

VisuallInfo Systems Management: CID Installation

Document Number GG24-4415-00

December 1994

International Technical Support Organization
Bethesda Center

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First Edition (December 1994)

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Abstract

This document provides detailed coverage of how to use Configuration Installation and Distribution (CID) techniques to automate the installation of VisuallInfo and its prerequisite software components on a large number of OS/2-based clients and servers.

With the current trend to rightsizing and moving business applications to intelligent desktop workstations, customers are finding the management of large numbers of intelligent workstations a major challenge. The systems management of a large number of workstations consists of tasks such as: initial software installation, ongoing software maintenance, error reporting, problem determination, and problem rectification. These tasks, which were handled in the past by the traditional IS department, were often transparent to the user departments.

This document provides a solution for initial software installation and can be adapted to provide ongoing software maintenance. Future documents in this series may cover other issues such as central error reporting, problem determination and central problem resolution. We have only touched lightly on those topics in this document.

This document was written for IS managers, operations staff, and application implementation staff. Some knowledge of CID concepts, OS/2, Communications Manager, LAN management, is assumed. To modify the install examples provided in the enclosed diskette requires a working knowledge of the REXX language.

(178 pages)

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Special Notices

This publication is intended to assist with the installation of large numbers of OS/2-based VisualInfo clients and servers by providing an automated and efficient method of installing the requisite software. The information in this publication is not intended as the specification of any programming interfaces that are provided by VisualInfo and OS/2. See the PUBLICATIONS section of the IBM Programming Announcement for VisualInfo and OS/2 for more information about what publications are considered to be product documentation.

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Preface

This document is intended to assist IS support staff to install large numbers of OS/2-based VisualInfo clients and servers in an efficient manner. For example, the installation of VisualInfo and its prerequisite software from diskette requires a full-time operator and the manual insertion of 60 or more diskettes. In contrast, the technique described herein requires the insertion of only 2 diskettes. The installation then continues in unattended mode.

How This Document is Organized

The document is organized as follows:

- Chapter 1, "Introduction to CID Installation"

This provides a description of the problem facing installers of large numbers of workstations, and an introduction to CID concepts.

- Part 1, "CID Installation Using the SRVIFS Method"

This part describes how to set up and use a CID server using the SRVIFS method of data transfer.

Note that setup common to both the SRVIFS and Netview DM/2 methods are covered in Part 1.

- Part 2, "CID Installation Using the NetView DM/2 Method"

This part describes how to set up and use a CID server using Netview DM/2.

- Appendix A, "Response File for OS/2 2.1 Installation"

The appendix beginning with this chapter contains listings of response files for your reference as some of these will need to be tailored to fit your installation standards.

- Appendix M, "Tips from the VisualInfo Performance Team"

This chapter contains miscellaneous tuning tips for some of the VisualInfo components.

Related Publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this document.

Basic CID Publications

- *NTS/2 Redirected Installation and Configuration Guide*, S96F-8488
- *OS/2 Version 2.1 Remote Installation and Maintenance*, GG24-3780
- *Automated Installation for CID Enabled OS/2 V2.0*, GG24-3783
- *NetView Distribution Manager/2 Concepts and Overview Version 2.0*, GH19-4009
- *NetView DM/2 Installation and Customization Guide*, SH19-6915
- *Response File Reference (RESPONSE.INF) on the CM/2 CD-ROM*.

- *Database 2 OS/2 Installation Guide*, S62G-3664
- *CM/2 Command Reference*

IBM ImagePlus VisualInfo Publications

- *ImagePlus VisualInfo Installation Guide*, GK2T-1710
- *ImagePlus VisualInfo Administration and Operations Guide*, SC31-7661
- *ImagePlus VisualInfo User's Guide*, SC31-7670

International Technical Support Organization Publications

- *Image Processing: ImagePlus and VisualInfo*, GG24-4109
- *A simple Approach to VisualInfo*, GG24-4444
- *VisualInfo Building Blocks*, GG24-4500

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Acknowledgments

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This publication is the result of a residency conducted at the International Technical Support Organization, Bethesda Center.

Thanks to the following people for the invaluable advice and guidance provided in the production of this document:

Walt Geddes
IBM SWS Development, Bethesda

John DiClemente
IBM SWS Development, Bethesda

Rob Thomas
IBM SWS Development, Bethesda

David Clifford
IBM SWS Development, Bethesda

Namita Singh
IBM SWS Development, Bethesda

Srini Padmanabhan
IBM SWS Development, Bethesda

Chapter 1. Introduction to CID Installation

This chapter introduces the *Configuration Installation Distribution* (CID) concept and discusses some of the problems associated with managing a large number of workstations on a Local Area Network.

1.1 The Problem

When a customer decides to install VisualInfo (or any other workstation-based application) he is faced with the the following tasks:

- Partitioning of the fixed disk(s) in a manner suitable for a VisualInfo environment.
- Installation of the prerequisite software for VisualInfo (OS/2, NTS/2, DB2/2, CM/2, C/C++ Tools and the OS/2 Toolkit).
- Installation of VisualInfo itself.
- Configuration of each workstation into the LAN environment.
- Tuning of DB2/2 and database parameters.
- Ongoing software maintenance.
- Problem determination.
- Problem resolution.

The magnitude of the above tasks assumes large proportions when one considers that a VisualInfo system could consist of hundreds of workstations. Obviously some CID method should be used in order to keep the installation effort at an acceptable level by automating most of its tasks.

1.2 Introduction to CID

CID stands for Configuration Installation Distribution, and is basically a technique for the installation and maintenance of software over a LAN. There are several methods for CID:

- **The SRVIFS method** provided by NTS/2 (Network Transport Services) can be used for any VisualInfo installation since it only requires NTS/2, a VisualInfo prerequisite. This method is discussed in Part I of this book.
- **The NetView DM/2 method** provided by Netview Distribution Manager/2 can only be used where Netview DM/2 is already installed or where it was purchased for the installation of VisualInfo. This method will be discussed in Part II of this book.

We use the word pristine in this document to describe a machine which does not have an operating system installed on its hard-drive. When we say that a machine must be made pristine before a CID installation we mean that all disk partitions must be deleted using FDISK prior to the CID install. Note that this will destroy any data that is currently on the disk.

1.3 CID Technique Described in Part I

In Part I we have chosen to describe how to perform an NTS/2 SRVIFS installation of VisuallInfo and its prerequisite software.

SRVIFS and the procedures provided with this book allow what is called a *lightly attended* installation of VisuallInfo and its prerequisites: only two diskettes must be inserted in the machines to be installed.

1.4 CID Technique Described in Part II

In Part II we have chosen to describe how to perform a NetView DM/2 installation of VisuallInfo and its prerequisite software.

NetView DM/2 and the procedures provided with this book allow what is called a *lightly attended* installation of VisuallInfo and its prerequisites: only two diskettes must be inserted in the machines to be installed.

Part 1. CID Installation Using the SRVIFS Method

Chapter 2. Planning Your VisuallInfo CID Installation

This section can be handled differently according to your CID experience:

- **If you are an experienced CID installer**, go directly to the section titled 2.4, "Installing the VisuallInfo CID Utilities" on page 6 to install the CID Utilities provided with this book.
- **If you are a CID neophyte**, read the manual *NTS/2 Redirected Installation and Configuration Guide* to familiarize yourself with the underlying principles of CID installation and then continue reading this chapter and carry out the tasks needed to set up a code server directory structure.

2.1 Hardware Required for the CID Code Server

Any personal computer capable of running OS/2 2.1 can be used as a CID Code Server provided it has:

- A LAN adapter supported by NTS/2.
- Approximately 128 MB of free disk space for the Code Server directory structure.
- A CD-ROM drive. This drive is needed only while the Code Server directory structure is being created. It will not be needed afterwards.

Note on mobile code servers

If mobility is important, you should consider two alternatives to an ordinary desktop personal computer for your Code Server:

- Install the Code Server structure on a ThinkPad laptop equipped with a PCMCIA Token-Ring adapter. This will give you full mobility and self-sufficiency.
- If you do not have a laptop at your disposal, install the Code Server structure on a 3.5-inch, 128MB magneto-optical diskette, and carry an external magneto-optical drive that can be attached to any personal computer equipped with a SCSI adapter. All components for a SRVIFS installation of VisuallInfo will fit into 128MB with enough space left free for the installation log files.

2.2 Hardware Required for the CID Clients

Since the software for the CID clients (VisuallInfo Servers and VisuallInfo clients) is loaded down from the CID Code Server, no CD-ROM drive is needed at the VisuallInfo Servers or clients. All other hardware requirements of VisuallInfo still apply. Refer to *ImagePlus VisuallInfo Installation Guide* for a description of the hardware requirements of VisuallInfo.

2.3 Software Required for CID

The software needed for the CID Code Server is:

- OS/2 2.1 or later.
- Network Transport Services/2 (NTS/2) Version 1.1.
- The REXX programs and response files provided with this book. See 2.4, "Installing the VisualInfo CID Utilities" .
- VisualInfo and all of its prerequisite software:
 - Communications Manager/2 (CM/2) Version 1.1.
 - Database 2 OS/2 (DB2/2) Version 1.0.
 - Developer's Toolkit for OS/2 2.1.
 - C/C++ Tools Version 2.0 compiler.
 - Corrective service diskettes (CSDs) for all of the above products.

2.4 Installing the VisualInfo CID Utilities

The diskette provided with this book contains the REXX programs and response files that were used during our residency for installing VisualInfo clients, Servers and stand-alone systems. They are collectively called *VisualInfo CID Utilities* throughout this book. These utilities can be used as they are or modified to suit your needs.

To install the utilities do the following:

1. Insert the VisualInfo CID Utilities diskette at the back of this book into the diskette drive and make that drive the current one.
2. Type **INSTALL target** and press **ENTER**, where **target** is the drive and path where the installation should be performed, for example **D:\VICIDUTI**.
3. The installation procedure will create the directory for the VisualInfo CID Utilities as well as all necessary subdirectories and will copy all files into them.

Note: If you receive the following error just ignore it. The VI CID Utilities will load OK anyway.

```
A:\install d:\viciduti
```

```
Source files are being read...
```

```
SYS1186: XCOPY cannot access the source file.
```

```
A:\EA DATA. SF
```

The VisualInfo CID Utilities are enabled for translation to other languages. All messages are separated from the code and organized in three files:

- UTI.MSG, the general messages for the CID Utilities, as a compiled OS/2 message file.
- UTI.TXT, the source for UTI.MSG.
- PAR.TXT, the messages for the PARTDISK.COM and UPDCONF.COM programs, in source form. There is no need to compile these messages.

The file UTI.MAK is a make file to be used with the OS/2 NMAKE.EXE program. It compiles UTI.TXT to generate UTI.MSG using the MKMSGF program provided with the OS/2 Toolkit. To perform the compilation, go to any OS/2 prompt and type: **NMAKE /F UTI.MAK**

The CID Utilities access the compiled message file UTI.MSG through the **SysGetMessage** function provided by REXXUTIL. PARTDISK and UPDCONF cannot use REXXUTIL because these functions are not available at the time they are executed. To overcome this problem, PARTDISK and UPDCONF have an internal SysGetMessage function that accesses the source file PAR.TXT in a compatible way. PAR.TXT can be translated, but it is not necessary to compile it.

Chapter 3. Setting Up the Code Server

CID Code Servers require a recommended directory structure for all product images, response files and programs used for the installation over a LAN. The VisualInfo CID Utilities include PREPSERV.CMD, a REXX program that creates the directory structure, prompts the administrator for the necessary product diskettes and installs them in the appropriate directories. The directory structure generated by PREPSERV is depicted in Figure 1 on page 10.

To run PREPSERV do the following:

1. From an OS/2 prompt, change to the drive and directory where you installed the VisualInfo CID Utilities.
2. Type **prepserv d:**, where d: is the drive where the CID directory structure should be generated.
3. The program defines the directory structure and then prompts for the diskettes of the following products:
 - OS/2 2.1.
 - CM/2 1.1.
 - CM/2 Productivity Aids to load CMWAIT.
 - NTS/2 (LAPS).
 - DB2/2.

PREPSERV also installs the response files for all of the above products and the LCU (LAN CID Utility) files that control the whole installation process.

Setting up the directory structure in several runs

The preparation of the Code Server directory structure can take several hours, or even days if all products to be installed are not simultaneously available. For this reason PREPSERV has been implemented as an interruptible procedure.

At any point after fully installing a product, you can press **Ctrl-Break** to interrupt the Code Server preparation. When you call PREPSERV again, it will skip all products that have been already installed and will prompt you for the next one.

PREPSERV also updates any file with an older date than the file with the same name in the VisualInfo CID Utilities directory. If you must change a response file, or any other Utility file, change it in the Utilities directory and run PREPSERV again. The new file will replace the old one in the appropriate places of the directory structure.

PREPSERV also generates a REXX program called STARTSERV and a control file for LAPS called SERVICE.INI. They are used to start the Code Server. These files are put into the subdirectory \CID\SERVER.

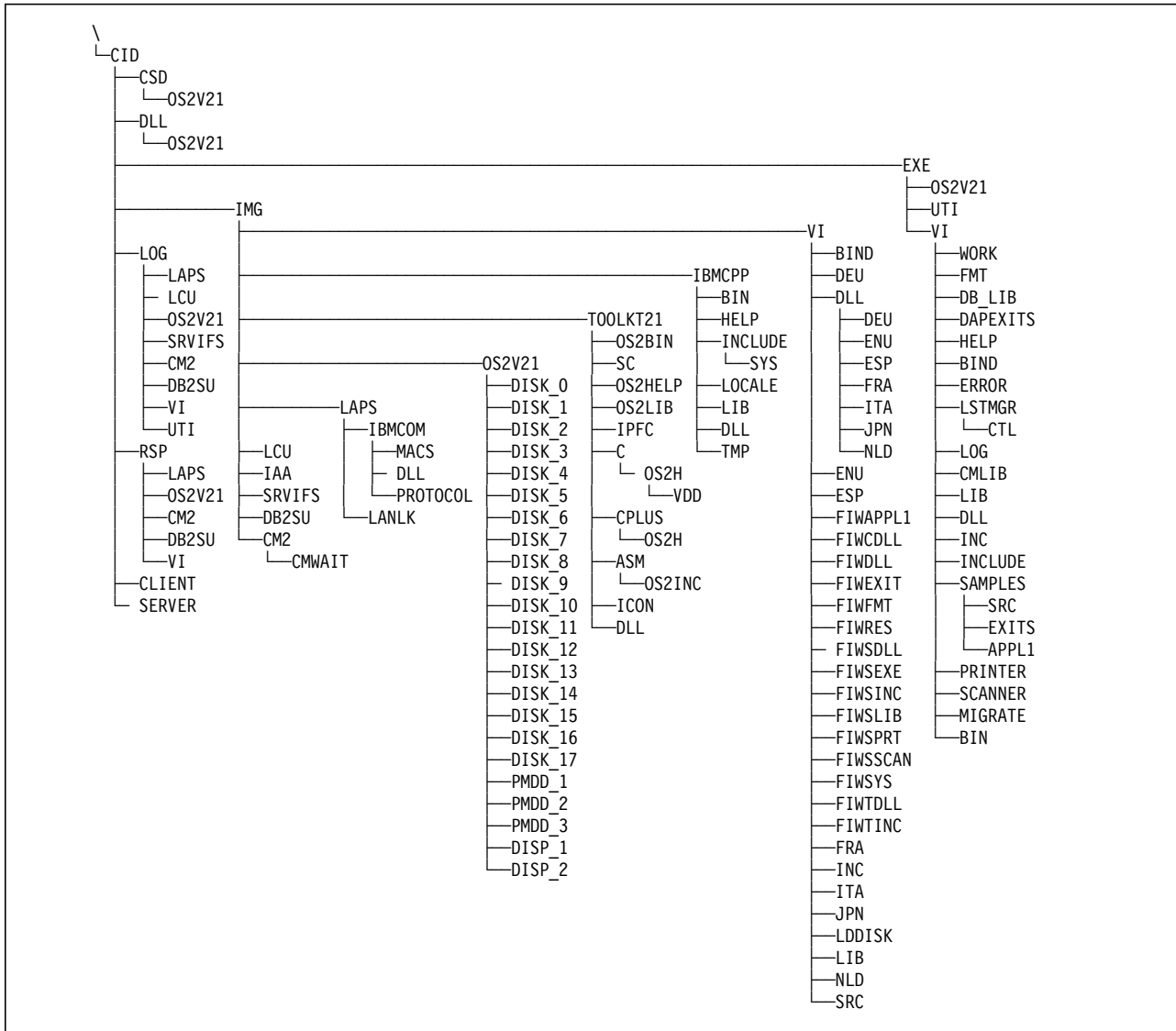


Figure 1. Code Server Directory Structure. This is the structure generated by the PREPSERV program and assumed by all VisualInfo CID Utilities delivered with this book.

3.1 Adding the C Set ++ Components to the

Directory Structure

The C Set ++ product consists of:

- WorkFrame/2
- OS/2 Toolkit
- C/C++

Of these components, only parts of the Toolkit and the C/C++ Tools are required by VisualInfo Library Servers to dynamically create static SQL queries. This section explains how to incorporate the required parts into the Code Server structure.

Version 2.1 of C Set ++ ++ (the current version at the time of writing) is not CID enabled and must be installed from CD-ROM. The installation of this version creates a directory off the root directory of the selected drive, but it does not

allow the direct installation into the directory structure of a CID Code Server. Therefore the inclusion of these components require a two-step procedure:

- Step 1: install temporarily on any drive.
- Step 2: XCOPY the created directory tree into the CID Code Server directory structure.

3.1.1 Step 1

To install the required components temporarily proceed as follows:

1. Decide on which drive the temporary installation should take place. It should have at least 15MB of free space, of which 7MB will be required for the C/C++ Tools and 8MB for the Toolkit.
2. Insert the C Set ++ CD-ROM disk, make the CD-ROM drive the current drive and change the current directory to **\OS2TK21**.
3. Type **install** and press **ENTER**.
4. Press **ENTER** when the logo appears.
5. When the Toolkit Installation window appears, click on **Development Tools** and click on **Options** afterwards.
6. Click on **Set drives**, select the drive you chose for the temporary installation and click on **OK**.
7. Click on **Options** and click again on **Install** to begin the installation.
8. A terse message saying: - **Install successful on drive x** will appear at the bottom of the Toolkit Installation window if everything was installed correctly. Click on **Options**, click on **Exit** and on **Yes** to finish the installation of the Toolkit. A message will tell you to restart the system to activate the changes in CONFIG.SYS. We are now ready to install the C/C++ Tools.
9. With the C Set ++ CD-ROM still loaded in the CD-ROM drive, change the current directory to **\OS2CPP**, type **cppinst** and press **ENTER**.
10. Click on **Ignore** when the IBM C/C++ Tools Installation ++ install window appears.
11. Click on **OK** when warnings about the WorkFrame/2 appears. VisualInfo does not use the WorkFrame/2 product, although you might need it for VisualInfo application development.
12. Deselect all sample and all component checkboxes except the **C/C++ Compiler** checkbox. This is the minimum required by VisualInfo.
13. Click on **Libraries and Documentation**.
14. Deselect all checkboxes in the **C++ Class Libraries** and **Online References** groups. Only the checkboxes in the **Runtime Libraries** group should remain selected. This is the minimum required by VisualInfo. Click on **OK**.
15. Select the **drive** where the temporary installation should be done. You can select **Update CONFIG.SYS** if you plan to use the product on your Code Server. Click on **Install** to start the installation.
16. A message will appear to indicate successful completion. Click on **OK** and double-click on the system icon of the C/C++ Tools Installation window to close it. Click on **OK** on the message about updating CONFIG.SYS.

3.1.2 Step 2

Once the temporary installation of C/C++ and the Toolkit has been ++ completed, we should transfer the directory trees to our CID Code Server directory structure. Proceed as follows:

1. From any OS/2 window prompt, and if you are using the SRVIFS method,type:

```
XCOPY d:\IBMCP*\*.* h:\CID\IMG\IBMCP\ /S /T /E /H /R
```

and press **ENTER**, where **d:** is the drive of the temporary installation and **h:** is the drive of the CID Code Server directory structure.

If you are using NetView DM/2, the XCOPY statement could be:

```
XCOPY d:\IBMCPP\*.* D:\IBMNVD2\SHARE_A\IMG\IBMCPP\ /S /T /E /H /R
```

2. From any OS/2 window prompt, and if you are using the SRVIFS method, type:

```
XCOPY d:\TOOLKT21\*.* h:\CID\IMG\TOOLKT21\ /S /T /E /H /R
```

and press **ENTER**, where **d:** is the drive of the temporary installation and **h:** is the drive of the CID Code Server directory structure.

If you are using NetView DM/2, the XCOPY statement could be:

```
XCOPY d:\TOOLKT21\*.* D:\IBMNVD2\SHARE_A\IMG\TOOLKT21\ /S /T /E /H /R
```

This completes the integration of the C Set ++ components into the CID Code Server directory structure. You can delete the temporary directories if you no longer need them.

3.2 Adding VisuallInfo to the Directory Structure

VisuallInfo is delivered on CD-ROM together with Showcase, a front-end for installing encrypted, or "locked" products.

The first thing you should do after obtaining the VisuallInfo CD-ROM is to **get the customer ID and the VisuallInfo System key** that are required to unlock it.

The customer ID consists of the letter "C" followed by ten digits. The key is a 20-digit number, written in groups of 4 digits. A hyphen is used to separate the groups. Example:

1111-2222-3333-4444-5555

Several keys might be delivered with the CD-ROM. The key you need is the VisuallInfo System key. If you don't have the appropriate customer ID and key, you cannot add VisuallInfo to your CID Code Server Directory Structure and you cannot install VisuallInfo.

Two steps are required to add VisuallInfo to the Code Server Directory Structure. On the first step we will transfer a decrypted version of the CD-ROM contents. On the second step we will install the Installation Tool for VisuallInfo and the System Configuration Utility.

3.2.1 Step 1

To transfer a decrypted copy of the CD-ROM contents proceed as follows:

1. Have your customer ID and key ready. Insert the VisuallInfo CD-ROM in the drive.
2. From any OS/2 prompt, type **g:\SHOWCASE**, where **g:** is the letter of the CD-ROM drive. Press **ENTER**.
3. At the Welcome panel click on the **Continue** button.
4. At the Product Catalog Panel, click on the **Setup** button.
5. A window will open and you will be asked to enter a path for storing keys. The proposed path is on the boot drive and has the name SHOWCASE. You can use the proposed drive and path or type your own. We suggest that you

do not store the keys on the boot drive. Select your country information and click on the **OK** button.

6. Accept the message about updating CONFIG.SYS by clicking on the **OK** button. This will add two statements to your CONFIG.SYS file:

```
IFS=D:\SHOWCASE\SDCFS.IFS
RUN=D:\SHOWCASE\SDCTL.EXE
```

These statements load and initialize a ShowCase-related Installable File System (IFS) which will perform the decryption of the VisualInfo files.

7. Click on **OK** for the message about rebooting the system.
8. Click on the **Exit** button and click on **OK** for the warning about terminating the application.
9. Shutdown and **reboot your system**.
10. From any OS/2 prompt, type **g:\SHOWCASE**, where **g**: is the letter of the CD-ROM drive. Press **ENTER**.
11. At the Welcome panel click on the **Continue** button.
12. At the Product Catalog panel, make sure that a big arrow points to the **IBM VisualInfo System** entry and click on the **Details** Button.
13. At the Product Notebook panel, click on the **Install** tab.
14. Click on the **Unlock** button.
15. Click on the **Accept** button.
16. Type your customer ID and key and click on the **Save** button.
17. **OK** the message about the VisualInfo System being unlocked.
18. Click on the **Copy** button.
19. On the Copy window, type the Directory Structure path where the VisualInfo System should be transferred. If you are following the CID conventions your path should be similar to: **h:\CID\IMG\VI** for the SRVIFS method, where **h**: is the drive of the CID Directory Structure.

For the NetView DM/2 method, the path could be:

```
D:\IBMNVDM2\SHARE_A\IMG\VI.
```

20. Click on the **OK** button to start the transfer. Approximately 32MB will be decrypted and copied to the directory structure.
21. Click on the **Exit** button and click on **OK** for the warning about terminating the application.

Note on CONFIG.SYS

Your CONFIG.SYS still has the two statements to load and activate the Installable File System for Showcase decryption. If you do not plan to use Showcase after the next reboot, you should comment them out to save system resources.

3.2.2 Step 2

Once we have transferred the VisualInfo system to our Code Server Directory Structure we should install the VisualInfo CID Installation Tool and the System Configuration Utility. The CID Installation Tool will allow us to install VisualInfo with CID methods. With the System Configuration Utility we will be able to create System Configurations and Network Tables for VisualInfo. Proceed as follows:

1. From any OS/2 prompt, type **x:install**, where **x**: is the drive and path in your Code Server Directory Structure where you previously copied the VisualInfo system. If you are following the CID conventions your path should be similar to: **h:\CID\IMG\VI**, where **h**: is the drive of the CID Directory Structure.

If you are using Netview DM/2, the path could be:

D:\IBMNVDM2\SHARE_A\IMG\VI.

2. Click on **Continue** when the **VisuallInfo Installation** panel appears.
3. When the **Installation and Maintenance** window appears, select **VisuallInfo - Selectable Components** and click on **Install** in the **Action** pull-down menu.
4. Make sure that the **Update CONFIG.SYS** checkbox is **not checked** and click on the **OK** button. The updates to the CONFIG.SYS are not necessary on a machine that will be used exclusively as a Code Server for CID installations of VisuallInfo. You need these updates only on machines that will actually run VisuallInfo.
5. Click on **YES** at the message about manually updating CONFIG.SYS.
6. When the **Install - directories** window appears, select **VisuallInfo Installation Program** and **System Configuration Utility** and type the drive and path in your Directory Structure where the components should be stored. If you follow the CID convention, the Executable Directory should be similar to: **h:\CID\EXE\VI** and the Work File Directory could be **h:\CID\EXE\VI\WORK**, where **h:** is the drive of your directory structure.

If you are using NetView DM/2, the directories could be:

D:\IBMNVDM2\SHARE_A\EXE\VI and **D:\IBMNVDM2\SHARE_A\EXE\VI\WORK.**

7. Click on the **Install** button. The **Install - progress** window will show you a graphical representation of the work being done.
8. When the **Define a network table and language** window appears, select **Install default network table** and click on **OK**. The **Install - progress** window will appear again.
9. Click **OK** on the confirmation message.
10. Press **F3** to exit the **Installation and Maintenance** window.
11. Press **F3** to exit the **VisuallInfo Installation** window.

This completes the integration of VisuallInfo into your Code Server Directory Structure.

Chapter 4. System Administration Tasks

4.1 Creating Boot Diskettes

The lightly-attended installation method provided by SRVIFS requires that every installation client be booted from two 3.5-inch, 1.44MB, especially prepared diskettes. These diskettes must contain:

- An OS/2 maintenance system.
- A stripped-down version of LAPS (LAN Adapter and Protocol Support).
- SRVIFS (Redirected-drive Installable File System)
- LAN CID Utility.

Several programs must be run to create these diskettes. They have been combined into PREPDSKT.COM, one of the VisualInfo CID Utilities provided with this book. To create the boot diskettes do the following:

1. Have two formatted, 3.5-inch, 1.44MB diskettes ready. Label the first diskette "**Installation Diskette**". Label the second diskette "**Disk 1**".
2. From any OS/2 prompt, go to the drive and directory where you have installed the VisualInfo CID Utilities and type: **prepdskt h: quick**, where **h:** is the drive that contains the Code Server directory structure. The **quick** parameter requests that quick-release diskettes be created. You can omit this parameter if you wish to create standard boot diskettes, which must remain inserted in the drive until the end of LCU queue 1. Quick-release diskettes can be extracted sooner and used immediately on another installation client, saving about 15 minutes per station.
3. The program will display the instructions given here about the diskettes and then will proceed to create the Installation Diskette, followed by the Disk 1.

The boot diskettes created by PREPDSKT are universal. They can be used to start the CID installation on any VisualInfo Client or Server, or for that matter, on any machine to be set up using CID.

The boot diskettes created by PREPDSKT do not contain any hard-coded NETBIOS names. The CID installer will be prompted to enter a name to uniquely identify the machine being installed. We used STDSERVR, STDCLIEN, STDALONE and DEFAULT during our work. The NETBIOS names entered are stored in the variable CLIENT of the LCU command files and are available to all installation programs.

Once you have created the first pair of diskettes, it is not necessary to run PREPDSKT.COM again to create additional pairs. You can use the DISKCOPY command to create diskette clones. This will allow you to install on several machines simultaneously.

Write-protecting boot diskettes

The Installation Diskette can be protected against accidental writing and erasure. Disk 1 should not be write-protected because its CONFIG.SYS will be subject to several updates during the installation. This is the normal LCU processing, as described in *NTS/2 Redirected Installation and Configuration Guide*.

