profile.

If you add a Virtual CD TS installation without changing any other settings, clients that log on in terminal server sessions are assigned the **Virtual CD basic profile**. However, we recommend creating a separate profile for TS clients.

In addition to configuring security settings and other features in the profile, you can also specify **virtual drives for TS clients. The drives are mapped when a session is opened.**

For more information about profiles, please see “Working with Profiles” in this manual.

Assigning licenses for Virtual CD TS clients:

You can assign license codes for Virtual CD TS using Virtual CD NMS. Each terminal server session takes up one license, starting when a virtual CD is inserted during the session.

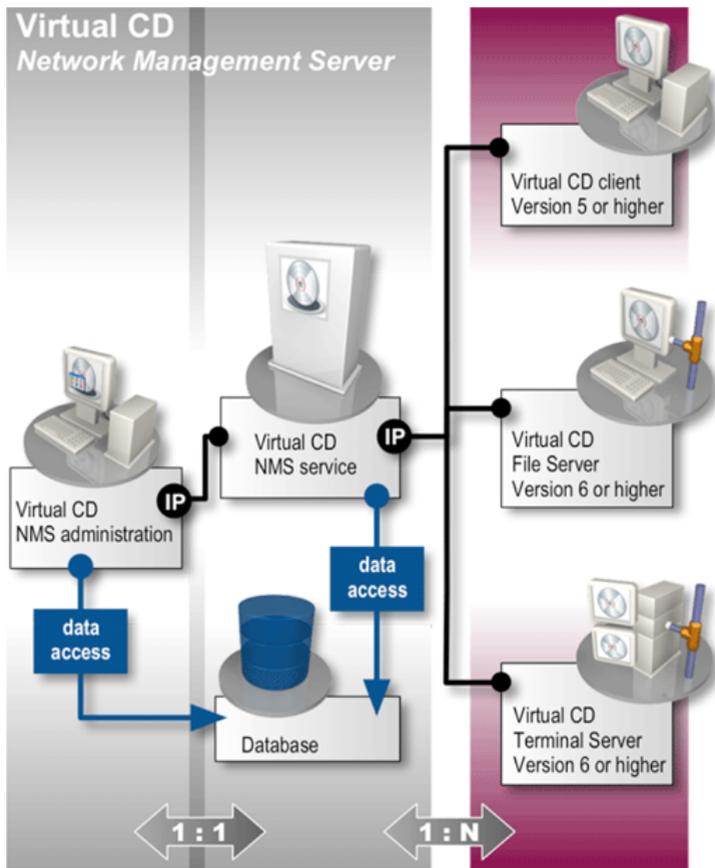


For details on the installation and configuration of Virtual CD TS, please refer to the Virtual CD TS documentation.

Working with Virtual CD NMS

Working with Virtual CD NMS

Virtual CD NMS is a client/server application that lets you control a variety of features on your Virtual CD client stations. With Virtual CD NMS, all Virtual CD clients are registered centrally on the Virtual CD Network Management Server, enabling management of virtual and physical CD drives, inserted virtual CDs, and other functions on the client machine using the Virtual CD NMS Administration program.



As illustrated above, all Virtual CD clients communicate with the Virtual CD NMS Service directly over TCP/IP, so that direct data access is not necessary. The Virtual CD NMS Administration program also accesses the Virtual CD NMS Service over TCP/IP. To enable the optimum data access speed, Virtual CD NMS Man-

agement reads some of the data directly from the databases written by Virtual CD NMS Service. For this reason, the folder created for the databases must be shared once the Virtual CD NMS Service is installed. When you install the Virtual CD NMS Administration program, the name of this share must be entered in the administration program properties (see “Installing Virtual CD NMS Administration” in this manual for details).



Virtual CD NMS Administration can be installed on as many machines as you like, but only one instance can run per Virtual CD NMS Service. If Virtual CD NMS Administration is already running when you try to start it, a message window opens to tell you which station the program is running on. Only after that instance has been closed can the program be started again on another machine.

The main tasks performed with Virtual CD NMS are accessible from the Virtual CD NMS Administration window:

- Central Management
- License Control for Virtual CDs
- Logging Data on Virtual CD Usage
- Activity Check for Virtual CD Drives
- Activity Check for Physical CD Drives
- Distributing Virtual CD Software to Client Stations
- Automatic Distribution of Virtual CD License Codes
- Creating and Assigning Profiles for Users/Stations
- Logbook Function

To understand how Virtual CD and Virtual CD NMS work together, it is important to keep in mind which tasks are performed by each of these two programs.

- Virtual CD manages your virtual CDs
- Virtual CD NMS manages the Virtual CD clients in the network

Before you continue...

Before you go any further with the description of Virtual CD NMS functions, we would like to emphasize a few elementary aspects of the program that are essential for the most effective possible use of Virtual CD NMS.

New settings must be saved: Changes in configuration settings that affect the Virtual CD NMS program or certain parameters for usage of virtual CDs (e.g., for license control) are *not* effective until you explicitly save them.



Your configuration data is not sent to the server – i.e., to the Virtual CD NMS service – until you select the command to save changes.

Changes affecting a virtual CD are not effective until the next time that virtual CD is inserted: Changes that affect virtual CDs (e.g., in license control settings) are not applied until the next time the virtual CD in question is inserted. Virtual CDs that are in virtual drives (whether actively in use or not) when the changes are made are **not** affected.



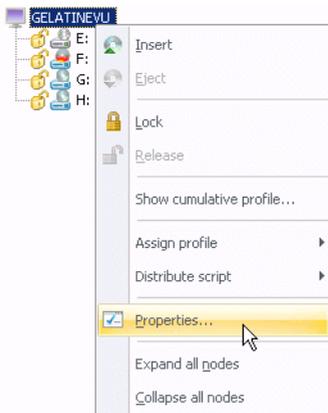
If a given virtual CD is in a drive when you change settings that apply to it, the new settings are not effective for that CD until it has been ejected and then inserted again.

Objects and Their Properties

An “object” is an element of the Virtual CD NMS Administration program which you can manipulate by activating certain functions. Virtual CD NMS Administration recognizes the following objects:

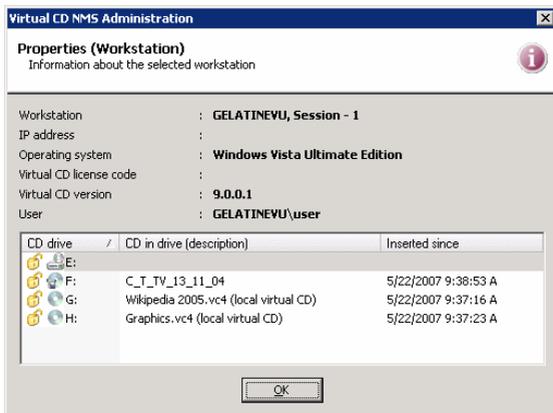
- Virtual CDs
- Virtual CD drives
- Physical CD drives
- Users (these are passive objects; i.e., no functions can be applied)
- Stations
- Groups

Most functions are applicable to more than one object. The function for displaying the properties of an object, for example, can be applied to virtual CDs and to client stations.



“Properties” show you the information assigned to objects. For example, one or more virtual drives can be assigned to a given client station. You can open a “Properties” window from almost any point within Virtual CD NMS Administration,

for fast access to key information about an object. The example below shows the properties of a virtual CD client station, which can include network parameters, the physical and virtual drives available on that station, and the virtual CDs currently inserted in drives on that station.



Registered Virtual CDs

To perform operations and routines on virtual CDs, the program must be able to identify the virtual CDs unambiguously, by some unique characteristic. The Virtual CD system identifies virtual CDs by their full name; in other words, by the file name of the virtual CD and its entire path (drive designation and folder names).

Which CDs are “registered” in your Virtual CD NMS system is configured under **Registered Virtual CDs** in your **Virtual CD NMS Settings**. Virtual CDs are registered by listing them in virtual CD configuration files (called **VCDImg.dat**). You can specify one or more configuration files in this dialog to register them in your NMS system.

Configuration files are stored in the folder specified for this purpose on the **Network** page of the **Virtual CD Settings** under **Global configuration path** (see „Configuring Virtual CD Clients“ in this manual for details).

These configuration files list the virtual CDs that are registered in your Virtual CD system and are available globally (e.g., over the network). Any time you add or remove virtual CDs the corresponding DAT file is changed accordingly, which means changes are automatically reflected in the Virtual CD NMS system.

Virtual CD NMS can insert only virtual CDs that are registered. Functions for assignment of licenses and identification of usage data can also be applied only to registered virtual CDs.



If you move a virtual CD from one folder to another on your hard drive, the path name will change and Virtual CD NMS will no longer recognize that CD as being registered. Settings in VCD NMS relating to the virtual CD, such as licensing, will be reset and have to be configured again.

Central Administration

Virtual CD NMS Administration offers central access to all administrative functions. Similar to the Virtual CD **CD Management** program, it is made up of three windows. In NMS, these are the administration window, the tasks window and the sidebar („Tasks sidebar“). You can change the positions of these windows as desired. A configuration of windows in this program is referred to as a „layout,“ and individual layouts can be stored and loaded using the **Layout** command in the Window menu. You can choose from a number of specific views for the administration window, such as the scripts overview or license codes window.

The **Tasks sidebar** gives you quick access to central functions such as license management, usage analysis, profile administration and software distribution. The sidebar also contains commands for working with virtual CDs and virtual drives, for actions such as locking drives or inserting virtual CDs. The **Virtual CD Programs** section contains links to Virtual CD programs such as CD Management and the Image Wizard. You can also open the NMS Settings program from the sidebar.

The **Tasks window** shows your NMS environment. Depending on which task is selected in the sidebar, this window lets you manage either virtual drives and virtual CDs or licenses for virtual CDs, or shows the license evaluation, usage evaluation or your registered stations.

With the default window configuration, the Tasks window shows your CDs and CD drives. This view includes functions for controlling virtual and physical CD drives as well as the use of virtual CDs. Virtual and physical drives are shown on two different display pages; click on the corresponding tab for the desired view. Physical drives that are designated for use with virtual CDs are listed under **Virtual drives**. In Virtual CD v9 and later, virtual drives and virtual burners are distinguished by different icons, as in the Virtual CD program.

The following commands are available for control of **virtual CD drives**:

Insert: Insert a virtual CD.

Eject: Eject a Virtual CD.

Lock: Lock a virtual CD drive.

Release: Release a locked virtual CD drive.

Data throughput: View the data throughput rate of the selected drive.

Show properties: The command in the sidebar lets you view properties of the virtual CD in the drive, or of the entire workstation.

Your virtual CDs must be registered in your VCD NMS system before the above commands can be applied.



When you use VCD NMS to insert a CD that is password-protected, the password is prompted centrally and must be entered in Virtual CD NMS before the NMS Administration program can insert the virtual CD. This means you can provide access to this CD for users on client stations **without** giving users the password.

You can prevent all usage of virtual CDs on a given station by using VCD NMS to **lock** that station's virtual CD drive(s). Once a virtual CD drive is locked, no virtual CDs can be inserted in that drive on that client station. You can, however, insert and eject CDs in that drive using VCD NMS Administration. When you **release** a CD drive that had been locked, the drive is once again available for use on that station. The „padlock“ symbol displayed next to a drive letter indicates the current status („locked“ or „unlocked“) of the virtual drive.



