

IBM Configuration Management Version Control

SC09-1596-01

UNIX Client Installation and Configuration

Version 2 Release 3



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Note

Before using this document, read the general information under "Notices" on page v.

Second Edition (December 1994)

This edition applies to Version 2, Release 3, Modification Level 0, of IBM Configuration Management Version Control/6000 (Program 5765-207), IBM Configuration Management Version Control for HP systems (Program 5765-202), IBM Configuration Management Version Control for Sun systems (Program 5622-063), IBM Configuration Management Version Control for Solaris systems (5765-397), and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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About This Manual

This manual provides support for the IBM* Configuration Management Version Control (CMVC) product for the UNIX** clients. CMVC consists of a *CMVC server* and *CMVC clients*.

Read this manual to learn how to install and configure the UNIX CMVC clients. The underlying concepts, manipulation of CMVC objects, and CMVC *command* syntax are identical for all supported CMVC clients.

Who Should Read This Manual

Anyone who wants to plan for, install, configure, or use the UNIX CMVC clients should read this manual. This includes administrators, planners, managers, project leaders, testers, application developers, and technical writers.

If you do not already have a basic understanding of the CMVC environment, you should read *IBM CMVC Concepts* before continuing with this manual.

What You Should Know

You should read this manual if you want to install or configure the UNIX CMVC clients. To install the CMVC clients, you must be familiar with basic operating system concepts.

How to Use This Manual

This manual is divided into five chapters:

- Chapter 1, "Network Overview" is an introduction to the CMVC environment.
- Chapter 2, "Hardware and Software Requirements" details the hardware and software requirements for the CMVC clients.
- Chapter 3, "Installing the CMVC Clients" shows how to install the CMVC clients and configure the client workstation environment for use with CMVC.
- Chapter 4, "Using the CMVC Clients" shows how to start and stop the CMVC clients using the *graphical user interfaces (GUIs)* and the command line.
- Chapter 5, "Customizing Your CMVC System" shows how to configure the CMVC client for your development environment.

For further information about the CMVC clients, refer to the other manuals in the CMVC library.

Highlighting Style

The following highlighting style is used in this manual:

- | | |
|----------------|--|
| Bold | Commands, flags, files, directories, field names, and other items predefined by CMVC are in bold. Valid abbreviations for commands also are in bold. |
| <i>Italics</i> | Arguments or options whose names or values must be supplied by you are in italics. Italics are also for emphasis, for the first occurrence in text of items that are in the glossary, and for titles of manuals. |
| Monotype | Examples of specific data values, examples of displayed text, messages, menu items that you select to initiate an action, or information that you should type are in monotype. |

Related Publications

You might want to refer to the following CMVC manuals that contain additional information about CMVC.

- *IBM CMVC Concepts*, SC09-1633, provides the basis for your understanding of CMVC. It describes in detail the concepts and processes involved in using CMVC.
- *IBM CMVC User's Guide*, SC09-1634, describes all CMVC actions, as implemented in the graphical user interfaces (GUIs).
- *IBM CMVC User's Reference*, SC09-1597, contains the reference lists, tables, and state diagrams for CMVC, as well as a description of how the message-integrated CMVC client uses the Broadcast Message Server (BMS), to fully integrate with other integrated development environment tools.
- *IBM CMVC Commands Reference*, SC09-1635, describes all CMVC commands, their syntax and use, as implemented in the command-line interface.
- *IBM CMVC Server Administration and Installation*, SC09-1631, contains detailed information needed to install and configure the CMVC servers.
- *NetLS Quick Start Guide*, SC09-1661, provides the information needed to set up the *Network License System** (NetLS**)* license control product to work with CMVC.
- *Managing Software Products with the Network License System*, SC09-1660, provides the information needed to manage the use of the NetLS license control product with CMVC.
- *Managing NCS Software*, SC09-1834, provides additional information for managing the NetLS software.

You may want to refer to your operating system or relational *database* documentation while installing or using CMVC.

Chapter 1. Network Overview

This chapter introduces IBM Configuration Management Version Control (CMVC) and briefly describes the system configuration, the *user* interfaces, and the three main user roles within a CMVC environment.

System Configuration

CMVC consists of four products: CMVC/6000, CMVC for HP** systems, CMVC for Sun** systems, and CMVC for Solaris** systems. Each product comprises a server and clients. Designed for use in a networked environment, each of the CMVC products is based on a client-server model, as shown in Figure 1.

All CMVC clients can be integrated with the HP SoftBench**, HP SoftBench for Sun, HP SoftBench for Solaris, or IBM SDE WorkBench/6000 environments.

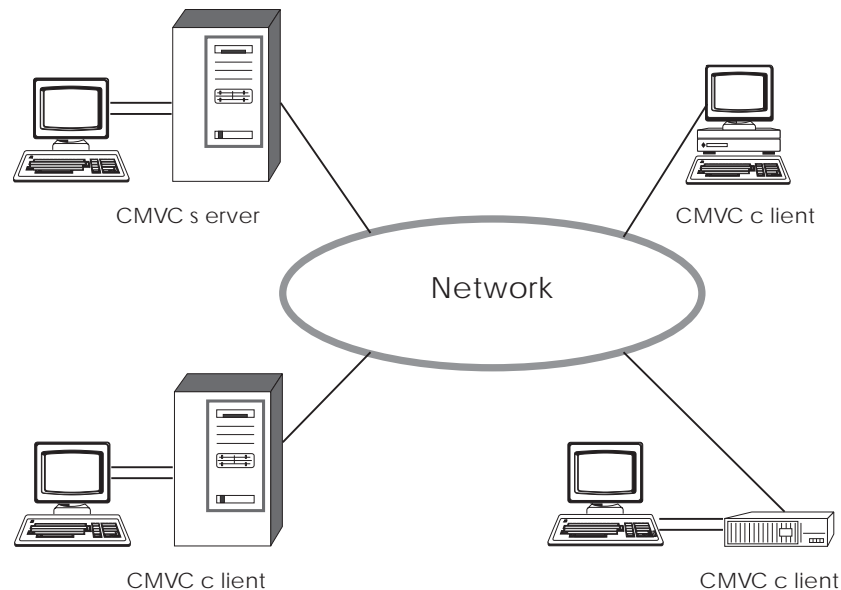


Figure 1. Example of a Client-Server Network of CMVC

A CMVC server is a workstation that runs the CMVC server software that controls all data within the CMVC environment. Data *files* are stored in a file system in combination with a *version control* system on the CMVC server. All other development data is stored in a relational database on the CMVC server. A CMVC client is a workstation that runs the CMVC client software to access the information and files stored on the CMVC server. With this client-server architecture, users can access files and project data without having to know where the networked resources physically reside.

User Interfaces

The UNIX clients for CMVC supports two graphical user interfaces (GUIs) based on the OSF/Motif** window manager and a command-line interface.

- A non-message-integrated GUI is provided for operation in your development environment.
- A message-integrated GUI is provided for operation with the following environments:
 - The IBM AIX* Software Development Environment (SDE) WorkBench/6000 product
 - The HP SoftBench, HP SoftBench for Sun, and HP SoftBench for Solaris products

For more information about the GUIs, see the *IBM CMVC User's Guide*.