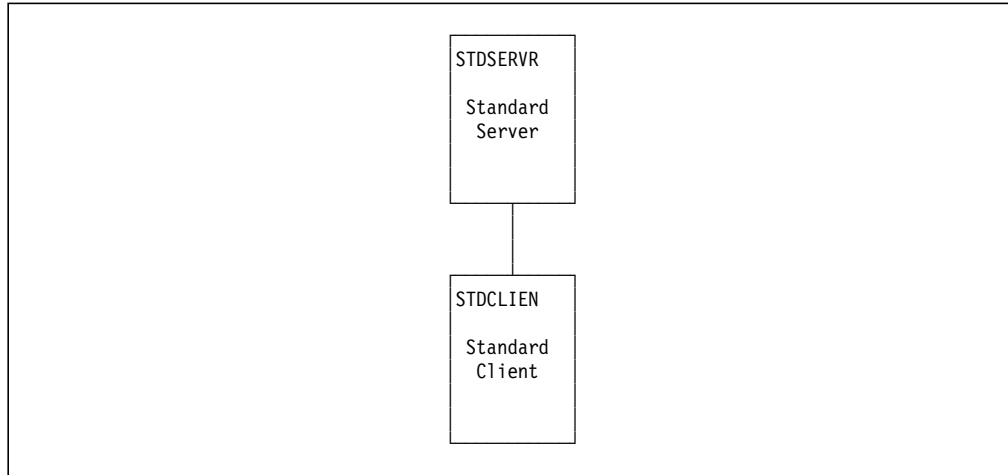


Figure 2. Network Diagram for the configuration assumed throughout this book. This is the configuration implemented in the `STDCFG.CFG` file.

4.2 Assigning Workstation Names and Addresses

In this step you will create a network diagram and a table where all stations or station groups to be installed will be documented. This task requires close cooperation with the LAN administrator of the location where you will install the VisuallInfo clients and servers because you will have to follow the local conventions for assigning Token-Ring addresses, SNA names, etc.

Special Case: stand-alone systems

VisuallInfo stand-alone systems do not require Network Diagrams or a System Configuration File. The default Network Table provided by VisuallInfo can be used for these systems. If you are installing a stand-alone System you can skip this section and go directly to 4.4, "Customizing the LAN CID Utility REXX Command Files" on page 21

4.2.1 The Network Diagram

The network diagram should emulate the diagram presented in Figure 2 and Figure 3 on page 18. These diagrams do not depict actual communication links, but they do show the connections that are relevant in defining a VisuallInfo System Configuration File. The first diagram represents the configuration used by all samples in this book. The second, more complex diagram, represents a more realistic configuration and will be used as the model for the instructions that follow.

1. Start by drawing the Library Servers. If the installation will use the Standard Application, you will probably have only one Library Server, although you might have more than one VisuallInfo Network. If you will not use the Standard Application, you might have more than one Library Server.
2. Draw the Object Servers and connect them to the appropriate Library Servers. Using the terminology of the VisuallInfo System Configuration Utility, these connecting lines represent the "Object Servers to Library Server Links."
3. Draw the configuration servers and connect them to the appropriate Library Servers. Using the terminology of the VisuallInfo System Configuration Utility,

these connecting lines represent the “Library Servers to configuration servers Links.”

4. Group the clients by configuration server and draw them. The criteria for grouping clients can be:
 - By department and type of work (all members of a department sharing a configuration server).
 - By Content Class (applications used).
 - By geographical distribution.
 - By code page (all clients attached to a configuration server should use the same code page).
5. Connect the clients to their assigned configuration servers. Using the terminology if the VisualInfo System Configuration Utility, these connecting lines represent the “clients to configuration server Links.”

This completes the instructions for drawing a network diagram. Note that the same machine can have more than one function. Standard Servers for example, combine the functions of a Library Server, an Object Server and a configuration server.

4.2.2 The Network Table

There are several ways to document names and addresses, and the documentation itself may be subject to local conventions. Regardless on the appearance of your document, we suggest that you include the following items:

Name	This is the workstation name, also called nickname in the VisualInfo System Configuration. It is the name to be typed when the CID agent prompts for it at every station to be set up after the two boot diskettes have been read. This name will be used to: <ul style="list-style-type: none">• establish the NETBIOS session for CID installation• to select the LCU command file to be executed• to identify the workstation when used as nickname in the VisualInfo System Configuration. It must have no more than 8 characters. The VisualInfo CID Installation Utilities supplied with this book assume two names: STDSERV and STDCLIEN . You can choose any name of 8 characters or less that follows the conventions for NETBIOS and file names.
TR Address	The Token-Ring address to be assigned to the workstation. Follow local conventions and obtain these addresses from the LAN administrator.
Local Node Name	The SNA Node Name to be assigned to the workstation. Follow local conventions and obtain these names from the LAN administrator. The name given here should match the NAME keyword of the LOCAL_CP record in the CM2 response file for the workstation.
Serial Number	The serial number that uniquely identifies the workstation. Used for correlation and checking.
Function	The function of the workstation in the VisualInfo system. It can be one of the following: <ul style="list-style-type: none">• Client• Standard Server (Library, Object, and configuration servers combined)• Library Server• Object Server

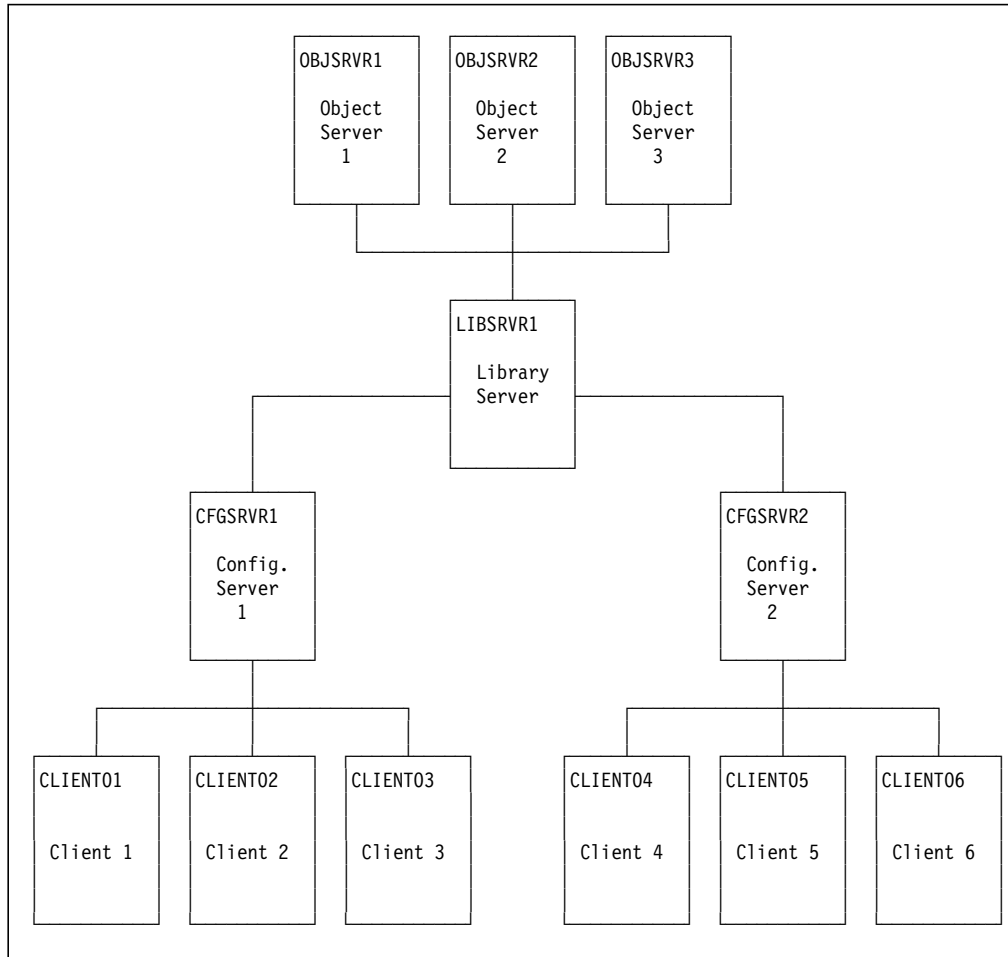


Figure 3. Network Diagram for a more realistic VisualInfo System. The connecting lines do not show actual communication links, but logical work connections in a VisualInfo system.

- configuration server
- List Manager Server

The following is an example of a Network Table for the configuration depicted in Figure 2 on page 16. This is the configuration assumed by the VisualInfo CID Utilities delivered with this book. It is kept simple for the sake of clarity. A more realistic configuration and its Network Table are presented further down in this section.

Name	STDSERVR	STDCLIEN
TR Address	400050002004	400051002026
Local Node Name	VISERVER	VICLIEN
Serial Number	23-KGG5K	55-V6807
Function	Standard Server	Standard Client

The following is an example of a Network Table for the configuration depicted in Figure 3. This configuration is presented here only as an example of a more realistic configuration than the one assumed by the programs and response files.

distributed with this book. It is not supported by any of the VisualInfo CID Utilities delivered with this book.

Table 2. Network Table for a realistic configuration

Name	TR Address	Local Node Name	Serial Number	Function
LIBSRVR1	400050002001	VILS01	23-KXKCL	Library Server
OBJSRVR1	400050002002	VIOS01	23-KXKAM	Object Server
OBJSRVR2	400050002003	VIOS02	23-MB031	Object Server
OBJSRVR3	400050002004	VIOS03	55-V6807	Object Server
CFGSRVR1	400050002005	VICS01	23-9270526	Configuration Server
CFGSRVR2	400050002006	VICS02	72-6078005	Configuration Server
CLIENT01	400050002007	VICL01	72-6078103	Standard Client
CLIENT02	400050002008	VICL02	72-6073901	Standard Client
CLIENT03	400050002009	VICL03	72-6079787	Standard Client
CLIENT04	40005000200A	VICL04	72-6078503	Standard Client
CLIENT05	40005000200B	VICL05	72-6078990	Standard Client
CLIENT06	40005000200C	VICL06	23-9264398	Standard Client

4.3 Creating a VisualInfo System Configuration File

In this section we will create a VisualInfo System Configuration File tailored to our specific needs for subsequent use in the VisualInfo response files.

The VisualInfo System Configuration File is a binary representation of the table you created in the section called 4.2.2, "The Network Table" on page 17. Using the Network Table you created, you will enter the information into Presentation Manager panels. The result will be stored as a file that will be later used in the response files for VisualInfo.

The VisualInfo CID Utilities diskette provided with this book contain a System Configuration File defined for two stations named **STDSEVR** and **STDCLIEN** (the names of the two LCU command files delivered with this book). This System Configuration File is called **STDCFG.CFG**. If you plan to install only a Standard Server and a Standard Client, you can copy STDCFG.CFG to the product images branch of your Code Server Directory Structure and skip the instructions to create a System Configuration File. However, if you are installing a higher number of stations, which will be the normal case, you should follow the instructions given below to create a new VisualInfo System Configuration File.

VisualInfo System Configuration Format

A VisualInfo System Configuration is a binary file. Do not attempt to modify it with an ASCII editor. Use only the VisualInfo System Configuration Utility or the GENVICFG program to create or change this file.

The VisualInfo CID Utilities diskette provided with this book contain a REXX program called GENVICFG.CMD. This program can be used to create a

VisuallInfo System Configuration on systems where VisuallInfo has not been installed for operational use, like a CID Code Server. The program GENVICFG requires only that VisuallInfo be present in the Code Server Directory Structure. It is not necessary to have VisuallInfo paths in CONFIG.SYS to run GENVICFG successfully.

If you have installed VisuallInfo for operational use on your code server, you do not need to run GENVICFG because you can use the System Configuration Utility provided by VisuallInfo. This utility can be found in the VisuallInfo Utilities folder.

To generate a VisuallInfo System Configuration File proceed as follows:

1. From any OS/2 prompt, change to the drive and directory where you have installed the VisuallInfo CID Utilities provided with this book and enter **GENVICFG path**, where **path** is the full path to the VisuallInfo System Configuration Utility in the executable branch of the Code Server Directory Structure. Example for SRVIFS:

```
GENVICFG H:\CID\EXE\VI
```

Example for NetView DM/2:

```
GENVICFG D:\IBMNVD2\SHARE_A\EXE\VI
```

2. The **System Configuration Utility** folder will appear. Double-click on **New Nodes**. The **New Nodes - Open Settings** panel will appear.
3. Using the table you created in the previous section, enter the following information:
 - Nickname of the current station, for examples: **STDSERV** or **STDCLIEN** or any other name.
 - Local Node name, for examples: **VISERVER** or **VICLIEN** or any other name.
 - Network ID, for example: **USIBMD1**.
 - Make sure that **OS/2** is selected as the Operating System for this node.
 - The information to be provided in the Components group depend upon the function of the station you are defining:
 - If the station is a **client**, click on the **Client** checkbox.
 - If the station is a **Standard Server**, click on **Library server**, on **Object server** and on **Configuration server**. Then type a name next to the Library and Object server checkboxes, for example: **LIBSRVR2** and **OBJSRVR2** (these are the default names).
 - If the station is a **Library Server**, click on **Library server** and type a name next to the Library server checkbox, for example: **LIBSRVR2**.
 - If the station is an **Object Server**, click on **Object server** and type a name next to the Object server checkbox, for example: **OBJSRVR2**.
 - If the station is a **configuration server**, click on **Configuration server**.
 - If the station is a **List Manager Server**, click on **List manager server**. You can also provide a name for this server, but this is not mandatory.
 - Click on the **Apply** button to complete the definition for the current station and to define the next station. Click on the **OK** button after you have entered the information for the last station.
4. Double-click on **Library Servers to configuration servers Links** and assign the Library Servers by clicking on **Add**. Click on **OK**.
5. Double-click on **clients to configuration servers Links** and assign the clients by clicking on **Move**. Click on **OK**.
6. Double-click on **Object Servers to Library Server Links** and assign the Object Servers by clicking on **Move**. Click on **OK**.

7. If you have defined List Managers, double-click on **List Manager to configuration server Links** and assign the List Managers by clicking on **Add**. Click on **OK**.
8. Click on **File** to display the File pull-down menu and select **Verify**. Click on **OK** to close the notification message. If the verification failed, correct the definition errors and verify until the configuration is perfect.
9. Click on **File** to display the File pull-down menu and select **Save as**. Locate the product images branch of your Code Server Directory Structure and type a file name of your choice with the extension .CFG. Example for SRVIFS:
H:\CID\IMG\VI\STDCFG.CFG
 Example for NetView DM/2:
D:\IBMNVDM2\SHARE_A\IMG\VI\STDCFG.CFG
10. Click on the **OK** button.
11. Double-click on the upper-left corner of the System Configuration Utility folder to close it. This completes the creation of the System Configuration File.

4.4 Customizing the LAN CID Utility REXX Command Files

The LAN CID Utility command files (LCU command files) are the main routines used in a SRVIFS CID installation. This book assumes that you are familiar with the structure of LCU command files and with the processing of return codes passed back by the installation programs. If you are not familiar with LCU command files or with the architected CID return code processing, you are advised to consult *NTS/2 Redirected Installation and Configuration Guide*.

Whenever possible, the CID agent tries to execute the LCU command file whose name matches the name entered at the client machine being installed. If an LCU command file with a matching name is not found, the LCU command file DEFAULT.CMD is executed instead.

The VisuallInfo CID Utilities diskette provided at the back of this book contains four LCU command files:

STDSERV.CMD	To install a VisuallInfo Standard Server (Library, Object, and configuration server).
STDCLIEN.CMD	To install a VisuallInfo Standard Client.
STDALONE.CMD	To install a VisuallInfo stand-alone System.
DEFAULT.CMD	The LCU command file that is executed for every machine for which a specific command file is not available.

These LCU command files are provided as working samples to be customized according to the situation. They are derived from sample LCU file CASSKEL.CMD provided with NTS/2.

The four LCU command files provided with this book perform a complete installation of VisuallInfo clients, Servers, and stand-alone systems, including disk partitioning and all of the prerequisite software. The order of installation is:

1. Disk partitioning and formatting.
2. OS/2 Production System installation.
3. Changes to CONFIG.SYS to assign SWAPPER.DAT to another partition.
4. NTS/2 installation
5. SRVIFS requester activation and LAN CID Utility installation.

6. OS/2 Maintenance System installation.
7. Relocation of the Spool directory to another partition.
8. If necessary, support for the Image-I Adapter/A can be installed now, in unattended mode, using the freshly installed OS/2 Maintenance System.
9. CM/2 installation, including the CMWAIT utility, to allow for automatic startup procedures for VisualInfo clients and servers.
10. DB2/2 installation.
11. C/C++ Tools and OS/2 Toolkit installation in unattended mode.
12. VisualInfo installation.
13. Setting up the OS/2 Maintenance System for automatic connection to the Code Server after startup.
14. Removal of the SRVIFS redirection statements from CONFIG.SYS.
15. Generation of a procedure to start VisualInfo clients or servers automatically.
16. Tuning of DB2/2 and the databases to optimize performance.

The installation of these products will be discussed in detail in the following chapters.

The LCU installation queues to install the above products are depicted in Figure 4 on page 23. An installation queue is a group of products that are installed in sequence with a common reboot at the end.

4.4.1 Creating New LCU Command Files and Response Files

For a typical VisualInfo installation with more stations than the two assumed by the examples in this book, you will have to create new LCU command files and response files. You should be familiar with the principles of CID installation as described in *NTS/2 Redirected Installation and Configuration Guide*. We suggest that you proceed as follows:

1. For every station that you will be installing simultaneously, select one of the sample LCU command files provided with this book (STDSERVR.COM and STDCLIEN.COM) and copy it, giving it the nickname of the station it will be used for. If the station will be a client, use STDCLIEN.COM as the source. Use STDSERVR.COM if the station will be a server. You will save considerable customization effort if you start with a model that is already similar to what you are trying to accomplish.
2. Using your favorite editor, customize the new LCU command file, changing names and parameters as appropriate.
3. For every station that you will be installing simultaneously, make a copy of the following response files, giving them names related to the nickname used for the station.
 - STDSERVR.RSP or STDCLIEN.RSP, whichever is best adapted to the station function.
 - CM2SERVR.RSP or CM2CLIEN.RSP, whichever is best adapted to the station function.
 - LAPSSERV.RSP or LAPSCLIEN.RSP. As delivered with this book, they only differ in the Token-Ring address, but maybe later on you would like to configure them differently, optimizing them for the functions of a client or server.

In most cases you will be able to use the response file for OS/2 2.1 without modifications, since the OS/2 installation program recognizes hardware configurations automatically.

```

Do Forever
Select
  when OVERALL_STATE = 0 then do
    if BootDrive() == 'DISKETTE' then iterate      /* If diskette go to state 1 */
    end
  when OVERALL_STATE = 1 then do
    if RunInstall(x.partdisk) == BAD_RC then exit /* Partition the disk */
    if RunInstall(x.seinst) == BAD_RC then exit  /* Install OS/2 2.1 */
    if RunInstall(x.updconf) == BAD_RC then exit /* Update CONFIG.SYS */
    if RunInstall(x.laps) == BAD_RC then exit   /* Install LAPS */
    if RunInstall(x.thinifs1) == BAD_RC then exit /* Activate SRVIFS requester */
    if RunInstall(x.thinifs2) == BAD_RC then exit /* Activate SRVIFS requester */
    if RunInstall(x.casinst1) == BAD_RC then exit /* Install LCU */
    Call CheckBoot                               /* Reboot if it was requested */
  end
  when OVERALL_STATE = 2 then do
    if RunInstall(x.semaint) == BAD_RC then exit /* Install OS/2 maintenance sys */
    Call CheckBoot                               /* Reboot if requested */
  end
  when OVERALL_STATE = 3 then do
    if RunInstall(x.updini) == BAD_RC then exit /* Set SPOOL directory to tmp sp*/
    Call CheckBoot                               /* Reboot */
  end
  /* when OVERALL_STATE = 4 then do */
  /* if RunInstall(x.instiaau) == BAD_RC then exit */ /* Install IAA Support unattended */
  /* Call CheckBoot */ /* Reboot if requested */
  /* end */
  when OVERALL_STATE = 4 then do
    if RunInstall(x.cmsetup) == BAD_RC then exit /* Install CM/2 */
    Call CheckBoot                               /* Reboot if requested */
  end
  when OVERALL_STATE = 5 then do
    if RunInstall(x.instdb2) == BAD_RC then exit /* Install DB2/2 Client/Server */
    Call CheckBoot                               /* Reboot if requested */
  end
  when OVERALL_STATE = 6 then do
    if RunInstall(x.insttk21) == BAD_RC then exit /* Install OS/2 Toolkit */
    if RunInstall(x.instcpp) == BAD_RC then exit /* Install C/C++ Tools */
    Call CheckBoot                               /* Reboot if requested */
  end
  when OVERALL_STATE = 7 then do
    if RunInstall(x.vistdsrv) == BAD_RC then exit /* Install VI Standard Server */
    QUEUE_REBOOT = 1                             /* Workaround VI problem */
    CALL_AGAIN = 0                               /* Workaround VI problem */
    Call CheckBoot                               /* Reboot if requested */
  end
  when OVERALL_STATE = 8 then do
    if RunInstall(x.thinlaps) == BAD_RC then exit /* Put thin LAPS on OS/2 Maint */
    if RunInstall(x.thinifs3) == BAD_RC then exit /* Activate SRVIFS requester */
    if RunInstall(x.thinifs4) == BAD_RC then exit /* Activate SRVIFS requester */
    if RunInstall(x.casinst2) == BAD_RC then exit /* Install LCU */
    Call CheckBoot                               /* Reboot */
  end
  when OVERALL_STATE = 9 then do
    if RunInstall(x.ifsdel) == BAD_RC then exit /* Delete SRVIFS requester */
    if RunInstall(x.casdel) == BAD_RC then exit /* Delete LCU */
    if RunInstall(x.genstart) == BAD_RC then exit /* Create VI startup procedure */
    if RunInstall(x.dbtuneup) == BAD_RC then exit /* Tune DBM and databases */
    Call Reboot                                  /* Reboot */
  end
  end
  otherwise nop
end
/* END select */
/* END Do Forever */

```

Figure 4. LCU installation queues for a VisuallInfo Standard Server. The two statements after the installation of the VisuallInfo Standard Server are a temporary solution for a problem involving return codes from the VisuallInfo installation program. They force a reboot which would not occur otherwise. This problem will be corrected by a future version or CSD.

The response file for DB2/2, called DB2.RSP, is also universally applicable for all VisualInfo systems. In most cases you will be able to use this file without modifications.

4. Edit the new response files and change their keywords as appropriate for the station they will install.
5. Put all new LCU command files in the CLIENT branch of your Code Server Directory Structure. If you follow the CID conventions, the path could be:
h:\CID\CLIENT
6. Put all new response files in the RSP branches of your Code Server Directory Structure. For the VisualInfo response files, put them also in the LOG branch to comply with the present VisualInfo requirement of read/write drive access for response files. If you follow the CID conventions, the paths could be:
h:\CID\RSP\VI
h:\CID\LOG\VI
h:\CID\RSP\CM2
h:\CID\RSP\LAPS

This completes the customization of LCU command files and response files.

Chapter 5. Disk Partitioning for VisuallInfo Systems

In this chapter we will discuss disk partitioning, a recommended organization principle for personal computers, that is crucial for the performance, ease of operation and maintainability of VisuallInfo systems.

The following recommendations are the result of performance tests by the VisuallInfo performance experts and personal experience in running and maintaining large, complex personal computer networks.

The VisuallInfo CID Utilities and the response files provided with this book follow the recommendations expressed in this section, but they can be modified if necessary to suit your particular needs.

The REXX program **PARTDISK.COMD** provides the means to automate the process of partitioning the disk(s) following the recommendations of this section. PARTDISK inspects the number of fixed disk drives available and their size and makes intelligent decisions about how to partition and format them.

If the disk partitioning suggested here cannot be used in your installation, you can partition the disk(s) in a different way or you can leave the disk(s) as they are. In both cases you should change the LCU command files and the response files provided with this book to reflect these changes.

5.1 Main Areas of Disk Activity in VisuallInfo Systems

The main areas of disk activity in a VisuallInfo system are:

- Staging Area
- Library Server tables, indices and log
- LAN-based binary Object Server data (LBOS)
- Object Server tables, indices and log
- SWAPPER.DAT
- Compiler work areas
- Printer spooling

These areas will be discussed in the following sections.

5.1.1 Staging Area

The staging area is an intermediate storage for objects. Every object entering the system first goes to the staging area and then, when certain conditions are met, to the first storage class, usually DASD. Every object that is fetched from the LBOS (LAN-based Object Server) is placed in the staging area and processed from there.

The control of objects in the Staging Area is performed by two concurrently operating programs:

- The **Destager** transfers the data and marks every transferred object as purgeable from the Staging Area.
- The **Purger** deletes all objects marked as purgeable from the Staging Area.

Destaging and purging are triggered by one of the following events:

- The **Destager cycle time** has expired. This is an arbitrary time set by the systems administrator, which can be set to the minimum of 1 minute to trigger almost immediate transfer to the first storage class area. Since the Destager and Purger are processor and disk intensive tasks, it is advisable to activate them during hours of relative tranquility, for example at night if the Staging Area is sufficiently large to hold all objects entered during a working day. The tradeoff is a relatively long residence on the Staging Area, which is a temporary area.

If the operating conditions of the application call for immediate destaging and the rate of object arrival is high, the Staging Area will have by far the most intensive disk activity in the system. Plan accordingly and allocate a fast drive for the Staging Area.

- The **occupancy threshold** of the Staging Area has been reached. This is an arbitrary percentage value set by the systems administrator to trigger destaging and purging based upon area occupied.

Be aware that destaging and purging is done by separate threads, and that as a result the Staging Area might continue to grow if the rate of object arrival is high. As a preventive measure, be sure to allocate enough space for the Staging Area to prevent the clogging of the system. If the number of available fixed disks permits it, allocate a full drive to the Staging Area.

5.1.2 Library Server Tables, Indices and Logs

This is an area of intense activity because many table, index and log updates are necessary for every object entering the system. Also, every query generates considerable disk activity as the indices and tables are accessed.

Follow the performance tuning recommendations given in *Database2/2 Guide, S62G-3663* and if you have enough fixed disk drives, put the database log on a separate drive. Further performance improvements can be achieved following the recommendations given in Appendix M, "Tips from the VisualInfo Performance Team" on page 175.

5.1.3 LAN-based Object Server Data (LBOS)

This is where the objects are stored. Typically the long-term storage class will reside on optical disks, however it could also reside on a Redundant Array of Independent Disks (RAID), or on simple magnetic disk drives. Depending upon the size of the objects, considerable amounts of data can be moved to/from the LBOS area. The VisualInfo Sizer tool can help in estimating the size for the LBOS area.

The disk activity for the LBOS area is characterized by large data transfers and relative small disk arm movements. The disk activity for the Library Server DB2/2 tables, indices and log is best described as relatively small data transfers with intensive disk arm movement.

5.1.3.1 RAID Levels

RAID technology offers an alternative to optical disks for object storage. RAID also offers redundancy and fault tolerance, two vital factors for backup and recovery. We would like to point out several facts about RAID:

1. There is no official committee assigned to establish RAID standards.
2. The higher level numbers do not mean better, or more performance implementations. The levels identify different designs, that may be better or worse depending upon the circumstances of the application.

3. A short summary of RAID levels and what they mean:

- RAID 0** Disk stripping, high-performance, no data redundancy.
- RAID 1** Mirrored or shadowed disks. All data is present twice. Read performance can be improved if two drives can supply data simultaneously. Write performance is worse than that of a comparable single-drive system.
- RAID 2** Bit-interleave across all drives in the array, including several drives for ECC and parity bits. Developed for mainframes. Too robust (and expensive) for personal computers.
- RAID 3** Byte-interleave across all drives and only one drive for ECC. High data transfer rates, but only one I/O request can be processed at a time since all drives are involved in the operation.
- RAID 4** Block-interleave across all drives and only one drive for parity. Multiple reads are possible, but the parity drive is involved in every operation, effectively making all accesses single-threaded.
- RAID 5** Block-interleave across all drives, including parity information. The parity information for a data block is stored on another drive, allowing data reconstruction if a drive fails. This is a true multi-threaded I/O system.
- RAID 6** Like RAID 5, but with two sections of each disk set aside for parity. Highly redundant, safer, and more expensive than RAID 5.
- RAID 1/0** Sometimes called RAID 10. It is a combination of RAID 1 and RAID 0.

For VisualInfo Library and Object Servers used in production environments, RAID level 1 (Disk Mirroring) and level 5 (Data Striping and Fault Tolerance) seem to be the most adequate.