In Virtual CD NMS, it may occur that a drive can still be used on a given client station even though it has been locked in NMS. If this happens, please check whether the central network mode was active and set to „normal“ when the drive was locked. (For details on this topic, please see article #1236, „A drive can be used even though it has been locked by Virtual CD OPS“ in the Virtual CD knowledge base.)

The following functions can be applied to **physical drives**:

Eject: Eject a physical CD.

Lock: Lock a physical CD drive.

Release: Release a locked physical CD drive.

Data throughput: View the data throughput rate of the selected drive.

Show properties: The command in the sidebar lets you view properties of the CD in the drive, or of a registered station.

The **Eject** function makes it possible to eject a physical CD from a physical drive on a Virtual CD client station.

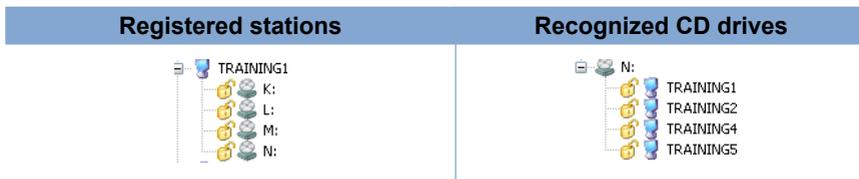
You can also „lock“ a physical drive on a Virtual CD client station. When the **Lock** setting is active, a physical CD can still be inserted in the physical drive but it is immediately ejected again. This means, of course, that no programs can be run or installed from physical CDs in that drive. When you **release** a physical CD drive that had been locked, the drive is once again available for use on that station. The „padlock“ symbol displayed next to a drive letter indicates the current status („locked“ or „unlocked“) of the drive.

As mentioned above, the Tasks window can be configured in accordance with your preferences.

There are two views to choose from for the Drives window:

Registered stations: In this view, each client station is represented by a node; when you expand a node (click on the plus sign), the lower branches show the drive letters of all CD drives on that station. This is the default setting.

Recognized CD drives: In this view, all of the drive letters used in your system to denote CD drives are shown as nodes. When you expand a node, the list shows all client stations that currently have a virtual CD drive with that drive letter.



The **CD View** lists all of the virtual CDs registered in Virtual CD NMS. Select the **Group by** command in the shortcut menu to group virtual CDs in categories from **0** to **9**, **A** to **Z** and **Other**. Virtual CDs in this list can be inserted in drives using drag-and-drop. Furthermore, the following commands are available in the sidebar or the shortcut menu:

Insert: Loads the selected virtual CD in a selected virtual drive.

Eject: Ejects the selected virtual CD. This command ejects the CD from **all** drives in which it is inserted.

Properties: Shows the properties of the virtual CD.

Settings: Opens the Virtual CD program's image properties window. This contains information on general properties, comments, file and path, as well as details on the process used to create the CD.



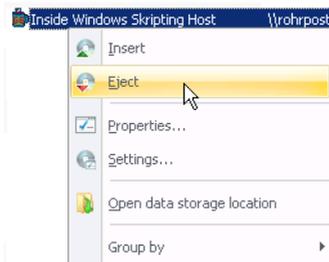
When you run CD Management in Windows Vista, the grouping function is interactive; i.e., the individual category views can be expanded and collapsed.

Location is “Central”!

The central management window gives you a variety of options that affect the virtual and physical CD drives on client stations. To facilitate intuitive operation, the manner in which a given function is executed always depends on the “location,” or the position within the program, from which that function was called. When you right-click on an object (e.g., a client station, virtual CD or drive) in this window, a shortcut menu opens containing the functions that can be applied to that object. The function performed is always dependent on the object selected. This is illustrated by the following examples:

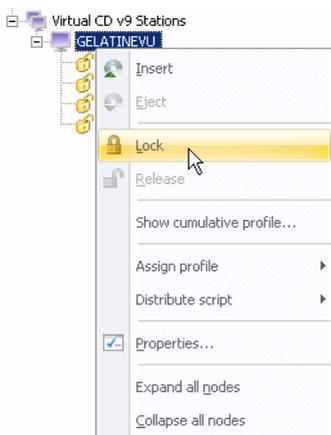
Example 1: Ejecting a virtual CD from all virtual CD drives.

Say you want to eject a particular virtual CD from all client stations, regardless of which drive letters the different machines are using for that CD. Select the virtual CD in the **list of registered virtual CDs** in the **CD view**, right-click on it, and choose **Eject** from the shortcut menu.



Example 2: Locking all virtual CD drives on a client station.

In certain situations, it may become necessary to prevent access entirely to virtual CDs on a given station. To do this, simply select the **Lock** function in the **Drive view** of the desired client station. Virtual CD NMS locks all virtual CD drives on that client station.



The techniques described above also apply when functions are activated by other methods, such as drag-and-drop or through the Toolbar, a menu command, or the Tasks sidebar. The decisive factor is always the selection of the object before the function is called.

Global Functions

In addition to the functions that can be applied to individual objects, there are a number of functions that can be applied “globally,” to all virtual or physical CD drives on all registered client stations. To help make sure these functions are not activated inadvertently, they can be accessed only through the **Edit** menu.

These global functions include the following (note that they are applied to virtual and physical drives separately):

Eject all CDs: Ejects all virtual or all physical CDs.

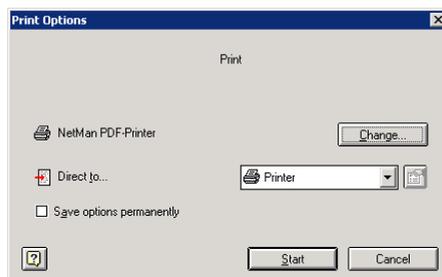
Lock all drives: Locks all virtual or all physical drives.

Release all drives: Releases all virtual or physical drives that had been locked.

These functions can be used to create a uniform operating state on all client stations in the network, which can be useful in a teaching or training situation, for example. One way to use these functions, for example, would be to first lock all drives and then eject all virtual CDs. Then you can permit access to a particular selection of virtual CDs for the group with whom you are currently working.

Print Function

The print function lets you save and print information about Virtual CD NMS.



To use this function, select **Print** from the **File** menu or from the shortcut menu in the selected overview.

Use the print function, for example, in the Profile Editor to print your Virtual CD profiles. This can be particularly useful if you have a large number of profiles to manage.

Management of Virtual CD License Codes

A central component of Virtual CD NMS is the management of license codes for Virtual CD client stations and Virtual CD servers. Virtual CD NMS can distribute licenses to stations, stations groups, users, and user groups. Server licenses can be deployed explicitly on servers in the network.

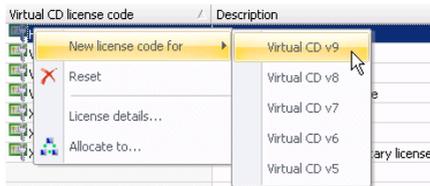


Virtual CD NMS can distribute license codes for Virtual CD versions 5 through 9. **For users, user groups and station groups, licenses can be assigned only to Virtual CD products in version 6 and later.**

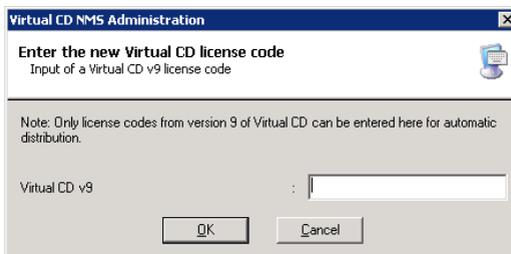
To distribute license codes, configure VCD NMS as follows:



Run the Virtual CD NMS Administration program and enter the Virtual CD license codes that you wish to distribute to client stations. To enter the license codes, right-click in the **Virtual CD license code** overview in VCD NMS Administration to open the shortcut menu. (New license codes can be entered directly in the **Virtual CD server license codes** window.) Select **New license code for:** and then choose the Virtual CD version to which the new license code applies.

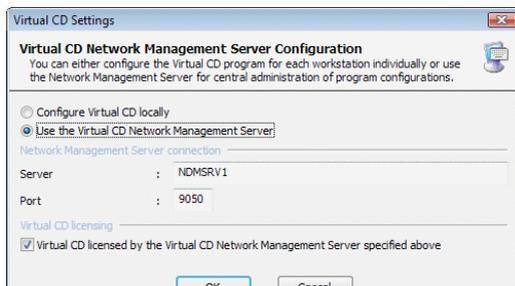


In our example, **Virtual CD v9** is selected.



3

Your Virtual CD client stations must now be configured to retrieve their license codes from Virtual CD NMS. To do this, run the Virtual CD Settings program on the client station, open the **Network** page and click on „Configure NMS...“ to open the **Virtual CD Network Management Server Configuration** window. Activate the **Virtual CD licensed by the Virtual CD Network Management Server specified above** option.



Once these steps have been completed, the client stations in your network that log on to Virtual CD NMS draw their licenses from VCD NMS on startup, and release the license when the station is logged out again. This saves you the trouble of entering license codes on each workstation separately.



At runtime, Virtual CD NMS will distribute Virtual CD licenses to each station that logs on until the number of licenses purchased are all in use. If another client attempts to log on and requests a license when none is available, an error message is shown. If no licenses are available, Virtual CD cannot run on additional stations.

To see which stations are using license codes from Virtual CD NMS, open the **Registered stations** view.

When you use the automatic license distribution feature in Virtual CD NMS, we recommend the following procedure:

1. Configure all client stations as described under Step 3 above.
2. Do not enter any license codes locally on client stations.
3. Mobile computing devices such as laptops should not be included in the automatic licensing scheme, since they would not be able to run Virtual CD when they are not connected to the network. Rather, enter license codes locally on laptops, notebooks and the like. Locally entered codes cannot be distributed by Virtual CD NMS.



Once a license code has been entered in Virtual CD NMS for distribution, that code cannot be used locally (i.e., assigned explicitly on a particular machine).

Virtual CD Server License Codes

One of the new features in Version 9 lets you use Virtual CD NMS to distribute server license codes, in addition to those distributed to clients. The **Virtual CD server license codes** window has been added to the NMS Administration program to help you keep track of licenses. This window shows only server licenses. The license used by your server is also shown in the **Virtual CD license codes** window, because the package containing your base code (server code) includes licenses for the use of Virtual CD as well. The server license window, on the other hand, shows only information on the base license; there are no „Number of licenses“ and „License in use“ columns. In their place, this window has a **Being used by server** column that shows which server is using the base license.

Explicit Assignment of Virtual CD Program Licenses

In addition to the automatic distribution of licenses, Virtual CD NMS can also be used for explicit assignment of licenses to users, user groups, stations, station groups and servers.



This applies only to licenses codes obtained for version 6 and later of the Virtual CD program.

The licenses codes entered in Virtual CD NMS are shown in the **Virtual CD license code** window in Virtual CD NMS Administration.