- A command-line interface is provided for use from an operating system shell. For more information about this interface, see the *IBM CMVC Commands Reference*.

Roles in the CMVC Environment

The roles of users within the CMVC environment can be divided into three main categories:

- *System administrator*
- *Family administrator*
- *End user*

System Administrator

The system administrator is responsible for:

- Installing, maintaining, and backing up the CMVC server
- Installing, maintaining, and backing up the relational database used by CMVC
- Planning, maintaining, and configuring all client and server hardware

The system administrator has root access to the CMVC server and database administration access to the relational database.

Family Administrator

The *family* administrator is responsible for:

- Planning and configuring CMVC for one or more families
- Managing user access to one or more CMVC families
- Maintaining one or more CMVC families

The family administrator has root access to the CMVC server and database administration access to the relational database.

End User

The end user uses CMVC within one or more families. This user has access to one or more CMVC clients.

Chapter 2. Hardware and Software Requirements

CMVC consists of the following products:

- CMVC/6000
- CMVC for HP systems
- CMVC for Sun systems
- CMVC for Solaris systems

Each product comprises a server and clients. This chapter lists the hardware and software requirements for the UNIX CMVC clients. For information on the hardware and software requirements for the CMVC servers, refer to the *IBM CMVC Server Administration and Installation* manual.

CMVC supports four UNIX clients: the CMVC/6000 client, the CMVC for Sun systems client, the CMVC for Solaris systems client, and the CMVC for HP systems client.

Each UNIX CMVC client requires 16MB (*MB* equals 1 048 576 bytes) of memory. The CMVC/6000 client and CMVC for HP systems client require 20MB of direct access storage. The CMVC for Sun systems client and the CMVC for Solaris systems client require 30MB of direct access storage.

Requirements for the CMVC/6000 Client

The CMVC/6000 client code requires the following hardware:

- Any IBM RISC System/6000* PowerStation* workstation
- Any high-resolution graphics display (color or monochrome) supported by the RISC System/6000 workstation
- Any token-ring or Ethernet Local Area Network (LAN) adapter card supported by the RISC System/6000 workstation that supports Transmission Control Protocol/Internet Protocol (TCP/IP)
- Keyboard
- Mouse (required for the GUI)
- Printer (optional)

Note: Any Xserver supporting OSF/Motif Version 1.1 and X Window System** X11R4 can be used as a display for any RISC System/6000 workstation running the CMVC/6000 client code. Examples include the IBM Xstation Models 120, 130, and 150.

The CMVC/6000 client code requires the following software:

- AIX Version 3.2 for RISC System/6000 operating system, or later, which includes TCP/IP and *Network File System** (NFS**)* software
- IBM AIXwindows* Environment/6000 Version 1.2
- IBM Software Development Environment (SDE) WorkBench/6000 (only required to use the message-integrated GUI with the IBM AIX SDE WorkBench/6000)
- Network License System (NetLS) license control product (shipped with CMVC)

Requirements for the CMVC for Sun Systems Client

The CMVC for Sun systems client code requires the following hardware:

- Any Sun SPARCstation** workstation
- Any high-resolution graphics display (color or monochrome) supported by the SPARCstation workstation
- Any token-ring or Ethernet LAN adapter card supported by the SPARCstation workstation that supports TCP/IP
- Keyboard
- Mouse (required for the GUI)
- Printer (optional)

The CMVC for Sun systems client code requires the following software:

- SunOS** Version 4.1.2 or SunOS Version 4.1.3, which includes TCP/IP and NFS software
- NetLS license control product (shipped with CMVC)
- HP SoftBench for Sun software (only required to use the message-integrated GUI with the HP SoftBench for Sun environment)
- Korn shell for Sun systems (required for use with the samples and SCCS migration or import tools)

Requirements for the CMVC for HP Systems Client

The CMVC for HP systems client code requires the following hardware:

- Any HP 9000 Series 400, 700, or 800 workstation
- Any high-resolution graphics display (color or monochrome) supported by the workstation
- Any token-ring or Ethernet LAN adapter card supported by the workstation that supports TCP/IP
- Keyboard
- Mouse (required for the GUI)
- Printer (optional)

The CMVC for HP systems client code requires the following software:

- HP-UX** Version 9.0, which includes TCP/IP and NFS software
- NetLS license control product (shipped with CMVC)
- HP SoftBench software (only required to use the message-integrated GUI with the HP SoftBench environment)

Requirements for the CMVC for Solaris Systems Client

The CMVC for Solaris Systems client code requires the following hardware:

- Any Sun SPARCstation workstation
- Any high-resolution graphics display (color or monochrome) supported by the SPARCstation workstation
- Any token-ring or Ethernet LAN adapter card supported by the SPARCstation workstation that supports TCP/IP
- Keyboard
- Mouse (required for the GUI)
- Printer (optional)

The CMVC for Solaris Systems client code requires the following software:

- Solaris Version 2.3 or a later release of Version 2 operating system, including TCP/IP, NFS, and SCCS software (for file migration only)
- HP SoftBench for Solaris software (only required to use the message-integrated GUI with the HP SoftBench for Solaris environment)
- NetLS license control product (shipped with CMVC)

Chapter 3. Installing the CMVC Clients

You can install the CMVC clients from tape or CD-ROM. This chapter describes the packaging for the CMVC clients, the system requirements for their installation, and the procedures for installing them.

Refer to Chapter 4, "Using the CMVC Clients" and Chapter 5, "Customizing Your CMVC System" for instructions on starting, stopping, and customizing the CMVC clients.

Before installing the CMVC clients, you should read *IBM CMVC Concepts* for a thorough understanding of *components*, *releases*, and files in the CMVC environment.

How CMVC Is Packaged

The UNIX CMVC clients are packaged on tapes or on one CD-ROM. A tape includes all the files for one server and one client:

- IBM CMVC/6000 server code, IBM CMVC/6000 client code, and NetLS Runtime Kit for RISC System/6000 workstations
- IBM CMVC for Sun systems server code, IBM CMVC for Sun systems client code, and NetLS Runtime Kit for Sun SPARCstation workstations
- IBM CMVC for Solaris systems server code, IBM CMVC for Solaris systems client code, and NetLS Runtime Kit for Solaris SPARCstation workstations
- IBM CMVC for HP systems server code, IBM CMVC for HP systems client code, and NetLS Runtime Kit for HP 9000 Series 700 workstations

The CD-ROM includes all the files for:

- IBM CMVC/6000 server code
- IBM CMVC for Sun systems server code
- IBM CMVC for Solaris systems server code
- IBM CMVC for HP systems server code
- IBM CMVC/6000 client code
- IBM CMVC for Sun systems client code
- IBM CMVC for Solaris systems client code
- IBM CMVC for HP systems client code
- NetLS Runtime Kits for all the platforms

You need to know the installp image names in the CMVC client package only if you are installing the CMVC/6000 client code. The installp image names for the CMVC/6000 client code are listed in the following section.

CMVC/6000 Packaging

The CMVC/6000 client consists of:

- The **cmvccltstalm/language.msg** installp image, which contains the base CMVC/6000 client messages and help text, where *language*, for example, is equal to En_US for US English.