5.1.4 Object Server Tables, Indices and Log

The workload caused by table, index and log updates in the Object Server database is much lower than the comparable activity on Library Servers. If there are enough fixed disks available you might consider putting the database log on a dedicated drive, but this is not a high-priority action. Further performance improvements can be achieved following the recommendations given in Appendix M, "Tips from the VisualInfo Performance Team" on page 175.

5.1.5 SWAPPER.DAT

This is an area where the recommendations for performance optimization are simple and straightforward: install enough memory to avoid disk activity.

For a Standard Server running on a 50Mhz processor and serving a maximum of 50 clients, the size of SWAPPER.DAT will probably not change if the machine has 48MB of memory or more. This behavior changes in our experience according to the number of clients being served and to the speed of the processor being used.

The size of SWAPPER.DAT does increase for machines with 32MB and a 50 Mhz processor, but this happens probably during the initialization period and a stable size is reached afterwards.

5.1.6 Compiler Work Areas

Program development activity (compile, link, bind, etc.) occurs in VisualInfo Library Servers when dynamic SQL queries are converted to static queries.

We recommend that all conversions take place before going into production, and only in periods of relative tranquility afterwards. Query conversion disrupts the normal activity of the Library Server, which by itself places a heavy load on system resources, and penalizes the performance of the system.

5.1.7 Printer Spooling

Do not combine heavy print job activity with VisualInfo Library or Object Servers. Printing on these systems should remain an exceptional activity.

5.2 Partitioning Single-Drive Systems

Single-drive systems are not recommended as VisualInfo servers except for demonstration purposes or for low-volume applications. The partitioning scheme described in this section applies to single-drive VisualInfo Servers and to VisualInfo clients and stand-alone systems. It is the scheme implemented by the general-purpose PARTDISK program. See Figure 5 on page 29 for an illustration on the partitioning of a single-disk system.

5.2.1 Boot Manager

The Boot Manager allows the coexistence of several operating systems or several operating system versions. It also implements the SETBOOT command, which enables programmed system restarts based on timer or other events. With the Boot Manager and an OS/2 Maintenance System installed you can automatically schedule and execute maintenance operations on VisualInfo clients and servers, a feature system administrators appreciate. The Boot Manager should be set up to boot the OS/2 Production System by default.

5.2.2 OS/2 Maintenance System

An OS/2 Maintenance System is a single-session OS/2 system without Presentation Manager. It is the same system that is started by booting from the OS/2 Installation Diskette, inserting Disk 1 and pressing ESC at the first prompt. By having all the components in a bootable partition, the maintenance system can be started much more quickly, without dependence upon the OS/2 installation diskettes.

A Maintenance System assists in the recovery from disk problems and the installation of CSDs (Corrective Service Diskettes) without changing the startup conditions of the OS/2 Production System. It is also possible to update components of the Production System that are always in use, such as the display drivers. It is a valuable asset for the maintenance of VisualInfo clients and servers and increases the availability and dependability of the system.

The format of this partition can be FAT or HPFS. Its size should be at least 5MB.

Boot Manager	Special partition. 1MB.
C: OS/2 Maintenance System	Primary partition. At least 5MB. FAT or HPFS.
D: Application Partition	Logical partition. Rest of the disk. FAT or HPFS.
E: OS/2 Production System	Logical partition. 55MB. FAT or HPFS
F: SSSDOT Partition (Spooling, Swapping, Staging, Database, Objects and Temporary use)	Logical partition. 80MB for a demonstration system. Use the VisualInfo Sizer for production systems. HPFS only.

Figure 5. Recommended partitioning for a single-drive system. This is the partitioning scheme implemented by PARTDISK.CMD.

5.2.3 Application Partition

This is the partition where all applications should be installed: VisualInfo, CM/2, DB2/2 (without databases), C/C++ Tools, the OS/2 Toolkit and all other applications except NTS/2, which goes in the OS/2 Production Partition.

By putting all applications in a partition above the OS/2 Production Partition you avoid the effort of backing up and reinstalling all applications every time a new, larger version of the Operating System is installed.

The format of this partition can be FAT or HPFS. Its size is what remains free after subtracting the sizes of all other partitions from the total disk size. For a VisualInfo standard server (Library, Object and Configuration servers combined on one machine), this partition should have at least 60MB. For a VisualInfo Client, a minimum size of 40MB is adequate. Allocate more if other applications will share this partition. The sample installation files delivered with this book allocate 200MB for the application partition.

5.2.4 OS/2 Production System

This is the partition to be booted for daily work. It is also the partition where NTS/2 should be installed, not because NTS/2 requires it, but because other applications (like LAN Server 3.0) expect it to be in the boot partition. The Spool directory and the SWAPPER.DAT file should **not** be in this partition since they create considerable fragmentation and subsequently performance reduction.

By putting the operating system in a partition of its own, without any co-resident applications (except NTS/2), you can follow the recommended installation procedure for OS/2, which is to format the partition. You will only have to re-install NTS/2 every time you install a new version of OS/2. All other applications will remain as they were.

The format of this partition can be FAT or HPFS. Its size is the sum of:

- the required size for OS/2.
- the required size for NTS/2.
- some free space for use by applications that put temporary files in the boot partition during their installation, like CM/2 and VisuallInfo.

For a full installation of OS/2 2.1, including all of the online documentation, NTS/2 and 10MB of reserved free space this partition should have a size of 55MB. Remember, SWAPPER.DAT will not be in this partition.

5.2.5 SSSDOT Partition

The partition for Spooling, Swapping, Staging, Database, Objects and Temporary use (SSSDOT) will contain the spool directory and files, the SWAPPER.DAT file, the Staging Area for VisuallInfo Object Servers, the DB2/2 databases for VisuallInfo Library Servers, the Objects and the temporary work spaces for compilers. This is the partition where most of the fragmentation will take place. It is recommended that the databases be reorganized periodically and the whole partition be backed up regularly.

Single-disk systems do not allow the distribution of disk accesses to several disk arms, but by putting the most frequently accessed areas (SWAPPER.DAT, Staging Area, DB2/2 databases and image objects) in the same partition the movement of the single available disk arm is reduced and the access time shortened.

The format of this partition should be HPFS. Its size is the sum of:

- The size of SWAPPER.DAT, at least 40MB for a Server.
- The sizes for the Staging Area and the databases, derived from the output of the VisuallInfo Sizer.
- The size for temporary use by compilers, fax applications, and so on.

For a demonstration system, 80MB should be adequate for this partition.

Note on SWAPPER.DAT growth

For a VisuallInfo Standard Server (Library, Object and Configuration Servers combined in a single machine), the size of SWAPPER.DAT will probably not change if the machine has 48MB of memory or more, although it does increase for machines with 32MB. This information should be considered when estimating the size of the SSSDOT partition.

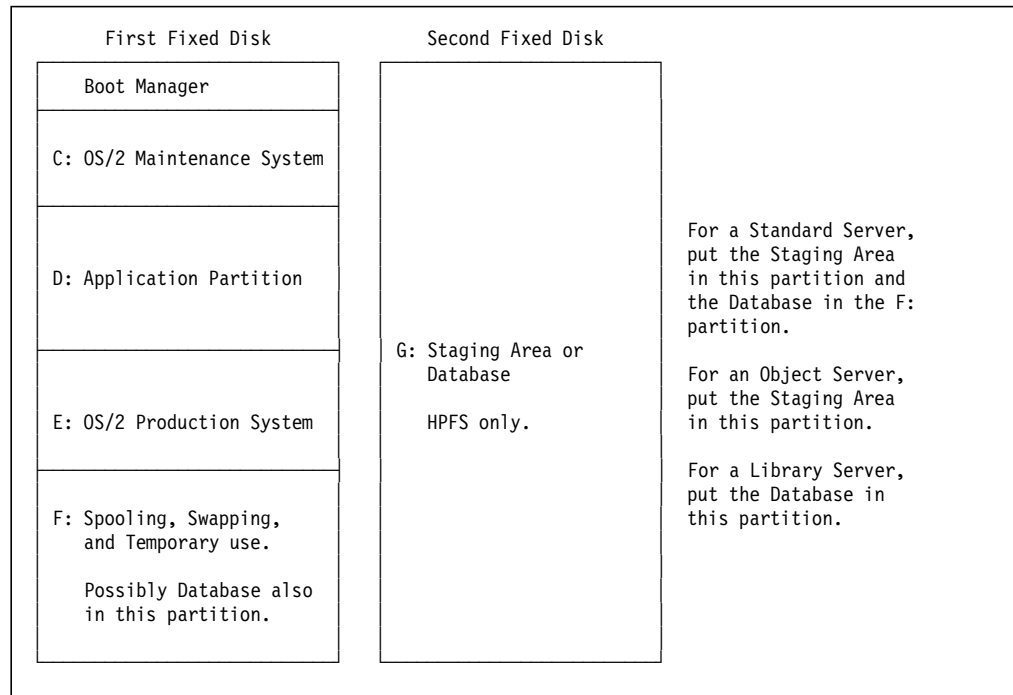


Figure 6. Recommended partitioning for a two-drive system. This is the partitioning scheme implemented by PARTDISK.COMD.

5.3 Partitioning Two-Drive Systems

Two-drive systems provide better conditions to improve the performance of VisualInfo servers because the disk activity can be distributed to two disk arms, resulting in simultaneous arm movement and interleaved data transmission. The PARTDISK program implements this partitioning scheme. See Figure 6 for an illustration on the partitioning of a two-disk system.

5.3.1 First Fixed Disk

The first disk is partitioned in the same manner as for a single-disk system. Here we also install the Boot Manager and an OS/2 Maintenance System for the same reasons we do it on a single-drive system. We also keep the Application and the OS/2 Production System partitions separated from the high-fragmentation partition where SWAPPER.DAT, the Spool directory and temporary files are located.

Note on SWAPPER.DAT growth

For a VisualInfo Standard Server (Library, Object and Configuration Servers combined in a single machine), the size of SWAPPER.DAT will probably not change if the machine has 48MB of memory or more, although it does increase for machines with 32MB. This information should be considered when estimating the size of the SSSDOT partition.

5.3.2 Second Fixed Disk

The second disk is allocated a single logical partition. The use of this partition is determined by the type of server being installed:

- For an **Object Server** or a **Standard Server** (Library, Object and configuration servers on the same machine), put the Staging Area on this partition and keep the Database, the DB2/2 Transaction Log and SWAPPER.DAT on partition F: (the SSSDOT partition). The amount of data transferred to/from the Staging Area usually is larger than the amounts involved in Database or SWAPPER.DAT accesses. By allocating a dedicated disk arm to the Staging Area we will optimize its processing.
- For a **Library Server**, put the Database on this partition and keep SWAPPER.DAT and the DB2/2 Transaction Log on partition F: (the SSSDOT partition). The main transfer areas will then have their own separate disk arm.

5.4 Partitioning Three-Drive Systems

Three-drive systems provide even better conditions to improve the performance of VisualInfo servers because the disk activity can be distributed to three disk arms, resulting in simultaneous arm movement and interleaved I/O. Also, three-drive systems may offer better conditions for the synchronization between the objects and the database due to lesser time difference between table, index and object commits. They also improve the reliability of the system. Three drives are the minimum recommended by the VisualInfo performance team for the configuration of Standard Servers (Object, Library and Configuration servers on one machine).

The PARTDISK program implements this partitioning scheme. See Figure 7 on page 33 for an illustration on the partitioning of a three-disk system.

5.4.1 First Fixed Disk

The first disk is partitioned in the same manner as for a single-disk system. Here we also install the Boot Manager and an OS/2 Maintenance System for the same reasons we do it on a single-drive system. We also keep the Application and the OS/2 Production System partitions separated from the high-fragmentation SSSDOT partition where SWAPPER.DAT, the Spool directory, the DB2/2 Transaction Log and temporary files are located.

5.4.2 Second Fixed Disk

The second disk is allocated a single logical partition. We suggest that you put the Staging Area in this partition. The amount of data transferred to/from the Staging Area is larger than the amounts involved in Database or SWAPPER.DAT accesses. By dedicating a disk arm to the Staging Area we will optimize its processing.

5.4.3 Third Fixed Disk

The second disk is allocated a single logical partition. We suggest that you put the Database in this partition, but keep the Transaction Log in the SSSDOT partition. By dedicating a disk arm to the Database we will optimize its processing.

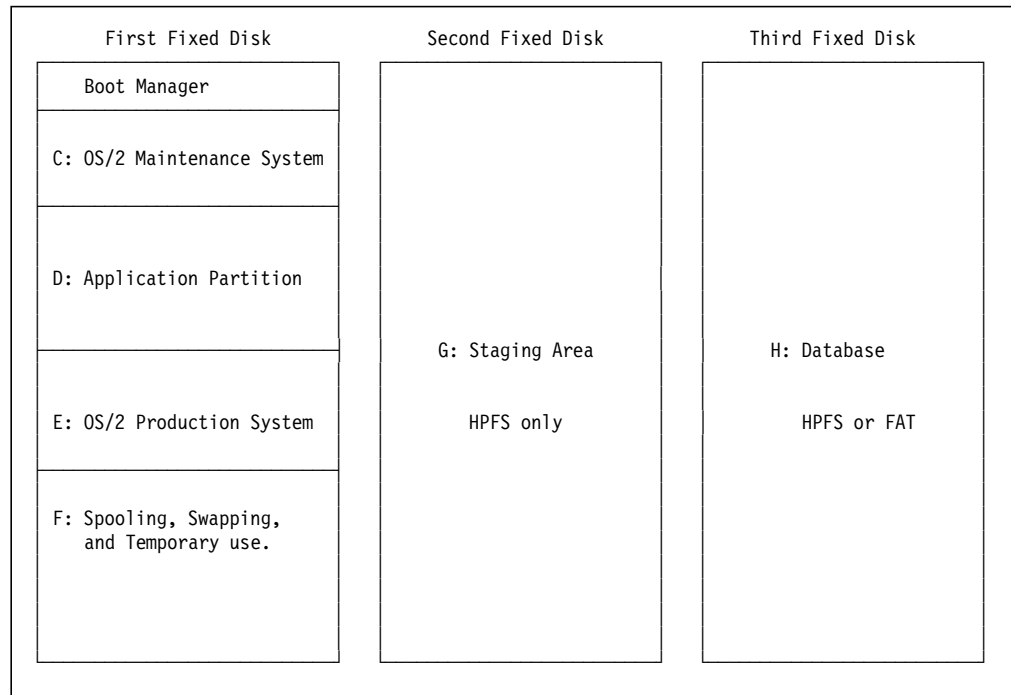


Figure 7. Recommended partitioning for a three-drive system. This is the partitioning scheme implemented by PARTDISK.CMD.

Note on SWAPPER.DAT growth

For a VisualInfo Standard Server (Library, Object and Configuration Servers combined in a single machine), the size of SWAPPER.DAT will probably not change if the machine has 48MB of memory or more, although it does increase for machines with 32MB. This information should be considered when estimating the size of the SSSDOT partition.

5.5 PARTDISK Parameters

The parameters that can be passed to PARTDISK are positional, separated by blanks. The following is the parameter specification in the LCU command file:

```

/*— Product variables for disk partitioning and Boot Mgr installation —*/
x.partdisk = 1
x.1.name='PARTDISK PROCEDURE'
x.1.statevar = ''
x.1.instprog = 'X:\EXE\UTI\PARTDISK.CMD',
client,
5,
200,
55,
80
x.1.rspdir = ''
x.1.default = ''
/* Do not define a state variable */
/* Path to program */
/* Name of client machine */
/* Size of OS/2 Maintenance partit*/
/* Min. application partition size*/
/* OS/2 partition size */
/* Min. temp. partition size */

```

These are the PARTDISK parameters in detail:

Workstation name

Name of the workstation, as entered at the LCU prompt for a client name. This is usually passed through the **client** variable in the LCU command file.

Size of Maintenance Partition

Size of the partition for the OS/2 Maintenance System. The LCU command files provided with this book specify 5MB. This will leave about 348K of free space in the partition. Allocate more if you plan to install other components in this partition.

Minimum size of the application partition

This is used to make decisions on where to put this partition. For a VisualInfo Standard Server (Library, Object and Configuration server), specify at least 60MB. For a VisualInfo Client specify 40MB or more. The LCU command files delivered with this book specify **200MB**.

Size of OS/2 Production System partition

Specify a size to hold OS/2 2.1, NTS/2 and some reserve free space for installation programs that create temporary files on the boot partition (like VisualInfo and CM/2). For a full OS/2 installation, specify **55MB**. This is also specified by the LCU command files.

Minimum size of SSSDOT partition

Specify **80MB** for a single-drive VisualInfo server or for a demonstration machine. Specify **50MB** for a VisualInfo client. Specifying this value as **0** will force the allocation of the SSSDOT partition to the second physical disk in the system. The LCU command files delivered with this book specify **80MB**.

5.6 Other Disk Partitioning Schemes

If you do not partition the Disk(s) according to the recommendations of this chapter, you should change the following lines of the LCU command file:

```

/*
Change the following lines if a different partitioning scheme is used.
*/
mntdr = 'C:';          /* OS/2 maintenance partition */
dosdr = '';           /* DOS partition */
appdr = 'D:';         /* Application partition */
os2dr = 'E:';         /* OS/2 production partition */
tmpdr = 'F:';         /* Temporary space partition */

```

You should also change all response files where a drive letter is expected as the target of some installation action. The files to be changed are:

- STDSERV.CMD
- STDCLIEN.CMD
- STDALONE.CMD
- DEFAULT.CMD
- INSTCPP.CMD
- PARTDISK.CMD
- INSTIAAU.CMD
- INSTTK21.CMD
- UPDCONF.CMD
- UPDINI.CMD

- SERVICE.INI
- STDSERV.RSP
- STDCLIEN.RSP
- STDALONE.RSP
- CM2CLIEN.RSP
- LAPSUNIV.RSP
- OS2V21.RSP
- DB2.RSP
- CM2SERVR.RSP
- CM2BASE.RSP
- LAPSSERV.RSP
- LAPSCLIEN.RSP

These changes are not necessary if you follow the recommendations for disk partitioning given in this chapter.

Chapter 6. Installation of the OS/2 Production System

In this chapter we will describe the CID installation of OS/2 2.1 for a VisualInfo system.

The redirected installation of OS/2 2.1 is done by the SEINST program. These are the SEINST parameters specified in the LCU command file:

```
/*----- Product variables for OS/2 2.1 installation -----*/
x.seinst = 3
x.3.name='OS/2 2.1'
x.3.statevar = 'CAS' x.3.name          /* State variable name          */
x.3.instprog = 'X:\EXE\OS2V21\SEINST.EXE', /* Path to installation program */
              '/b:'os2dr,              /* Boot drive after installation */
              '/s:X:\IMG\OS2V21',      /* Path to diskette images      */
              '/t:A:',                 /* Boot drive before installation */
              '/l:L:\OS2V21\client.LOG', /* Path to log file             */
              '/r:'                    /* Autoselect response file     */
x.3.rspdir = 'X:\RSP\OS2V21'          /* Path to response file        */
x.3.default = 'OS2V21.RSP'           /* Default response file name   */
```

The parameters for SEINST are explained in detail in the publication *OS/2 Version 2.1 Remote Installation and Maintenance*.

6.1 Response File for OS/2 Installation

The VisualInfo CID Installation Utilities delivered with this book include a file called OS2V21.RSP, which provides the responses for the installation of an OS/2 production system for VisualInfo clients and servers. You should change this file to adapt it to your needs. The responses most likely to be changed are:

- Country code.
- Country keyboard.
- Default printer and printer port.
- Display adapter (specify VGA if you plan to install the software for the Image-I Adapter/A).
- Primary code page.
- Mouse.

Refer to Appendix A, "Response File for OS/2 2.1 Installation" on page 137 for a listing of the OS2V21.RSP file.

6.2 Changes to CONFIG.SYS

The OS/2 installation generates a CONFIG.SYS file with a SWAPPATH statement that points to the OS/2 boot drive. As explained under Chapter 5, "Disk Partitioning for VisualInfo Systems" on page 25, the SWAPPER.DAT file should be located on the SSSDOT partition to keep the fragmentation it generates away from the OS/2 partition. The CONFIG.SYS changes to accomplish this are performed by UPDCONF.COM, a REXX program that also inserts a

SET RESTARTOBJECTS=STARTUPFOLDERONLY

statement to prevent undesired restarts after an emergency shutdown or a power failure, as recommended in the README file of VisualInfo. The UPDCONF

parameters specified in the LCU command file are shown in the following example:

```
/*— Product variables for CONFIG.
SYS update prior to first IPL -----*/
x.updconf = 2
x.2.name='UPDCONF PROCEDURE'
x.2.statevar = 'CAS_'x.2.name          /* State variable name      */
x.2.instprog = 'X:\EXE\UTI\UPDCONF.CMD', /* Path to program         */
              os2dr                    /* OS/2 partition          */
x.2.rspdir   = ''
x.2.default  = ''
```

Chapter 7. NTS/2 Installation

NTS/2, previously known as LAN Adapter and Protocol Support (LAPS), is installed with the assigned Token-Ring address and the IEEE 802.2 protocol (APPC) for VisuallInfo. The NETBIOS protocol is also installed because the rest of the CID installation must be performed after booting the OS/2 Production System for the first time. These are the LAPS parameters specified for a VisuallInfo server in the LCU command file:

```
/*— Product variables for LAPS installation —*/
x.laps = 4
x.4.name=' LAPS'
x.4.statevar = 'CAS_'x.4.name          /* State variable name          */
x.4.instprog = 'X:\IMG\LAPS\LAPS.EXE', /* Path to installation program */
              '/e:MAINT',             /* Maintenance environment     */
              '/s:X:\IMG\LAPS',       /* Path to product images      */
              '/t:'os2dr'\',         /* Target drive for installation */
              '/l:L:\LAPS\client'.LOG', /* Path to log file            */
              '/r:'                   /* Autoselect response file    */
x.4.rspdir   = 'X:\RSP\LAPS'          /* Path to response file       */
x.4.default  = 'LAPSSERV.RSP'        /* Response file name          */
```

For a VisuallInfo client the parameters are almost identical. The only difference is the name of the LAPS response file, which is LAPSCLE.RSP.

7.1 Response File for NTS/2 Installation

The VisuallInfo CID Installation Utilities delivered with this book include two files called LAPSSERV.RSP and LAPSCLE.RSP, which provide the responses for the installation of LAPS for an IBM Token-Ring adapter (4Mb or 4/16Mb) with two protocols: NETBIOS and IEEE802.2 (APPC). You should change this file to adapt it to your needs. The responses most likely to be changed are:

- Token-Ring address.
- LAN adapter used.
- Transmission parameters

Refer to Appendix B, "Response File for LAPS Installation on a Server" on page 149 for a listing of the LAPSSERV.RSP file and to Appendix C, "Response File for LAPS Installation on a Client" on page 151 for a listing of LAPSCLE.RSP.

The transmission parameters defined in the response files LAPSSERV.RSP and LAPSCLE.RSP will work with any Token-Ring adapter that has 16KB of RAM and is set to 4Mbps. This is to ensure that the basic response files will work in any installation. The transmission parameters should be optimized for VisuallInfo if your installation is equipped with better adapters, like the TR 4/16 Mbps Adapter/A. If you have these adapters, use the transmission parameters presented in the following table:

<i>Table 3. Recommended Token-Ring Adapter Transmission Parameters</i>			
Parameter	Library Server	Object Server	Client
Maximum number of queued transmits	30	30	30
Number of receive buffers	12	6	12
Receive buffer size	1096	2040	1096
Number of adapter transmit buffers	1	2	1
Transmit buffer size for 16Mbps setting	17952	17952	17952
Transmit buffer size for 4Mbps setting	4456	4456	4456
Note: The adapter must be set to use 32KB of RAM.			

If you are using IBM LANStreamer adapters for your VisualInfo servers, the recommended values for the NDIS Device Driver are:

<i>Table 4. Recommended LANStreamer NDIS Device Driver Parameters</i>		
Parameter	Library Server	Object Server
Maximum number of queued transmits	31	31
Minimum adapter driver receive buffers	20	20
Size of adapter driver receive buffer	2048	2048

The VisualInfo CID Utilities also include another LAPS response file that can be used for any machine, without changing the response for the Token-Ring address. This response file uses the Universally Administered Address built into each Token-Ring adapter. This response file is called LAPSUNIV.RSP.

Chapter 8. SRVIFS Requester Activation and LCU Installation

This chapter describes the activation of two SRVIFS requesters on the OS/2 Production System and the installation of the LAN CID Utility (LCU).

These activities are presented together because they are closely related functions.

The SRVIFS parameters specified in the LCU command file are:

```
/*— Product variables for first SRVIFS requester activation ————*/
x.thinifs1 = 5
x.5.name='SRVIFS REQUESTER'
x.5.statevar = 'CAS_'x.5.name /* State variable name */
x.5.instprog = 'X:\IMG\SRVIFS\THINIFS.EXE', /* Path to installation program */
              '/s:X:\IMG\SRVIFS', /* Path to product images */
              '/t:'os2dr'\SRVIFSRQ', /* Target for installation */
              '/tu:'os2dr'\', /* Target for CONFIG.SYS update */
              '/l1:L:\SRVIFS\client.LOG', /* Path to log file */
              '/req:client, /* Requester NETBIOS name */
              '/srv:CIDSRV', /* Server NETBIOS name */
              '/d:X' /* Letter for redirected drive */
x.5.rspdir = ''
x.5.default = ''

/*— Product variables for second SRVIFS requester activation ————*/
x.thinifs2 = 6
x.6.name='SECOND SRVIFS REQUESTER'
x.6.statevar = 'CAS_'x.6.name /* State variable name */
x.6.instprog = 'X:\IMG\SRVIFS\THINIFS.EXE', /* Path to installation program */
              '/s:X:\IMG\SRVIFS', /* Path to product images */
              '/t:'os2dr'\SRVIFSRQ', /* Target for installation */
              '/tu:'os2dr'\', /* Target for CONFIG.SYS update */
              '/l1:L:\SRVIFS\client.LOG', /* Path to log file */
              '/req:client, /* Requester NETBIOS name */
              '/srv:\\CIDSRV\LOG', /* Server NETBIOS name and alias */
              '/d:L' /* Letter for redirected drive */
x.6.rspdir = ''
x.6.default = ''
```

The two redirected drives are assigned the letters X: and L:.

- **X:** is assigned to read-only branches of the CID Directory Structure.
- **L:** is assigned to the log branch of the Directory Structure, where writing is permitted. The present version of the VisualInfo installation program (GA version 1.0) expects its response files to be on drives with read/write authority.

The installation of the LAN CID Utility (LCU) sets up the CONFIG.SYS and STARTUP.CMD of the OS/2 Production System to establish a NETBIOS session with the Code Server to continue the CID installation. This is a standard procedure for CID installations following the SRVIFS method. The parameters in the LCU command file are:

```

/*----- Product variables for LCU installation -----*/
x.casinstl = 7
x.7.name=' LCU'
x.7.statevar = '' /* State variable name */
x.7.instprog = 'X:\IMG\LCU\CASINSTL.EXE', /* Path to installation program */
              '/cmd:X:\CLIENT', /* Path to LCU command file */
              '/tu:'os2dr, /* Target for CONFIG.SYS update */
              '/pl:X:\DLL\OS2V21;X:\IMG\LCU;X:\EXE\OS2V21;X:\EXE\UTI;',
              '/pa:X:\IMG\LCU', /* Path to CASAGENT.EXE on server */
              '/l1:L:\LCU\client.LOG', /* Path to log file */
              '/l2:L:\LCU\SRVIFS_REQ.LOG', /* Generated path to log file */
              '/D' /* Run DEFAULT.CMD if necessary */
x.7.rspdir = ''
x.7.default = ''

```

The machine being installed will be automatically rebooted after this step. Queue 2 of the LCU command file will be then executed.