Virtual CD license code	Description	Number of licenses	Licenses in use	Allocated to
[Virtual CD v5 license key]	Virtual CD v5 license	1	0	
[Virtual CD v6 license key]	Virtual CD v6 license	25	0	
[Virtual CD v9 license key]	Virtual CD v9 license	5	1	Virtual CD v9 Stations
[Virtual CD v9 TS license key]	Virtual CD v9 TS basic license	5	0	Virtual CD v9 TS Server
[Virtual CD v7 license key]	Virtual CD v7 license	5	1	
[Virtual CD v8 license key]	Virtual CD v8 license	1	0	
[Virtual CD v9 TS license key]	Virtual CD v9 TS supplementary license	25	0	

Scripts | Logbook | Station groups | Virtual CD license code | Virtual CD server license code | Information/Help

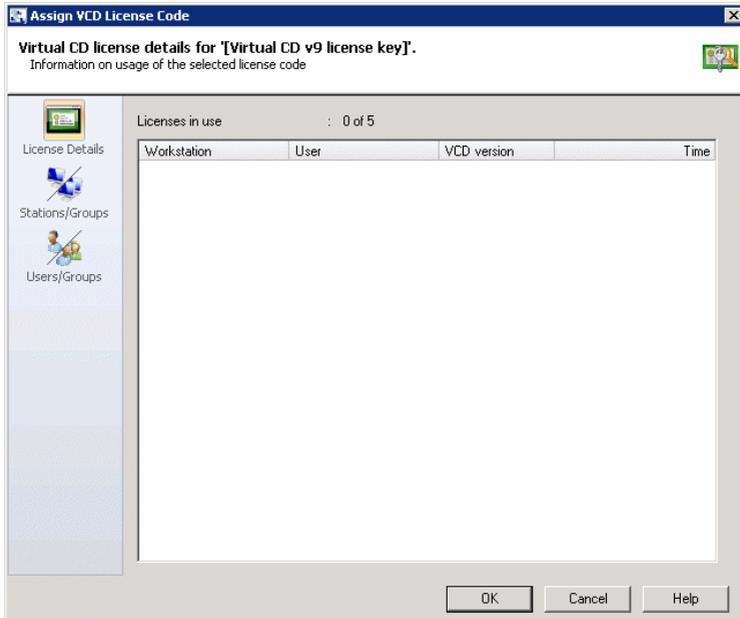


Server licenses are additionally shown in the **Virtual CD server license codes** window. This does not affect the assignment of licenses to servers. You can assign licenses to users, user groups, stations, station groups and servers in both windows. Virtual CD automatically distinguishes between the base license (server license) and user licenses.

The procedure for assigning licenses explicitly is demonstrated in the following, with a 5-user license code and Virtual CD v9 clients:

1

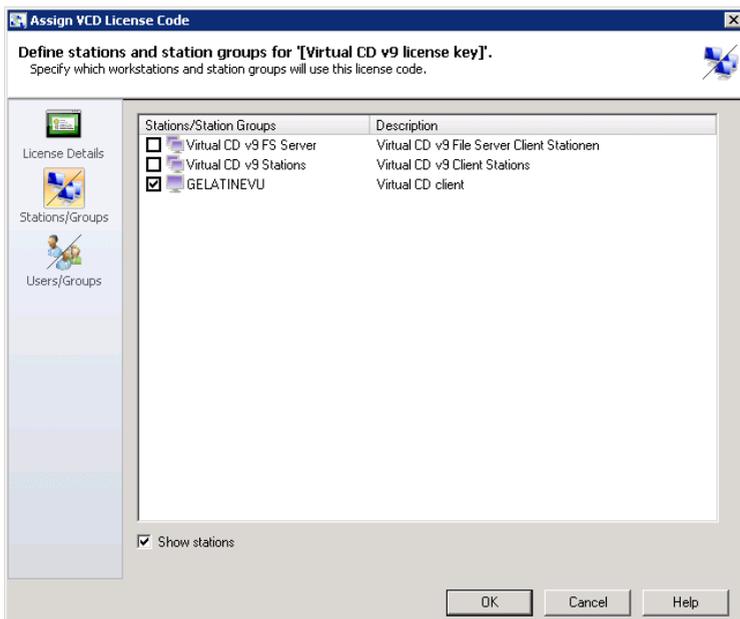
Double-click on the license code in the **Virtual CD license codes** window to open the **Assign VCD License Code** dialog.



None of the 5 licenses enabled by this code have been assigned up to now.

2

To assign licenses to individual stations, open the **Stations/Groups** page and select the **Show stations** option.



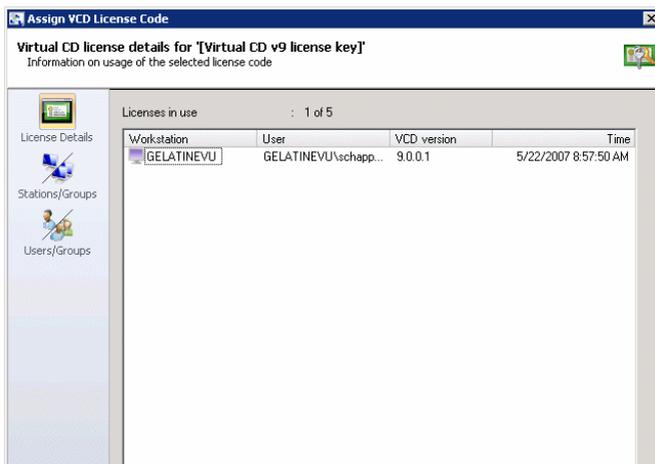
3

In our example, we select the “Student_1” through “Student_4” stations and click on **OK** to confirm. These stations are now shown in the **Virtual CD license code** window, under **Users/Stations**.

Virtual CD license code	Description	Number of licenses	Licenses in use	Allocated to
[Virtual CD v5 license key]	Virtual CD v5 license	1	0	
[Virtual CD v6 license key]	Virtual CD v6 license	25	0	
[Virtual CD v9 license key]	Virtual CD v9 license	5	1	GELATINEVU
[Virtual CD v9 TS license key]	Virtual CD v9 TS basic license	5	0	Virtual CD v9 TS Server
[Virtual CD v7 license key]	Virtual CD v7 license	5	1	
[Virtual CD v8 license key]	Virtual CD v8 license	1	0	
[Virtual CD v9 TS license key]	Virtual CD v9 TS supplementary license	25	0	

4

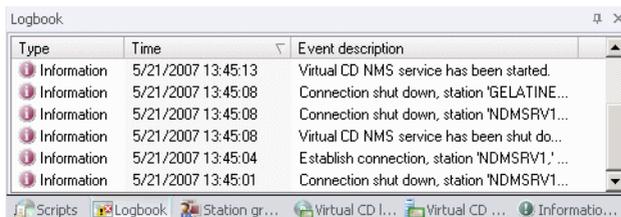
The next time the “Details: Licenses” view is opened, these stations will be displayed there as well.



Because these licenses have been assigned explicitly to these stations, the licenses are not released for use by other stations when these stations log out!

Logbook

If you have any difficulties with Virtual CD NMS, it is a good idea to check the logbook for an indication of the cause.



System events shown here are divided into 3 categories:

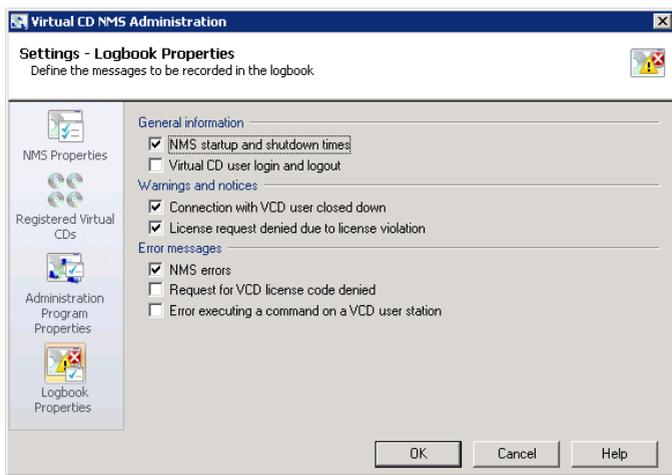
Information: Shows uncritical system events that took place as expected.

Warning: These are semi-critical events; i.e., they were unexpected, but do not directly interfere with the proper functioning of the system.

Error: These are critical system events that interfere with or prevent proper functioning of the system.

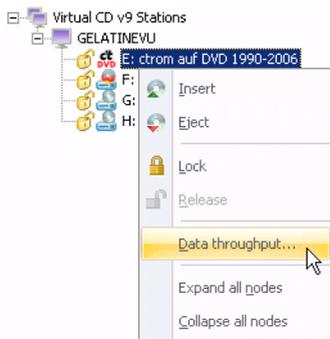
If a given function was not carried out correctly, logbook entries can help locate the source of the error. For example if a station attempts to connect to NMS when no licenses are available, this fact is recorded in the logbook. This problem can be located and eliminated on the server, precluding the need for troubleshooting on the client machine.

Which events are shown here is configured on the **Logbook Properties** page of the NMS Settings.

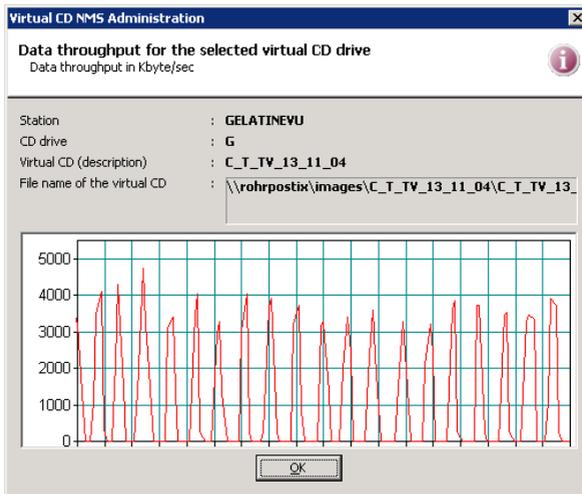


Monitoring Virtual CD Drive Activity

If you are having a problem with a virtual CD, you can open the Data Throughput Monitor to determine whether the drive it is inserted in is actually being accessed. To open the data throughput monitor, right-click on a virtual drive (in which a virtual CD is inserted) in the **Management of virtual CDs** window, and select **Data throughput...** from the shortcut menu.



Similar to the Windows Task Manager showing system performance data, the data throughput monitor shows the data throughput detected on the selected virtual CD drive. Throughput is displayed in kilobytes per second. The following illustration shows the data throughput detected when a virtual video CD is played.



The data throughput monitor can only show the throughput for one CD drive at a time.



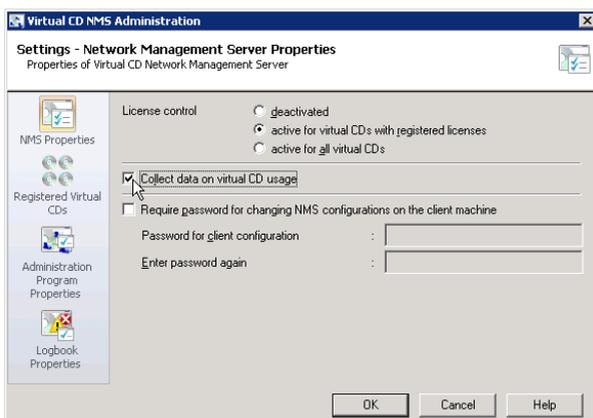
The user interfaces show whether a virtual CD is inserted in a given drive, but not whether the CD in the drive is being used. This is why we developed the throughput monitor, which shows whether the virtual CD data is actually being read.

Logging Virtual CD Usage Data

When you activate the function for logging usage data on virtual CDs, you can use the data collected for an evaluation of virtual CD usage in your system. The logged data comes from the following sources:

- Virtual CDs
- Stations
- Users

When you first install Virtual CD NMS, this data logging function is not active. To activate this feature, open the **NMS Properties** page of the Virtual CD NMS Settings.