- The **cmvccltstal.obj** installp image, which contains the base CMVC/6000 client software (the command-line interface programs, the CMVC/6000 client graphical user interface program, and sample shell scripts).
 - The **cmvccltintgmlanguage.msg** installp image, which contains the additional messages and help text required to use the CMVC/6000 client in the SDE WorkBench/6000 environment, where *language* indicates your chosen language.
- Note:** The messages for the message-integrated CMVC/6000 client are installed in the C language locale. The message-integrated CMVC client does not require messages in the En_US language locale. As a result there is no **cmvccltingmEn_US.msg** option.
- The **cmvccltintg.obj** installp image, which contains the additional GUI required to use the CMVC/6000 client in the SDE WorkBench/6000 environment.
 - The **NetLS.Ark** installp image, which contains the NetLS Runtime Kit for RISC System/6000 workstations.

The package may also contain update files.

Prerequisite Tasks for Installing the CMVC Clients

For all CMVC clients, you must do the following prerequisite tasks:

1. Log in as root.
2. Install the appropriate operating system for your client:
 - For the CMVC/6000 client, install the AIX Base Operating System (BOS) Runtime. (It is part of the IBM AIX Version 3 Release 2 for RISC System/6000 licensed program).
 - For the CMVC for Sun systems client, install SunOS Version 4.1.2 or Version 4.1.3.
 - For the CMVC for Solaris systems client, install Solaris Version 2.3.
 - For the CMVC for HP systems client, install HP-UX Version 9.0.
3. Install TCP/IP.
4. Install the NFS software.
5. Verify the NetLS license control product is installed on a node on your network. If the NetLS product and the CMVC client are installed on the same node, do *not* complete the following steps. Otherwise, do the following to let the CMVC client know the location of the NetLS product:
 - a. Log in as root.
 - b. Change to the /usr/lpp/ncs/bin directory.
 - c. Create a file called glb_site.txt if it does not already exist.
 - d. Add the following line to the file:


```
ip:node where NetLS is installed
```
 - e. Save the file and log out of root.

If you do not have the NetLS license product installed, refer to the *IBM CMVC Server Administration and Installation* manual for installation instructions.

CMVC/6000

For the CMVC/6000 client, you must do these additional prerequisite tasks:

- Install the IBM AIXwindows Environment/6000 Release 2 program.
- If you are using the message-integrated CMVC/6000 client, you must install the SDE WorkBench/6000 product. The CMVC/6000 client installation procedures install the SDE WorkBench/6000 licensed program when installing the **cmvcclintg.obj** installp image, if the code is available and if the option to install prerequisites is selected.
- Verify that you have a minimum of 20MB of direct access storage.

CMVC for Sun Systems

For the CMVC for Sun systems client, you must do these additional prerequisite tasks:

- Install the OpenWindows** program and OpenLook** Window Manager software.
- If you are going to use the CMVC for Sun systems client in the HP SoftBench for Sun environment, install HP SoftBench for Sun before installing the CMVC for Sun systems client.
- Install a Korn shell if you plan to use the SCCS migration or import scripts, or any of the sample scripts shipped with the CMVC clients. The CMVC for Sun systems client does not require a Korn shell. However, the SCCS migration and import scripts and all sample scripts shipped with the CMVC clients must be run under a Korn shell. If you do not have a Korn shell, you cannot use these scripts.

These scripts were tested with the UNIX System Laboratories Inc. Korn Shell Version 88 Release f. No testing was conducted with any other software-vendor-supplied Korn shell.

- Verify that you have a minimum of 30MB of direct access storage.

The CMVC client GUIs are based on the OSF/Motif window manager; however, the CMVC for Sun systems client can be installed to function with both the OpenLook Window Manager (**olwm**) and the OSF/Motif window manager (**mwm**). Your window manager must be installed and running before you install the CMVC for Sun systems client. The **cmvcinstall** script works with either **olwm** or **mwm**.

CMVC for Solaris Systems

For the CMVC for Solaris systems client, you must do these additional prerequisite tasks:

- Install the OpenWindows program and OpenLook Window Manager software.
- If you are going to use the CMVC for Solaris systems client in the HP SoftBench for Solaris environment, install the HP SoftBench before installing the CMVC client.
- Verify that you have a minimum of 30MB of direct access storage.

The CMVC client GUIs are based on the OSF/Motif window manager; however, the CMVC for Solaris systems client can be installed to function with both the OpenLook Window Manager (**olwm**) and the OSF/Motif window manager (**mwm**).

Your window manager must be installed and running before you install the CMVC for Solaris systems client. The **cmvcinstall** script works with either **olwm** or **mwm**.

CMVC for HP Systems

For the CMVC for HP systems client, you must do these additional prerequisite tasks:

- Install the X Window product and either the OSF/Motif window manager or HP Visual Environment Window Manager (**vuewm**).
- If you want to use the CMVC for HP systems client in an HP SoftBench environment, install the HP SoftBench software before installing the CMVC for HP systems client.
- Verify that you have a minimum of 20MB of direct access storage.

Installing the CMVC Client Code from Tape

This section describes how to install the CMVC client code from tape. To install the CMVC client code from CD-ROM, see “Installing the CMVC Client Code from CD-ROM” on page 11.

CMVC/6000

To install the CMVC/6000 client code from tape, do the following:

1. Log in as root.
2. Insert the tape containing the CMVC/6000 client installation images into the tape drive.
3. Type the following on the AIX command line:

```
smit startup
```

This command starts the *System Management Interface Tool (SMIT)*, which presents a menu-driven environment for the installation process. For information on SMIT, see your AIX operating system documentation.
4. Follow the directions on the SMIT installation menus, selecting **cmvccltstal.obj** for installation.
5. Follow the directions on the SMIT installation menus, selecting **cmvccltstalm/language.msg**, where *language*, for example, is `En_US` for US English. If you do not want to use CMVC/6000 with SDE WorkBench/6000, this is the final step.
6. If you are installing the message-integrated CMVC/6000 client, follow the directions on the SMIT installation menus, selecting **cmvccltintg.obj** and **cmvccltintgm/language.msg**, where *language* indicates your chosen language.

Note: The messages for the message-integrated CMVC/6000 client are installed in the C language locale. The message-integrated CMVC client does not require messages in the `En_US` language locale. As a result there is no **cmvccltingmEn_US.msg** option.

CMVC for Sun, Solaris, and HP Systems

To install the client code from tape, do the following:

1. Log in as root.
2. Insert the tape containing the CMVC files into your tape drive.
3. Create a directory for the CMVC client code files, for example, `/usr/lpp/cmvc`.
4. Determine the device name for your tape drive.

Figure 2 shows common device names for the Sun, Solaris, and HP platforms. Verify the device name with your system administrator before proceeding.