The lines added to CONFIG.SYS on the OS/2 Production System are:

```

CALL=E:\SRVIFSRQ\SRVATTCH.EXE X: CIDSRV
DEVICE=E:\SRVIFSRQ\SRVIFS.SYS
IFS=E:\SRVIFSRQ\SRVIFSC.IFS STDALONE
CALL=E:\SRVIFSRQ\SRVATTCH.EXE L: \CIDSRV\LOG
SET CAS_STATE=8
SET CAS_VISUALINFO STANDARD SERVER=0
SET CAS_VISUALINFO STANDARD CLIENT=0
SET CAS_VI STARTUP PROCEDURE GENERATION=0
RUN=X:\IMG\LCU\SRVREXX.EXE

```

The STARTUP.CMD generated for the OS/2 Production System is:

```

X:\IMG\LCU\CASAGENT.EXE /CMD:X:\CLIENT /D /L1:L:\LCU\SRVIFS_REQ.LOG
CMD
EXIT

```

Chapter 9. Installation of the OS/2 Maintenance System

The installation of an OS/2 Maintenance System is performed by the SEMAINT program. This program is bound in the CID bundle of Disk 7 of the OS/2 2.1 installation diskettes. It is installed on the Code Server Directory Structure as part of the process done by the PREPSERV program. Its parameters in the LCU command file are:

```
/*— Product variables for OS/2 maintenance system installation —*/
x.semaint = 18
x.18.name='OS/2 2.1 Seed System'
x.18.statevar = 'CAS_'x.18.name /* State variable name */
x.18.instprog = 'X:\_EXE\OS2V21\SEMAINT.EXE', /* Path to installation program */
              ' /S:X:\IMG\OS2V21', /* Path to diskette images */
              ' /T:'mntdr'\SERVICE', /* Target directory */
              ' /B:'mntdr', /* Boot drive for maintenance sys */
              ' /L1:L:\OS2V21\client.LOG' /* Path to log file */
x.18.rspdir = '' /* Path to response file */
x.18.default = '' /* Default response file name */
```

This installs an OS/2 Maintenance System in the primary bootable partition designated by the variable **mntdr**. The partition should have at least 5MB, of which approximately 348KB will remain free. Allocate more space if you plan to install other components in this partition.

The OS/2 Maintenance System installed in this step will be set up for automatic connection to the Code Server later during the installation process. This is done by installing Thin LAPS, two SRVIFS requesters, and the LCU utility. We could have used the LAPS installed on the OS/2 Production System, but we believe that a maintenance system should be as independent as possible from the rest of the software installed on the same machine.

After everything is installed, if the OS/2 Maintenance System is selected from the Boot Manager panel, the system will display the prompt **Enter the client name**. Two courses of action are open:

- For **automatic maintenance**, type the name of an LCU command file stored in the CLIENT branch of the Code Server Directory Structure and press Enter. A NETBIOS session with the Code Server will be started and the LCU command file will be executed. If a session with the Code Server cannot be established, for example when the Code Server has not been started, the system goes into manual maintenance mode, as explained below.
- For **manual maintenance**, type any name that does not exist as a valid LCU command file, for example **Exit** and press Enter. The system will inform you that the procedure cannot be found, will terminate the LCU agent program, and you will have a single-session, full-screen OS/2 system ready for manual maintenance.

Set up this way, the OS/2 Maintenance System can be used for automatic or manual maintenance.

Chapter 10. Relocation of the SPOOL Directory

The installation of the OS/2 Production System created the SPOOL directory on the boot drive. In order to comply with the principle of concentration of high-fragmentation activity on the SSSDOT partition, we should move the SPOOL directory to this partition. This is done by creating the SPOOL directory in the SSSDOT partition, copying the contents of the old directory into the new one, deleting the old SPOOL directory and finally updating the relevant entry in the OS2.INI file.

These changes are done by UPDINI.COMD, a REXX program supplied with this book as part of the VisualInfo CID Utilities. UPDINI also changes other OS2.INI and OS2SYS.INI entries to adopt different colors from the ones generated by OS/2, change the way minimized objects are presented, etc. UPDINI contains comments that explain each activity in detail. Change the processing of this program to adapt it to your needs. The parameters of UPDINI in the LCU command file are shown in the following example:

```
/*— Product variables for setting the SPOOL directory to temporary space —*/
x.updini = 15
x.15.name='UPDINI PROCEDURE'
x.15.statevar = 'CAS_'x.15.name          /* State variable name      */
x.15.instprog = 'X:\EXE\UTI\UPDINI.COMD', /* Path to program         */
               tmpdr                    /* Parameter is temp space partit.*/
x.15.rspdir   = ''
x.15.default  = ''
```

Chapter 11. Installation of the Image-I Adapter/A Software

The VisualInfo CID Utilities diskette include INSTIAAU.CMD, a REXX program to install the software for the Image-I Adapter/A in unattended mode. This installation has been deactivated in the LCU command files delivered with this book by commenting out the relevant statements, but all definitions are still present and the installation can be activated by removing the comment indicators from the fourth LCU installation queue.

OS/2 installation note

If you plan to install the software for the Image-I Adapter/A, you should install OS/2 with VGA support. The OS/2 response file should include the response **DisplayAdapter=4**.

The parameters of INSTIAAU in the LCU command file are:

```
/*—— Product variables for Image-I Adapter/A unattended installation ——*/
x.instiaau = 22
x.22.name=' Image-I Adapter/A Support'
x.22.statevar = 'CAS_'x.22.name          /* State variable name          */
x.22.instprog = 'X:\EXE\UTI\INSTIAAU.CMD' /* Path to installation program */
x.22.rspdir = ''
x.22.default = ''
```

Part of the Image-I Adapter/A software installation involves changing the display driver of OS/2, DISPLAY.DLL. This cannot be done while the OS/2 Production System is running. INSTIAAU uses the OS/2 Maintenance System to swap display drivers in the OS/2 Production System. The installation of the software for the Image-I Adapter/A involves four stages:

Stage 1 is initiated if the file \OS2\IBMIAA\OPTION.EXE does not exist and does the following:

1. Update CONFIG.SYS with IAA information (DEVICE= and SET)
2. Process the Device Driver Profile IAA.DDP and copy the files listed there to their appropriate directories. Create the directories if necessary. The file IBMIAA.DLL will be copied as IBMIAA.DLL, not as DISPLAY.DLL. The file SYSMONO.FON will be copied as SYSMONOI.FON to avoid name duplications. These files will be renamed during Stage 2.
3. Copy display-specific files to the \OS2\IBMIAA directory.
4. Generate desktop objects.
5. Generate the file STAGE2.CMD for the OS/2 maintenance system.
6. Modify the CONFIG.SYS of the OS/2 maintenance system to auto-execute STAGE2. the next time it is started.
7. Reboot the system from the maintenance partition to execute Stage 2.

Stage 2 is the execution of the STAGE2.CMD procedure by the OS/2 maintenance system. This should be an ordinary OS/2 command procedure, not a REXX program because maintenance systems created by SEMAINT do not have REXX capability. Stage 2 does the following:

1. Rename DISPLAY.DLL to DISPLAY.OLD.

2. Rename IBMIAA.DLL to DISPLAY.DLL.
3. Rename SYSMONO.FON to SYSMONO.OLD.
4. Rename SYSMONO_i.FON to SYSMONO.FON.
5. Reboot the system from the production OS/2 drive to start Stage 3.

Stage 3 is initiated if the file \OS2\IBMIAA\OPTION.EXE exists and the file STAGE2.CMD also exists in the OS/2 maintenance system. Its actions are:

1. Erase the STAGE2.CMD file from the OS/2 maintenance system.
2. Remove the modification to CONFIG.SYS to auto-execute STAGE2.CMD.
3. Exit with the return code x'0000' (no reboot or call back).

Stage 4 is initiated if the file \OS2\IBMIAA\OPTION.EXE exists and the file STAGE2.CMD does not exist on the OS/2 maintenance system. This stage is usually not executed, but it is included to handle accidental calls to this procedure after successful installation of the IAA support. The processing done is to exit with a return code of x'0000' (no reboot or call back necessary).

Chapter 12. CM/2 Installation

The installation of Communications Manager/2 is done by the CMSETUP program. Its parameters in the LCU command file are:

```
/*—— Product variables for CM/2 installation ——*/
x.cmsetup = 8
x.8.name='CM/2 1.0'
x.8.statevar = 'CAS_'x.8.name          /* State variable name          */
x.8.instprog = 'X:\IMG\CM2\CMSETUP.EXE', /* Path to installation program */
              'R:X:\RSP\CM2\CM2SERVR.RSP', /* Response file to be used    */
              'L1:L:\CM2\client.L1 ', /* Path to remote inst/conf log */
              'L2:L:\CM2\client.L2 ', /* Path to installation log    */
              'G:X:\IMG\CM2\CMWAIT', /* General path to other data file*/
              'S:X:\IMG\CM2', /* Path to image files          */
              'CR' /* The keywords are current keywds*/
x.8.rspdir = ''
x.8.default = ''
```

The parameter **/G:** should be noted here. It points to a directory in the Code Server Directory Structure where general files to be included can be located. This is necessary because the response file for CM/2 installation copies the CMWAIT utility, delivered with CM/2 as a Productivity Aid. CMWAIT is copied to the Code Server Directory Structure by the PREPSERV program.

CMWAIT can be used in startup procedures for VisualInfo servers and clients, immediately after starting CM/2. It waits until CM/2 has finished its initialization and the APPC Attach Manager is active, and then it allows the startup procedure to continue. CMWAIT avoids synchronization problems found when several products are to be started in sequence. It is a valuable asset to increase the operability of VisualInfo systems.

12.1 Response File for CM/2 Installation

The response file for the installation of CM/2 will generate a CM/2 configuration file that will be used only as a model by the VisualInfo installation program to generate another configuration file, which will be used for actual VisualInfo work.

Therefore it is not important to have accurate Token-Ring addresses in the CM/2 response file, but it is important that all CM/2 functions required by VisualInfo be installed following the directives of this response file. Actual Token-Ring addresses and other details should be provided accurately in the VisualInfo response file. The VisualInfo installation program will take the model CM/2 configuration file and generate a new one, with addresses and names extracted from its own response file.

The VisualInfo CID Installation Utilities delivered with this book include the files CM2BASE.RSP, CM2SERVR.RSP and CM2CLIEN.RSP. These are the response files used for the CM/2 installation.

CM2BASE is the basic response response file. It is included from CM2SERVR and CM2CLIEN.

CM2SERVR and CM2CLIEN are specific response files for VisualInfo servers and clients. They include CM2BASE and then modify some responses to customize for the specific machine being installed. You should change these files to adapt them to your needs. The responses most likely to be changed are:

- Local CP name (fully qualified).
- Local CP Node ID.
- Logical Link Destination Address.

Refer to Appendix G, “Basic Response File for CM/2 Installation” on page 159, Appendix E, “Response File for CM/2 Installation on a VI Server” on page 155 and Appendix F, “Response File for CM/2 Installation on a VI Client” on page 157 for a listing of the CM2BASE, CM2SERVR and CM2CLIEN response files.

Chapter 13. DB2/2 Installation

The CID installation of DB2/2 is done by the DBCID program. Its parameters in the LCU command file are:

```
/*—— Product variables for DB2/2 Single User installation ——*/
x.instdb2 = 14
x.14.name='DB2/2 Client/Server'
x.14.statevar = 'CAS_'x.14.name          /* State variable name          */
x.14.instprog = 'X:\IMG\DB2SU\DBCID.EXE', /* Path to installation program */
              '/L1:L:\DB2SU\client.L1', /* Path to remote installation log*/
              '/TMP:F',                /* Drive for temporary use      */
              '/R:X:\RSP\DB2SU\DB2.RSP' /* Path to response file        */
x.14.rspdir   = ''
x.14.default  = ''
```

The parameter **/TMP:** directs DBCID to allocate all of the temporary files during the installation to the partition for temporary space.

The DB2/2 installation performed here does not tune the system for optimum performance in a VisuallInfo environment. This will be done later in the installation process by the DBTUNEUP program.

13.1 Response File for DB2/2 Installation

The VisuallInfo CID Installation Utilities delivered with this book include the file DB2.RSP. This is the response file used for the DB2/2 installation. It is a relatively simple and straightforward response file for the installation of a DB2/2 Standalone system, as required for VisuallInfo. In most cases it will not be necessary to modify this file.

Refer to Appendix H, "Response File for DB2/2 Installation" on page 165 for a listing of the DB2.RSP file.

Chapter 14. C/C++ Tools and Toolkit Installation

The installation of these two products is presented together because both of them are needed for VisualInfo Library Servers.

14.1 C/C++ Tool Installation

The VisualInfo CID Utilities diskette delivered with this book include INSTCPP.COM, a REXX program to install the C/C++ Tools product in unattended mode. Its parameters in the LCU command file are:

```
/*— Product variables for C/C++ Tools installation —*/
x.instcpp = 17
x.17.name='C/C++ Tools'
x.17.statevar = 'CAS_'x.17.name          /* State variable name      */
x.17.instprog = 'X:\EXE\UTI\INSTCPP.COM', /* Path to installation program */
              appdr          /* Drive letter for C/C++ Tools */
x.17.rspdir = ''
x.17.default = ''
```

The INSTCPP program does the following:

- Create the IBMCPP directory and copy all the files into it.
- Create the C/C++ Tools desktop folder and all program objects within it.
- Update the CONFIG.SYS file of the OS/2 Production System with C/C++ Tools information. The statements changed are:
 - LIBPATH
 - SET PATH
 - SET DPATH
 - SET HELP
 - SET BOOKSHELF
 - SET LIB
 - SET INCLUDE

Also, two lines are added to CONFIG.SYS. They are:

```
SET TMP=F:\
SET TZ=EST5EDT,0,0,0,0,0,0,0,0,0
```

14.2 OS/2 Toolkit Installation

The VisualInfo CID Utilities diskette delivered with this book include INSTTK21.COM, a REXX program to install the OS/2 Toolkit in unattended mode. Its parameters in the LCU command file are:

```
/*— Product variables for OS/2 Toolkit installation —*/
x.insttk21 = 16
x.16.name='OS/2 Developers Toolkit'
x.16.statevar = 'CAS_'x.16.name          /* State variable name      */
x.16.instprog = 'X:\EXE\UTI\INSTTK21.COM', /* Path to installation program */
              appdr          /* Drive letter for Toolkit  */
x.16.rspdir = ''
x.16.default = ''
```

The INSTTK21 program does the following:

- Create the TOOLKT21 directory and copy all the files into it.
- Create the Toolkit desktop folder and all program objects within it.
- Update the CONFIG.SYS file of the OS/2 Production System with Toolkit information. The statements changed are:
 - LIBPATH
 - SET PATH
 - SET HELP
 - SET BOOKSHELF
 - SET LIB
 - SET INCLUDE

Also, two lines are added to CONFIG.SYS. They are:

```
SET IPFC='tktdr'\TOOLKT21\IPFC
SET PROGREF21=CPGREF1.INF+CPGREF2.INF+CPGREF3.INF
```

Chapter 15. VisualInfo Installation

This chapter discusses the installation of VisualInfo clients, Servers and stand-alone systems.

The redirected installation of VisualInfo is done by the FRNINSTS program.

Note on VisualInfo response files

The present version of the installation program for VisualInfo expects all response files to be on drives with read/write authorization. This is an unusual CID installation requirement.

To comply with this condition the **PREPSERV** program places the response files for VisualInfo on the **LOG** branch of the Code Server Directory Structure as well as on the usual **RSP** branch to maintain consistency.

We were informed that the next version of the installation program will eliminate the requirement of a read/write access to the response files.

These are the FRNINSTS parameters specified in the LCU command file for a VisualInfo Client:

```
/*— Product variables for VisualInfo Standard Client installation —*/
x.vistdcIn = 21
x.21.name='VisualInfo Standard Client'
x.21.statevar = 'CAS_x.21.name          /* State variable name          */
x.21.instprog = 'X:\EXE\VI\BIN\FRNINSTS.EXE', /* Path to installation prog    */
              '/A:I', /* Action is install           */
              '/C:X:\IMG\VI\FRNOCDCT.ICF', /* Catalog file                 */
              '/G:X:\VI', /* Path to included response files*/
              '/L1:L:\VI\client.LOG', /* Path to error log file      */
              '/L2:L:\VI\client.HST', /* Path to history log file    */
              '/P:"VisualInfo - Standard Client"', /* Product name                */
              '/R:L:\VI\STDCLIEN.RSP', /* R/W path to response file   */
              '/O:DRIVE', /* Origin of installation files */
              '/S:X:\IMG\VI', /* Source path of inst. files  */
              '/T:'appdr'\VI', /* Target directory            */
              '/TU:'os2dr'\', /* Target for CONFIG.SYS update */
              '/X' /* Interactive installation?   */
x.21.rspdir = '' /* Path to response file       */
x.21.default = '' /* Default response file name  */
```

And these are the FRNINSTS parameters for a VisualInfo Standard Server:

```

/*—— Product variables for VisualInfo Standard Server installation ——*/
x.vistdsrv = 19
x.19.name=' VisualInfo Standard Server'
x.19.statevar = 'CAS_'x.19.name /* State variable name */
x.19.instprog = 'X:\EXE\VI\BIN\FRNINSTS.EXE', /* Path to installation prog */
              '/A:I', /* Action is install */
              '/C:X:\IMG\VI\FRNOCDCT.ICF', /* Catalog file */
              '/G:L:\VI', /* Path to included response files*/
              '/L1:L:\VI\client.LOG', /* Path to error log file */
              '/L2:L:\VI\client.HST', /* Path to history log file */
              '/P:"VisualInfo - Standard Server"', /* Product name */
              '/R:L:\VI\STDSEVR.RSP', /* R/W path to response file */
              '/O:DRIVE', /* Origin of installation files */
              '/S:X:\IMG\VI', /* Source path of inst. files */
              '/T:'appdr'\VI', /* Target directory */
              '/TU:'os2dr'\', /* Target for CONFIG.SYS update */
              '/X' /* Interactive installation? */
x.19.rspdir = '' /* Path to response file */
x.19.default = '' /* Default response file name */

```

15.1 Command Line Parameters for VisualInfo Installation

VisualInfo uses a general-purpose installation program called FRNINSTS. Some of the parameters accepted by this program are irrelevant in the context of a VisualInfo installation, but they are documented here for the sake of completeness.

The parameters accepted by FRNINSTS are:

/A:<action>

Specifies the action of the installation program. If you specify this parameter, you should also specify the **/P** parameter. Valid values are:

I Install
D Delete
R Restore
U Update

If you specify this value as **D (delete)**, you should also provide the **DELETEBACKUP = NO** keyword in the response file. This combination deletes the VisualInfo system and its backup copies, which provides enough space to reinstall the product.

/C:<catalog file name>

Specifies the name and full path to the catalog file **FRNOCDCT.ICF** in the product images branch of your Code Server Directory Structure. If you follow the CID conventions, the value of this parameter should be **X:\IMG\VI\FRNOCDCT.ICF**.

A catalog is an ASCII file used by the installation program to obtain installation and maintenance information for a product. A catalog can contain information about several products. Do not change the contents of the catalog file delivered with VisualInfo.

/G:<general include path>

Specifies the path to the general response files that are included from the specific response file indicated by the **/R** parameter. The present version of the installation program expects all response files to be on paths with read/write authorization.

/L:<xpos,ypos>

Specifies the initial horizontal and vertical coordinates of the installation window relative to the lower left corner of the screen.

Since CID is an unattended installation method, this parameter is irrelevant in the context of this book.

/L1:<error log>

Specifies the full path and name of the error log file. Example:

/L1:L:\VI\CLIENT23.LOG

/L2:<history log>

Specifies the full path and name of the history log file. Example:

/L2:L:\VI\CLIENT23.HST

/L3: /L4: /L5: <additional log files>

These parameters specify additional log files. The VisualInfo installation program does not use these parameters. They can be left unspecified.

/O:<originating system>

Specifies the source environment for the installation. Valid values are:

**DRIVE
MVS
VM
VSE**

For a VisualInfo installation, this parameter must be **/O:DRIVE**.

/P:<product name>

Specifies the name of the product being acted upon. If the name specified includes blanks, enclose it in double quotes. The name specified should match exactly the value of the NAME keyword of the PACKAGE entry in the catalog file specified by the **/C:** parameter. Valid values from the FRNOCDCT.ICF catalog file are:

**"VisualInfo - Standard Client"
"VisualInfo - Standard Server"
"VisualInfo - stand-alone System"
"VisualInfo - Selectable Components"
"Development Tools and Samples"**

/R:<response file>

Specifies the full path and name of the specific response file. This is the main VisualInfo response file. The present version of the installation program expects all response files to be on paths with read/write authorization. Example of a compliant value:

/R:\VI\STDSERVR.RSP

/S:<source path>

Specifies the full path to the VisualInfo product image. If you follow the CID conventions, this value should be **X:\IMG\VI**.

/T:<target path for installation>

Specifies the drive and directory where VisualInfo should be installed. If you follow the recommendations on disk partitioning given in Chapter 5, "Disk Partitioning for VisualInfo Systems" on page 25, the drive should be **D:**. This parameter overrides the value of the **FILE** keyword in the response file. Example:

/T:D:\VI

/TU:<target path for CONFIG.SYS update>

Specifies the drive and directory to update the CONFIG.SYS file. If you follow the recommendations on disk partitioning given in Chapter 5, "Disk Partitioning for VisuallInfo Systems" on page 25, this parameter should be **/TU:E:** (the drive of the OS/2 Production System).

/X

Specifies that the installation is unattended. This parameter must be specified.

15.2 Response File for VisuallInfo Installation

The VisuallInfo CID Installation Utilities delivered with this book include three files called STDSERVER.RSP, STDCLIEN.RSP and STDALONE.RSP, which provide the responses for the installation of a VisuallInfo Standard Server, Client and stand-alone System, respectively. You should change these files to adapt them to your needs. Refer to Appendix I, "Response File for the Installation of a VI Standard Server" on page 167 for a listing of the STDSERVER.RSP file, to Appendix J, "Response File for the Installation of a VI Standard Client" on page 169 for a listing of the STDCLIEN.RSP file and to Appendix K, "Response File for the Installation of a VI Stand-Alone System" on page 171 for a listing of the STDALONE.RSP file.

Response file keywords are separated from the assigned value by an equal sign. Example:

OVERWRITE = NO

15.2.1 Installation Keywords

These are general installation keywords that are applicable to VisuallInfo clients and Servers.

CFGUPDATE Specifies whether the CONFIG.SYS file should be updated. Valid values are:

AUTO Automatically update CONFIG.SYS.

MANUAL Do not update CONFIG.SYS.

COMP Specifies the name of the component being installed. It should exactly match the value of the NAME keyword of the COMPONENT entry in the package file for the product being installed. A package is an ASCII file that describes the components of the product.

This keyword can be specified several times in the response file.

Note: Do not use quotes to enclose this value, even if it contains blanks.

The values for this keyword depend upon the product selected by the **/P:** command line parameter. The following table lists all possible values for every product:

/P:"VisuallInfo - Standard Client"

Standard Client Workstation
Application Programming Toolkit

/P:"VisualInfo - Standard Server"

Standard Server
IBM IP/2 Migration Utilities
IBM IRM Migration Utilities

/P:"VisualInfo - stand-alone System"

stand-alone System
Application Programming Toolkit
IBM IP/2 Migration Utilities
IBM IRM Migration Utilities

/P:"VisualInfo - Selectable Components"

VisualInfo Installation Program
System Configuration Utility
configuration server
List Manager Server
VisualInfo Fax Support
Library Client
Library Server for OS/2
Object Server for OS/2
Library Client Programming Toolkit
Client Application Programming Toolkit
IBM Image Services Toolkit
Client Application
IBM Image Services
IBM IP/2 Migration Utilities
IBM IRM Migration Utilities

/P:"Development Tools and Samples"

LABELGEN Diskette Label Generator
OS/2 Word Count Tool
INFOVIEW
MEDIT2
EVNDOCK
ALPHA Debugger
ASDT32 Debugger
SD386 Debugger
PMGUIDE2 Development Tool

Example for **/P:"VisualInfo - Standard Client"**, the COMP keyword could be:

COMP = Standard Client Workstation

COPY

Specifies source and target files to be copied. The copy operation is performed **prior** to the installation of VisualInfo. If the target files already exist, they are overwritten. If either file specification is not valid, the files are not copied. Any directories specified as part of the target should be previously defined or the copy will fail. Example:

COPY = X:\IMG\VI\TTAB.DAT D:\VI

DELETEBACKUP Specifies whether to delete only the backup copies or the entire product. Valid values are:

YES to delete only the backup copies.

NO to delete the entire product.

FILE	<p>Specifies the drive and directory where VisualInfo should be installed. If you follow the recommendations on disk partitioning given in Chapter 5, "Disk Partitioning for VisualInfo Systems" on page 25 , the drive should be D:. Example:</p> <p>FILE = D:\VI</p> <p>This parameter is overridden by the value of the /T: command line parameter.</p>
INCLUDE	<p>Specifies a response file to be included in-line. Up to 5 levels of response files can be included. Example:</p> <p>INCLUDE = X:\LOG\VI\XTRA.RSP</p> <p>The search order for response files is:</p> <ol style="list-style-type: none"> 1. The path specified in the INCLUDE keyword value. 2. The current directory. 3. The path specified in the /G: command line parameter. 4. The directories specified by the PATH environment variable. 5. The directories specified by the DPATH environment variable.
OVERWRITE	<p>Specifies whether to overwrite files during installation. Valid values are:</p> <p>YES to overwrite the files. NO to keep existing files.</p>
SAVEBACKUP	<p>Specifies whether to backup the product prior to updating it. Valid values are:</p> <p>YES to backup prior to update. NO to produce no backup prior to update.</p>
USEREXIT	<p>Specifies the name of a program that should be called as part of the installation process. The user exit is called prior to the installation of VisualInfo. Example for a user exit written in REXX:</p> <p>USEREXIT = E:\OS2\CMD.EXE /C "X:\REXXSAMP.CMD"</p> <p>The search order for user exits is:</p> <ol style="list-style-type: none"> 1. The path specified in the USEREXIT keyword value. 2. The current directory. 3. The directories specified by the PATH environment variable. 4. The directories specified by the DPATH environment variable.
WORK	<p>Specifies a drive and directory to put certain files that should be separated from the main VisualInfo directory. This is neither a work area nor a directory for temporary or ephemeral files. If you follow the recommendations for disk partitioning given in Chapter 5, "Disk Partitioning for VisualInfo Systems" on page 25, this keyword could be specified as:</p> <p>WORK = D:\VI\WORK</p>

15.2.2 General VisualInfo Keywords

There are two keywords in this category.

FRNNODISP	<p>Specifies whether the prerequisites screen should be displayed. If you do not want the screen to be displayed, specify YES.</p>
------------------	--

FRNLANGUAGE Specifies the language of the system you are installing. Valid values are:

DEU for Germany
ENU for US English
ESP for Spain
FRA for France
ITA for Italy
JPN for Japan
NLD for the Netherlands

15.2.3 Network Table Keywords

These keywords provide values that are applicable to the VisualInfo Network Table.

FRNNTACTION Specifies the Network Table action. Valid values are:

NO Do not install a Network Table. If you specify this value, all other Network Table Keywords are ignored. You could specify NO if you are re-installing VisualInfo and already have a valid Network Table.

DEFAULT Install the default Network Table. There is a default Network Table for each type of VisualInfo system: stand-alone, Client, Standard Client, Standard Server, Library, Object and Configuration Servers. If you are installing a stand-alone system, specify DEFAULT.

CUSTOM Install a customized Network Table based upon the VisualInfo System Configuration file specified by the **FRNNCFILE** keyword. This is the recommended value for a first-time CID installation because it allows you to start working with clients and servers immediately, without any manual adjustments.

FRNNCFILE Specifies the full path and name of the VisualInfo System Configuration file if the FRNNTACTION keyword was specified as **CUSTOM**. This is the file that you created following the instructions under 4.3, "Creating a VisualInfo System Configuration File" on page 19. Example:

FRNNCFILE = X:\IMG\VI\STD CFG.CFG

FRNFQNODE Specifies the workstation for which the action should be performed. The value of this keyword is one of the nicknames defined in the Network Diagram and Network Table you created in 4.2, "Assigning Workstation Names and Addresses" on page 16. It is not necessary to specify the names of all clients here, because this would imply that a response file should be created for every client station. It is sufficient to specify the name of any client attached to a particular configuration server for all clients sharing the same Server. Following the diagram in Figure 3 on page 18, it is sufficient to specify CLIENT01 for all stations attached to CFGSRVR1, and CLIENT04 for all stations sharing CFGSRVR2. The value can be one of the following:

- A **Nickname** used in the definition of the VisualInfo System Configuration, as described under 4.3, "Creating a VisualInfo System Configuration File" on page 19. Example:

STDCLIEN

- A **Fully qualified SNA Node Name** consisting of the Network ID and the Local Node Name, separated by a period. Example:
IBMUSD1.STAT17

15.2.4 CM/2 Keywords

The following keywords apply to Communications Manager/2.

FRNCMACTION Specifies whether a CM/2 configuration file should be created. Valid values are **YES** and **NO**.

If **YES** is specified, a CM/2 configuration file will be created using the file specified by the **FRNCFGN** keyword as a model. The configuration created will have all characteristics of the model configuration and all functions that are required by VisualInfo (Links, Modes, etc).. If a model is not provided, a new configuration will be created with the functions required by VisualInfo. We recommend that you specify **YES** for this keyword.

The name of the created file will depend upon the network function of the machine and whether a model configuration is provided or not:

- If a model configuration is provided through the **FRNCFGN** parameter, the name of the CM/2 configuration will be **FRNONEWN**, for clients and Servers.
- If a model configuration is not provided and the machine is a **Network Node (NN)**, the name of the CM/2 configuration will be **FRNONETN**.
- If a model configuration is not provided and the machine is an **End Node (EN)**, the name of the CM/2 configuration will be **FRNOENDN**.