If you try to select a usage data display before the logging function has been activated, a message window opens. Once the message window is closed, the selected display is blank.

All output windows showing usage data include the duration of use and the most recent usage relating to the selected object. The duration of use shown here is a cumulative value. In other words, if a virtual CD was used simultaneously on two client stations for 1 hour, the usage time logged amounts to 2 hours.

Virtual CD usage

Virtual CD (description)	Duration of use	Most recent use	File name of the virtual CD
Inside Windows Skripting Host	03 : 05 : 03	5/22/2007 12:46:49 PM	\\rohrpostix\Images\Inside ...
MSDN Library May 2006	00 : 00 : 37	5/21/2007 16:49:44 PM	\\rohrpostix\Images\MSDN ...
NERO 5556	02 : 12 : 21	5/22/2007 10:29:38 ...	\\rohrpostix\images\nero\...
PaintShopPro 7	00 : 01 : 15	5/21/2007 16:49:52 PM	\\rohrpostix\Images\Paint5...

Usage by station

Workstation	VCD version	Duration of use	Most recent use
GELATINEVU	9.0.0.1	05 : 33 : 46	5/22/2007 12:46:49 PM
NULLDIETUS	7.0.0.0	02 : 15 : 56	5/22/2007 10:23:39 AM

Usage by user

User	Duration of...	Most recent use
GELATINEVU\user	05 : 33 : 46	5/22/2007 12:46:49 PM
HH-ZFRK\user	02 : 15 : 56	5/22/2007 10:23:39 AM



The usage data that is logged relates to inserted virtual CDs. If a client station logs on to Virtual CD NMS but does not insert any virtual CDs, no usage data is collected for that station. Neither the workstation nor the user logged in on that station are included in the display of usage data.

Select **Delete data records** from the **Edit** menu to delete all entries from the usage database. When data logging continues, all values begin again at zero.

Station Groups

To facilitate management of the client stations logged on to Virtual CD NMS, it can be very useful to group stations that have certain similarities. For example, you can put together all of the stations that are used in a particular department of your company, or all the stations that use Virtual CD, in groups. All existing groups are shown in the **Station Groups** window in Virtual CD NMS Administration.

Group	Description
Virtual CD v9 TS Server	Virtual CD v9 Terminal Server Client Stations
Virtual CD v9 Stations	Virtual CD v9 Client Stations
Virtual CD v9 FS Server	Virtual CD v9 File Server Client Stations
Virtual CD v7 TS Stations	Virtual CD v7 Terminal Server client stations
Virtual CD v7 Stations	Virtual CD v7 client stations
Virtual CD v7 FS Stations	Virtual CD v7 File Server client stations

Eleven groups are created during installation of Virtual CD; these are referred to as base station groups.

Virtual CD v5 Stations	Virtual CD v7 FS Stations
Virtual CD v6 Stations	Virtual CD v8 Stations
Virtual CD v6 TS Stations	Virtual CD v9 Stations
Virtual CD v6 FS Stations	Virtual CD v9 TS Stations
Virtual CD v7 Stations	Virtual CD v9 FS Stations
Virtual CD v7 TS Stations	

Virtual CD clients are automatically added to one of these groups the first time they log on to Virtual CD NMS. These pre-defined groups cannot be deleted. You can, however, assign the stations in them to any other group, as desired.

Groups are displayed in the Administration view only if at least one member of the group is logged on to Virtual CD NMS. This applies to the base groups as well as user-defined groups.

You can execute certain actions centrally in Virtual CD NMS for groups. Actions that can be applied to entire groups include, for example, inserting and ejecting virtual CDs, distributing scripts, and locking CD drives.

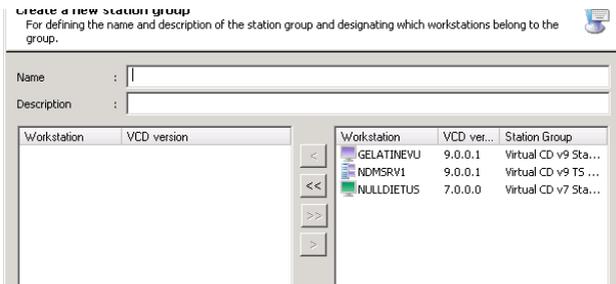
Furthermore, you can assign licenses codes and user profiles that cover entire groups.

You can create additional groups as needed.

The following example shows how to create a group in just a few simple steps.

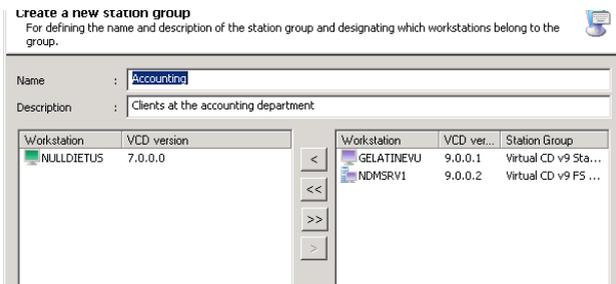
1

Right-click in the **Station Groups** window of Virtual CD NMS Administration and open the **Create a new station group** dialog from the shortcut menu.



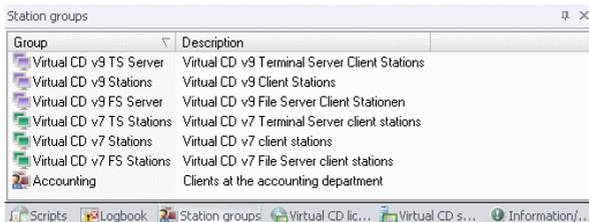
2

Enter a name and, if desired, a description. All available client stations are shown on the right-hand side of the dialog. To add a station to the new group, select the station in the list on the right and use the arrow buttons to move it to the left-hand side of the dialog.



3

The new group is displayed in the **Station Groups** window:



and in the **Management of Virtual CDs: Registered stations** view:



You can now execute actions for these groups, such as inserting and ejecting virtual CDs or assigning a profile.



Each station can belong to only one group.

Scripts

In addition to assigning profiles and grouping stations, Virtual CD NMS also offers function controls implemented by scripts. In the Virtual CD NMS Administration program, you can assign scripts during run time for individual client stations or station groups.

For example, you can have a script insert multiple virtual CDs in virtual CDs drives on client stations.

With the Virtual CD Script Generator, you can create scripts quickly and easily with just a few mouse clicks. Alternatively, you can write scripts with a Visual Basic program. For details on scripts that insert or eject virtual CDs, please refer to the Virtual CD API documentation. For a link to this documentation, open the Virtual CD folder in your Windows Start menu.

To use a script with Virtual CD NMS, the script must be located in the **Virtual CD NMS\Data\Scripts** directory.

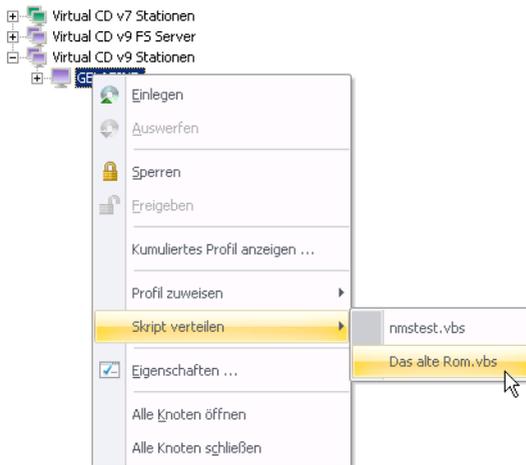


The scripts in this directory are listed in the **Scripts** overview in the VCD NMS Administration program.



Name	Size	Type	Modified
Eject all images.vbs	4 KB	VBScript Script File	2/5/2007 5:14:08 PM
nmstest.vbs	1 KB	VBScript Script File	5/6/2004 10:22:14 AM

Right-click on a script to assign it to a station or a station group.



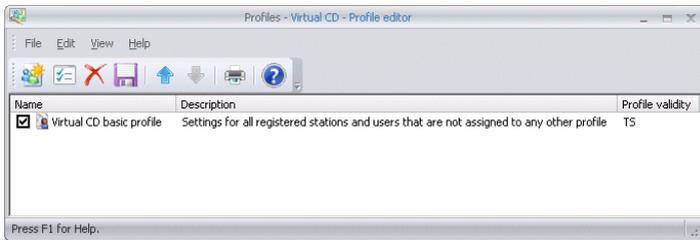
The benefits of scripts can be seen, for example, when using Virtual CD NMS in a teaching or training environment: you can create a script that inserts the same virtual CD(s) on all client stations at once. This saves time and trouble, and all participants are quickly and easily provided with same resources.

Profiles

Profile Editor

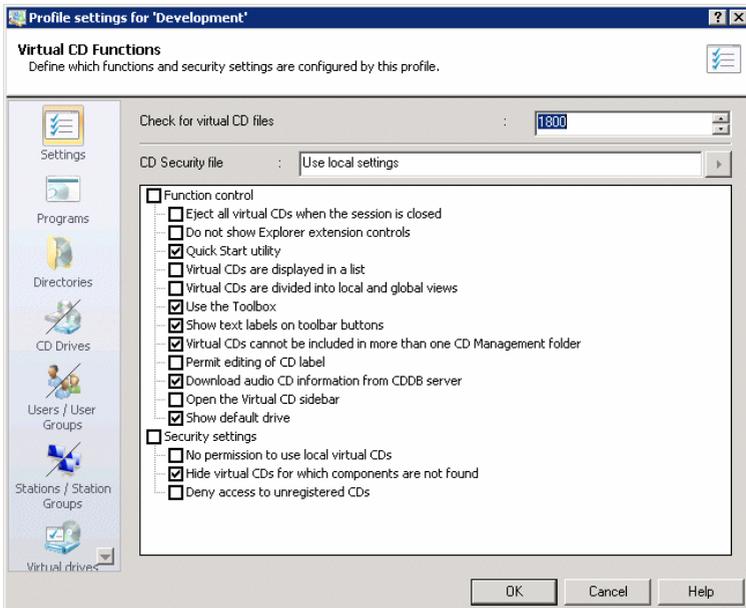
In a network with a large number of Virtual CD client stations, it may be useful to define settings that are applied to certain clients or groups of clients; for example, to specify which functions may be used and which security settings are active. You can do this by creating and assigning profiles. Profiles define the “conditions of use” for stations logged on to Virtual CD NMS.

To create and configure profiles, select Profile Editor in the Tasks sidebar of your Virtual CD NMS Administration program.



Profiles cannot be defined for Virtual CD FS. In conjunction with Virtual CD TS, on the other hand, profiles can be used to their fullest extent.

The main window of the Profile Editor shows all of the existing profiles. The first time you open the Profile Editor only the default, the **Virtual CD Basic Profile** is shown. Every Virtual CD client station is assigned a profile when it logs on to NMS. If you have not specified a profile for a particular client, that client continues to use the Virtual CD basic profile.



The first time you open Virtual CD NMS Administration, the basic profile does not impose any limitations on users.

When change you a profile, the new settings are active only after:

- the changes have been saved, and
- a new session is opened.



It is a good idea to back up your profile data regularly so that you always have a recent version available in case of emergencies. Profile definitions are stored in **Profile.vcd** in your Virtual CD NMS data directory.