Tape Mode	Sun Device Name	Solaris Device Name	HP Device Name
Rewind	<code>/dev/rst0</code>	<code>/dev/rmt0m</code>	<code>/dev/rmt0m</code>
Non-rewind	<code>/dev/nrst0</code>	<code>/dev/rmt0mn</code>	<code>/dev/rmt0mn</code>

Figure 2. Common Device Names for Tape Drives

5. Assuming that `TAPEDEV` is the name of the device used to access your tape drive in a nonrewinding mode, enter the following commands for HP-UX:

```
cd /usr/lpp/cmvc
mt -t TAPEDEV rewind
dd if=TAPEDEV skip=0 > cmvcinstall
chmod u+x cmvcinstall
./cmvcinstall
```

Enter the following commands for SunOS or Solaris:

```
cd /usr/lpp/cmvc
mt -f TAPEDEV rewind
dd if=TAPEDEV skip=0 > cmvcinstall
chmod u+x cmvcinstall
./cmvcinstall
```

The `cmvcinstall` script prompts you for the name of the device used to access your tape drive in nonrewind mode and in rewind mode. You must supply the correct values to run the installation script successfully.

6. To install either the message-integrated client or the non-message-integrated client, follow the instructions and answer the prompts presented by the `cmvcinstall` script.

Installing the CMVC Client Code from CD-ROM

This section describes how to install the CMVC client code from CD-ROM. To install the CMVC client code from tape, see “Installing the CMVC Client Code from Tape” on page 10.

The CD-ROM contains the software for the CMVC servers and CMVC clients. For instructions on installing the CMVC servers, refer to the *IBM CMVC Server Administration and Installation* manual.

The terms and conditions for using the CMVC clients are stated in the file **copyright.inf** on the CD-ROM. You can display or print **copyright.inf**, which is in ASCII format, from your workstation.

If you are installing the CMVC for HP systems client, all file names are displayed in uppercase.

CMVC/6000

To install the CMVC/6000 client code from CD-ROM, do the following:

1. Log in as root.
2. Insert the CD-ROM into the CD-ROM drive.
3. Type the following on the AIX command line:

```
smit
```

This command starts the System Management Interface Tool (SMIT) which presents a menu-driven environment for system administration tasks. For more information on SMIT, see your AIX operating system documentation.
4. Use SMIT to mount the CD-ROM as a file system. Mount the file system into a directory, such as `/cdrom`.
5. Run the standard software installation procedure from SMIT. Specify the source directory that you created in step 4.
6. Follow the directions on the SMIT installation menus, selecting **cmvccltstal.obj** for installation.
7. Follow the directions on the SMIT installation menus, selecting **cmvccltstalm/language.msg**, where *language*, for example, is `En_US` for US English. If you do not want to use CMVC/6000 with SDE WorkBench/6000, this is the final step.
8. If you are installing the message-integrated CMVC/6000 client, follow the directions on the SMIT installation menus, selecting **cmvccltintg.obj** and **cmvccltintgm/language.msg**, where *language* indicates your chosen language.

Note: The messages for the message-integrated CMVC/6000 client are installed in the C language locale. The message-integrated CMVC client does not require messages in the `En_US` language locale. As a result there is no **cmvccltingmEn_US.msg** option.

CMVC for Sun Systems

To install the CMVC for Sun systems client code from CD-ROM, do the following:

1. Insert the CD-ROM into the CD-ROM drive.
2. Log in as root and type the following commands:

```
mkdir /cdrom
mount -r -t hsfs /dev/sr0 /cdrom
cd /cdrom
./cmvcinst
```
3. Follow the instructions in the installation script to install the appropriate CMVC client.
4. After the installation is completed, type the following commands:

```
umount /cdrom
eject /dev/sr0
```

CMVC for Solaris Systems

To install the Solaris systems client code from CD-ROM, do the following:

1. Insert the CD-ROM into the CD-ROM drive. The Solaris volume management automatically mounts the CD-ROM as /cdrom/cmvc_230.
2. Log in as root and type the following commands:

```
cd /cdrom/cmvc_230
./cmvcinst
```

3. Follow the instructions in the installation script to install the appropriate CMVC client.
4. After the installation is completed, type the following command:

```
eject cdrom
```

Note: If volume management is not running, contact your system administrator for instructions on mounting the CD-ROM.

CMVC for HP Systems

To install the CMVC for HP systems client code from CD-ROM, do the following:

1. Insert the CD-ROM into the CD-ROM drive.
2. Log in as root and use System Administration Manager (SAM) to mount the CD-ROM as a file system under a directory, such as /cdrom.
3. Type the following commands:

```
cd /cdrom
./CMVCINST
```

4. Follow the instructions in the installation script to install the appropriate CMVC client.
5. After the installation is completed, type the following command:

```
umount /cdrom
```

Configuring Your Environment to Use CMVC

A CMVC server can support several CMVC families. After installing the CMVC client on your workstation, you must configure it for your environment and the family or families to which you belong. Do the following on each workstation designated as a CMVC client.

You can find more information about the GUI in the file **/usr/lpp/cmvc/bin/README.gui**.

Verifying Motif Key Bindings for Sun and Solaris

Verify that Motif** keysyms are available before running the CMVC for Sun systems or CMVC for Solaris systems client. These keysyms reside in the resource file **XKeysymDB**. The CMVC version of this file is in the **/usr/lib/X11/XKeysymDB.cmvc** file.

If you do not already have an **XKeysymDB** file, copy the CMVC version into one of the following paths:

- For CMVC for Sun systems, into the `$OPENWINHOME/lib` path (for OpenWindows Version 3.0)
- For CMVC for Solaris systems, into the `$OPENWINHOME/lib/X11` path (for OpenWindows Version 3.0)

If you already have an **XKeysymDB** file, place it in the appropriate directory and add the CMVC version information to it.

Setting Your Client Address

Before you can set your client address, you must have the root password for your workstation.

To set the client address for your workstation, do the following:

1. Log in as root to the designated CMVC client.
2. This step is optional, but if you do not complete it, you must enter the information manually each time you start CMVC.

Add the following entry to the end of the **/etc/services** file:

```
familyname portnumber/tcp
```

where `familyname` is the name of your CMVC family, `portnumber` is the port number for your family, and `tcp` is the network type indicator. You must obtain the family name and port number from your family administrator. For example, if `cmvcfam1` is your family name and 1221 is your port number, you would have the following entry in your **/etc/services** file:

```
cmvcfam1 1221/tcp
```

The 1221 is arbitrary but must be unique and must match the entry in the **/etc/services** file on the CMVC server workstation.

3. Add the family name as an alias of the CMVC server workstation in your TCP/IP naming environment. This is done through the network information system, a name server, or by changing the entry in your **/etc/hosts** file. For example, family `cmvcfam1` is an alias for the machine `cmvcserv`, which is the designated CMVC server workstation. You would have the following entry in your **/etc/hosts** file:

```
cmvcserv cmvcfam1
```

4. Log out of root.

Setting the Path to the CMVC Executables

You must set the path to the CMVC client executable programs and copy the **Cmvc** file for the CMVC client to your *home directory*, as follows:

1. Log in to your system with your operating system *login*.
2. Add **/usr/lpp/cmvc/bin** to the PATH environment variable in the login profile.
3. Copy the CMVC client application resource file, **Cmvc**, from the **/usr/lib/X11/app-defaults** directory to your home directory.