If **NO** is specified, no CM/2 configuration file is created and all other CM/2 keywords are ignored. It is your responsibility to provide a CM/2 configuration file with all functions required by VisualInfo if you specify **NO** for this keyword.

FRNCFGN Specifies the full path to the CM/2 configuration file to be used as a model. This keyword is only significant if **YES** is specified by the keyword **FRNCMACTION**. Example:

FRNCFGN = D:\CMLIB\OURCONF.CFG

Note: Even if you provide a model configuration, you should still provide the following, CM/2-related parameters to VisualInfo. The version we used during the residency (June 1994, first GA version) was not able to extract all information necessary from the CM/2 configuration file. This will be corrected in a later release or CSD.

FRNNETID Specifies the SNA network ID of this node.

FRNNETNM Specifies the SNA local node name.

FRNNODID Specifies the last 5 (of 8) digits used in exchange identifier XID during link activation. This should match the Node ID of the CM/2 configuration file. Example:

FRNNODID = 00000

FRNNODTY	Specifies the APPN node type and the functions it performs. Valid values are EN (for End Node) and NN (for Network Node).
FRNNDA	Specifies the Token-Ring adapter address of the Network Node Server to be used by this station. If this station is an End Node, specify the address of its Network Node Server. If this station is a Network Node, you should still specify a Token-Ring address, which will be ignored by the installation program. This error will be corrected by a future release or CSD.
FRNDLCNM	Specifies the type of adapter to be used for APPN communications. For a Token-Ring network, specify IBMTRNET . For an Ethernet network, specify ETHERAND .
FRNADAPT	Specifies the adapter to be used for APPN communications. Valid values are: 0 (for the primary adapter) and 1 (for the secondary adapter).
FRNCFGD	Specifies the letter of the drive where CM/2 was installed. Do not append a colon after the drive letter. Example: FRNCFGD = D

15.2.5 Mandatory Keywords for Library or Object Servers

These keywords should be specified for all server machines (Library, Object or combined servers).

FRNUSERID	Specifies the local user ID for the database administrator. All databases will be created under this user ID. OS/2 provides a default user ID: USERID . Its password is PASSWORD .
FRNPASSWORD	Specifies the password for the used ID given by the keyword FRNUSERID.
FRNLDBNAME	If you are installing a Library Server, this keyword specifies the name of the Library Server database. Default is LIBSRVR2 . If you are installing an Object Server, this keyword specifies the Library Server database which will index the Object Server.
FRNODBNAME	If you are installing an Object Server, this keyword specifies the name of the Object Server database. Default is OBJSRVR2 . If you are installing a Library Server, this keyword should specify any of the Object Server databases that will be indexed by the Library Server.

15.2.6 Library Server Keywords

The following keywords apply to VisualInfo Library Servers.

FRNLDBACTION	Specifies whether the Library Server database should be created. Valid values are YES and NO . You could specify NO if you are re-installing VisualInfo and already have a database.
FRNLDBDRIVE	Specifies the drive where the Library Server database should be created. Do not append a colon to the letter. Example: FRNLDBDRIVE = F

FRNLDBCOMMENT Specifies the comment line that describes the database.

Example:

FRNLDBCOMMENT = OS/2 Library Server Database

FRNLDBLABELL Specifies the length of the ITEM column, in characters. Any value between **25** and **50** is acceptable. Default is **50**. Specify a lower value if your application will never use the maximum value.

FRNLDBVALUEL Specifies the length of the VALUE column, in characters. Any value between **1** and **100** is acceptable. Default is **100**. Specify a lower value if your application will never use the maximum value.

FRNLDBNAMEL Specifies the length of the NAME column, in characters. Any value between **25** and **80** is acceptable. Default is **80**. Specify a lower value if your application will never use the maximum value.

FRNLDBDIRL Specifies the length of the DIRECTORY column, in characters. Any value between **1** and **120** is acceptable. Default is **120**. Specify a lower value if your application will never use the maximum value.

FRNSAMPLEDATA Specifies whether to load the sample data into the database. Valid values are **YES** and **NO**. For a VisualInfo demonstration or tutorial system, this keyword allows you to have some data stored from the very beginning to start your demonstration or practice without delay. For a VisualInfo production system, this keyword would be specified as **NO** in most cases.

15.2.7 Object Server Keywords

The following keywords apply to VisualInfo Object Servers.

FRNOBBACTION Specifies whether the Object Server database should be created. Valid values are **YES** and **NO**. You could specify **NO** if you are re-installing VisualInfo and already have an Object Server database.

FRNOBBDRIVE Specifies the drive where the Object Server database should be created. Do not append a colon to the letter. Example:

FRNOBBDRIVE = F

FRNOBDBCOMMENT Specifies the comment line that describes the database. Example:

FRNOBDBCOMMENT = OS/2 Object Server Database

FRNOBJPATH Specifies the full path to the Staging Area, terminated by a backslash. Example:

FRNOBJPATH = F:\STAGING\

FRNOBJDRIVE Specifies the drive that will be used to store the objects. This could be an optical disk unit, a Redundant Array of Independent Disks (RAID), or a simple magnetic disk drive. If the objects will be stored on several drives, specify any of them in this keyword. Do not append a colon to the letter. Example:

FRNOBJDRIVE = G

Chapter 16. Setting up the OS/2 Maintenance System for Automatic Connection to the Code Server

Ideally, an OS/2 Maintenance System should be able to perform automatic and manual maintenance.

- **Automatic** maintenance is the ability to request for product updates or for the installation of new products from a Code Server by executing a remote procedure.
- **Manual** maintenance is the ability to perform manual corrective procedures at the machine, without any links to a Code Server. Power breakdowns, disk crashes and unexpected standstills are typical situations that require manual corrective intervention.

In order to allow both maintenance methods from the OS/2 Maintenance System, this step of the installation process does the following:

1. It installs **Thin LAPS**. This is a minimal version of LAPS which is also present in the two boot diskettes used to start the SRVIFS method of CID installation. We could have used the full LAPS installed on the OS/2 Production System, but we believe that a maintenance system should be as independent as possible from the rest of the software in the machine.
2. It sets up **two SRVIFS requesters** for the virtual drives X: (as a read-only drive) and L: (as a read-write drive).
3. It installs the LAN CID Utility (LCU) to be able to run LCU command files for product updates and new installations.

OS/2 Maintenance partition size

In a 5MB partition (the default size for the programs delivered with this book), approximately 348 KB of disk storage will remain free after installing the Thin LAPS, the SRVIFS requesters and the LCU. Allocate more space to the OS/2 Maintenance Partition if you plan to install other components there.

After everything is installed, if the OS/2 Maintenance System is selected from the Boot Manager panel, the system will display the prompt **Enter the client name**.

Two courses of action are open:

- For **automatic maintenance**, type the name of an LCU command file stored in the CLIENT branch of the Code Server Directory Structure and press Enter. A NETBIOS session with the Code Server will be started and the LCU command file will be executed. If a session with the Code Server cannot be established, for example when the Code Server has not been started, the system goes into manual maintenance mode, as explained below.
- For **manual maintenance**, type any name that does not exist as a valid LCU command file, for example **Exit** and press Enter. The system will inform you that the procedure cannot be found, will terminate the LCU agent program, and you will have a single-session, full-screen OS/2 system ready for manual maintenance.

These are the parameters in the LCU command file:

```

/*— Product variables for Thin LAPS inst. on the OS/2 Maintenance System —*/
x.thinlaps = 26
x.26.name='Thin LAPS on Maintenance System'
x.26.statevar = 'CAS_'x.26.name /* State variable name */
x.26.instprog = 'X:\IMG\LAPS\THINLAPS.EXE', /* Path to installation program */
                'X:\IMG\LAPS', /* Source */
                mntdr'\', /* Target */
                'IBMTOK.NIF' /* NIF name */
x.26.rspdir = '' /* Path to response file */
x.26.default = '' /* Default response file name */

/*— Product variables for first SRVIFS requester on OS/2 Maintenance system */
x.thinifs3 = 27
x.27.name='Maintenance SRVIFS Requester'
x.27.statevar = 'CAS_'x.27.name /* State variable name */
x.27.instprog = 'X:\IMG\SRVIFS\THINIFS.EXE', /* Path to installation program */
                '/S:X:\IMG\SRVIFS', /* Path to product images */
                '/T:'mntdr'\SRVIFSRQ', /* Target for installation */
                '/TU:'mntdr'\', /* Target for CONFIG.SYS update */
                '/L1:L:\SRVIFS\client.LOG', /* Path to log file */
                '/REQ:*P', /* Prompt for NETBIOS */
                '/SRV:CIDSRV', /* Server NETBIOS name */
                '/D:X' /* Letter for redirected drive */
x.27.rspdir = ''
x.27.default = ''

/*— Product variables for second SRVIFS requester on OS/2 Maintenance System*/
x.thinifs4 = 28
x.28.name='Second Maintenance SRVIFS Requester'
x.28.statevar = 'CAS_'x.28.name /* State variable name */
x.28.instprog = 'X:\IMG\SRVIFS\THINIFS.EXE', /* Path to installation program */
                '/S:X:\IMG\SRVIFS', /* Path to product images */
                '/T:'mntdr'\SRVIFSRQ', /* Target for installation */
                '/TU:'mntdr'\', /* Target for CONFIG.SYS update */
                '/L1:L:\SRVIFS\client.LOG', /* Path to log file */
                '/REQ:*P', /* Prompt for NETBIOS */
                '/SRV:\\CIDSRV\LOG', /* Server NETBIOS name and alias */
                '/D:L' /* Letter for redirected drive */
x.28.rspdir = ''
x.28.default = ''

/*— Product variables for LCU installation on OS/2 Maintenance System —*/
x.casinst2 = 29
x.29.name='LCU'
x.29.statevar = '' /* State variable name */
x.29.instprog = 'X:\IMG\LCU\CASINSTL.EXE', /* Path to installation program */
                '/CMD:X:\CLIENT', /* Path to LCU command file */
                '/TU:'mntdr', /* Target for CONFIG.SYS update */
                '/PL:X:\DLL\OS2V21;X:\IMG\LCU;X:\EXE\OS2V21;X:\EXE\UTI;',
                '/PA:X:\IMG\LCU', /* Path to CASAGENT.EXE on server */
                '/L1:L:\LCU\client.LOG', /* Path to log file */
                '/L2:L:\LCU\SRVIFS_REQ.LOG' /* Generated path to log file */
x.29.rspdir = ''
x.29.default = ''

```

Chapter 17. Removal of SRVIFS Redirection

This step removes all redirection and server connection statements from the CONFIG.SYS of the OS/2 Production System. This is a standard cleanup procedure for CID installation following the SRVIFS method. The parameters in the LCU command file are:

```
/*— Product variables for SRVIFS deactivation —————*/
x.ifsdel = 9
x.9.name='SRVIFS DELETE'
x.9.statevar = ''
x.9.instprog = 'X:\IMG\SRVIFS\IFSDEL.EXE', /* State variable name */
              '/t:'os2dr'\SRVIFSRQ', /* Path to program */
              /* Path to files to be deleted */
              /* Target for CONFIG.SYS update */
              '/tu:'os2dr
x.9.rspdir = ''
x.9.default = ''

/*— Product variables for LCU removal —————*/
x.casdelet = 10
x.10.name='LCU DELETE'
x.10.statevar = ''
x.10.instprog = 'X:\IMG\LCU\CASDELET.EXE', /* State variable name */
              /* Path to program */
              '/l1:L:\LCU\client.LOG', /* Path to log file */
              /* Path to log file */
              /* Target for CONFIG.SYS update */
              '/p1:X:\DLL\OS2V21;X:\IMG\LCU;X:\EXE\OS2V21;X:\EXE\UTI;',
              '/tu:'os2dr
x.10.rspdir = ''
x.10.default = ''
```

It could be advisable at this point to set up the OS/2 Maintenance System for automatic SRVIFS requests when it is started. A system set up this way would operate normally when the OS/2 Production System is booted, and it would go into automatic maintenance mode when the OS/2 Maintenance System is started, requesting instructions from the Code Server.

Chapter 18. Generation of STARTUP.CMD to Start VisuallInfo Clients and Servers

The VisuallInfo CID Utilities delivered with this book include a REXX program called GENSTART.CMD. This program generates a STARTUP.CMD file for the OS/2 Production System to automatically start VisuallInfo clients and Servers.

The parameters of GENSTART in the LCU command file are:

```
/*—— Product variables for generating the VI startup procedure ——*/
x.genstart = 23
x.23.name='VI Startup Procedure Generation'
x.23.statevar = 'CAS_'x.23.name          /* State variable name          */
x.23.instprog = 'X:\EXE\UTI\GENSTART.CMD', /* Path to installation program */
              'N',                       /* Calling from SRVIFS         */
              os2dr,                      /* OS/2 drive                   */
              appdr                        /* Application drive            */
x.23.rspdir  = ''
x.23.default = ''
```

The parameters required by GENSTART are:

- Param 1** This specifies if the generated STARTUP.CMD file should initialize a NetView DM/2 requester. It can be 'Y' or 'N'. For a SRVIFS installation, specify it as 'N'.
- Param 2** The letter of the OS/2 Production System partition, followed by a colon.
- Param 3** The letter of the application partition where VisuallInfo has been installed, followed by a colon.

The generated STARTUP.CMD files are tailored to the functions of the machine and start only the components that are necessary for VisuallInfo. For example, no attempt is made to start an Object Server if the machine was installed only as a Library Server. The STARTUP.CMD file is generated as a REXX program. Here is an example of a generated STARTUP.CMD for a Standard Server:

```

/*
  Start the VisualInfo Standard Server
*/
call RxFuncAdd 'SysLoadFuncs', 'RexxUtil', 'SysLoadFuncs'
call SysLoadFuncs /* Load REXX Utilities */
'LOGON USERID /P:PASSWORD /L' /* Local logon to UPM */
'STARTDBM' /* Start DataBase Manager */
'START /C CM FRNONETN ' /* Start CM/2 with FRNONETN.CFG*/
'CMWAIT' /* Wait for CM/2 to start */
'START D:\VI\FRNOLLMN.EXE LIBSRVR2 IBMCONFIG' /* Start VI Library Server */
say 'Sleep 30 seconds.....'
if SysSleep(30) = '0' then say 'Wake up time!'
'START D:\VI\FRNOLBMN.EXE OBJSRVR2 IBMCONFIG' /* Start VI Object Server */
say 'Sleep 30 seconds.....'
if SysSleep(30) = '0' then say 'Wake up time!'
'START D:\VI\FRNSMSRV.EXE OBJSRVR2' /* Start VI SMS Server */
say 'Sleep 5 seconds.....'
if SysSleep(5) = '0' then say 'Wake up time!'
'START /C D:\VI\FRNOLIRN.EXE' /* Refresh VI Configuration */
call SysDropFuncs /* Unload the REXX Utilities */
'EXIT'

```

Chapter 19. Tuning of DBM and the Databases to Optimize Performance

The VisualInfo CID Utilities delivered with this book include a REXX program called DBTUNEUP.COMD. This program does the following:

- Update the CONFIG.SYS file of the OS/2 Production System to include tuned-up environment variables, as recommended by the VisualInfo performance team.
- Change the configuration parameters of the Database Manager, of the Library Server database, and of the Object Server database to the values recommended by the VisualInfo performance team. This leaves a tuned-up DB2/2 system ready for production work immediately after the installation.
- Move the log files of the Library and Object Server databases to another drive or partition if this is requested through parameters. Moving the log file to another drive can improve the performance of DB2/2 databases considerably.

The recommended parameters for the Database Manager and the databases are presented in Table 5 on page 72, Table 6 on page 72 and Table 7 on page 73 .

The parameters of DBTUNEUP in the LCU command file are:

```
/*—— Product variables for DB2/2 and database tune-up ——*/
x.dbtuneup = 25
x.25.name='DB2/2 and database Tune-up'
x.25.statevar = 'CAS_'x.25.name           /* State variable name           */
x.25.instprog = 'X:\EXE\UTI\DBTUNEUP.COMD', /* Path to installation prog     */
      client,                             /* Name of client machine       */
      tmpdr,                               /* Drive for OBJSRVR2 log file  */
      tmpdr,                               /* Drive for LIBSRVR2 log file  */
      appdr,                               /* Application partition        */
      os2dr                                /* OS/2 Production System drive */
x.25.rspdir = ''                          /* Path to response file       */
x.25.default = ''                        /* Default response file name   */
```

The parameters required by DBTUNEUP are:

- Param 1** Name of the workstation, as entered at the LCU prompt for a client name. This is usually passed through the **client** variable in the LCU command file.
- Param 2** This is the letter of the **drive** or **partition** where the log file of the Object Server database should be relocated, or the word **'LEAVE'** to leave the log file where it was created.
- Param 3** This is the letter of the **drive** or **partition** where the log file of the Library Server database should be relocated, or the word **'LEAVE'** to leave the log file where it was created.
- Param 4** This is the letter of the **application partition** where VisualInfo has been installed. It defaults to the value of the environment variable APPDR, which is set in the LCU command file.
- Param 5** This is the letter of the **OS/2 Production System partition**. It defaults to the value of the environment variable OS2DR, which is set in the LCU command file.

Param 6 This parameter is only required if the program is called from NetView DM/2. It specifies the full path to the log file to be used. Default is: L:\UTI.

Param 7 This parameter is only required if the program is called from NetView DM/2. It specifies the full path to the message file to be used. Default is: X:\EXE\UTI\PAR.TXT.

Table 5. Recommended DBM Configuration. This is implemented by DBTUNEUP.

Parameter	Recommended Value	Units
Maximum number of Shared Segments (SQLENSSEG)	802	Segments
Maximum number of concurrently active databases (NUMDB)	1 (2 for a Std. Server)	Databases
Sort Heap Threshold (SHEAPTHRES)	250	4KB-pages
Index Recreation Time (INDEXREC)	During index access	N/A

Note: The maximum number of concurrent databases should be 1 for a Library or an Object Server. It should be 2 for a Standard Server. This value should be adjusted if other applications are also using DBM.

Table 6 (Page 1 of 2). Recommended Database Configuration for Library Servers. This is implemented by DBTUNEUP

Parameter	Recommended Value	Units
Buffer Pool Size (BUFFPAGE)	250	4KB-pages
Interval to check for deadlocks (DLCHKTIME)	10000	Millisecs.
Maximum storage for Locklists (LOCKLIST)	100	4KB-pages
Maximum percent of Locklists per application (MAXLOCKS)	25	Percent
Maximum database files per application (MAXFILOP)	20	Files
Maximum files open per application (MAXTOTFILOP)	255	Files
Maximum number of active applications (MAXAPPLS)	30	Appls.
Default application heap size (APPLHEAPSZ)	10	Segments
Database heap size (DBHEAP)	20	Segments
Sort list heap size (SORTHEAP)	6	Segments
Application agent heap size (AGENTHEAP)	2	Segments
SQL statement heap size (STMHEAP)	64	Segments

Table 6 (Page 2 of 2). Recommended Database Configuration for Library Servers. This is implemented by DBTUNEUP

Parameter	Recommended Value	Units
Number of log records to write before soft checkpoint (SOFTMAX)	100	Records
Number of primary log files (LOGPRIMARY)	5	Files
Number of secondary log files (LOGSECOND)	5	Files
Log file size (LOGFILSIZ)	1000	4KB-pages

Table 7. Recommended Database Configuration for Object Servers. This is implemented by DBTUNEUP

Parameter	Recommended Value	Units
Buffer Pool Size (BUFFPAGE)	50	4KB-pages
Interval to check for deadlocks (DLCHKTIME)	20000	Millisecs.
Maximum storage for Locklists (LOCKLIST)	50	4KB-pages
Maximum percent of Locklists per application (MAXLOCKS)	20	Percent
Maximum database files per application (MAXFILOP)	20	Files
Maximum files open per application (MAXTOTFILOP)	255	Files
Maximum number of active applications (MAXAPPLS)	17	Appls.
Default application heap size (APPLHEAPSZ)	5	Segments
Database heap size (DBHEAP)	5	Segments
Sort list heap size (SORTHEAP)	2	Segments
Application agent heap size (AGENTHEAP)	2	Segments
SQL statement heap size (STMTHEAP)	64	Segments
Number of log records to write before soft checkpoint (SOFTMAX)	100	Records
Number of primary log files (LOGPRIMARY)	5	Files
Number of secondary log files (LOGSECOND)	5	Files
Log file size (LOGFILSIZ)	50	4KB-pages

Chapter 20. Performing the CID Install (SRVIFS)

This chapter explains how to conduct the CID installation of VisuallInfo and all of its prerequisites. Compared with the preparation and customization effort done previously, this is a relatively simple task.

20.1 Actions at the Code Server

The Code Server must be started before the installation clients are activated, otherwise the clients will be quiesced and will remain idle forever.

At the Code Server, do the following:

1. From any OS/2 prompt, change to the drive where the Code Server Directory Structure resides.
2. Change to the directory `\CID\SERVER`.
3. Enter **STARTSRV** to start the CID Code Server. This procedure also erases all log files from the LOG branch of the Code Server Directory Structure. The Code Server registers the NETBIOS name CIDSRV and waits for session requests.
4. The installation clients can be activated now. The installation administrator can remain at the Code Server and follow the installation by inspecting the log files created in the LOG branch of the Code Server Directory Structure.

While the Code Server is running, you can execute the following commands from the SERVER branch of the Directory Structure:

SERVICE /Status	Queries the status of a running SRVIFS server.
SERVICE /Quit	Stops the running SRVIFS server from taking new requests and requires it to shut down when the last client disconnects.
SERVICE /Force	Forces the running SRVIFS server to stop immediately.

20.2 Actions at the Installation Clients (VisuallInfo Systems)

The installation clients should be activated after the initialization of the Code Server. Have the diskettes you created following the instructions given in 4.1, "Creating Boot Diskettes" on page 15 ready. At every installation client do the following:

1. Insert the Installation Diskette and boot the machine.
2. When you are prompted for Disk 1, insert it and press Enter.
3. When the message **Enter client name** appears, type the nickname of the station being installed and press Enter. The disk(s) will be partitioned.
4. When you are prompted to insert the Installation Diskette, do so and press Enter.
5. You will be prompted again to insert Disk 1 and later on, to enter the client name. Follow these instructions and type the same name you typed before. This repetition is necessary because the PARTDISK program, which was the first one to be executed, partitioned the disk(s). The same program will now format all partitions except the partition for the OS/2 Production System, which will be formatted during the installation of OS/2.

6. You will be prompted to remove the diskette and press Enter. Your presence is no longer required at the installation client.

Chapter 21. Verifying the Installation

We refer you to the *VisuallInfo Installation Guide* for this task. The module C10 of the Installation Guide provides the instructions necessary to verify the VisuallInfo installation.

Part 2. CID Installation Using the NetView DM/2 Method

Chapter 22. Planning Your VisuallInfo CID Installation (NVDM/2)

This chapter describes all prerequisite planning prior to the installation of the NetView DM/2 Server, including hardware, software, preparation of the CID Code Server and installation of utilities.

If you are not familiar with NetView DM/2, please read:

- Chapter 1. Introducing NetView DM/2.
- Chapter 2. NetView DM/2 CDM on a Stand-Alone LAN.

in the publication *NetView Distribution Manager/2 Concepts and Overview Version 2.0* (GH19-4009-00).

22.1 Hardware Required for the CID Code Server

Any workstation capable of running OS/2 2.1 may be used as a CID Code Server. The minimum configuration requirements are:

- A LAN adapter supported by NTS/2.
- 200 MB of disk space.
- A CD-ROM drive. This drive is needed only while the Code Server directory structure is being created. It will not be needed afterwards.

Note on mobile Code Servers

If mobility is important, you should consider installing the Code Server structure on a ThinkPad laptop equipped with a PCMCIA Token-Ring adapter. This will provide total mobility and self-sufficiency.

22.2 Hardware Required for the CID Clients

Since the software for the CID clients (VisuallInfo Servers and VisuallInfo clients) is downloaded from the CID Code Server, no CD-ROM drive is needed at the VisuallInfo Servers or clients. All other hardware requirements of VisuallInfo still apply. Refer to *ImagePlus VisuallInfo Installation Guide* for a description of the hardware requirements of VisuallInfo.

22.3 Software Required for CID

The software needed for the CID Code Server is:

- OS/2 2.1 or later.
- Network Transport Services/2 (NTS/2) Version 1.01.
- NetView DM/2 Version 2.0 or later.
- DB2/2 Version 1.0 or Database Manager from Extended Services Version 1.0.
- The VisuallInfo CID Utilities provided with this book.
- VisuallInfo and all of its prerequisite software:
 - Communications Manager/2 (CM/2) Version 1.1.
 - Database 2 OS/2 (DB2/2) Version 1.0 (VI Server only).
 - Developer's Toolkit for OS/2 2.1 (VI Server only).
 - C/C++ Tools Version 2.0 compiler (VI Server only).

- Corrective service diskettes (CSD's) for all of the above products.

22.4 Preparation of Server, NV DM/2

To prepare for the installation of NetView DM/2, be sure that you have:

- installed your network-adaptor, connected it to your network, and configured it.
- created the partitions on your hard disk. One C partition of a minimum of 50 MB for OS/2, LAPS, DB2/2 (or Database Manager); and one D partition of a minimum of 150 MB for NetView DM/2 and the software necessary for CID-installation, is required. If you have two hard disks on your system make one large partition on each of them. One disk will then become your C drive and the other one your D drive. Be sure to format the D drive.
- installed OS/2 on your C drive. During the OS/2 installation, you may either install all features or select features. If you select features, you will be presented with the "OS/2 Setup and Installation" panel. Make sure that you include System Utilities, REXX, the Enhanced Editor (EPM) and the High Performance File System. You can save hard disk space by deselecting DOS, Windows and Games, since they are not necessary for NetView DM/2. This will also produce a smaller CONFIG.SYS.
- installed LAPS with NETBIOS support for your adapter on your C drive. NETBIOS is used to establish sessions between the server and the clients. Be sure to use the LAPS diskette that comes with CM/2 V1.1 (or NTS/2 V1.01), or any later version of LAPS.
- installed DB2/2 or Database Manager from Extended Services 1.0 on your C drive. NetView DM/2 uses the database to store all its information.

The time needed to install OS/2, LAPS and DB2/2 from diskette is approximately one and a half hours.

22.5 Installing the VisuallInfo CID Utilities

The diskette provided with this book contains sample REXX programs, NetView DM/2 profiles and response files to facilitate the installation of VisuallInfo clients and Servers. They are collectively called *VisuallInfo CID Utilities* throughout this book. These utilities were created prior to and during our residency to help you with your installations. They can be used as they are or modified to suit your needs. Note that all files will not be used during your NetView DM/2 installation. The files that are unused are for SRVIFS installation in part 1 of this book.

To install the utilities do the following:

1. Insert the VisuallInfo CID Utilities diskette at the back of this book into the diskette drive.
2. Type **A:\INSTALL D:\SAMPLES** and press Enter.
3. The installation procedure will create the directory for the VisuallInfo CID Utilities and copy all files into it.

Chapter 23. Setting Up Code Server (NVDM/2)

This chapter describes the installation for NetView DM/2 on your server, including the creation of directory structures, and copying all the product diskettes into it.

23.1 Installing NetView DM/2

There are two ways of installing NetView DM/2 on your server. You can do it from diskettes or from diskette images on your hard disk. During this installation we are going to install NetView DM/2 from your hard disk. This step will take approximately one hour.

We are going to load the images of the NetView DM/2 diskettes to the catalog where we can use them for CID installation later. Then we are going to update these images with the latest CSD for NetView DM/2 (XR20334 at 15 December 1993). If your NetView DM/2 diskettes are already at the latest level, then you do not need to apply the CSD. When all this is done we are going to install NetView DM/2 on the system.

To install NetView DM/2 follow this instructions:

1. Create the directory for the diskette images
(D:\IBMNVDM2\SHARE_A\IMG\NVDM2). Issue the following commands:
MD D:\IBMNVDM2
MD D:\IBMNVDM2\SHARE_A
MD D:\IBMNVDM2\SHARE_A\IMG
2. Copy the NetView DM/2 V2.0 product diskette images. Insert the NetView DM/2 diskette 1 into drive A: and issue the following command from the OS/2 prompt:

```
A:\NVDMPCOPY /S:A:\ /T:D:\IBMNVDM2\SHARE_A\IMG\NVDM2
```

Follow the instruction on the screen to copy the diskettes to the hard disk.

3. Copy NetView DM/2 V2.0 CSD diskette image. You only need to do this if you have a NetView DM/2 CSD that is at a higher level than your product diskettes. Insert the NetView DM/2 CSD diskette 1 into drive A: and issue the following command from the OS/2 prompt:

```
A:\NVDMPCSO
```

Wait while the CSD-facility inspects the system. Select OK to see the images you can update. Select all entries listed on the menu and select SERVICE to start to update the images. Insert each diskette as prompted. Exit the installation program when finished.