Types of Profile

The Profile Editor recognizes two types of profile:

The **Virtual CD basic profile**: This profile comes with your VCD NMS installation and cannot be deleted. It is applied to all users for whom you have not designated a specific profile.

User profiles: You can assign these to station groups. Every client station must be assigned a profile so that user settings can be loaded. If no user profile is specified, the settings defined in the „basic profile“ are applied.

Validity of profile

„Profile validity“ is either „Local,“ „TS“ or both. A local profile is applicable only to stations that are registered locally; a TS profile applies for stations that register in NMS during a terminal server session. To define the validity of a profile, right click on it and choose the desired range from the shortcut menu. The following options are available:

Local and TS: The profile applies for both local stations and stations in terminal server sessions.

Local: This profile is assigned only to users that register locally; i.e., not in a terminal server session.

TS: This profile is assigned only to users in terminal server sessions.

Whether a station is registered locally or in a terminal server session can be an important difference for certain administrative decisions. For example, you might want to give local users broader permissions, allowing them capabilities such as creating virtual CDs or locking drives, while preventing users in terminal server sessions from using these features.

Virtual CD Basic Profile

The basic profile lets you define the configuration status for all client stations that log on to Virtual CD NMS and for whom no other profile is explicitly designated. You can use the basic profile, for example, to deny Virtual CD access for unknown client stations or to restrict them to a specified set of functions.

The basic profile differs from your customized profiles in the following respects:

1. It is **not** applied simultaneously with any other profile. More than one customized profile **can** be assigned, but the basic profile cannot be assigned simultaneously.
2. It is applied by default; i.e., to any client station for whom no other profile has been allocated.
3. It cannot be assigned to users or user groups.
4. It cannot be deleted or deactivated.



Directly following installation, the basic profile permits access to all functions in Virtual CD.



If you want all stations that log on the Virtual CD NMS to use the same configuration settings, we recommend configuring the basic profile for this purpose.

Profile Settings

Profile settings define which options in Virtual CD will be available on client stations. To open the Profile Settings window and edit profile settings, select **Edit profile...** from the Edit menu, click on the corresponding toolbar button, or double-click on a profile.



The title bar of the Profile Settings window shows the name of the profile opened for editing. You can check the title bar to make sure you are editing the desired profile.



The Profile Editor in Virtual CD v9 is quite different from earlier versions. A great many new settings options have been added, and care was taken to ensure downward compatibility. Some of the settings that you have used in earlier versions, however, may have different functions now, and some may not have been included in the new version. Changes, additions and deletions are all indicated in the following descriptions. Furthermore, the differences between v9 and the earlier versions are listed in table form at the end of this chapter.

The Profile Settings are divided into the following pages:

The **Settings** page lets you define which Virtual CD functions are available on the client stations.

Programs determines which Virtual CD programs can be executed on the client.

The **Directories** page defines the paths used by Virtual CD for its folders.

CD Drives enables management of virtual (and, in some cases, physical) drives on the client.

The **Users/User Groups** page lets you assign users and user groups to the active profile.

The **Stations/Station Groups** page lets you assign stations and station groups to the active profile.

Select **Virtual drives** to define whether a client drive is a virtual drive or a virtual burner.



For the basic profile, you can edit settings only on the **Settings, Programs, Directories** and **CD Drives** pages. Because the basic profile is automatically used by any station for which **no** other profile is designated, you cannot explicitly assign any users, stations or groups to this profile.



If your profile settings do not have the desired results, be sure to check the cumulative profile for the station. If the station is assigned to more than one profile and the others have different settings, your settings might have no effect. To open the cumulative profile, right-click on the station in the NMS CD Management and select **Show cumulative profile...** from the shortcut menu.

The options available on the Profile Settings dialog pages are listed in the following:

Settings

Check for virtual CD files

Defines the intervals (in seconds) at which the program checks for virtual CDs registered in the system.

CD Security file

Defines which security file is used. You can load the local settings for use in NMS, specify a particular file or reset security settings to the default values.

Function control

Function control defines the Virtual CD user interface in the client and determines which Virtual CD functions are available. Function control is new in Virtual CD v9. The following options are available here:

Eject all virtual CDs when a session is ended: When the session is closed, all virtual CDs in that session are ejected.

Do not show Explorer extension controls: The Virtual CD Explorer extension is deactivated. The Explorer extension adds Virtual CD controls and functions to shortcut menus opened in the Windows Explorer.

Quick Start utility: The Virtual CD Quick Start utility is available in the Windows taskbar.

Virtual CDs are displayed in a list: CDs are shown in a „CD overview“ in the CD Management program.

Virtual CDs are divided into local and global views: Virtual CDs displayed in the CD Management program are divided into global and local views.

Use the Toolbox: The Virtual CD Toolbox is activated. The user can override this option by selecting the desired configuration in the Settings program.

Show text labels on toolbar buttons: Activates the popup texts that explain the function of a button when the mouse hovers on that button.

Virtual CDs cannot be included in more than one CD Management folder: Prevents duplicates from being stored in a single folder.

Download audio CD information from CDDB server: Track titles and artist information are downloaded from the Internet. If CDDB Internet access has not been configured, a dialog opens prompting this configuration.

Open the Virtual CD sidebar: The Virtual CD sidebar is loaded automatically when the Virtual CD program is opened.

Show default drive: The default drive designated for a virtual CD is shown in the Quick Start menu when that CD is listed.

Security settings

Defines security policies for working with virtual CDs:

No permission to use local virtual CDs: You can prevent access to local virtual CDs; in this case, only virtual CDs that are available over the global configuration path can be accessed.

Hide CDs for which files are not found: If there are any virtual CDs that are classified as „not found“ when Virtual CD starts up, those CDs are not shown if this option is selected.

Deny access to unregistered CDs: CDs that are not specified in the Virtual CD NMS configuration file cannot be used.

Programs

On the **Programs** page you can specify which Virtual CD programs can be used on the stations that are assigned to the profile. You can deactivate programs that you do not want to allow users to execute. Deactivated programs are not available to users, or not on the station in question.

For example, if you deactivate the Toolbox, the CD Management program (rather than the Toolbox) opens when the profile member double-clicks the desktop shortcut. In earlier Virtual CD versions, programs could not be activated or deactivated individually.

This feature is fully operational only on clients running Virtual CD v9.

For client machines running earlier Virtual CD versions, deactivating an individual item (program) within a given group has the effect of deactivating that entire group.

The programs are grouped according to function. You can grant or deny permission to run the following programs:

Administration: Activates access to administrative tools. You can grant or deny permission to run each of the programs under „Administration“ individually:

- Administration
- CD properties
- Drive properties

CD search

Catalog search

Toolbox

Quick Start utility

Command line program

Creating Virtual CDs: The programs under „Create virtual CDs“ have to do with making virtual CDs. You can grant or deny permission to run each of these programs individually:

- Editor
- Image Converter
- Quick Copy Editor
- Copy Template Editor
- Collection Wizard (available only with the Virtual CD FS Edition)
- Copy Wizard
- Image Wizard

Smart Virtual CD Burner

1:1 Copy Wizard

Eraser Wizard

Blank Media Wizard

Change settings: This section defines whether users can edit settings in Virtual CD. You can grant or deny access to the following configuration dialogs individually:

- Settings
- CD Security Editor

Administrative programs: This section defines whether users can run administrative programs. You can grant or deny access to these programs individually:

- Script Generator
- License Monitor
- Profile Editor
- Drive Editor

Explorer extension

Diagnostics

Create a Client Setup

Comparison Wizard

Job Editor

Virtual CD sidebar

Internal functions: Permission to change folders: When this option is active, the user can change the working directories specified for the local Virtual CD installation.



The first time you run Virtual CD NMS Administration, all function control elements and all programs are activated in the basic profile.



For a detailed description of program options, please refer to the Help program.

	v9	v8 *	v7 *	v6
Administration	Yes	Yes	Yes	Yes
Administration	Yes	Deactivation of the entire ,Administration' group	Deactivation of the entire ,Administration' group	Deactivation of the entire ,Administration' group
CD properties	Yes	Deactivation of the entire ,Administration' group	Deactivation of the entire ,Administration' group	Deactivation of the entire ,Administration' group
Drive properties	Yes	Deactivation of the entire ,Administration' group	Deactivation of the entire ,Administration' group	Deactivation of the entire ,Administration' group
CD serch	Yes	No	No	No
Catalog search	Yes	No	No	No
Toolbox	Yes	Yes	Yes	Yes
Quick Start utility	Yes	Yes	Yes	Yes
Command line pro-gram	Yes	Yes	Yes	Yes
Create virtual CDs	Yes	Yes	Yes	Yes
Editor	Yes	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group
Image Converter	Yes	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group
Quick Copy Editor	Yes	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group
Copy Template Editor	Yes	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group	Deactivation of the entire ,Create virtual CDs' group

Collection Wizard	Yes	Deactivation of the entire , Create virtual CDs' group	Deactivation of the entire , Create virtual CDs' group	Deactivation of the entire , Create virtual CDs' group
Copy Wizard	Yes	Deactivation of the entire , Create virtual CDs' group	Deactivation of the entire , Create virtual CDs' group	Deactivation of the entire , Create virtual CDs' group
Image Wizard	Yes	Deactivation of the entire , Create virtual CDs' group	Deactivation of the entire , Create virtual CDs' group	Deactivation of the entire , Create virtual CDs' group
Smart Virtual CD Burner	Yes	Yes	Yes	Yes
1-to-1 Copy Wizard	Yes	No	No	No
Eraser Wizard	Yes	No	No	No
Blank Media Wizard	Yes	Not included	Not included	Not included
Change settings	Yes	Yes	Yes	Yes
Settings	Yes; this setting also de- activates creation of Client Setups	Deactivation of the entire , Change settings' group	Deactivation of the entire , Change settings' group	Deactivation of the entire , Change settings' group
Security Editor	Yes	Deactivation of the entire , Change settings' group	Deactivation of the entire , Change settings' group	Deactivation of the entire , Change settings' group
Administrative pro- grams	Yes	Yes	Yes	Yes
Script Generator	Yes	Deactivation of the entire , Administrative programs' group	Deactivation of the entire , Administrative programs' group	Deactivation of the entire , Administrative programs' group
License Monitor	Yes	Deactivation of the entire , Administrative programs' group	Deactivation of the entire , Administrative programs' group	Deactivation of the entire , Administrative programs' group

Profile Editor	Yes	Deactivation of the entire 'Administrative programs' group	Deactivation of the entire 'Administrative programs' group	Deactivation of the entire 'Administrative programs' group
Drive Editor	Yes	Deactivation of the entire 'Administrative programs' group	Deactivation of the entire 'Administrative programs' group	Deactivation of the entire 'Administrative programs' group
Explorer extension	Yes	Yes	Yes	Yes
Diagnostics	Yes	No	No	No
Create a Client Setup	Yes	No	No	No
Comparison Wizard	Yes	Not included	Not included	Not included
Job Editor	Yes	Not included	Not included	Not included
Virtual CD sidebar	Yes	Yes	Yes	Not included
Internal functions	Yes	No	No	No
Permission to change folders				

* NMS is included only in v7 (7.2). That version also supports stations running v8, which is why all of these settings are identical.



Stations running version 5 cannot use profiles. These stations support only controls that are available directly in NMS Administration, such as inserting virtual CDs.