This file stores information such as the colors and fonts you have selected. For guidelines on customizing CMVC, see Chapter 5, “Customizing Your CMVC System.” Chapter 5, “Customizing Your CMVC System.”

Note: In CMVC for Solaris Systems, add the following variable for the integrated client: `LD_LIBRARY_PATH=/opt/softbench/lib`

Setting Message-Integrated CMVC as Your CM Tool

The SDE WorkBench/6000, HP SoftBench, and HP SoftBench for Sun tools use the **softinit** file in the **/usr/softbench/config** directory and the **.softinit** file in your home directory to control the tools that are started for each of the tool classes. You can configure these files to designate that CMVC is your tool of the Configuration Management (CM) class. For more information on how the Tool Manager performs this control function, refer to your WorkBench or SoftBench documentation.

Note: Softbench in Solaris is usually installed in `/opt/softbench` and not `/usr/softbench`.

To make CMVC your configuration management tool within the WorkBench or SoftBench environment, enable the CMVC and Windows menus in the Development Manager, and direct the Execution Manager to start CMVC in response to CM messages.

Enabling the CMVC Menus in the Development Manager

To enable the CMVC menus in the Development Manager, do the following:

1. Copy the applications default for the Development Manager into your home directory:

```
cp /usr/softbench/app-defaults/Softdm $HOME/.  
chmod u+w Softdm
```

2. Add the following line:

```
Softdm.menuDirSelect_CM: Softcmvc
```

The next time that you start the Development Manager, the CMVC and Windows menus are displayed on the menu bar.

For information on enabling menus, refer to your WorkBench or SoftBench documentation.

Informing the Execution Manager

You must have an entry in your personal **.softinit** file indicating the CM tool that Execution Manager uses. You must also configure the SOFTINIT tool.

If you are the system or family administrator for your group, edit the file **softinit** in **/usr/softbench/config** to specify that CMVC is the Configuration Management tool:

1. Delete the comment character from the first column of the line that says:
`CM TOOL HOST * %Local% softcmvc -scope host -host %Host% -class Softcmvc`
2. Add a comment character in the first column of any other line that begins with:
`CM TOOL`

If you are a CMVC user, do the following:

1. Copy the line added to the **softinit** file to your **\$HOME/.softinit** file (your personal WorkBench or SoftBench initialization file). The **softinit** file is in **/usr/softbench/config**.
2. If the Tool Manager is already running, to invoke the **softinit** process to reread these files, select **SOFTINIT** from the scrollable list in the Tool Manager - Start dialog box.

Bringing SCCS Files into CMVC

If you have been using the Development Manager, you may have been using the Source Code Control System (SCCS) encapsulation (**softscs**) as your configuration management (CM) tool within the WorkBench or SoftBench environment. You may also have used SCCS as a version management tool before using WorkBench or SoftBench environment tools.

If your group has been using SCCS as its CM tool or as an independent program, you can migrate your files to the database and file system managed by the CMVC server.

For information on the processes for migrating and importing SCCS files into the CMVC environment, refer to the *IBM CMVC Server Administration and Installation* manual. You should also read *IBM CMVC Concepts* for a thorough understanding of CMVC.

Migrating CMVC Version 1.1 Application Defaults

A utility program, **migResources**, converts the application defaults from the CMVC Version 1.1 **Cmvc** and **Softcmvc** resource files to your current settings. The conversion includes Section 2 to Section 5 of the **Cmvc** resource file and Section 2 to Section 6 of the **Softcmvc** resource file.

Note: In CMVC Version 2.1, both the message-integrated client and the non-message-integrated client use the same **Cmvc** resource file.

The **migResources** program is located in the **samples** directory. The **migResources** program makes the appropriate adjustments for the differences between CMVC Version 1.1 and CMVC Version 2.1.

To convert your application defaults, do the following:

1. Install the CMVC Version 1.1 **Cmvc** or **Softcmvc** resource file in the same way as it was used with the CMVC Version 1.1 client.

2. Run the **migResources** program. Type:

```
migResources cmvc or migResources softcmvc
```

All the CMVC Version 1.1 application resources are saved as your current settings in a file in your home directory.

3. Copy the CMVC Version 2.1 **Cmvc** resource file, as described in “Setting the Path to the CMVC Executables” on page 15. Edit this file if you want to change color defaults. For editing instructions, see “Motif Resources” on page 28.
4. Start CMVC.

Chapter 4. Using the CMVC Clients

This chapter helps you to begin using CMVC by describing:

- The information you must get from your family administrator before starting
- The *authority* that is required to perform CMVC *actions*
- Starting the CMVC GUI and exiting from it
- Where to get help if you want to use CMVC without the GUI

Before You Start

Before starting the CMVC GUI program, do the following:

1. Ensure that you have a workstation with the TCP/IP and NFS programs running on it. You also require a login for the *host* that is your CMVC client.
2. Ask your CMVC family administrator to create a CMVC user ID for you. You can suggest a user ID that is different to your login. It can be a maximum of 15 alphanumeric characters.

Note: User IDs must be unique within a family.

You must also provide the following information so that a *host list* entry can be made for your CMVC user ID:

- Your host name
 - Your login on the host
3. Ensure that your workstation has access to the CMVC client code. If your family administrator has not done this, refer to Chapter 3, "Installing the CMVC Clients."

Authority Requirements

Different authority requirements are attached to each of the many actions that can be performed using CMVC. There are 5 types of authority influencing the type of actions you can perform: *base authority*, *superuser privilege*, *implicit authority*, *explicit authority*, and *restricted authority*.

Base Authority

If you have a valid CMVC user ID, you can perform unrestricted actions, such as, opening *defects* and *features* or issuing reports on CMVC development objects.

Superuser Privilege

If you are granted CMVC superuser privilege by a family administrator or someone else with superuser privilege, you can perform all possible actions in your CMVC family. This superuser privilege is granted within CMVC. There are some actions in CMVC that only a superuser has the authority to do, such as, adding or deleting a user.

Implicit Authority

You have implicit authority to perform some actions on the basis of ownership. For example, if a defect is opened for a component you own, you have the implicit authority to perform certain actions, such as, accepting the defect or modifying the *owner* of the defect. Similarly, if you own a component, a release, or a feature, you have implicit authority related specifically to those roles. You have the implicit authority until you relinquish ownership of the object in question.

Explicit Authority

You may be granted explicit access authority for a component to perform actions on certain CMVC objects associated with that component. This provides control over who can do what in a project. Instead of having to give you authority for each and every action, your family administrator can group a set of actions under access authority groups. The component owner can assign you to one or more of those access authority groups. Component owners cannot, however, give more access than they have. The authority group or groups to which you belong for any given component are inherited by all descendant components. The *inheritance* of explicit authority can be restricted for any or all users in a CMVC family for specific components. The specific actions used to create or restrict access authority groups are listed in the *IBM CMVC Server Administration and Installation* manual. The set of predefined authority groups shipped with this product, which your family administrator may choose to use, are in the *IBM CMVC User's Reference*.

If explicit authority is required, you will be told of the specific action you must have defined in your access authority group, rather than the name of the authority groups to which you must belong. This is necessary because the access authority groups can be configured by your family administrator. Superuser privilege is listed only if a superuser can perform that action.