4. Prepare DB2/2 for the installation of NetView DM/2. NetView DM/2 will set up the database during the installation, so we need to log on and start it up. You do that by issuing two commands from the OS/2 prompt:

```
LOGON USERID /P:PASSWORD /L  
STARTDBM
```

5. Start the NetView DM/2 installation.
 - a. Issue the following commands to start the installation:

D:
CD D:\IBMNVDM2\SHARE_A\IMG\NVDM2
NVDM2PMS

- b. Press Enter twice to get to the “NetView DM/2 Base and Server Feature Installation” panel.
- c. Define the following installation parameters on this screen:

Target directory D:\IBMNVDM2
Installationtype Full installation
Connectiontype Standalone
Install option CDM only

- d. Click on Configure and you will see the Configure-screen. Define your servername. This is the name by which the server will be known on your LAN. You will later use this name when you create the client diskettes.

Servername: NVDM2SRV

- e. Click on OK to go back to the first screen. Click on Install to start the installation. After installation you will have to click on Continue to exit the installation program.

6. All the product images will later be copied to the SHARE_A directory. It is recommended that this directory is defined as “read-only.” Do that by issuing this command from the OS/2 prompt:

EPM D:\IBMNVDM2\IBMNVDM2.INI

- Find the line:**SharedDirA=D:\IBMNVDM2\SHARE_A**
- Add the following to the end of the line as follows:**,R**
- The new line will look like this: **SharedDirA=D:\IBMNVDM2\SHARE_A,R**
- Press F4 to save and exit.

7. Reboot your server. After the machine reboots, you can verify your NetView DM/2 installation by issuing this command from the OS/2 prompt:

CDM STATUS

The result of the command will tell you that both CDM Change controller and CDM Agent are active. The NetView DM/2 Server is now up and running.

23.2 Creating the Directory Structure of the Server

Before you start copying all the product images, you will have to create the directory structure of the server. After the preparation of the NetView DM/2 Server your directory structure on your D drive that will look like this:

Some of the directories are more important to you than other. This is what some of the different directories will be used for:

- D:\PROFILES will hold all your NetView DM/2 profiles.
- D:\SAMPLES will hold all VisualInfo CID Utilities.
- D:\SQLDBDIR and D:\SQL00001 are the NetView DM/2 database.
- D:\IBMNVDM2\SHARE_A will hold all response files and diskette images.
- D:\IBMNVDM2\SHARE_B will hold all installation logfiles.
- D:\IBMNVDM2\FSDATA will hold all NetView DM/2 change files.

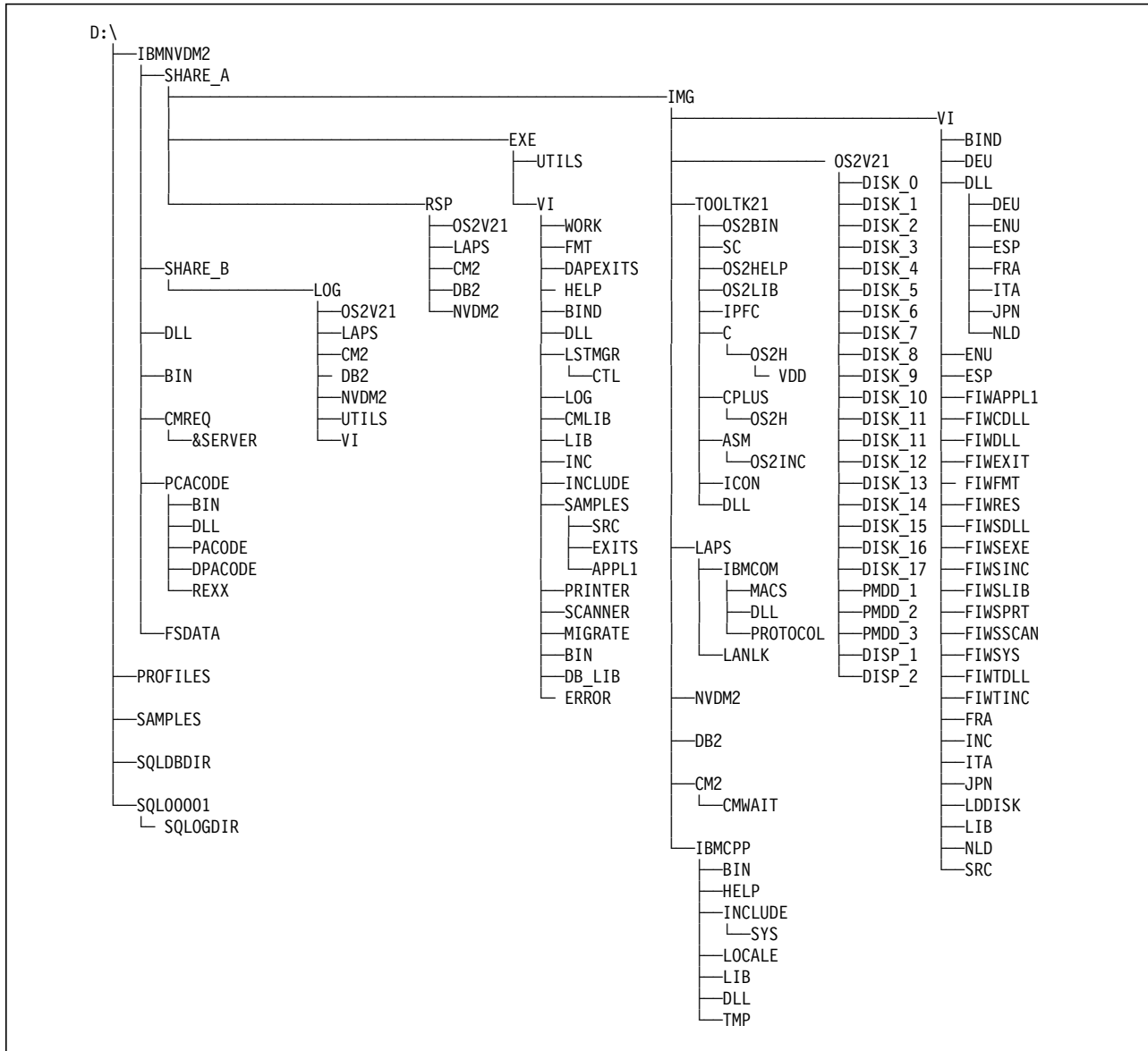


Figure 8. NetView DM/2 Server Directory Structure. This is the structure generated during the preparation of the NetView DM/2 Server.

- D:\IBMNVDM2\PCACODE will hold some client programs.
- D:\IBMNVDM2\CMREQ will hold a copy of all clients NetView DM/2 logfiles.

You will now create some of the directories. Others will be created during the installation of the diskette images. This step will only take a couple of minutes.

Using a VisualInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\MKSTRUC.CMD

This command file will execute the following commands up until 23.3, "Copy the Product Images" on page 87.

- The IMG subdirectories will hold all your product images. You only need read access to the images so we are going to put those directories in the SHARE_A directory. Issue the following commands from the OS/2 prompt to create the directories:

```
D:
CD D:\IBMNVD2\SHARE_A\IMG
MD OS2V21
MD LAPS
MD DB2
MD VI
```

- The RSP subdirectories will hold all your response files. You only need read access to the response files so we are going to put those directories in the SHARE_A directory. Issue the following commands from the OS/2 prompt to create the directories:

```
D:
CD D:\IBMNVD2\SHARE_A
MD RSP
CD RSP
MD OS2V21
MD LAPS
MD CM2
MD DB2
MD NVDM2
```

- The LOG subdirectories will hold all your installation logs. You need write access to the logfiles so we are going to put those directories in the SHARE_B directory. Issue the following commands from the OS/2 prompt to create the directories:

```
D:
CD D:\IBMNVD2\SHARE_B
MD LOG
CD LOG
MD OS2V21
MD LAPS
MD CM2
MD DB2
MD NVDM2
MD UTILS
MD VI
```

- The EXE subdirectories will hold all your utilities and executables. You only need read access to those files so we are going to put those directories in the SHARE_A directory. Issue the following commands from the OS/2 prompt to create the directories:

```
D:
CD D:\IBMNVD2\SHARE_A
MD EXE
CD EXE
MD UTILS
```

- Create the directories for NetView DM/2 profiles by issuing the following command from the OS/2 prompt:

```
MD D:\PROFILES
```

23.3 Copy the Product Images

We are now going to copy all the product images and utilities that we need for the installation. Be sure to have all the diskettes for all the products ready before you start. This step will take approximately two hours.

23.3.1 Copy OS/2 V2.1 Images

We begin this section by copying the OS/2 images to the server as follows:

— **Using a VisualInfo CID Utilities command file** —

To issue the commands below, run the command file we have provided:

D:\SAMPLES\OS2COPY.CMD

This command file will execute the following commands up until 23.3.2, "Copy LAPS Images."

- Copy the OS/2 Unpack Utility to the server by issuing the following command from the OS/2 prompt with the OS/2 V2.1 diskette 2 in drive A:
COPY A:\UNPACK.EXE D:\IBMNVD2\SHARE_A\IMG\OS2V21
- Copy the OS/2 CID Utility to the server by issuing the following commands from the OS/2 prompt with the OS/2 V2.1 diskette 7 in drive A:
**D:
CD D:\IBMNVD2\SHARE_A\IMG\OS2V21
UNPACK A:\CID D:\IBMNVD2\SHARE_A\IMG\OS2V21
UNPACK A:\REQUIRED D:\IBMNVD2\SHARE_A\IMG\OS2V21 /N:RSPINST.EXE**
- Copy the images to the server by issuing the following command from the OS/2 prompt and insert diskettes as prompted:
D:\IBMNVD2\SHARE_A\IMG\OS2V21\SEIMAGE /S:A: /T:D:\IBMNVD2\SHARE_A\IMG\OS2V21

23.3.2 Copy LAPS Images

Next we copy LAPS images to the server. Be sure to use LAPS from the CM/2 V1.1 (or NTS/2 V1.01) package or later, CSD level 7020 or higher. If you are using an older version of LAPS the CID installation later will fail with a XI01008 error message. (Note that LAPS is a part of NTS/2. The NTS/2 product has three diskettes but you will only use the LAPS diskette). Insert the LAPS diskette into drive A: and issue the following command from the OS/2 prompt:

A:\LAPSDISK A: D:\IBMNVD2\SHARE_A\IMG\LAPS

23.3.3 Copy CM/2 Images

The next product will be CM/2 V1.1. Insert the CM/2 V1.1 diskette 1 into drive A: and issue the following command from the OS/2 prompt and insert diskettes as prompted:

A:\CMIMAGE A: D:\IBMNVD2\SHARE_A\IMG\CM2

Press Enter at the first question to start copying the diskettes.

23.3.4 Copy CM/2 Utility

We also need the CM/2 utility CMWAIT. It is located on CM/2 Productivity Aids diskette 1.

Using a VisualInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\CMWAIT.CMD

This command file will execute the following commands up until 23.3.5, "Copy DB2/2 Images."

Put that diskette in drive A: and issue the following commands from the OS/2 prompt:

```
D:
CD D:\IBMNVD2\SHARE_A\IMG\CM2
MD CMWAIT
CD CMWAIT
C:\IBMCOM\PKUNZIP2 A:\CMWAIT.ZIP
```

23.3.5 Copy DB2/2 Images

DB2/2 is not necessary if you only are going to install VisualInfo clients.

The next product will be DB2/2 Single User version 1.0. There is no program to copy all the diskettes so you will do that with the command XCOPY. Insert each of the DB2/2 diskettes and issue the following command from the OS/2 prompt:

```
XCOPY A:\*.* D:\IBMNVD2\SHARE_A\IMG\DB2 /S /E
```

23.3.6 Copy REXX Files

The standard pristine environment will not support REXX by default. You need to copy some files to be able to run REXX programs in your pristine environment.

Using a VisualInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\REXXCOPY.CMD

This command file will execute the following commands up until 23.3.7, "Copy Hard Disk Utility" on page 89.

To enable REXX in a pristine environment follow this instructions:

1. Create the REXX directory by issuing the following commands from the OS/2 prompt:

```
D:
CD D:\IBMNVD2\PCACODE
MD REXX
```

2. Copy the REXX files by issuing the following command from the OS/2 prompt:

```
D:\IBMNVD2\SHARE_A\IMG\OS2V21\UNPACK
D:\IBMNVD2\SHARE_A\IMG\OS2V21\DISK_X\REXX D:\IBMNVD2\PCACODE\REXX
```

You have to change the X in DISK_X to a number from 1 to 15 (or as many diskettes you have in your NLS version of OS/2). Maybe you will have to go through them all if the REXX files are located on different diskette images. In some versions of OS/2 2.1 the REXX files are all on diskette image number 9. On other versions there are a couple of files on every diskette image. When you do your unpack command you will see the names of the REXX files that are being unpacked. You have to unpack these files from the images:

- RXSUBCOM.EXE
- RXQUEUE.EXE
- REXX.DLL
- REXXAPI.DLL
- REXXINIT.DLL
- REXXUTIL.DLL
- REX.MSG
- REXH.MSG

3. Copy the command processor by issuing the following commands from the OS/2 prompt:

```
D:  
CD D:\IBMNVD2\PCACODE\REXX  
COPY C:\OS2\CMD.EXE
```

4. Copy the REXX loader program from the NTS/2 Utilities diskette. Put the diskette in drive A: and issue the following commands from the OS/2 prompt:

```
D:  
CD D:\IBMNVD2\PCACODE\REXX  
COPY A:\LCU\SRVREXX.EXE
```

5. Copy the file that will initiate REXX with the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\REXSTART.CMD D:\IBMNVD2\PCACODE\REXX
```

23.3.7 Copy Hard Disk Utility

You are now going to copy some files that will be needed for partitioning and formatting your hard disk.

Using a VisualInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

```
D:\SAMPLES\HDCOPY.CMD
```

This command file will execute the following commands up until 23.3.8, "Copy CONFIG.SYS Update Utility" on page 90.

To do that issue the following commands from the OS/2 prompt:

```
COPY D:\SAMPLES\PARTDISK.CMD D:\IBMNVD2\SHARE_A\EXE\UTILS  
COPY D:\SAMPLES\PAR.TXT D:\IBMNVD2\SHARE_A\EXE\UTILS  
COPY C:\OS2\SETBOOT.EXE D:\IBMNVD2\PCACODE\REXX  
COPY C:\OS2\DLL\UHPFS.DLL D:\IBMNVD2\PCACODE\REXX
```

Note on NLS version of OS/2 2.1

The utility **PARTDISK.COMD** will answer a Y (YES) on the question about formatting your hard disk. If you have a NLS version where yes is not Y, you will have to change the Y to your national answer in two places in this REXX file.

23.3.8 Copy CONFIG.SYS Update Utility

You are now going to copy a file that will be needed for updating your CONFIG.SYS during the installation.

To do that issue the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\UPDCONF.COMD D:\IBMNVD2\SHARE_A\EXE\UTILS
```

23.3.9 Copy OS2.INI and OS2SYS.INI Update Utility

You are now going to copy a file that will be needed for updating OS2.INI and OS2SYS.INI during the installation.

To do that issue the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\UPDINI.COMD D:\IBMNVD2\SHARE_A\EXE\UTILS
```

23.3.10 Copy C Set ++ and Toolkit Installation Utility

C Set ++ and the Toolkit are not necessary if you only are going to install VI clients. You are now going to copy some files that will be needed for installing C Set ++ and the Toolkit.

To do that issue the following commands from the OS/2 prompt:

```
COPY D:\SAMPLES\INSTCPP.COMD D:\IBMNVD2\SHARE_A\EXE\UTILS  
COPY D:\SAMPLES\INSTTK21.COMD D:\IBMNVD2\SHARE_A\EXE\UTILS  
COPY D:\SAMPLES\UTI.MSG D:\IBMNVD2\SHARE_A\EXE\UTILS
```

23.3.11 Copy STARTUP.COMD Generator Utility

You are now going to copy a file that will be needed for creating the right STARTUP.COMD.

To do that issue the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\GENSTART.COMD D:\IBMNVD2\SHARE_A\EXE\UTILS
```

23.3.12 Copy Reboot Utility

You are now going to copy a file that will be needed for rebooting the CID Client.

To do that issue the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\REBOOT.COMD D:\IBMNVD2\SHARE_A\EXE\UTILS
```

23.3.13 Copy Database Tuning Utility

You are now going to copy a file that will be needed for tuning the database of the VI Server.

To do that issue the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\DBTUNEUP.COMD D:\IBMNVDM2\SHARE_A\EXE\UTILS
```

23.4 Adding the C Set ++ Components to the Directory Structure

You must now add C Set ++ and the Toolkit to your CID structure. C Set ++ and the Toolkit are not necessary if you only are going to install VI clients. The information on how to do that is the same for NetView DM/2 users and SRVIFS users, so we have documented that only once in this redbook. That is in the SRVIFS part of this book. See 3.1, "Adding the C Set ++ Components to the" on page 10 for that information and then return here after you have done that.

23.5 Adding VisuallInfo to the Directory Structure

You must now add VisuallInfo to your CID structure. The information on how to do that is the same for NetView DM/2 users and SRVIFS users, so we have documented that only once in this redbook. That is in the SRVIFS part of this book. See 3.2, "Adding VisuallInfo to the Directory Structure" on page 12 for that information then return here after you have done that.

Chapter 24. System Administration Tasks (NVDM/2)

This chapter describes the creation of the boot diskettes, the preparation of all products for CID, and information about disk partitioning.

24.1 Creating Boot Diskettes

When you install on a pristine machine you will have to boot the machine from the two boot diskettes to establish the connection between the client and the server. To create them, you will need two empty formatted 1.44 MB diskettes. Label one of them "NetView DM/2 Installation Diskette," and the other one "NetView DM/2 Diskette 1." Creating the diskettes will take approximately 15 minutes. Here are the steps:

Using a VisualInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\DISKMAKE.CMD

This command file contains commands up until 24.2, "Information to prepare each Product for CID Installation" on page 94.

1. To install the minimal OS/2 boot system on your diskettes, issue the following command from the OS/2 prompt:

D:\IBMNVDM2\SHARE_A\IMG\OS2V21\SEDISK /S:D:\IBMNVDM2\SHARE_A\IMG\OS2V21 /T:A:

Insert the diskette labeled "NetView DM/2 Installation Diskette" and press Enter. At completion, insert the diskette labeled "NetView DM/2 Diskette 1" and press Enter.

2. To install the minimal LAPS system, issue the following command from the OS/2 prompt (with the diskette labeled "NetView DM/2 Diskette 1" in the A drive):

D:\IBMNVDM2\SHARE_A\IMG\LAPS\THINLAPS D:\IBMNVDM2\SHARE_A\IMG\LAPS A: IBMTOK.NIF

This assumes that you are using an IBM Token Ring Adapter. If not, you will have to change IBMTOK.NIF to the appropriate NIF file. See LAPS documentation for other supported NIF files.

3. To install the minimal NetView DM/2 system, issue the following command from the OS/2 prompt (with the diskette labeled "NetView DM/2 Diskette 1" in the A drive):

D:\IBMNVDM2\BIN\NVDMBDSK

4. Specify the following on the "NetView DM/2 Boot Diskette update" program window:

- Targetdrive should be A:
- Server Name should be NVDMSRV or the name you used when you installed NetView DM/2.
- Clientname should be a question-mark (?). This will create a prompt for the clientname during installation.
- Click on OK to install the NetView DM/2 Client on the diskette.

- Select Exit after installation and then Yes to confirm.
5. To be able to run the hard disk utility we will have to add some SET statements at the end of CONFIG.SYS on “NetView DM/2 Diskette 1.” You do that by adding the lines of the file D:\SAMPLES\CONFIG.ADD at the end of A:\CONFIG.SYS. To do that, follow these instructions:
 - Be sure you have the “NetView DM/2 Diskette 1” in drive A:
 - Issue the following command from the OS/2 prompt:
TYPE D:\SAMPLES\CONFIG.ADD>>A:\CONFIG.SYS
 6. To be able to run REXX in a pristine environment you have to update your CONFIG.SYS on “NetView DM/2 Diskette 1.” Start the editor EPM with the following command from the OS/2 prompt:
EPM A:\CONFIG.SYS
 7. Add the following information to CONFIG.SYS:
 - Add **Z:\REXX;** last in the LIBPATH statement line
 - Add **Z:\REXX;** last in the PATH statement line
 - Add **Z:\REXX;** last in the DPATH statement line
 8. Press F4 to save and exit.

These steps can be repeated to create a new pair of boot diskettes.

24.2 Information to prepare each Product for CID Installation

Here is some information you need to know before starting to prepare each product.

24.2.1 Information About Disk Partitioning for VisuallInfo Systems

The information about how to set up your hard disk is the same for NetView DM/2 users and SRVIFS users, so we have documented that only once in this redbook. That is in the SRVIFS part of this book. See Chapter 5, “Disk Partitioning for VisuallInfo Systems” on page 25 for that information.

24.2.2 Information About VisuallInfo Parameters

The information about the parameters for VisuallInfo is the same for NetView DM/2 users and SRVIFS users, so we have documented that only once in this redbook. That is in the SRVIFS part of this book. See 15.1, “Command Line Parameters for VisuallInfo Installation” on page 56 and 15.2, “Response File for VisuallInfo Installation” on page 58 for that information.

24.2.3 Information About Response Files

A response file is an ASCII file that contains the information for the installation program about:

- What parts to install
- How to install them
- Where to install them

Response files for every product have been provided with the VisuallInfo CID Utilities. The response files are:

- OS2V21.RSP for OS/2
- LAPSCCLIE.RSP, LAPSSERV.RSP and LAPSUNIV.RSP for LAPS
- NVDM2CLI.RSP and NVDM2SRV.RSP for NetView DM/2
- CM2CLIEN.RSP, CM2SERVR.RSP and CM2BASE.RSP for CM/2
- STDCLIEN.RSP, STDSERVR.RSP and STDALONE.RSP for VisualInfo
- DB2.RSP for DB2/2

Note. We can not use a response file to install C Set ++ and the Toolkit, since they are not CID enabled products.

You will have to make some small changes to some of the response files. These changes are documented under each product below. To change a response file just load it into the editor by issuing the following command from the OS/2 prompt:

EPM D:\SAMPLES\xxxxxxx.RSP

Enter the name of the response file instead of xxxxxxxx, for example OS2V21. Make your changes in the response file and press F4 to save and exit.

When those changes are made, the files can be used as models for subsequent response files by copying into new files using the unique clientnames (for example, STDCLIEN.RSP) in the appropriate subdirectory. To illustrate, if CID Client STDCLIEN is going to install OS/2 the response file OS2V21.RSP has to be copied into D:\IBMNVDM2\SHARE_A\RSP\OS2V21\STDCLIEN.RSP. If STDCLIEN also is going to install LAPS the response file LAPSCCLIE.RSP has to be copied into D:\IBMNVDM2\SHARE_A\RSP\LAPS\STDCLIEN.RSP. You can read more information about this under each product.

Without changing anything in any response file you will be able to install a VI Client with the name STDCLIEN and a VI Server with the name STDSERVR. The VI Client STDCLIEN can then logon to the VI Server STDSERVR after the installation.

24.2.4 Information About NetView DM/2 Profiles

Every product that NetView DM/2 should install must have a profile. The profile will tell NetView DM/2:

- The products global name in NetView DM/2
- The description of the product
- The name of the installation program
- All parameters to the installation program

A NetView DM/2 profiles for every product has been provided with the VisualInfo CID Utilities. The profiles are:

- OS2V21.PRO for OS/2
- LAPS.PRO for LAPS
- NVDM2.PRO for NetView DM/2
- CM2.PRO for CM/2
- VICLIEN.PRO, VISERVER.PRO and VISALONE.PRO for VisualInfo

- DB2.PRO for DB2/2
- INSTCPP.PRO for C Set ++
- INSTTK21.PRO for the Toolkit
- REXXLOAD.PRO for REXX
- OS21MNT.PRO for the OS/2 maintenance system
- LAPMAINT.PRO for the LAPS maintenance system
- PARTDISK.PRO for the Disk Preparation Utility
- UPDCONF.PRO for CONFIG.SYS Update Utility
- UPDINI.PRO for OS2.INI and OS2SYS.INI files Update Utility
- GENSTART.PRO for the STARTUP.CMD Generator Utility
- REBOOT.PRO for the Reboot Utility
- DBTUNEUP.PRO for the Database Tuning Utility

If you are using the same disk partitions as we are using in this book, see 24.2.1, “Information About Disk Partitioning for VisualInfo Systems” on page 94, you do not need to update the profiles at all. If you do not, you will have to update all the profiles with the correct target drives. Then some of the response files will need to be updated too.

When the profiles are correct, you have to build a binary “NetView DM/2 change file” from your ASCII profile. This is the file NetView DM/2 will use. The OS/2 command for that is documented under each product. This step will take approximately 30 minutes.

Using a VisualInfo CID Utilities command file

To issue the commands in the rest of this chapter, run the command file we have provided:

D:\SAMPLES\PREPPROD.CMD

Before you issue the above command, please be sure to review the following section, create the VisualInfo system configuration file and make the necessary changes to the response files as described.

This command file will execute the following commands up until Chapter 25, “Performing the CID Install (NVDM/2)” on page 119.

24.3 Prepare the OS/2 Product

We start with the OS/2 product.

24.3.1 OS/2 Response File

The name of the sample response file is D:\SAMPLES\OS2V21.RSP. There are a couple of parameters that you may want to change. They are:

```

/*****
/* CountryCode */
/* Specifies which country should be installed.*/
/* This causes all county information to be */
/* installed. */
/* */
/*****
CountryCode=001

/*****
/* CountryKeyboard */
/* Specifies which country keyboard should be */
/* installed. This causes all keyboard */
/* information to be installed. */
/* */
/*****
CountryKeyboard=US

/*****
/* */
/* DefaultPrinter */
/* Specifies which default printer to install */
/* 0=None or Keyvalue=printer driver index */
/* Keyvalue=printer driver index (DEFAULT=line */
/* # of 42XX) in PRDESC.LST shipped on first */
/* printer diskette */
/* NOTE: the driver index is the line number in */
/* the PRDESC.LST file that contains the */
/* printer name. */
/* */
/*****
DefaultPrinter=130

```

This is only a part of the response file. Refer to Appendix A, "Response File for OS/2 2.1 Installation" on page 137 for a listing of the complete file.

Be sure that the value of the CountryCode, CountryKeyboard and DefaultPrinter are the ones you want. If not, load the file in to the EPM editor and change the values. To find the printer you want, load the file PRDESC.LST from OS/2 Printer Diskette 1 into EPM. Find your printer and see what line it is on. Specify the line numbers after the keyword DefaultPrinter in the response file. Be sure to save the changes. In the response file the default is 130 (IBM 4029).

To create the response files for VI Client STDCLIEN and VI Server STDSERVR use the following commands from the OS/2 prompt:

```

COPY D:\SAMPLES\OS2V21.RSP D:\IBMNVDM2\SHARE_A\RSP\OS2V21\STDCLIEN.RSP
COPY D:\SAMPLES\OS2V21.RSP D:\IBMNVDM2\SHARE_A\RSP\OS2V21\STDSERVR.RSP

```

24.3.2 OS/2 Profile

This is the OS/2 profile (OS2V21.PRO):

```

TargetDir = E:\OS2

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.OS2V21.INST.REF.2.1
  Description = "Installation of OS/2 V2.1"
End

Section Install
Begin
  Program = SA:\img\os2v21\seinst.exe
  Params = /S:${SourceDir} /B:E: /R:${ResponseFile} /I1:${LogFile1} /T:A:\
  SourceDir = SA:\img\os2v21
  ResponseFile = SA:\rsp\os2v21\$(WorkStatName).rsp
  LogFile1 = SB:\log\os2v21\$(WorkStatName).log
End

```

For more information about the parameters to OS/2 see *Automated Installation for CID Enabled OS/2 V2.X* (GG24-3783-01).

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\OS2V21.PRO D:\PROFILES
```

24.3.3 Build OS/2 Change File

We are going to build the OS/2 change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\OS2V21.PRO FS:OS2V21.CHG
```

24.4 Prepare the LAPS Product

The next product will be LAPS.

24.4.1 LAPS Response File

Two sample response files have been provided in the D:\SAMPLES directory. They are:

- LAPSCLIE.RSP for installation of a VI clients.
- LAPSSERV.RSP for installation of a VI Servers.

The response files are exactly the same except for the Token Ring address. There are two reasons for that. The first reason is that you are now able to install one VI Client and one VI Server without having to change any LAPS response file. The second reason is that you may want to tune the response file for the VI Servers and not for the VI clients.