Directories

On the **Directories** page, you can choose from the following options to define program folders:

- Use the program path defined in the local settings (**Use local settings**)
- Use the path in which Virtual CD is installed (**Use the installation path**)
- Specify the path yourself (**Select the path**)

With the default settings, the path defined in the local settings is used.



Not all of the directories that you can define for v9 can also be defined for earlier versions of Virtual CD. Settings defined in profiles that cannot be defined for a given program version are ignored by that program. The table below shows the settings to which this applies.

	v9	v8	v7	v6
Global configuration path	Yes	Yes	Yes	Yes
Global folder for virtual CDs	Yes	Cannot be defined	Cannot be defined	Cannot be defined
Local folder for configuration files (“... for virtual CDs”)	Yes	Cannot be defined	Cannot be defined	Cannot be defined
Local folder for new virtual CDs	Yes	Cannot be defined	Cannot be defined	Cannot be defined
Folder for copy templates	Yes	Yes	Yes	Yes
Folder for Quick Copy files	Yes	Yes	Yes	Yes
Folder for scripts	Yes	Yes	Yes	Yes
Folder for CDDB databases	Yes	Yes	Yes	Yes
Folder for catalog files	Yes	Yes	Yes	Yes
Folder for temporary files	Yes	Yes	Yes	Cannot be defined
Folder for VCD Editor project files	Yes	Cannot be defined	Cannot be defined	Cannot be defined
Folder for layout files	Yes	Cannot be defined	Cannot be defined	Cannot be defined
Folder for log files	Yes	Cannot be defined	Cannot be defined	Cannot be defined

CD Drives

On the **CD Drives** page, you can designate settings for CD drives to be configured by the profile. For example, you can specify that CD drives are locked by default for members of this profile, or you can have a particular virtual CD inserted.

Begin by specifying in the **List** field whether your settings shall be applied to virtual drives, virtual drives in the Terminal Server edition, or to physical drives. Click on **Action** to assign an action to the selected drive type. You can choose from the following actions:

Release: If the selected drive had been locked, this action releases it.

Lock: The selected drive is locked for profile members by default.

Eject inserted CD: When the profile is loaded, the CD in the selected drive is automatically ejected.

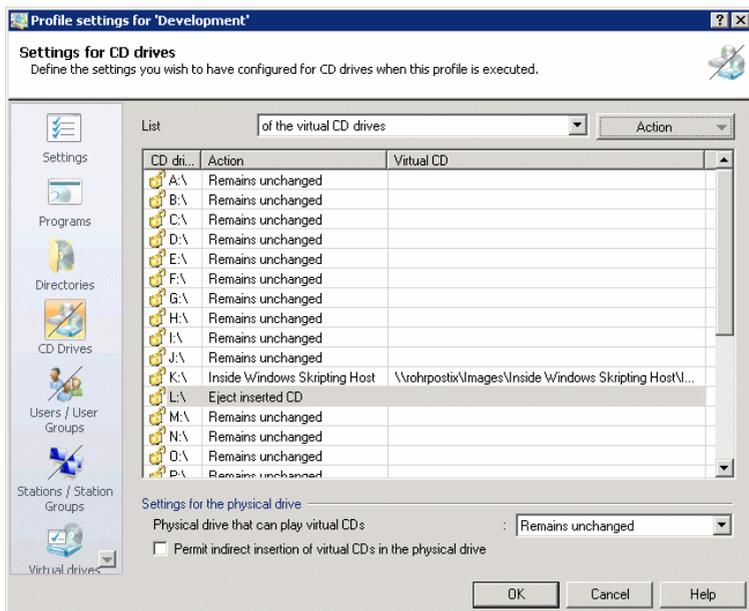
Remains unchanged: No action is performed. This is the default settings for all drives.

Insert a virtual CD... This action inserts a virtual CD when the profile is loaded.

Insert within a session: Activates the selected drive for use in terminal server sessions. This action is available for use only with Virtual CD TS.



Please note that for physical drives, only the **Release** and **Lock** actions are available.



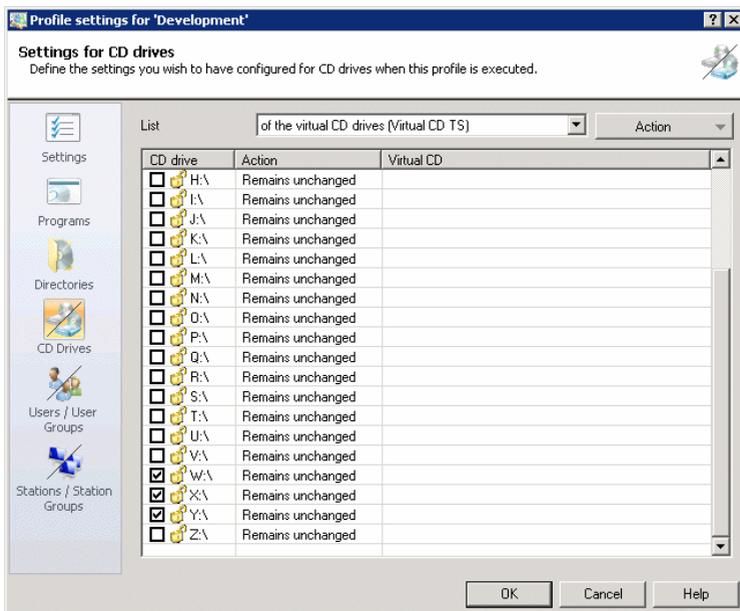
In this example, any virtual CD in inserted the L: drive is automatically ejected, and the virtual CD specified here is automatically inserted in the K: drive.

Under **Physical drive that can play virtual CDs** you can specify a physical drive for use with virtual CDs.

When the **Permit indirect insertion of virtual CDs in the physical drive** option is active, virtual CDs can be inserted in the designated physical drive by double-clicking on the CD.



Drives for terminal server sessions are designated on the **CD Drives** page. This is evident when a profile applies only to TS sessions, because the **Virtual Drives** page is not available for such profiles, and “**of the virtual CD drives (Virtual CD TS)**” is the only list that can be selected.



In the example above, drives W:, X: and Y: are provided as virtual drives in TS sessions. Drive settings for TS sessions are applied as soon as the user logs in on the terminal server.



Virtual drives defined locally are not affected by these settings. Any virtual drives defined locally are still available in the session; drives defined in the VCD TS profile are additional virtual drives.

Users/User Groups

On this page you can assign the profile to one or more users or user groups. Click **Add...** to add **users or groups** to the list. Click **Remove** to delete the selected entry from the list.

Stations/Station Groups

On this page you can assign the profile to one or more stations or station groups. Click **Add...** to add users or groups to the list. Click **Remove** to delete the selected entry from the list.

Virtual Drives

On the **Virtual Drives** page you can define the functionality of virtual drives. Specifically, you can define whether or not a given virtual drive is a virtual burner.



Altered settings are not applied to the client station until the client has been restarted. If drive settings defined in a profile conflict with local drive settings, the local settings are overwritten.



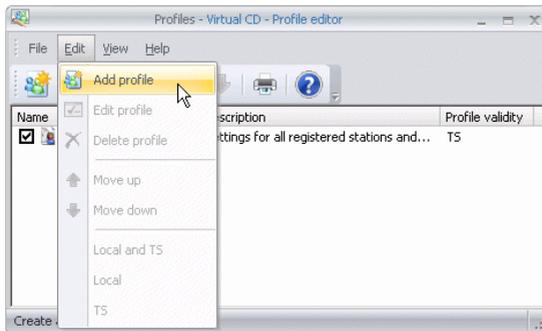
You can use the Virtual CD NMS script distribution feature to apply modified drive settings. To do this, create a script that restarts the computer and store it in the Virtual CD script folder. Then locate the script in the NMS Administration program and use drag-and-drop to run it on the desired station.

Creating a User Profile

In the following example, a profile is created for “Virtual CD Administration.” This profile will be assigned to the client stations used for managing the virtual CDs that are available over the network. For this example, a station group called “CD Administration” has already been created in the administration window.



Run the Profile Editor and select **Add profile** from the **Edit** menu.



2

Enter a **name** for the new profile. Under **Description**, we recommend entering a descriptive text so you will be able to recognize the purpose of the profile after some time has passed. In the **Copy from** field, you can select an existing profile from which settings will be loaded in your new profile.



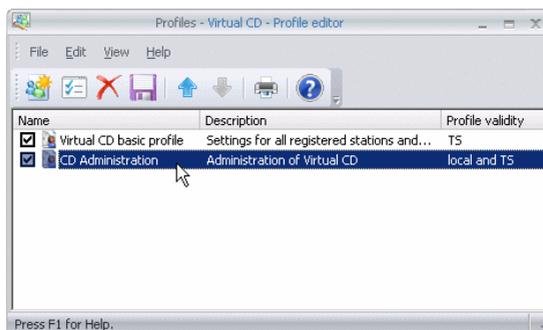
To start with a profile that has all options activated, select **<blank profile>**.

3

Enter the required data and click **Finish** to close the Profile Editor.

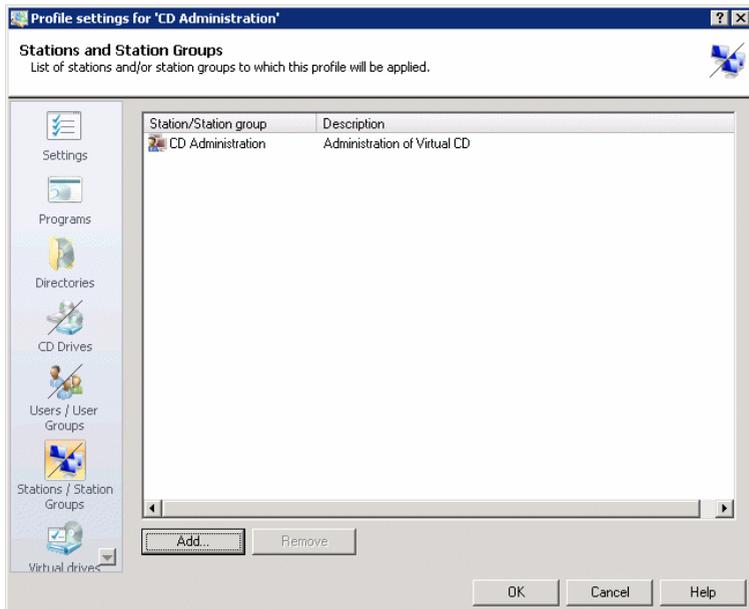
4

So far, the new profile has not been assigned to any client stations. To make the desired assignments, double-click on the profile to open it.



5

In the Profile Settings, select **Stations/Station Groups**. Click on „Add“ and select the station group that will be responsible for CD administration.



6

Since the blank profile you started with already had all features activated, you do not need to configure any more settings in the profile. Click on **OK** to conclude configuration of this profile.

How to get the most out of profiles

The first step is to clarify which functions and basic settings should be applied to **which stations**.

In a network environment with a large number of client stations, it can be helpful to group those stations that have similar requirements, and then assign profiles to these groups. Then you might want to change the basic (default) profile to have more restrictive settings applied to clients that do not belong to the defined groups.

The following example illustrates some of the many options made possible by the use of profiles:

We shall create two profiles for use in a company: one for the Development department and one for Accounting. Then we will modify the basic profile, to make it more restrictive. For this demonstration, the computers used in each department have already been put together in station groups. The profiles we create in this example will be assigned to these groups.