Restricted Authority

A superuser, a component owner, or a user with AccessRestrict authority can restrict the access of an authority group for a specific component. The user can restrict this authority group for all inherited users or for specific inherited users. Restricted authority is not inherited and does not affect the user's implicit authority or superuser authority. For specific information on the authority requirements for each CMVC action, refer to the *IBM CMVC User's Reference*.

Starting the CMVC Graphical User Interface

You must log in on the CMVC client workstation and the CMVC server must be running. The path to the CMVC client executables must be set. If you have not already done this, see "Setting the Path to the CMVC Executables" on page 15. To start the CMVC GUI application from the command line, type the following and press Enter:

```
cmvc
```

The CMVC - Tasks window is opened. The standard X Toolkit options are all available.

Starting the Message-Integrated CMVC GUI

CMVC supports a graphical user interface that is integrated with the SDE WorkBench/6000, HP SoftBench for Sun, HP SoftBench for Solaris, or HP SoftBench tools through the BMS message interface. With the message-integrated interface, CMVC functions in the same way no matter which tool you use.

Before you can start the message-integrated CMVC client, it and the CMVC server must be installed. The SDE WorkBench/6000, HP SoftBench for Sun, HP SoftBench for Solaris, or HP SoftBench tools must also be configured so that the CMVC client is the CM tool.

If the CMVC client is not installed, follow the steps in Chapter 3, “Installing the CMVC Clients” on page 7. For details on customizing the WorkBench or SoftBench tools, see “Setting Message-Integrated CMVC as Your CM Tool” on page 15.

You can start the message-integrated CMVC GUI from the Tool Manager, from the Development Manager, from some of the other development environment tools, or from the command line.

From the Tool Manager

Use the following procedure to start the CMVC client GUI from the Tool Manager:

1. Select Start from the Tool menu. The Tool Manager - Start dialog box is displayed.
2. Select CM from the scrollable list of tools available from the Tool Manager.
3. Select the Start button or double-click on CM to start the message-integrated CMVC client. The CMVC - Tasks window of the graphical user interface appears.

You can save the selected tool as part of a startup toolset, as explained in your WorkBench or SoftBench documentation.

From the Development Manager

Ensure that the CMVC and Windows menus are enabled for the Development Manager. If they are not, follow the instructions in “Setting Message-Integrated CMVC as Your CM Tool” on page 15.

To start CMVC from the Development Manager:

1. Start the SDE WorkBench/6000, HP SoftBench for Sun, HP SoftBench for Solaris or HP SoftBench tool. The main window of the Development Manager appears.
2. Select any action from the CMVC menu or any item from the Windows menu.
 - a. If you select an action from the CMVC menu, the CMVC - Tasks main window, the associated window for the selected action, and the dialog box needed to perform the action are displayed. For example, if you select the action Check In... from the CMVC menu, the CMVC - Tasks main window, the CMVC - Files window, and the Check In Files dialog box are displayed.
 - b. If you select an item from the Windows menu, you see the CMVC - Tasks main window and the associated window for the selected item.

For more information on the Development Manager, see your WorkBench or SoftBench documentation.

From Other WorkBench or SoftBench Tools

When you select a CM tool action, such as, Check In... from one of the other WorkBench or SoftBench tools, the Tool Manager starts the CMVC GUI, if it is not already running. The CMVC - Tasks main window, the associated window for the selected action, and the dialog box needed to perform the action are displayed. For example, if you select the action Check In... from the Program Builder, the CMVC - Tasks main window, the CMVC - Files window, and the Check In Files dialog box are displayed.

From the Command Line

You can start the message-integrated CMVC GUI from the operating system command line. Make sure that WorkBench or SoftBench are running. To start the message-integrated CMVC client tool, type the following command and press Enter:

```
softcmvc -scope host -host hostname -class Softcmvc
```

The standard X Toolkit options are all available, as are all the standard SDE WorkBench/6000, HP SoftBench for Sun, or HP SoftBench options, as follows:

-scope [HOST|host]

Specifies the scope of the message-integrated CMVC client. Other normally allowable values for scope, such as, NET, net, DIR, dir, FILE, or file are not allowed because the message-integrated CMVC client is a tool with a host scope.

-host *hostname*

Specifies the host portion of the tool context. If not specified, the current host is assumed.

-class *name*

Specifies the class name of the encapsulated application. The class name is passed to the SDE WorkBench/6000, HP SoftBench for Sun, HP SoftBench for Solaris, or HP SoftBench encapsulator. Message-integrated CMVC has the class name **Softcmvc**.

A warning message is displayed if the Broadcast Message Server is not running. You can still use the message-integrated CMVC client but you will not be communicating with other integrated development environment tools.

Helpful Hints

This section describes some unexpected messages that may appear when you try invoking the CMVC client and describes how to respond to them.

Unexpected Messages	Responses
The CMVC - Tasks window opens, but the Set Family Dialog box does too.	Type the name of the CMVC family that you want to access and select OK. The family you set is saved and used until you change it.
No window is opened, but a message is displayed indicating that the command is not found.	Check that your CMVC client is correctly installed on your client workstation. Check that you configured your client environment properly, especially the path pointing to your CMVC executable programs.
The CMVC - Tasks window is opened, but the User ID is not found.	Cancel the Error dialog box and type the CMVC User ID that your family administrator created for you in the Set User ID dialog box. The User ID you set is saved and used until you change it. Before you exit the CMVC client GUI, you should set your CMVC User ID properly in the Options menu, or else you will have to set your User ID each time you invoke the GUI program.
Windows are too small, too large, or are posted in the wrong position.	Motif resource specification problems. Check your settings in the Cmvc file.

Figure 3. Problems Starting CMVC and Their Solution

Stopping the CMVC GUI

From any CMVC GUI window:

1. Select Exit from the File menu. You can also press F3 to display the CMVC - Question dialog box directly. A CMVC - Question dialog box appears, asking you to respond to the question:
Do you want to exit from the CMVC GUI program?
2. Select Yes. All CMVC windows and dialog boxes are closed.

Stopping the Message-Integrated CMVC GUI

You can stop the message-integrated CMVC client from the GUI or from the Tool Manager.

From the GUI

From any CMVC client GUI window:

1. Select Exit from the File menu. A CMVC - Question box appears.
2. Select Yes. All open CMVC windows and dialog boxes are closed.

From the Tool Manager

To stop the CMVC client from the Tool Manager:

1. Select the CM tool in the context that you want from the scrollable list on the Tool Manager main menu.
2. Choose Stop from the Tool menu. A STOP Request is sent to the CMVC client. All open CMVC windows and dialog boxes are closed.

Chapter 5. Customizing Your CMVC System

This chapter describes how to use the customization options of CMVC to tailor the CMVC client to your development environment.

Use the customization options to:

- Set the GUI application defaults. These defaults are used to specify directory paths and the CMVC family that you usually work with, and to select the print command that you want to use. The defaults also control screen refreshes, the messages that are sent to your terminal, and the expiry time for the NetLS token.
- Set the tasks in the Tasks window task list. The task list is used to start frequently performed actions, such as, requesting information from a database. When you select an item in the task list, the corresponding window is opened and the action is started.
- Assign a default query to a specific GUI window. These queries are issued each time the GUI window opens.
- If you are using the message-integrated CMVC client, set the context mapping options so that information about default directories is passed from the integrated development environment to CMVC.
- Modify the default Motif resources, such as colors and fonts.