The default Token Ring address of your first VI Server is 400050002004 and for your first VI Client 400051002026. You do not have to change the response files if you can use those addresses. If you want to change the Token Ring address of your VI Server or your VI Client, here is where to find the line in the response file:

```

DriverName = IBMTOK$
ADAPTER = "PRIMARY"
NETADDRESS = "400050002004"
MAXTRANSMITS = 6
RECVBUFS = 2
RECVBUFSIZE = 256
XMITBUFS = 1

```

This is only a part of the response file. Refer to Appendix B, "Response File for LAPS Installation on a Server" on page 149 and Appendix C, "Response File for LAPS Installation on a Client" on page 151 for the complete listing of the files.

If you change the Token Ring address of the server, don't forget to change the corresponding parameter FRNNDA in the VI Client response file STDCLIEN.RSP later.

To create the response files for VI Client STDCLIEN and VI Server STDSERV use the following command from the OS/2 prompt:

```

COPY D:\SAMPLES\LAPSCLE.RSP D:\IBMNVD2\SHARE_A\RSP\LAPS\STDCLIEN.RSP
COPY D:\SAMPLES\LAPSSERV.RSP D:\IBMNVD2\SHARE_A\RSP\LAPS\STDSERV.RSP

```

The VisualInfo CID Utilities also include a LAPS response file that uses the Universally Administrated Address. The name of that response file is LAPSUNIV.RSP. This response file can be used for any machine, without changing the Token Ring Address.

24.4.2 LAPS Profile

This is the LAPS profile (LAPS.PRO):

```

TargetDir = E:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.LAPS.INST.REF.1.0
  Description = "Installation of LAPS"
End

Section Install
Begin
  Program = SA:\img\laps\laps.exe
  Pargs = /S:$(SourceDir) /T:$(TargetDir) /R:$(ResponseFile)
          /11:$(LogFile1) /E:MAINT
  SourceDir = SA:\img\laps
  ResponseFile = SA:\rsp\laps\$(WorkStatName).rsp
  LogFile1 = SB:\log\laps\$(WorkStatName).log
End

```

For more information about the parameters to LAPS see *Automated Installation for CID Enabled OS/2 V2.X* (GG24-3783-01).

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```

COPY D:\SAMPLES\LAPS.PRO D:\PROFILES

```

24.4.3 Build LAPS Change File

We are going to build the LAPS change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\LAPS.PRO FS:LAPS.CHG
```

24.5 Prepare the NetView DM/2 Product

It's time for NetView DM/2.

24.5.1 NetView DM/2 Response File

The name of the sample response files are D:\SAMPLES\NVDM2CLI.RSP and D:\SAMPLES\NVDM2SRV.RSP. You will not need to change anything in those response files to install your first VI Client STDCLIEN and your first VI Server STDSERVR. Refer to Appendix L, "Response Files for NetView DM/2 Installation" on page 173 for a listing of the files.

To create the response file for VI Client STDCLIEN and VI Server STDSERVR, use the following commands from the OS/2 prompt:

```
COPY D:\SAMPLES\NVDM2CLI.RSP D:\IBMNVDM2\SHARE_A\RSP\NVDM2\STDCLIEN.RSP
COPY D:\SAMPLES\NVDM2SRV.RSP D:\IBMNVDM2\SHARE_A\RSP\NVDM2\STDSERVR.RSP
```

24.5.2 NetView DM/2 Profile

This is the NetView DM/2 profile (NVDM2.PRO):

```
TargetDir = E:\IBMNVDM2

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.NVDM2.INST.REF.2.0
  Description = "Installation of NVDM/2 Client"
End

Section Install
Begin
  Program = SA:\img\nvdm2\nvdmclt.exe
  Pargs = /B:E /R:$(ResponseFile) /S:$(SourceDir) /T:$(TargetDir)
         /1:$(LogFile1)
  SourceDir = SA:\img\nvdm2
  ResponseFile = SA:\rsp\nvdm2\$(WorkStatName).rsp
  LogFile1 = SB:\log\nvdm2\$(WorkStatName).log
End
```

For more information about the parameters to NetView DM/2 see *NetView DM/2 Installation and Customization Guide* (SH19-6915).

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\NVDM2.PRO D:\PROFILES
```


24.5.3 Build NetView DM/2 Change File

We are going to build the NetView DM/2 change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\NVDM2.PRO FS:NVDM2.CHG
```

24.6 Prepare the CM/2 Product

It's time for CM/2.

24.6.1 CM/2 Response File

Three sample response files have been provided in the D:\SAMPLES directory:

- CM2CLIEN.RSP is the unique response file for installation of a VI Client.
- CM2SERVR.RSP is the unique response file for installation of a VI Server.
- CM2BASE is a basic response file for both VI clients and VI Servers. It is included from both CM2CLIEN.RSP and CM2SERVR.RSP. This file does not need to be updated. See Appendix G, "Basic Response File for CM/2 Installation" on page 159 for a listing of the file.

To install a VI Server be sure to update the appropriate parameters in the response file CM2SERVR.RSP. This is the response file:

```
/* CM2SERVR.RSP - CM/2 response file for a VisualInfo
/* Standard Server (Library, Object and
/* configuration server on the same machine) */
/* Include the common response file to set the basic values.*/
/* They will be overridden by the responses in this file. */
INCLUDE=X:\RSP\CM2\CM2BASE.RSP
CMUSERCFG=VISERVER
/* LAN_DLC
/* Communication and System Managements LAN ID
LAN_DLC = (
NAME = 0
CASM_LAN_ID = LAN12345
)
/* Local CP
/* NAME is the fully qualified Local CP Name. Specify it
/* as the NETID and CP NAME separated by a period.
LOCAL_CP = (
NAME = USIBMD1.ABC12345
)
```

You will have to update the parameters CASM_LAN_ID and NAME in the file CM2SERVR.RSP.

To install a VI Client, be sure to update the appropriate parameters in the response file CM2CLIEN.RSP. This is the response file:

```

/*****
/* CM2CLIEN.RSP - CM/2 response file for a VisualInfo Client*/
/*****
/*****
/* Include the common response file to set the basic values.*/
/* They will be overridden by the responses in this file. */
/*****
INCLUDE=X:\RSP\CM2\CM2BASE.RSP
CMUSERCFG=VICLIEN
/*****
/* LAN_DLC */
/* */
/* Communication and System Managements LAN ID */
/*****
LAN_DLC = (
NAME = 0
CASM_LAN_ID = LAN12345
)
/*****
/* Local CP */
/* */
/* NAME is the fully qualified Local CP Name. Specify it */
/* as the NETID and CP NAME separated by a period. */
/*****
LOCAL_CP = (
NAME = USIBMD1.ABC12345
NODE_TYPE = 3
)
/*****
/* LOGICAL_LINK */
/* */
/* DESTINATION_ADDRESS */
/* Specifies the TR address of your Network Node (NN) */
/*****
LOGICAL_LINK = (
NAME = LINK0001
DLC_NAME = IBMTRNET
ACTIVATE_AT_STARTUP = 1
CP_CP_SESSION_SUPPORT = 1
ADAPTER_NUMBER = 0
ADJACENT_NODE_TYPE = 2
DESTINATION_ADDRESS = 400050002004
ETHERNET_FORMAT = 0
EFFECTIVE_CAPACITY = -1
COST_PER_BYTE = -1
COST_PER_CONNECT_TIME = -1
PROPAGATION_DELAY = -1
SECURITY = -1
USER_DEFINED_1 = -1
USER_DEFINED_2 = -1
USER_DEFINED_3 = -1
LIMITED_RESOURCE = 0
LINK_STATION_ROLE = -1
SOLICIT_SSCP_SESSION = 0
MAX_ACTIVATION_ATTEMPTS = 0
USE_PUNAME_AS_CPNAME = 0
)

```

You will have to update the parameters CASM_LAN_ID, NAME and DESTINATION_ADDRESS in the file CM2CLIEN.RSP.

If you want more information about the response file for CM/2, please review the on-line documentation *Response File Reference* (RESPONSE.INF) on the CM/2 CD-ROM.

To create the response files for VI Client STDCLIEN and VI Server STDSERVR use the following commands from the OS/2 prompt to copy the files from the sample directory:

```
COPY D:\SAMPLES\CM2CLIEN.RSP D:\IBMNVD2\SHARE_A\RSP\CM2\STDCLIEN.RSP
COPY D:\SAMPLES\CM2SERVR.RSP D:\IBMNVD2\SHARE_A\RSP\CM2\STDSEVR.RSP
COPY D:\SAMPLES\CM2BASE.RSP D:\IBMNVD2\SHARE_A\RSP\CM2
```

24.6.2 CM/2 Profile

This is the CM/2 profile (CM2.PRO):

```
TargetDir = D:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.CM2.INST.REF.1.1
  Description = "Installation of CM/2 V1.1"
End

Section Install
Begin
  Program = SA:\img\cm2\cmsetup.exe
  Pams = /S:$(SourceDir) /R:$(ResponseFile) /I1:$(LogFile1)
        /I2:$(LogFile2) /G:$(SourceDir)\cmwait /cr
  SourceDir = SA:\img\cm2
  ResponseFile = SA:\rsp\cm2\$(WorkStatName).rsp
  LogFile1 = SB:\log\cm2\$(WorkStatName).11
  LogFile2 = SB:\log\cm2\$(WorkStatName).12
End
```

For more information about the parameters to CM/2 review the CM/2 on-line documentation *CM/2 Command Reference*.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\CM2.PRO D:\PROFILES
```

24.6.3 Build CM/2 Change File

We are going to build the CM/2 change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\CM2.PRO FS:CM2.CHG
```

24.7 Prepare the VisuallInfo (VI) Product

Heeeerrrrre's VI!!!!!!!

24.7.1 VisuallInfo System Configuration File

One thing you need to do before you prepare the response file to VI is to generate the VI System Configuration File. To do that you will also have to assign all your workstations names and addresses. The information about this are the same for NetView DM/2 users and SRVIFS users, so we have documented that only once in this redbook. That is in the SRVIFS part of this book. See 4.2, "Assigning Workstation Names and Addresses" on page 16 and 4.3, "Creating a VisuallInfo System Configuration File" on page 19 for that information and return here after you have done that.

24.7.2 VI Response File

Two sample response files have been provided in the D:\SAMPLES directory. They are STDCLIEN.RSP (for VI clients) and STDSERVER.RSP (for VI Servers).

Note

Note that VisuallInfo requires that its response files are placed in a read/write directory. That is the reason why we have the response file in the LOG directory structure and not in the RSP directory structure as for all the other products.

If you are going to install VI Server be sure to update the appropriate parameters in the response file STDSERVER.RSP.

```
;**** Nickname of this node ****
FRNFQNODE = STDSERVER

;*****
;* CM/2 Keyword Parameters *
;*****
;*** Create a CM/2 configuration file *
FRNCMACTION = YES
;*** Model CM/2 Configuration File ****
FRNCFGN = VISERVER
;*** SNA Network ID ****
FRNNETID = USIBMD1
;*** SNA Local Node Name ****
FRNNETNM = VISERVER
```

This is only a part of the response file. Refer to Appendix I, "Response File for the Installation of a VI Standard Server" on page 167 for a listing of the complete file.

You will have to update the parameters FRNFQNODE, FRNNETID and FRNNETNM in the file STDSERVER.RSP. For information about those parameters refer to 24.2.2, "Information About VisuallInfo Parameters" on page 94.

If you are going to install VI Client be sure to update the appropriate parameters in the response file STDCLIEN.RSP.

```

;**** Nickname of this node *****
FRNFQNODE = STDCLIEN

;*****
;* CM/2 Keyword Parameters *
;*****
;*** Create a CM/2 configuration file *****
FRNCMACTION = YES
;*** Model CM/2 Configuration File *****
FRNCFGN = VICLIEN
;*** SNA Network ID *****
FRNNETID = USIBMD1
;*** SNA Local Node Name *****
FRNNETNM = VICLIEN
;*** Last 5 digits of Local Node ID *****
FRNNODID = 00000
;*** APPN Node Type (NN=Network Node, EN=End Node) *
FRNNODTY = EN
;*** For an EN: Adapter address of NN Server *****
;*** For an NN: Any Adapter address, not used *****
FRNNNDA = 400050002004

```

This is only a part of the response file. Refer to Appendix J, “Response File for the Installation of a VI Standard Client” on page 169 for a listing of the complete file.

You will have to update the parameters FRNFQNODE, FRNNETID, FRNNETNM and FRNNNDA in the file STDCLIEN.RSP. For information about those parameters refer to 24.2.2, “Information About VisualInfo Parameters” on page 94.

VI creates a CM/2 configuration file with this information. This is the CM/2 configuration file we will be using after the installation.

To copy the response files for VI Client STDCLIEN and VI Server STDSERVER, use the following commands from the OS/2 prompt to copy the files from the sample directory:

```

COPY D:\SAMPLES\STDCLIEN.RSP D:\IBMNVDM2\SHARE_B\LOG\VI\STDCLIEN.RSP
COPY D:\SAMPLES\STDSERVER.RSP D:\IBMNVDM2\SHARE_B\LOG\VI\STDSERVER.RSP

```

24.7.3 VI Profile

There are two profiles for VI. One for the Server and one for the Client. This is the VI Client profile (VICLIEN.PRO):

```

TargetDir = D:\VI

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.VICLIENT.INST.REF.1.0
  Description = "Installation of VisualInfo Client"
End

Section Install
Begin
  Program = SA:\exe\vi\bin\frninsts.exe
  Params = "/A:I /C:X:\IMG\VI\FRNOCDCT.ICF /G:W:\LOG\VI /I1:$(LogFile1)
           /I2:$(LogFile2) /P:"VisualInfo - Standard Client"
           /R:$(ResponseFile) /O:DRIVE /S:$(SourceDir) /T:D:\VI
           /TU:E:\ /X"
  SourceDir = SA:\img\VI
  ResponseFile = SB:\log\VI\$(WorkStatName).rsp
  LogFile1 = SB:\log\VI\$(WorkStatName).log
  LogFile2 = SB:\log\VI\$(WorkStatName).hst
End

```

The profile for the VI Server (VISERVER.PRO) looks exactly the same, except the parameter /P: has the value "VisualInfo - Standard Server."

For more information about the parameters to VisualInfo, see 24.2.2, "Information About VisualInfo Parameters" on page 94.

To copy the file from the sample directory, use the following commands from the OS/2 prompt:

COPY D:\SAMPLES\VICLIENT.PRO D:\PROFILES for VI clients installations

COPY D:\SAMPLES\VISERVER.PRO D:\PROFILES for VI Servers installations

Copy both files above if you are planning to install both VI clients and VI Servers later.

24.7.4 Build VI Change File

We are going to build the VI change file by issuing the following commands from the OS/2 prompt:

CDM BUILD D:\PROFILES\VICLIENT.PRO FS:VICLIENT.CHG for VI clients installations

CDM BUILD D:\PROFILES\VISERVER.PRO FS:VISERVER.CHG for VI Servers installations

Issue both commands above if you are planning to install both VI clients and VI Servers later.

24.8 Prepare the DB2/2 Product

DB2/2 is next. Note that DB2/2 is not necessary if you only are going to install VisualInfo clients.

24.8.1 DB2/2 Response File

The name of the sample response file is D:\SAMPLES\DB2.RSP. You will not need to change anything in this response file. See Appendix H, “Response File for DB2/2 Installation” on page 165 for a listing of the response file.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\DB2.RSP D:\IBMNVD2\SHARE_A\RSP\DB2\STDSERV.RSP
```

24.8.2 DB2/2 Profile

This is the DB2/2 profile (DB2.PRO):

```
TargetDir = D:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.DB2.INST.REF.1.0
  Description = "Installation of DB2/2 V1.0"
End

Section Install
Begin
  Program = SA:\img\db2\dbcid.exe
  Parms = /S:$(SourceDir) /R:$(ResponseFile) /L1:$(LogFile1) /L2:$(LogFile2)
  SourceDir = SA:\img\db2
  ResponseFile = SA:\rsp\db2\$(WorkStatName).rsp
  LogFile1 = SB:\log\db2\$(WorkStatName).11
  LogFile2 = SB:\log\db2\$(WorkStatName).12
End
```

For more information about the parameters to DB2/2 see *Database 2 OS/2 Installation Guide* (S62G-3664).

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\DB2.PRO D:\PROFILES
```

24.8.3 Build DB2/2 Change File

We are going to build the DB2/2 change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\DB2.PRO FS:DB2.CHG
```

24.9 Prepare the C Set ++ Product

We need this to install C Set ++. Note that C Set ++ is not necessary if you only are going to install VisualInfo clients.

24.9.1 C Set ++ Profile

This is the C Set ++ profile (INSTCPP.PRO):

```

TargetDir = D:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.CPP.INST.REF.1.0
  Description = "Installation of C++"
End

Section Install
Begin
  Program = SA:\exe\utils\INSTCPP.CMD
  Parns = D: $(WorkStatName) W:\LOG\UTILS X:\exe\UTILS\UTI.MSG E:
End

```

The program that will be executed is the VisualInfo CID Utility INSTCPP.CMD. The program does the following:

- Creates the IBMCPP directory and copy all files to it.
- Creates the C/C++ folder and icons.
- Update the CONFIG.SYS with the same information as the C Set ++ installation program would do.

Parameters to INSTCPP.CMD are:

1. Drive for installation
2. Clientname
3. Log path
4. Message file
5. OS/2 drive

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\INSTCPP.PRO D:\PROFILES
```

24.9.2 Build C Set ++ Change File

We are going to build the C Set ++ change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\INSTCPP.PRO FS:INSTCPP.CHG
```

24.10 Prepare the Toolkit Product

This utility will install the Toolkit. Note that the Toolkit is not necessary if you only are going to install VisualInfo clients.

24.10.1 Toolkit Profile

This is the Toolkit profile (INSTTK21.PRO):

```
TargetDir = D:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.TK21.INST.REF.1.0
  Description = "Installation of ToolKit"
End

Section Install
Begin
  Program = SA:\exe\utils\INSTTK21.CMD
  Pargs = D: $(WorkStatName) W:\LOG\UTILS X:\EXE\UTILS\UTI.MSG E:
End
```

The program that will be executed is the VisualInfo CID Utility INSTTK21.CMD. The program does the following:

- Creates the TOOLKT21 directory and copy all files to it.
- Creates the Toolkit folder and icons.
- Update the CONFIG.SYS with the same information as the Toolkit installation program would do.

Parameters to INSTTK21.CMD are:

1. Drive for installation
2. Clientname
3. Log path
4. Message file
5. OS/2 drive

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\INSTTK21.PRO D:\PROFILES
```

24.10.2 Build Toolkit Change File

We are going to build the Toolkit change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\INSTTK21.PRO FS:INSTTK21.CHG
```

24.11 Prepare REXX Utility

We need this to enable REXX in a pristine environment.

24.11.1 REXX Profile

This is the REXX profile (REXXLOAD.PRO):

```
TargetDir = C:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.REXXLOAD.PRISTINE.REF.1.0
  Description = "Load REXX in a pristine environment"
End

Section Install
Begin
  Program = Z:\REXX\REXSTART.COMD
End
```

The program that will be executed is the VisualInfo CID Utility REXSTART.COMD. The program does the following:

- Loads REXX so it is possible to run REXX programs.
- Shows information on screen.

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\REXXLOAD.PRO D:\PROFILES
```

24.11.2 Build REXX Change File

We are going to build the REXX change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\REXXLOAD.PRO FS:REXXLOAD.CHG
```

24.12 Prepare OS/2 Maintenance Utility

This utility will install a minimal OS/2 system on your C drive. This system can be used when updating or fixing problems on the production OS/2 system. We are going to install OS/2 maintenance and THINLAPS on that system. We could have used the LAPS installed on the OS/2 Production System, but we believe that a maintenance system should be as independent as possible from the rest of the software installed on the same machine.

Two courses of action are open after the installation:

- For **manual maintenance**, select the OS/2 Maintenance System from the Boot Manager panel and you will have a single-session, full-screen OS/2 system ready for manual maintenance. The system will display the OS/2 prompt. You now have the possibility to correct errors and make manual updates on the OS/2 production partition. You also have NETBIOS loaded if you would like to run some NETBIOS utilities.
- For **automatic maintenance**, make a CID installation of the NetView DM/2 Client on the maintenance partition. Boot the machine on the OS/2 Maintenance System from the Boot Manager panel or with the SETBOOT command. A NETBIOS session with the NetView DM/2 Server will be started

and the CDM Agent will start. The machine is now ready to receive data from the NetView DM/2 Server.

OS/2 Maintenance partition size

In an 8 MB partition (the default size for the programs delivered with this book), approximately 3.5 MB of disk storage will remain free after installing the OS/2 and THINLAPS. That space is enough to install the NetView DM/2 Client when you are doing automatic maintenance. Allocate more space to the OS/2 Maintenance Partition if you plan to install other components there.

24.12.1 OS/2 Maintenance Profile

This is the OS/2 Maintenance profile (OS21MNT.PRO):

```
TargetDir = C:\SERVICE

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.OS2V21.MAINT.REF.2.1
  Description = "Installation of OS/2 V2.1 Seed System"
End

Section Install
Begin
  Program = SA:\img\os2v21\semaint.exe
  Pargs = /S:$(SourceDir) /T:$(targetdir) /B:C: /I1:$(LogFile1)
  SourceDir = SA:\img\os2v21
  LogFile1 = SB:\log\os2v21\$(WorkStatName).ml
End
```

For more information about the parameters to OS/2 Maintenance see *Automated Installation for CID Enabled OS/2 V2.X* (GG24-3783).

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\OS21MNT.PRO D:\PROFILES
```

24.12.2 Build OS/2 Maintenance Change File

We are going to build the Maintenance change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\OS21MNT.PRO FS:OS21MNT.CHG
```

24.13 Prepare LAPS Maintenance Utility

We need this to install a minimal LAPS system on your C drive. This will make the maintenance system LAN enabled when the machine is booted on the maintenance partition.

24.13.1 LAPS Maintenance Profile

This is the LAPS Maintenance profile (LAPMAINT.PRO):

```
TargetDir = C:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.LAPS.MAINT.REF.2.1
  Description = "Installation of LAPS on maintenance system"
End

Section Install
Begin
  Program = X:\img\laps\thinlaps.exe
  Pargs = X:\IMG\LAPS C:\ IBMTOK.NIF
End
```

For more information about the parameters to THINLAPS see *Automated Installation for CID Enabled OS/2 V2.X (GG24-3783)*.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\LAPMAINT.PRO D:\PROFILES
```

24.13.2 Build LAPS Maintenance Change File

We are going to build the Maintenance change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\LAPMAINT.PRO FS:LAPMAINT.CHG
```

24.14 Prepare Disk Preparation Utility

This is the disk preparation utility. This utility is called PARTDISK.

24.14.1 Disk Preparation Profile

This is the Disk Preparation profile (PARTDISK.PRO):

```
TargetDir = C:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.PARTDISK.PRISTINE.REF.1.0
  Description = "Prepare your hard disk in a pristine environment"
End

Section Install
Begin
  Program = SA:\exe\utils\PARTDISK.CMD
  Pargs = $(WorkStatName) 8 200 55 80
End
```

The program that will be executed is the VisualInfo CID Utility PARTDISK.CMD. The program does the following:

- Looks at the disk partitions to see if they are correct and formatted.

- Re-partitions the disk if the machine is in a pristine state.
- Formats the disks if the partitions are right but not formatted.
- Exits the utility if partitions are right and formatted.

Parameters to PARTDISK.CMD are:

1. Clientname
2. OS/2 Maintenance size (NetView DM/2 clients need 8 MB)
3. Minimum size of the application partition
4. Size of OS/2 production system
5. Minimum size for spooler, swapping and temporary data

See the file for more information.

The default parameters in the PARTDISK.PRO needs at least 340 MB of disk space on the CID Client. If you don't have that amount of disk on your CID Client you can reduce the "minimum size of the application partition" parameter down to a minimum of 60 MB. We would recommend 100 MB minimum for the application partition. If you reduce the application to 60 MB then you can not install any other software in the application partition, only VI and it's prerequisites. This is how you would fit VI on a 200 MB disk. See 24.2.1, "Information About Disk Partitioning for VisualInfo Systems" on page 94 for more information.

To copy the file from the sample directory use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\PARTDISK.PRO D:\PROFILES
```

24.14.2 Build Disk Preparation Change File

We are going to build the PARTDISK change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\PARTDISK.PRO FS:PARTDISK.CHG
```

24.15 Prepare CONFIG.SYS Update Utility

We need this to update your CONFIG.SYS during installation.

24.15.1 CONFIG.SYS Update Profile

This is the CONFIG.SYS Update profile (UPDCONF.PRO):

```

TargetDir = C:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.UPDCONF.INST.REF.1.0
  Description = "Modify your CONFIG.SYS"
End

Section Install
Begin
  Program = SA:\exe\utils\UPDCONF.CMD
  Parns = E: $(WorkStatName) V:\LOG\UTILS W:\EXE\UTILS\PAR.TXT
End

```

The program that will be executed is the VisualInfo CID Utility UPDCONF.CMD. The program does the following:

- Moves your OS/2 swapper file from the OS/2 drive (E:) to the temporary drive (F:).
- Adds the entry **SET RESTARTOBJECTS=STARTUPFOLDERONLY** to your CONFIG.SYS. This entry will at startup tell OS/2 to only autostart programs in STARTUP.CMD and the startup folder. The default for OS/2 is to start all programs that were running at shutdown.

Parameters to UPDCONF.CMD are:

1. OS/2 drive
2. Clientname
3. Log path
4. Message file

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\UPDCONF.PRO D:\PROFILES
```

24.15.2 Build CONFIG.SYS Update Change File

We are going to build the UPDCONF change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\UPDCONF.PRO FS:UPDCONF.CHG
```

24.16 Prepare OS2.INI and OS2SYS.INI Update Utility

We will use this utility to update OS2.INI and OS2SYS.INI during installation.

24.16.1 OS2.INI and OS2SYS.INI Update Profile

This is the OS2.INI and OS2SYS.INI Update profile (UPDINI.PRO):

```

TargetDir = C:\

Section Catalog
Begin
    ObjectType = SOFTWARE
    GlobalName = IBM.UPDINI.INST.REF.1.0
    Description = "Change parameters in the OS2.INI and OS2SYS.INI file"
End

Section Install
Begin
    Program = SA:\exe\utils\UPDINI.CMD
    Pargs = F: E:
End

```

The program that will be executed is the VisualInfo CID Utility UPDINI.CMD. The program does the following:

- Moves your print spooler from the OS/2 drive (E:) to the temporary drive (F:).
- Makes some desktop enhancement.

Parameters to UPDINI.CMD are:

1. Temporary drive
2. OS/2 drive

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\UPDINI.PRO D:\PROFILES
```

24.16.2 Build OS2.INI and OS2SYS.INI Update Change File

We are going to build the UPDINI change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\UPDINI.PRO FS:UPDINI.CHG
```

24.17 Prepare STARTUP.CMD Generator Utility

We need this to create a STARTUP.CMD during installation. This utility can create a STARTUP.CMD for the following types of installation:

- VI Standard Client
- VI Standard Server
- VI stand-alone
- VI Library Server
- VI Object Server

This is an example of a generated STARTUP.CMD on a VI Standard Server:

```

/*
   Start the VisualInfo Standard Server
*/
call RxFuncAdd 'SysLoadFuncs', 'RexxUtil', 'SysLoadFuncs'
call SysLoadFuncs /* Load REXX Utilities */
'LOGON USERID /P:PASSWORD /L' /* Local logon to UPM */
'STARTDBM' /* Start DataBase Manager */
'START /C CM FRNONEWN ' /* Start CM/2 with FRNONETW.CFG*/
'CMWAIT' /* Wait for CM/2 to start */
'START D:\VI\FRNOLLMN.EXE LIBSRVR2 IBMCONFIG' /* Start VI Library Server */
say 'Sleep 30 seconds.....'
if SysSleep(30) = '0' then say 'Wake up time!'
'START D:\VI\FRNOLBMN.EXE OBJSRVR2 IBMCONFIG' /* Start VI Object Server */
say 'Sleep 30 seconds.....'
if SysSleep(30) = '0' then say 'Wake up time!'
'START D:\VI\FRNSMSRV.EXE OBJSRVR2' /* Start VI SMS Server */
say 'Sleep 5 seconds.....'
if SysSleep(5) = '0' then say 'Wake up time!'
'START /C D:\VI\FRNOLIRN.EXE' /* Refresh VI Configuration */
call SysDropFuncs /* Unload the REXX Utilities */
'EXIT'

```

24.17.1 STARTUP.CMD Generator Profile

This is the STARTUP.CMD Generator profile (GENSTART.PRO):

```

TargetDir = C:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.GENSTART.INST.REF.1.0
  Description = "Generate a STARTUP.CMD and reboot"
End

Section Install
Begin
  Program = SA:\exe\utils\GENSTART.CMD
  Pams = Y E: D:
End

```

The program that will be executed is the VisualInfo CID Utility GENSTART.CMD. The program does the following:

- Find out if you are installing on a VI Client or a VI Server.
- Generate a STARTUP.CMD.

Parameters to GENSTART.CMD are:

1. Is this machine using NVDM/2 (Y/N). All NVDM/2 CID clients must have a Y here.
2. OS/2 drive
3. Application drive

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\GENSTART.PRO D:\PROFILES
```


24.17.2 Build STARTUP.CMD Generator Change File

We are going to build the GENSTART change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\GENSTART.PRO FS:GENSTART.CHG
```

24.18 Prepare Reboot Utility

This utility will reboot the CID Client during installation. This is a work around for the problem that the VI installation program does NOT tell NetView DM/2 to reboot after installation. This problem will be corrected in future versions of VI. At that point, this program will not be needed.

24.18.1 Reboot Profile

This is the Reboot profile (REBOOT.PRO):

```
TargetDir = C:\

Section Catalog
Begin
    ObjectType = SOFTWARE
    GlobalName = IBM.REBOOT.INST.REF.1.0
    Description = "Tell NetView DM/2 to reboot"
End

Section Install
Begin
    Program = SA:\exe\utils\REBOOT.CMD
End
```

The program that will be executed is the VisualInfo CID Utility REBOOT.CMD. The program does the following:

- Ends at once with a returncode FE00. FE00 tells NetView DM/2 to reboot.

There are no parameters to REBOOT.CMD.

See the file for more information.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\REBOOT.PRO D:\PROFILES
```

24.19 Prepare Database Tuning Utility

This is the utility that will tune the database on the VI Server. We also run this utility on VI clients since this utility also updates CONFIG.SYS.