“Development” Profile

This profile does not require any restrictive settings, but we do want the frequently-used virtual CDs to be available when these clients log in. Additionally, we want the virtual CD that is used most often by this group to be inserted upon login.

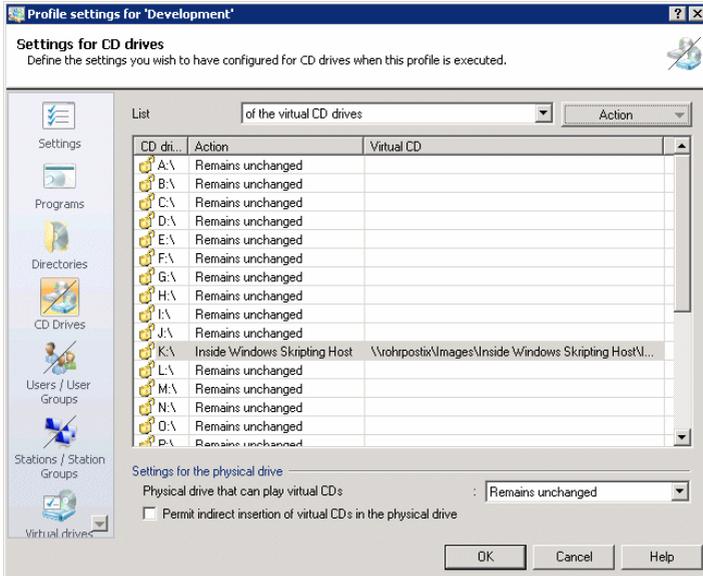
Because we do not need to make this a restrictive profile, we do not deactivate any of the functions on the **Settings** and **Programs** pages.

- Function control
 - Eject all virtual CDs when the session is closed
 - Do not show Explorer extension controls
 - Quick Start utility
 - Virtual CDs are displayed in a list
 - Virtual CDs are divided into local and global views
 - Use the Toolbox
 - Show text labels on toolbar buttons
 - Virtual CDs cannot be included in more than one CD Management folder
 - Permit editing of CD label
 - Download audio CD information from CDDB server
 - Open the Virtual CD sidebar
 - Show default drive
- Security settings
 - No permission to use local virtual CDs
 - Hide virtual CDs for which components are not found
 - Deny access to unregistered CDs

On the **Directories** page, we designate the directory in which the relevant virtual CDs are stored as the global configuration path.

<input type="checkbox"/> Global folder	
Global configuration path	\\CDServer\VirtualCDs
Global folder for virtual CDs	\\CDServer\VirtualCDs
<input type="checkbox"/> Local folder	
Local folder for virtual CDs	Use local settings
Local folder for new virtual CDs	Use local settings
<input type="checkbox"/> Default folder for user-specific files	
Folder for copy templates	Use local settings
Folder for Quick Copy files	Use local settings
Folder for scripts	Use local settings
Folder for CDDB databases	Use local settings
Folder for catalog files	Use local settings
Folder for temporary files	Use local settings
Folder for Editor project files	Use local settings
Folder for layout files	Use local settings
Folder for log files	Use local settings

On the **CD Drives** page, a virtual drive that exists on all stations in the group is specified for insertion of a particular virtual CD when a client in this group logs in.



Selecting a virtual CD drive that exists on all stations will help keep your management tasks as uncomplicated as possible.

On the **Stations/Station Groups** page of the Profile Settings, this profile is now assigned to the group called Development.

„Accounting“ Profile

This profile will be somewhat more restrictive than the „Development“ profile. It will permit users to work with the CD Management program, but not to create virtual CDs or burn Smart Virtual CDs.

On the **Programs** page, we deactivate the entire **Create virtual CDs** section of options, as well as the **Burn Smart virtual CDs** option.

On the **Directories** page, we designate the directory in which the relevant virtual CDs are stored as the global configuration path.

To ensure that users can access only those virtual CDs that are stored in the global configuration path, access to other virtual CDs is prohibited by configurations on the **Settings** page. To do this, we select **No permission to use local virtual CDs** and **Hide virtual CDs for which components are not found under Security settings**. Local use of physical CDs, on the other hand, remains unrestricted.

On the **Stations/Station Groups** page of the Profile Settings, we assign this profile to the Accounting group.

Now that all of the client stations in our example have been assigned customized profiles, in the next step we will modify the basic profile. As mentioned elsewhere, the basic profile is automatically assigned to any client station that logs in for which no custom profile is specified.

Basic Profile

Clients that use the basic profile (in its modified form) shall be permitted to run the CD management program and to use certain specified virtual CDs, but all other functions will be inaccessible.

As described above for the “Accounting” profile, we select **No permission to use local virtual CDs** and **Hide virtual CDs for which components are not found** under **Security settings** on the **Settings** page. Again, local use of physical CDs remains unrestricted.

On the **Programs** page, the entire **Administration** section is deactivated.

The **global configuration path** is specified under **Directories**, enabling the only virtual CD access permitted by this profile. All other paths are defined here as well, so that no local settings are used.

You can define customized groups and profiles for any environment. This helps to ensure trouble-free management of both client stations and virtual CDs stored on the network, even if you have a large number of clients in your Virtual CD NMS Administration system.



The settings defined in the profile for a given station remain active even if that station loses contact with Virtual CD NMS. These settings remain valid until a different profile is assigned.

Cumulative Profiles

In some cases, you might have stations to which more than one profile is applied. For example, you may find it necessary or useful to assign a certain profile to one station individually, although that station is a member of a group that uses a different profile.

For instance, say you want to block access to locally stored virtual CDs on one particular client station. You can allocate a profile to the station that blocks this access. The important thing to keep in mind is that, as the term “Cumulative Profiles” indicates, all of the settings in all of the profiles that are assigned to a given client station are applied to that station, except in the case of contradictory settings.

- Security settings
 - No permission to use local virtual CDs

If a given option is set to “No” or deactivated in one profile and “Yes” (activated) in another, the “Yes” setting is applied. Even if other profiles assigned to the same station have a “No” setting for the particular option, a single “Yes” setting takes precedence.

If you want to view profile settings for a client station that has more than one profile assigned to it, you need to look at the cumulative profile; i.e., the sum of all profiles applied to that station. To view the cumulative profile, right-click on the station in the Virtual CD NMS Administration window and select **Show cumulative profile...** from the shortcut menu.

This opens a profile window showing all of the settings active for the selected station.



Opening the cumulative profile of a station is a good way to check which settings are **actually applied** to that station. If the allocation of a profile did not have the results you expected, checking the cumulative profile can help you detect and eliminate conflicting settings.

Basic rules for using profiles

The Virtual CD NMS Profile Editor makes it easy to manage your profiles. Still, there are a couple of points that you need to keep in mind to make sure your profile specifications have the desired effects:

First save, then test: Do not forget to save your changes before you test a profile. New settings are not applied until the profile has been saved.

No login = no change: When you modify a profile, the new settings are not effective until the next time the affected clients log in on Virtual CD NMS.

Activate your profiles: In the list of profiles shown in your Profile Editor, the profiles can be activated and deactivated. Remember: only activated profiles are processed at login.

If you find that Virtual CD does not behave as expected on a given client, even though you saved the desired profile settings and the client logged in afterwards, check whether there are multiple profiles assigned; the cumulative effect of conflicting settings may produce unexpected results. To keep things as simple as possible, remember the old saying:

Less is More

Make this your motto, and create only as many profiles as you really need.



Use the „Print“ function in the Virtual CD NMS Profile Editor to print hard copies of your profiles. This makes it easier to keep track of your settings.

License Management

License Control for Virtual CDs

When virtual CDs are distributed in a network, it can be difficult to make sure that software manufacturers' licensing agreements are observed. Virtual CD NMS is equipped with special tools to help you control usage and protect your legal security.

Before you can use the licensing tools in Virtual CD NMS, you need to select one of the following options on the **NMS Properties** page of the VCD NMS Settings.

Setting 1: License control is deactivated

This is the default setting, active when you first install Virtual CD NMS. This setting is fine if you do not need to use the Virtual CD NMS license control functions. Properties of this setting:

1. License control is not applied.
2. Users can insert any virtual CDs.

Setting 2: License control is active for virtual CDs with registered licenses

This settings allows flexible handling of license settings, because it enables license control for virtual CDs as required while also letting you permit unlimited use of virtual CDs that are not subject to licensing restrictions. Properties of this setting:

1. License control is applied for all virtual CDs for which you have defined a number of licenses.
2. The virtual CDs for which no number of licenses has been defined can run in any number of instances.
3. Virtual CDs that are not registered in Virtual CD NMS (for example, CDs that exist only on one client workstation) can be used without restriction.

Setting 3: License control is active for all virtual CDs

This is the most restrictive setting, and gives you complete control of virtual CD usage for all client stations registered in Virtual CD NMS. Properties of this setting:

1. License control is applied for all virtual CDs for which you have defined a number of licenses.
2. Virtual CDs for which no number of licenses has been defined cannot be inserted.
3. Virtual CDs that are not registered in Virtual CD NMS (for example, CDs that exist only on one client workstation) cannot be inserted.

Defining the Number of Licenses for a Virtual CD

To activate the Virtual CD NMS license control function for a given virtual CD, you need to define a number of licenses for that CD. Licenses are assigned in the **Licenses for virtual CDs** window, which is opened by selecting **Show licenses for virtual CDs** in the sidebar. This view shows the number of licenses assigned to

each virtual CD, as well as the number of licenses currently in use. To change the number of licenses available for a virtual CD, select **Edit license**.

This opens the **Define number of licenses** dialog showing the selected virtual CD(s). Enter the desired number of licenses here.



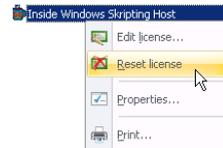
If you activate license control and enter 0 for the number of licenses, this makes the virtual CD in question inaccessible for use. Once you have ejected the virtual CD, it will not be possible to insert it on any station. This is a practical way to temporarily block all access to a virtual CD; for example, if you want to update the files that comprise the virtual CD.

After defining virtual CD license quantities, you can toggle the display between a list of all virtual CDs and a list showing only licensed virtual CDs. Use this filter function for a quick overview of the virtual CDs that are subject to licensing controls.

When **Show licenses for virtual CDs** is active, the **Number of licenses** column shows how many licenses are available for each virtual CD. If „file server share licenses“ are assigned, these are listed as well; see „Special Case: Virtual CD FS“ in this manual for details.

Virtual CD (description)	Number of licenses	Licenses in use	Number of FS lic...	FS licenses in use	File name of the virtual CD
C_TV_13_11_04	25	0	25	0	\\rohrpostbx\images\C...
Dev Partner Studio 7.2	2	0	2	0	\\rohrpostbx\images\De...
DevPartner Studio Profess...	2	0	2	-	\\rohrpostbx\images\WC...
Graph-On	-	-	-	-	\\Ads.hh-zfrik.com\dfs...
Inside Windows Skripting ...	25	0	25	0	\\rohrpostbx\images\Ins...
InstallShield X Updates	-	-	-	-	\\rohrpostbx\images\Ins...

To reset the number of licenses for a virtual CD to zero, select the virtual CD and activate the **Reset license** function.