Setting the GUI Application Defaults

The CMVC GUI application defaults provide you with a quick way of initiating commonly performed GUI tasks, file tasks, and family management tasks. The default actions are implemented each time you start CMVC.

To set the CMVC GUI application defaults, select **Options** from the menu bar of any window. When the pull-down list is displayed, select the default values that you want to customize. Select **OK** to save your selection. The values are saved and used until you change them.

To customize the GUI, set any or all of the following defaults:

Set Family...

The Set Family dialog box appears with the **Family** and **User ID** fields containing the values you previously set for the family. If you did not set the values using the Set Family dialog box, then these fields are blank. Type the name of the family you want to access in the **Family** field. If you did not configure the port number for your family in **/etc/services** and **/etc/hosts**, you must fully specify the family name in the following format:

```
fami l yname@hostname@portnumber
```

For information on configuring the port number for your family, see "Setting Your Client Address" on page 14.

Set User ID...

The Set User ID dialog box is displayed, with the **User ID** field containing the value you previously set for user ID. This value is initialized with your workstation login unless you install the GUI program. If you want to perform actions using a different CMVC user ID, type the CMVC user ID that you want to use.

Note: To perform CMVC actions using another user ID, your user ID must be entered on the host list for that user ID.

Set Directory...

The Set Directory dialog box appears with the **Directory** field filled in. This value is initialized with the current working directory when you install the GUI program. Type the name of the working directory that you want to use.

Set Print Command...

The Set Print Command dialog box appears, with the **Command** field containing the value that you previously set for the print command. This value is initialized with **lpr** unless you install the GUI program. Type the print command that you want to use.

Set Log Filename

Specifies the name of the file that logs a history of all the commands that you issue while you are using CMVC. This value is initialized with **cmvc.log** unless you install the GUI program. Type the filename you want to use as log file.

Set Expiry Time

Specifies the length of time (in minutes) that the NetLS token is held. The default and minimum is 15 minutes.

Defining Default Tasks and Queries

Sample tasks are provided with CMVC. You must modify these tasks to make them relevant to your development environment. You can also define default queries for a specific CMVC window.

Default Tasks

The CMVC - Tasks window in the GUI application lists default tasks in the client area of the window. You can use the task list to perform frequently used procedures and to query the server for information related to a CMVC object.

Customize tasks in the task list using one of two procedures. Use either the Open List... option provided in any main window, except the Tasks window, or the options provided in the Tasks window.

Using the Open List Option to Customize Tasks

Use the Open List... option to add a new task to the task list. To add a new task:

1. Select **Open List...** from the File menu in any main window (except the Tasks window). The corresponding Open List dialog box is displayed.
2. To define a task, complete the entry fields in the dialog box.
3. To save the task, select **OK**.

4. Then select `Current Query` from the File menu and select `Add to Task List` from the cascade menu. The `Add Current Query to Task List` dialog box is displayed, with the **Query** field filled in.
5. Type a description in the **Description** field. Select `OK` to add the query to the Task list.

Using Task Window Options to Customize Tasks

Use the options provided by the Actions menu of the Tasks window to create, modify, or delete tasks from the task list.

To create a task:

1. Select `Create...` from the Actions menu in the Tasks window. The `Create Tasks` dialog box is displayed.
2. Specify the description of the task in the **Description** field. This description is displayed in the Tasks window each time that you start CMVC.
3. Specify a query (in valid SQL syntax) for the main window, or type the name of an executable program in the **Task** field.
4. To specify whether the task is an SQL query or an executable program, select the appropriate push button.
5. To specify the name of the main window in which you want the SQL query task to run, select the name from the pick list.
6. To save the new task, select the `OK` push button. If you want to leave the dialog box open, select `Apply` instead of `OK`.

To modify a task:

1. Select a task from the task list.
2. Select `Modify...` from the Actions menu of the Task window.
3. Change the task title, window, query, or executable program name in the appropriate fields.
4. To save the modified task, select the `OK` push button.

To delete a task:

1. Select a task from the task list.
2. Select `Delete` from the Actions menu of the Task window. A prompt box is displayed and you are prompted to confirm that you want to delete the task.
3. To delete the task, select the `Yes` push button.
4. If you do not want to delete the task, select the `No` push button.

Default Queries

You can define a default query for main windows dealing with CMVC objects using the List view in the GUI application. The default query is issued each time you open the window.

To define a default query for a main window, select `Open List...` from the Files menu of the window. When you finish entering your query, select `OK` to save the query. Then select `Current Query` from the File menu and select `Save as Default` from the cascade menu to save the query.

Note: Define your queries concisely using valid SQL syntax. If your queries are too general, you may find that:

- The time required to open a main window increases. This slows down your application.
- The number of items displayed in the client window increases. If the resulting list is large, you may have to use the scroll bars extensively to navigate through the list.
- The server overloads and the network bandwidth diminishes.

Customizing the Message-Integrated Client

CMVC stores all versioned files by a path name within a particular release and component. To convert the file information CMVC receives from the WorkBench or SoftBench environment, so that the CMVC file name can be identified, you must enter context mapping information in the Set Context Mapping dialog box. For more information on context mapping, refer to the *IBM CMVC User's Reference*.

To enter context mapping information:

1. Select Set Context Mapping from the CMVC menu in the Development Manager.

The Set Context Mapping dialog box is opened. The **Directory** field contains a value from the Development Manager context.

2. Type information in the following fields:

Release	Name of the release associated with the files in the context directory
Component	Name of the component associated with the files in the context directory

3. Select OK to save your settings.

For more information on the Set Context Mapping dialog box, refer to the *IBM CMVC User's Guide*.

Motif Resources

The **Cmvc** resource file contains the Motif resources, such as, colors, fonts and keyboard focus information. All CMVC clients use the **Cmvc** resource file.

Edit the resource file to customize the appearance (such as, color) and behavior (such as, the size and location) of the CMVC client windows and dialog boxes. For example, the font defaults for the CMVC for Sun systems client are *screen.r.12*. If you prefer a different font, run the following command to see the fonts available for your workstation:

```
xlsfonts
```

Replace the *screen.r.12* entry in your **Cmvc** file with the font that you prefer.

For more information about the **Cmvc** file, see "Setting the Path to the CMVC Executables" on page 15.

Glossary

This glossary contains definitions of data processing terms that might be unfamiliar to you. It includes terms and definitions from the *IBM Dictionary of Computing*, New York: McGraw-Hill, 1994.

A

access list. A set of objects that controls access to development data. Each object consists of a component, a user, and the authority that the user is granted or is restricted from in that component. See also *authority*, *granted authority*, and *restricted authority*.

action. A task performed by the CMVC server and requested by a CMVC client. A CMVC action is the same as issuing one CMVC command.

authority. The right to access development objects and perform CMVC commands. See also *access list*, *base authority*, *explicit authority*, *granted authority*, *implicit authority*, *restricted authority*, and *superuser privilege*.

B

base authority. The set of actions granted to a user when a user ID is created within a CMVC family. See also *authority*. Contrast with *implicit authority* and *explicit authority*.

Broadcast Message Server (BMS). A facility that coordinates the SDE WorkBench/6000 or HP SoftBench tools. Messages from tools are sent to the Broadcast Message Server, which routes the messages to other tools.

C

check in. The return of a CMVC file to version control.

client. A functional unit that receives shared services from a server. Contrast with *server*.

CMVC client. A workstation that connects to the CMVC server by a TCP/IP connection and that is running the CMVC client software.

CMVC file. A file that is stored by the CMVC server and retrieved by a path name and release. See also *file*, *common file*, and *shared file*.

common file. A file that is shared by two or more releases, and the same version of the file is the current version for those releases. See also *shared file*.

component. A CMVC object that organizes project data into structured groups, and controls configuration management properties. Component owners can control access to development data and configure notification about CMVC actions. Components exist in a parent-child hierarchy, with descendent components inheriting access and notification information from ancestor components. See also *access list* and *notification list*.

configuration management. The process of identifying, managing, and controlling software modules as they change over time.

context. A description of a data file or directory in the form *host dir file*. That is the host machine, working directory, and file. See *tool context* and *message context*.

current working directory. (1) The directory that is the starting point for relative path names. (2) The directory in which you are working.

D

database. A organized collection of data that can be accessed and operated upon by a data processing system for a specific purpose.

default. A value that is used when an alternative is not specified by the user.

default query. A database search, defined for a specific CMVC window, that is issued each time that CMVC window is opened. See also *search*.

defect. A CMVC object used to formally report a problem. The user who opens a defect is the defect originator.

delete. If you delete a development object, such as, a file or a user ID, any reference to that object is removed from CMVC. Certain objects can be deleted only if certain criteria are met. Most objects that are deleted can be re-created.

E

end user. See *user*.

environment. A user-defined testing domain for a particular release. Also used as a defect field, in which case, it is the environment where the problem occurred.

explicit authority. The ability to perform an action against a CMVC object because you have been granted the authority to perform that action. Contrast with *implicit authority* and *base authority*.

F

family. A logical organization of related development data. A single CMVC server can support multiple families. The data in one family cannot be accessed from another family.

family administrator. A user who is responsible for all nonsystem-related tasks for one or more CMVC families, such as planning, configuring, and maintaining the CMVC environment and managing user access to those families.

feature. A CMVC object used to formally request and record information about a functional addition or enhancement. The user who opens a feature is the feature originator.

file. A collection of data that is stored by the CMVC server and retrieved by a path name. Any text or binary file used in a development project can be created as a CMVC file. Examples include source code, executable programs, documentation, and test cases. See *common file* and *shared file*.

G

graphical user interface (GUI). The OSF/Motif-based CMVC graphical user interface program.

H

host. A host node, host computer, or host system.

host list. A list associated with each CMVC user ID that indicates the client hosts that can access the CMVC server and act on behalf of the CMVC user. The CMVC server uses the list to authenticate the identity of a CMVC client when the CMVC server receives a CMVC command. Each entry consists of a login, a CMVC user ID, and a host name.

host name. The identifier associated with the host computer.

I

implicit authority. The ability to perform an action on a CMVC object without being granted explicit authority. This authority is implicitly granted through inheritance or object ownership. Contrast with *base authority* and *explicit authority*.

inheritance. The passing of configuration management properties from parent to child component. The configuration management properties that are inherited are access and notification. Inheritance within each CMVC family or component hierarchy is cumulative.

L

level. A collection of tracks that represent a set of changed files within a release. Levels are only associated with releases whose processes include the track and level subprocesses.

login. User identifier.

M

message context. The Broadcast Message Server uses a context field to pass file name information between the various SDE WorkBench/6000 or HP SoftBench tools. The context is made up of the host, dir and file.

N

NetLS. Network License System.

Network File System (NFS). A program that enables you to share files with other computers in one or more networks over a variety of machine types and operating systems.

Network License System (NetLS). A program that controls the number of users who can simultaneously access CMVC.

notification list. A CMVC object allowing component owners to configure notification. A list of user ID-interest group pairs attached to a component, designating users and the corresponding notification interest they are being granted for all objects managed by this component or any of its descendants.

O

owner. The user who is responsible for a CMVC object within a CMVC family, either because the user created the object or was assigned ownership of the object.

P

path name. The name of the file under CMVC control. A path name can be a set of directory names and a base name or just a base name. It must be unique within the release that groups the files.

process. A combination of CMVC subprocesses, configured by the family administrator, that controls the general movement of CMVC objects (defects, features, tracks, and levels) from state to state within a component or release. See also *subprocess* and *state*.

Q

query. A structured request for information from a database, for example, a search for all defects that are in the open state. See also *default query* and *search*.

R

release. A CMVC object defined by a user that groups all the files that must be built, tested, and distributed as a single entity.

restricted authority. The restriction of a user's ability to perform certain actions at a specific component. Authority can be restricted by the superuser, the component owner, or a user with AccessRestrict authority. See also *authority*.

S

scope. A parameter in the TOOL statement for each SDE WorkBench/6000 or HP SoftBench tool. It defines the fields in the message context used by the Execution Manager to determine whether a tool can service a request.

search. To scan one or more data elements of a set in a database to find elements that have certain properties.

server. A workstation that performs a service for another workstation.

shared file. A file that is shared between two or more releases. See also *common file*.

SMIT. System Management Interface Tool.

subprocess. CMVC subprocesses govern the state changes for CMVC objects. The design, size, review (DSR) and verify subprocesses are configured for component processes. The track, approve, fix, level,

and test subprocesses are configured for release processes. See also *process* and *state*.

superuser privilege. This privilege allows a user to perform any action available in the CMVC family. **Note:** Superuser privilege is internal to CMVC and not related to operating system superuser authority.

system administrator. A user who is responsible for all system-related tasks involving the CMVC server, such as installing, maintaining, and backing up the CMVC server and the relational database it uses.

System Management Interface Tool (SMIT). An AIX tool used to perform system administration tasks, such as installing software or creating logins for new users.

T

task list. The list of tasks displayed in the CMVC-Tasks window. The user can customize this list to issue requests for information from the server. Tasks can be added, modified, or deleted from the lists.

TCP/IP. A set of communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

tool. An SDE WorkBench/6000 or HP SoftBench application.

tool context. The range of data for which a tool is registered to receive requests and perform actions.

toolset. A set or configuration of tools. You can save and restore a toolset to replicate a particular SDE WorkBench/6000 or HP SoftBench environment with the Tool Manager.

Transmission Control Protocol/Internet Protocol. See *TCP/IP*.

U

user. A person with an active CMVC user ID and access to one or more CMVC families.

user ID. The identifier assigned by the system administrator to each CMVC user.

V

version control. The storage of multiple versions of a single file along with information about each version.

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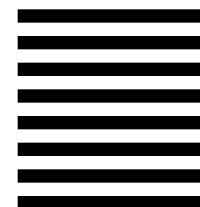
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