The value you enter for number of licenses affects the execution of the “Insert” command on the client station as follows:

- (No input, or license has been reset): Access to the virtual CD is unrestricted, unless the **License control active for all virtual CDs** option is active, in which case the CD is inaccessible.
- 0**: The virtual CD cannot be inserted at all.
- <a number greater than 0>**: The virtual CD is inserted if a license is available.



The values you enter for numbers of licenses remain stored when license control for virtual CDs is deactivated. The number of licenses is not applied, however, until you explicitly reactivate the license control function.

Analysis of License Control

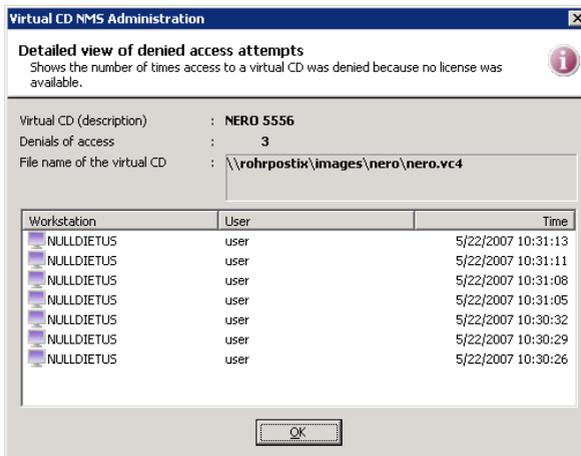
Over a period of time, the Virtual CD NMS license control function can accumulate a quantity of detailed data relating to the number of times the “Insert” command failed due to a lack of available licenses.

This data is shown in the **Evaluation of licenses** view. For every virtual CD that has a defined number of licenses, the **Denials of access** column shows the number of times the CD was requested but could not be inserted because all licenses were in use.

To view details on failed access attempts for a given virtual CD, right-click on the CD in this list and select **Details...** from the shortcut menu.



The detailed view shows which workstations and users made the access attempts, as well as the time that access was denied.



This information can help you decide whether you have enough licenses for the CDs in your network. If the number of access failures is high, then the number of licenses might need to be increased.



The number of licenses should correspond to the actual program licensing.



The number given for denials of access is reset to 0 when:

- the number of licenses for the virtual CD is changed, or
- the licensing for a virtual CD is reset.

Special Case: Virtual CD FS

Virtual CD FS enables access to virtual CDs over the network for any number of users. The virtual CDs are made accessible by sharing the virtual drives that the Virtual CD FS program sets up on the file server, and then inserting the desired virtual CDs in these drives.

Virtual CD NMS gives you the option of limiting the number of file server shares. In this case, the shares for virtual CDs are referred to as **file server share licenses**.

The procedure for assigning file server share licenses is very simple. A step-by-step description is given below.

The virtual CDs must be registered in Virtual CD NMS before you begin.

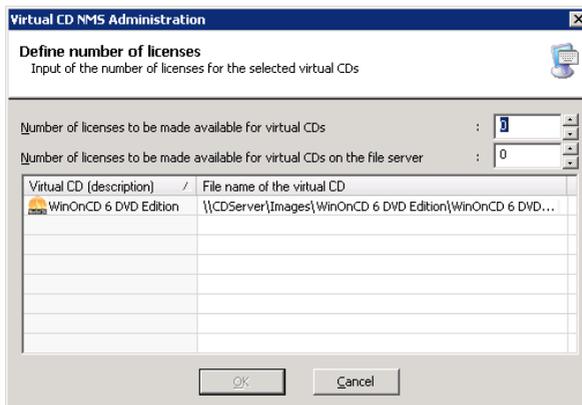


Open the **Licenses for virtual CDs** view in Virtual CD NMS Administration.

Virtual CD (description)	Number of licenses	Licenses in use	Number of FS licenses	FS licenses in use	File name of the virtua...
Windows XP Multilingual User Interface CD 1	-	-	-	-	- \\Rohrpostix\Images\...
WinOnCD 6 DVD Edition	-	-	-	-	- \\Rohrpostix\Images\...
WINDSK	-	-	-	-	- \\Rohrpostix\Images\...
Wise For Windows Installer 4	-	-	-	-	- \\Rohrpostix\Images\...



Select the virtual CD to which you wish to assign a file server share license, right-click on it and select **Edit license**.



3

Enter the desired number of licenses under **Number of licenses to be made available for virtual CDs on the file server**. In the example shown here, the number is 20.

4

When this input is confirmed, you are prompted to save changes. To do this, click on **Save**.



You can deactivate this prompt by selecting **Do not show this message again**.

5

The number of licenses for the file server share is now displayed in the **Licenses for virtual CDs** view.

Virtual CD (description)	Number of licenses	Licenses in use	Number of FS licenses	FS licenses in use	File name of the virtua...
Windows XP Multilingual User Interface CD 1	-	-	-	-	\\rohrpostix\images\...
WinOnCD 6 DVD Edition	0	0	20		\\rohrpostix\images\...
WINSDK	-	-	-	-	\\rohrpostix\images\...
Wise For Windows Installer 4	-	-	-	-	\\rohrpostix\images\...

The **FS share licenses in use** column shows how many of these licenses are currently in use.

Virtual CD Clients

Virtual CD Clients

The table below gives a clear overview of the various types of Virtual CD client, and the options and functions available for each type.

Distinctions are made between the following types of Virtual CD client:

Virtual CD v5	Virtual CD FS v7
Virtual CD v6	Virtual CD v8
Virtual CD TS v6	Virtual CD v9
Virtual CD FS v6	Virtual CD TS v9
Virtual CD v7	Virtual CD FS v9
Virtual CD TS v7	

Function	v5	v6/v7	TS v6/v7	FS v6/v7	v8	v9	TS v9	FS v9
Insert/eject virtual CDs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lock/release virtual drives	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Show cumulative profile	Yes	Yes	Yes*	Yes*	Yes	Yes	Yes*	Yes*
Properties	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Assign profiles	No	Yes	Yes	No	Yes	Yes	Yes	No
Distribute scripts	No	Yes	Yes	No	Yes	Yes	Yes	No
Show virtual CD drives	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eject physical CDs	No	Yes	No	No	Yes	Yes	No	No
Lock/release physical drives	No	Yes	No	No	Yes	Yes	No	No
Deploy Client Setups	No	No	No	No	No	Yes	No	No

* Session-specific



Not all profile settings are applied in Virtual CD FS v6, v7 and v9. Settings that specify paths and virtual drives are not applied. You cannot assign a profile to Virtual CD FS during runtime.



Virtual CD TS v6, v7 and v9 apply all profile settings on a per-session basis.



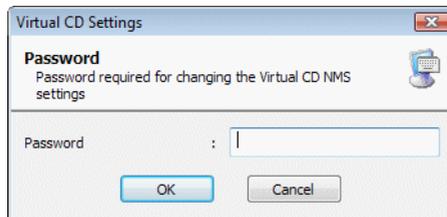
With Virtual CD v5, physical CD drives are not displayed, and profiles and scripts cannot be assigned.

Changing the Virtual CD Settings on NMS Client Stations

It may at some point become necessary to change the Virtual CD NMS settings on a client station after you have already configured your NMS system; for example, to activate or deactivate automatic license distribution. At the same time, you may wish to prevent users from changing Virtual CD settings at will. If this is the case, please observe the following:

The global Virtual CD settings that affect client stations are stored in the following Registry key: **HKEY_LOCAL_MACHINE\SOFTWARE\IH+H Software GmbH\Virtual CD 9\Settings**. Make sure users do not have permission to change this key.

Even without permissions in the Registry, users could change Virtual CD settings temporarily; i.e., the changes would be active until the client station is shut down or restarted. To prevent this, activate the **Require password for changing NMS configurations on the client machine** option on the **NMS Properties** page and then define a password. With this setting configured, the Virtual CD NMS configuration settings cannot be accessed on client stations unless the password is entered.



Special Case: Client Station not Connected to Virtual CD NMS

Under certain circumstances you may find that one or more of your client stations cannot connect to the Virtual CD NMS Service; for example, when a network laptop is used outside the company, or if the server that runs the Virtual CD NMS Service is temporarily unavailable.

To ensure that the Virtual CD NMS license control feature remains active, VCD NMS stores its license control settings locally; i.e., on each client machine. How

the program operates in such cases depends on the following **license control** settings on the **NMS Properties** page:

License control is deactivated: Any virtual CD can be used.

License control is active for virtual CDs with registered licenses: Locally stored CDs are accessible; CDs stored on the network are not accessible.

License control is active for all virtual CDs: No virtual CDs can be used.



Regardless of the license control settings, Virtual CD cannot run on a client station that is not connected to the Virtual CD NMS Service unless the station in question has its own license for the Virtual CD program.

Glossary

B

- Basic group:** There are eleven groups defined in Virtual CD NMS Administration that cannot be deleted. These eleven groups are: Virtual v6 TS Server, Virtual CD v6 FS Server, Virtual CD v7 TS Server, Virtual CD v7 FS Server, Virtual CD v9 TS Server, Virtual CD v9 FS Server, and station groups Virtual CD versions 5 through 9. The first time a client station logs on, it is automatically assigned to the corresponding group.
- Basic profile:** This profile is applied to all users for whom you have not designated a specific profile. There is only one instance of this profile, and it cannot be deleted.

C

- CDDB:** CDDB is a free database service offered at FreeDB.org. You (or your Virtual CD program) can request data (artist, track titles, etc.) pertaining to music from this service over the Internet.
- Client Distributor:** This is a component of Virtual CD NMS that enables installation of Virtual CD on client stations from a central NMS location, using --> Client Setups.
- Client Setup:** This is a Setup program that you configure, for installing Virtual CD on your network stations.
- Configuration file:** The configuration file (vcdimg.dat) lists all virtual CDs published in the program, with their paths.

F

- Functions:** The actions and operations that can be performed on objects in Virtual CD NMS are referred to as functions. Locking a drive, for example, and inserting virtual CDs are functions.

G

Global configuration path: If you designate a directory for this path, you can distribute access to virtual CDs over the network. This adds a “global view” to each workstation display of CDs.

L

Logbook: You can define whether or not errors, warning and/or messages concerning actions executed are logged.

O

Objects: Objects in Virtual CD NMS are elements in the Administration view on which functions can be carried out; these include, for example, drives and station groups.

P

Profile: Profiles are used to configure the settings (such as virtual CD drives, program functions, etc.) that are active when a particular user logs in on Virtual CD NMS.

Profile file: Data defining the profiles is stored in the profile file, called 'Profile.vcd,' in the Virtual CD NMS data directory.

Properties: Dialogs for viewing object properties can be opened from almost any window in Virtual CD NMS. This permits fast access to detailed information on a selected object.

S

Station groups: Client stations can be grouped for easier management. You can assign profiles or licenses to groups.

U

User profile: Data processed at login (such as user privileges and other settings) defining which data the particular user is allowed to access over the network, and how the data is accessed. If a specific user profile is assigned to a given user, the “basic profile” is not applied for that user.

V

Virtual CD client: Virtual CD client are stations in the network on which Virtual CD is installed and that are linked to the Network Management Server.

Virtual CD NMS Administration: Virtual CD NMS Administration is the program used for administration of Virtual CD clients in the network.

Virtual CD NMS Service: This is the server component of Virtual CD NMS. The Virtual CD NMS Service regulates communication between Virtual CD client stations and Virtual CD NMS Administration.

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