24.19.1 Database Tuning Profile

This is the database tuning profile (DBTUNEUP.PRO):

```

TargetDir = C:\

Section Catalog
Begin
  ObjectType = SOFTWARE
  GlobalName = IBM.DBTUNEUP.INST.REF.1.0
  Description = "DB Tuning Utility"
End

Section Install
Begin
  Program = SA:\exe\utils\DBTUNEUP.CMD
  Pams = $(WorkStatName) F: F: D: E: W:\LOG\UTILS X:\EXE\UTILS\UTI.MSG
End

```

The program that will be executed is the VisualInfo CID Utility DBTUNEUP.CMD. The program does the following:

- Create the new DB logfile directories.
- Optimize Database Manager and the databases.
- Tune some parameters in CONFIG.SYS.

Parameters to DBTUNEUP.CMD are:

1. Client name
2. The drive for the Library Server database log.
3. The drive for the Objects Server database log.
4. Application drive
5. OS/2 drive
6. Log path
7. Message file

For more information about all parameters that are being tuned see Chapter 19, "Tuning of DBM and the Databases to Optimize Performance" on page 71.

To copy the file from the sample directory, use the following command from the OS/2 prompt:

```
COPY D:\SAMPLES\DBTUNEUP.PRO D:\PROFILES
```

24.19.2 Build Database Tuning Utility Change File

We are going to build the DBTUNEUP change file by issuing the following command from the OS/2 prompt:

```
CDM BUILD D:\PROFILES\DBTUNEUP.PRO FS:DBTUNEUP.CHG
```

Chapter 25. Performing the CID Install (NVDM/2)

This chapter describes the CID installation procedure on the CID clients to create a VisualInfo client and a VisualInfo Server. There is also information on how to install and reinstall additional VI clients, Servers and stand-alone systems.

25.1 Prepare the First VI Server for CID Installation

We will now perform our first VI Server CID installation. This installation will repartition your hard disk. Therefore, we assume that you are installing on:

- A pristine machine, brand new with no software installed.
- A machine that has all important user data backed up so it can be made pristine.

To make pristine run FDISK and delete all partitions. Make sure you back your data up first (if any) because deleting partitions will destroy all data.

If you don't want to run PARTDISK then you will have to be sure that your disk is partitioned and formatted according to 24.2.1, "Information About Disk Partitioning for VisualInfo Systems" on page 94.

We will establish a connection between the server and the client, using the following steps:

1. Define the client, in this example STDSERVER, to the NetView DM/2 Server by issuing the following command at the OS/2 prompt on the NetView DM/2 Server:

```
CDM ADD_WS STDSERV
```

2. Put the diskette labeled "NetView DM/2 Installation Diskette" in drive A: of your pristine CID Client and boot the machine.
3. When prompted, insert the diskette labeled "NetView DM/2 Diskette 1" and press Enter.
4. The Pristine Client Agent display will appear. Enter the client name STDSERV and press Enter.
5. After the client connects to the server, you will get a message on the screen telling you to take the diskette out of the diskette drive; do it.
6. You will get the message "ANX1310 the pristine client agent is waiting for CM request." The client is ready.
7. To check that the client is attached to the server, you can issue this command from an OS/2 prompt on the NetView DM/2 Server:

```
CDM LIST_WS
```

8. The return message from the above command will indicate STDSERV's status as RUNNING if the system was booted from a diskette, and ACTIVE if the system was booted from the hard drive. If the status is INACTIVE you have a problem somewhere.

25.2 Install the First VisuallInfo Server

We will now describe the steps involved in installing a VisuallInfo Server. The installation of a VisuallInfo Server will take approximately one and a half hours.

25.2.1 What to Install on a VisuallInfo Server

To install a VisuallInfo Server the system will install these components from your NetView DM/2 Server:

REXX and PARTDISK	These two components will together set up your hard disk according to 24.2.1, "Information About Disk Partitioning for VisuallInfo Systems" on page 94.
OS/2 UPDCONF	OS/2 will be installed according to your response file. UPDCONF is a REXX routine that will update your CONFIG.SYS with the new location of your SWAPPER file.
LAPS	LAN Adapter Protocol Support will be installed with your Token Ring address.
NetView DM/2	The NetView DM/2 Client will be installed according to your response file.
UPDINI	UPDINI is a REXX routine that will update OS2.INI and OS2SYS.INI. After running this utility, there will be a new location for your spool area and some desktop enhancements.
OS21MNT	OS21MNT will install a minimal OS/2 system on your C drive.
LAPMAINT	LAPMAINT will install a minimal LAPS system on your C drive.
CM/2	CM/2 will be installed according to your response file.
CPP and TK21	This will install the C Set ++ and the Toolkit.
DB2/2	DB2/2 will be installed.
VisuallInfo Server	The VisuallInfo Server will be installed according to your response file.
REBOOT	REBOOT tell NetView DM/2 to reboot after the VI installation.
GENSTART	GENSTART is a REXX routine that will create the STARTUP.CMD on your VI Server.
DBTUNEUP	DBTUNEUP is a REXX routine that will tune your databases after installation and tune parameters in CONFIG.SYS.

25.2.2 Start the Installation of a VisuallInfo Server

Using a VisuallInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\CIDVISRV.CMD

This command file will execute the following commands up until 25.2.3, "Roadmap for the VisuallInfo Server Installation" on page 122.

The program will ask you for the name of the server. Answer STDSERVER and press Enter.

The following components have to be installed in blocks. Follow this instructions to install the VisualInfo Server (STDSERVER):

1. To start the installation of step 1 in the roadmap (REXX, PARTDISK, OS/2, LAPS and NetView DM/2 Client), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.REXXLOAD.PRISTINE.REF.1.0+IBM.PARTDISK.PRISTINE.REF.1.0+  
IBM.OS2V21.INST.REF.2.1+ IBM.UPDCONF.INST.REF.1.0+IBM.LAPS.INST.REF.1.0+  
IBM.NVDM2.INST.REF.2.0 /WS:STDSERV
```

2. To start the installation of step 2 in the roadmap (UPDINI, OS21MNT, LAPMAINT and CM/2), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.UPDINI.INST.REF.1.0+IBM.OS2V21.MAINT.REF.2.1+  
IBM.LAPS.MAINT.REF.1.0+IBM.CM2.INST.REF.1.1 /WS:STDSERV
```

3. To start the installation of step 3 in the roadmap (CPP and TK21), issue the following commands from the OS/2 prompt:

```
CDM INSTALL IBM.CPP.INST.REF.1.0+IBM.TK21.INST.REF.1.0 /WS:STDSERV
```

4. To start the installation of step 4 (DB2/2), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.DB2.INST.REF.1.0 /WS:STDSERV
```

5. To start the installation of step 5 (VI and Reboot), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.VISERVER.INST.REF.1.0+IBM.REBOOT.INST.REF.1.0 /WS:STDSERV
```

6. To start the installation of step 6 (GENSTART and DBTUNEUP), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.GENSTART.INST.REF.1.0+IBM.DBTUNEUP.INST.REF.1.0 /WS:STDSERV
```

25.2.3 Roadmap for the VisualInfo Server Installation

This is a roadmap that will show you all the steps that you have to go through during a VI Server installation,

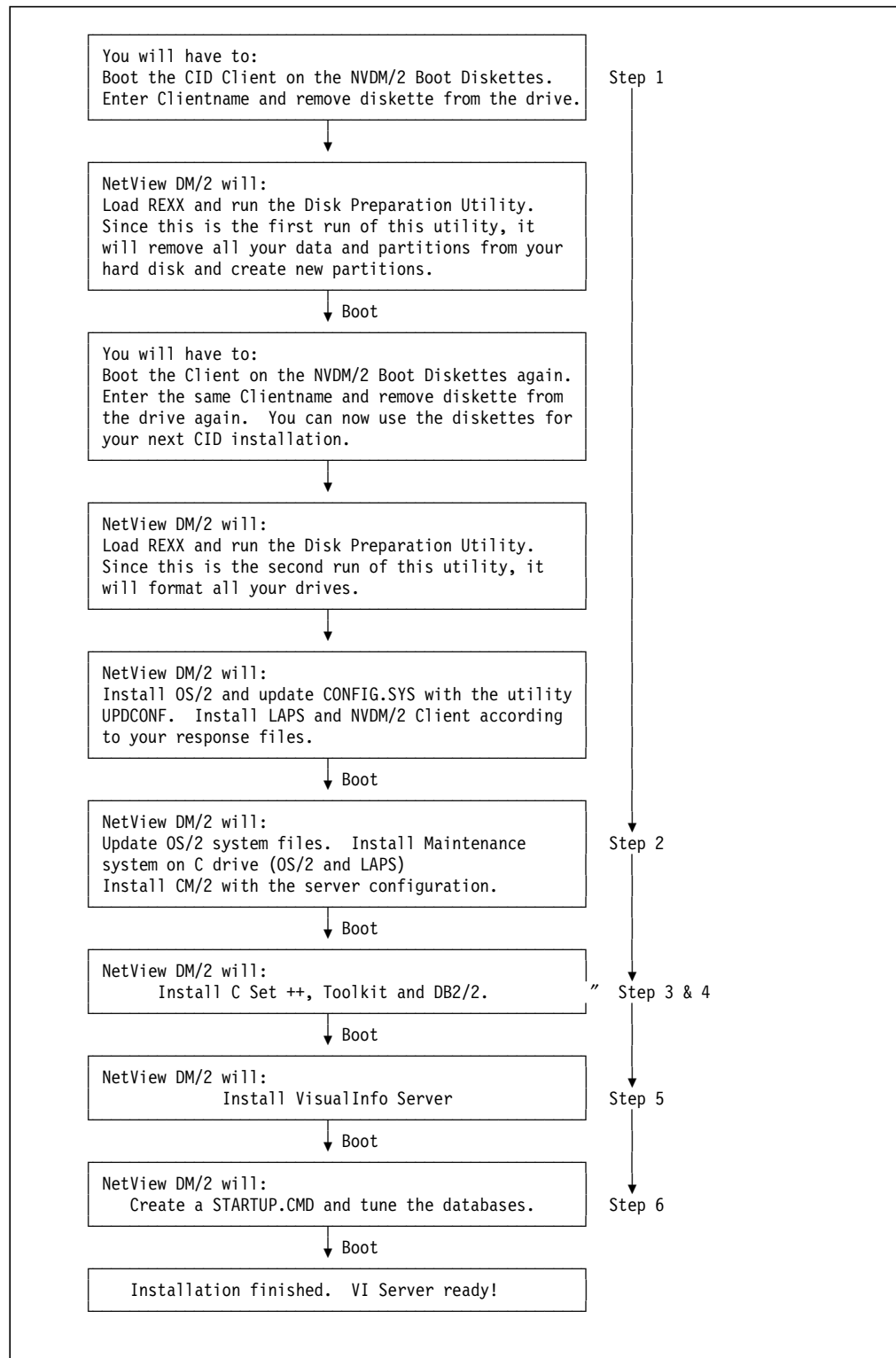


Figure 9. Roadmap for VI Server CID Installation.

25.2.4 After the Installation of a VisuallInfo Server

Your VI Server installation is finished when the VI Server PM program is running on the desktop and the hard disk activity has stopped. The VI Server is then ready to use.

25.3 Prepare the First VI Client for CID Installation

We will now perform our first VI Client CID installation. This installation will re-partition your hard disk. Therefore, we assume that we are installing on:

- A pristine machine, brand new with no software installed.
- A machine that has all important user data backed up so it can be made pristine by using FDISK to delete all partitions.

We will establish a connection between the server and the client, using the following steps:

1. Define the client, in this example STDCLIEN, to the NetView DM/2 Server by issuing the following command at the OS/2 prompt on the NetView DM/2 Server:

```
CDM ADD_WS STDCLIEN
```

2. Put the diskette labeled "NetView DM/2 Installation Diskette" in drive A: of your pristine CID Client and start the machine.
3. When prompted, insert the diskette labeled "NetView DM/2 Diskette 1" and press Enter.
4. The Pristine Client Agent display will appear. Enter the clientname STDCLIEN and press Enter.
5. After the client connects to the server, you will get a message on the screen telling you to take the diskette out of the diskette drive; do it.
6. You will get the message "ANX1310 the pristine client agent is waiting for CM request." The client is ready.
7. To check that the client is attached to the server, you can issue this command from an OS/2 prompt from the NetView DM/2 Server:

```
CDM LIST_WS
```

8. The return message from the above command will indicate STDCLIEN's status as RUNNING if the system was booted from a diskette, and ACTIVE if the system was booted from the hard drive. If the status is INACTIVE you have a problem somewhere.

25.4 Install the First VisuallInfo Client

We will now describe the steps involved in installing a VisuallInfo Client. The installation of a VisuallInfo Client will take approximately one hour.

25.4.1 What to Install on a VisuallInfo Client

To install a VisuallInfo Client the system will install these components from your NetView DM/2 Server:

REXX and PARTDISK	These two components will together set up your hard disk according to 24.2.1, "Information About Disk Partitioning for VisuallInfo Systems" on page 94.
OS/2 UPDCONF	OS/2 will be installed according to your response file. UPDCONF is a REXX routine that will update your CONFIG.SYS with the new location of your SWAPPER file.
LAPS	LAN Adapter Protocol Support will be installed with your Token Ring address.
NetView DM/2	The NetView DM/2 Client will be installed according to your response file.
UPDINI	UPDINI is a REXX routine that will update OS2.INI and OS2SYS.INI. After running this utility, there will be a new location for your spool area and some desktop enhancements.
OS21MNT	OS21MNT will install a minimal OS/2 system on your C drive.
LAPMAINT	LAPMAINT will install a minimal LAPS system on your C drive.
CM/2 VisuallInfo Client	CM/2 will be installed according to your response file. The VisuallInfo Client will be installed according to your response file.
REBOOT	REBOOT tell NetView DM/2 to reboot after the VI installation.
GENSTART	GENSTART is a REXX routine that will create the STARTUP.CMD on your VI Client.
DBTUNEUP	DBTUNEUP is a REXX routine that will tune your databases after installation and tune parameters in CONFIG.SYS.

25.4.2 Start the Installation of a VisuallInfo Client

Using a VisuallInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\CIDVICLI.CMD

This command file will execute the following commands up until 25.4.3, "Roadmap for the VisuallInfo Client Installation" on page 126.

The program will ask you for the name of the client. Answer STDCLIEN and press Enter.

The following components have to be installed in blocks. Follow this instructions to install the VisuallInfo Client (STDCLIEN):

1. To start the installation of step 1 (REXX, PARTDISK, OS/2, LAPS and NetView DM/2 Client), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.REXXLOAD.PRISTINE.REF.1.0+IBM.PARTDISK.PRISTINE.REF.1.0+  
IBM.OS2V21.INST.REF.2.1+ IBM.UPDCONF.INST.REF.1.0+IBM.LAPS.INST.REF.1.0+  
IBM.NVDM2.INST.REF.2.0 /WS:STDCLIEN
```


2. To start the installation of step 2 (UPDINI, OS21MNT, LAPMAINT and CM/2), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.UPDINI.INST.REF.1.0+IBM.OS2V21.MAINT.REF.2.1+  
IBM.LAPS.MAINT.REF.1.0+IBM.CM2.INST.REF.1.1 /WS:STDCLIEN
```

3. To start the installation of step 3 (VI and Reboot), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.VICLIENT.INST.REF.1.0+IBM.REBOOT.INST.REF.1.0 /WS:STDCLIEN
```

4. To start the installation of step 4 (GENSTART and DBTUNEUP), issue the following command from the OS/2 prompt:

```
CDM INSTALL IBM.GENSTART.INST.REF.1.0+IBM.DBTUNEUP.INST.REF.1.0 /WS:STDCLIEN
```

25.4.3 Roadmap for the VisualInfo Client Installation

This is a roadmap that will show you all the steps that you have to go through during a VI Client installation,

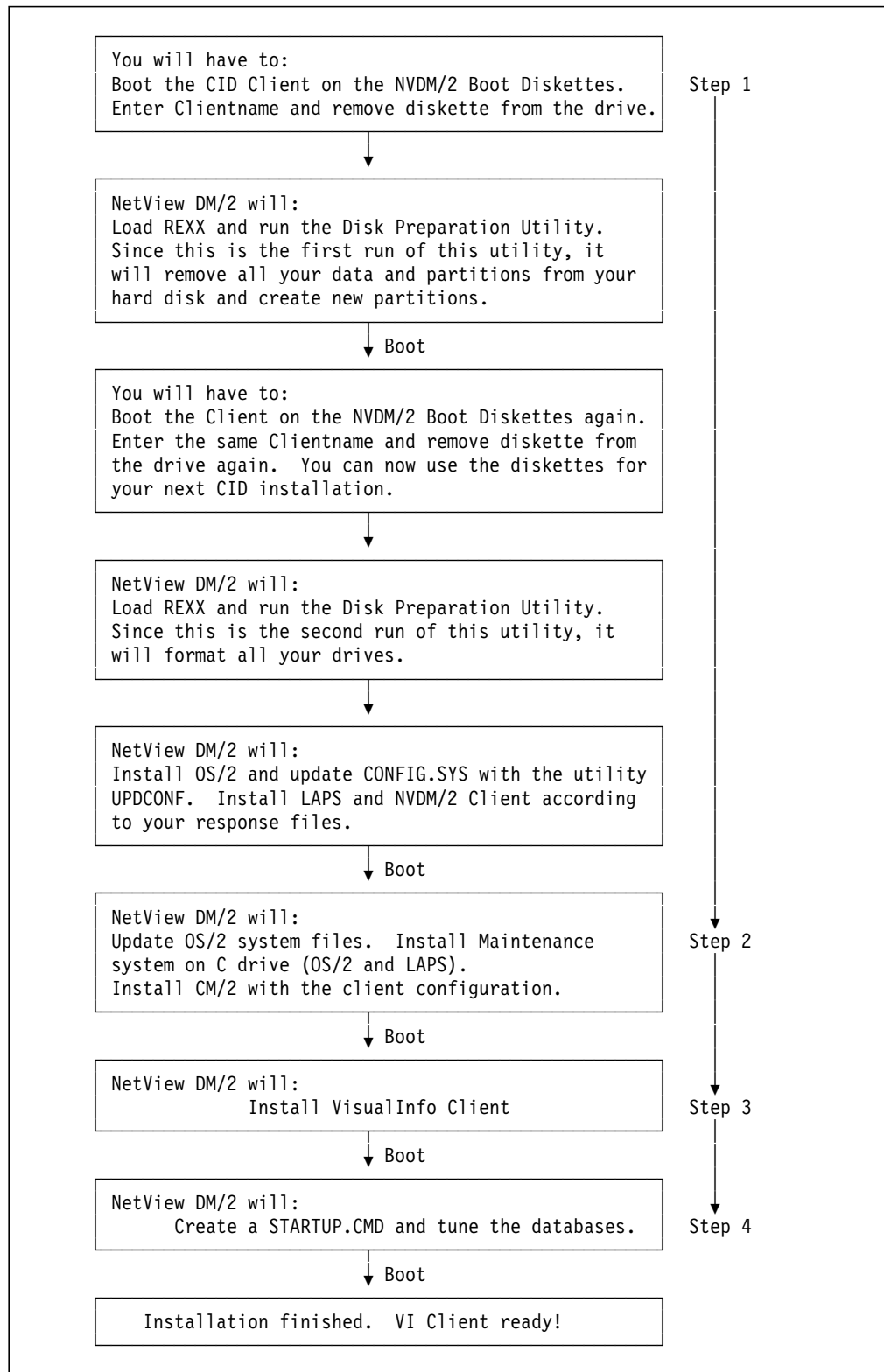


Figure 10. Roadmap for VI Client CID Installation.

25.4.4 After the Installation of a VisuallInfo Client

Your VI Client installation is finished when the VI folder icon is on the desktop and the hard disk activity has stopped. The VI Client is ready to logon to the VI Server.

25.5 Installing Additional CID Clients

You have now performed your first two CID installations. Hopefully you have your first VisuallInfo Client and Server running. Now you probably want to CID-install more clients.

25.5.1 Installing Additional VI Clients

This is what you will have to do before you start with the next CID installation of a VI Client:

1. The first thing you will have to do is to tell NetView DM/2 about the new machine that you are going to CID install. You must have a client name for the machine. One approach is to use CLIENTx, where x is a unique number. Every CID Client must have a unique name. Tell NetView DM/2 about the new machine (CLIENT2, for example) by issuing the following command from the OS/2 prompt on the NetView DM/2 Server:

```
CDM ADD_WS CLIENT2
```

2. You will now have to prepare a response file called CLIENT2 for every product that you are going to install. You can just copy the sample response files again, but this time into CLIENT2.RSP.

You must issue the following commands from the OS/2 prompt:

— **Using a VisuallInfo CID Utilities command file** —

To issue the commands listed below in this list item 2, run the following command file we have provided:

```
D:\SAMPLES\NEWVICLI.CMD
```

The program will ask you for the name of the client. Answer CLIENT2 and press Enter.

```
D:  
CD D:\IBMNVDM2\SHARE_A\RSP\OS2V21  
COPY D:\SAMPLES\OS2V21.RSP CLIENT2.RSP  
CD D:\IBMNVDM2\SHARE_A\RSP\LAPS  
COPY D:\SAMPLES\LAPSCLE.RSP CLIENT2.RSP  
CD D:\IBMNVDM2\SHARE_A\RSP\NVDM2  
COPY D:\SAMPLES\NVDM2CLI.RSP CLIENT2.RSP  
CD D:\IBMNVDM2\SHARE_A\RSP\CM2  
COPY D:\SAMPLES\CM2CLIEN.RSP CLIENT2.RSP  
CD D:\IBMNVDM2\SHARE_B\LOG\VI  
COPY D:\SAMPLES\STDCLIEN.RSP CLIENT2.RSP
```

3. Now you will have to make some small updates on the new response files. This is what you will have to do:
 - The response file for OS/2 does not need to be updated, unless you would like to install a different printer (parameter DefaultPrinter).
 - The response file for LAPS needs to be updated with the Token Ring address of the new machine (parameter NETADDRESS). See

Appendix C, "Response File for LAPS Installation on a Client" on page 151 for a full listing of the response file.

- The response file for NetView DM/2 needs to be updated with the new client name (CLIENT2) instead of STDCLIEN (parameter CLIENTNAME). See Appendix L, "Response Files for NetView DM/2 Installation" on page 173 for a full listing of the response file.
- The response file for CM/2 needs to be updated with the new machines configuration parameters. See 24.6.1, "CM/2 Response File" on page 101 to know what parameters you need to update.
- The response file for VI needs to be updated with the new machines configuration parameters. See 24.7.2, "VI Response File" on page 104 to know what parameters you need to update. Be sure that you already have the information about the new VI Client in the VisuallInfo system configuration file. If not, see 24.7.1, "VisuallInfo System Configuration File" on page 103 for documentation about how to update the file with that information. Don't forget that the response file for VI is not in the RSP directory as all the other response files, it is in the D:\IBMNVDM2\SHARE_B\LOG\VI directory.

To change a response file just load it into the editor by issuing the following command from the OS/2 prompt:

EPM D:\IBMNVDM2\SHARE_A\RSP\xxxxxxx\CLIENT2.RSP

Enter the name of the product directory instead of xxxxxxxx, for example LAPS. Make your changes in the response file and press F4 to save and exit.

4. To start the CID install just boot the new machine on the same diskettes as you used when you installed your first VI Client.
5. Enter your new client name (CLIENT2) at the Pristine Client Agent display.
6. To start the installation of the VisuallInfo Client, see 25.4.2, "Start the Installation of a VisuallInfo Client" on page 124. When you run the command file CIDVICLI, answer with your new client name (CLIENT2).

25.5.2 Installing Additional VI Servers

This is what you will have to do before you start with the CID installation of a second VI Server:

1. The first thing you will have to do is to tell NetView DM/2 about the new machine that you are going to CID install. You must have a client name for the machine. One approach is to use SERVERx, where x is a unique number. Every CID Client must have a unique name. Tell NetView DM/2 about the new machine (SERVER2, for example) by issuing the following command from the OS/2 prompt on the NetView DM/2 Server:

CDM ADD_WS SERVER2

2. You will now have to prepare a response file called SERVER2 for every product that you are going to install. You can just copy the sample response files again, but this time into SERVER2.RSP.

You must issue the following commands from the OS/2 prompt:

Using a VisualInfo CID Utilities command file

To issue the commands listed below in this list item 3, run the following command file we have provided:

D:\SAMPLES\NEWVISRV.CMD

The program will ask you for the name of the server. Answer SERVER2 and press Enter.

```
D:
CD D:\IBMNVD2\SHARE_A\RSP\OS2V21
COPY D:\SAMPLES\OS2V21.RSP SERVER2.RSP
CD D:\IBMNVD2\SHARE_A\RSP\LAPS
COPY D:\SAMPLES\LAPSSERV.RSP SERVER2.RSP
CD D:\IBMNVD2\SHARE_A\RSP\NVD2
COPY D:\SAMPLES\NVD2SRV.RSP SERVER2.RSP
CD D:\IBMNVD2\SHARE_A\RSP\CM2
COPY D:\SAMPLES\CM2SERVR.RSP SERVER2.RSP
CD D:\IBMNVD2\SHARE_A\RSP\DB2
COPY D:\SAMPLES\DB2.RSP SERVER2.RSP
CD D:\IBMNVD2\SHARE_B\LOG\VI
COPY D:\SAMPLES\STDSEVR.RSP SERVER2.RSP
```

3. Now you will have to make some small updates on the new response files. This is what you will have to do:

- The response file for OS/2 does not need to be updated, unless you would like to install a different printer (parameter DefaultPrinter).
- The response file for LAPS needs to be updated with the Token Ring address of the new machine (parameter NETADDRESS). See Appendix B, "Response File for LAPS Installation on a Server" on page 149 for a full listing of the response file.
- The response file for NetView DM/2 needs to be updated with the new client name (SERVER2) instead of STDSEVR (parameter CLIENTNAME). See Appendix L, "Response Files for NetView DM/2 Installation" on page 173 for a full listing of the response file.
- The response file for CM/2 needs to be updated with the new machine's configuration parameters. See 24.6.1, "CM/2 Response File" on page 101 to know what parameters you need to update.
- The response file for DB2/2 does not need to be updated.
- The response file for VI needs to be updated with the new machines configuration parameters. See 24.7.2, "VI Response File" on page 104 to know what parameters you need to update. Be sure that you already have the information about the new VI Server in the VisualInfo system configuration file. If not, see 24.7.1, "VisualInfo System Configuration File" on page 103 for documentation about how to update the file with that information. Don't forget that the response file for VI is not in the RSP directory as all the other response files, it is in the D:\IBMNVD2\SHARE_B\LOG\VI directory.

To change a response file just load it into the editor by issuing the following command from the OS/2 prompt:

EPM D:\IBMNVD2\SHARE_A\RSP\xxxxxxx\SERVER2.RSP

Enter the name of the product directory instead of xxxxxxx, for example LAPS. Make you changes in the response file and press F4 to save and exit.

4. To start the CID install just boot the new machine on the same diskettes as you used when you installed your first server.
5. Enter your new client name (SERVER2) at the Pristine Client Agent display.
6. To start the installation of the VisualInfo Server, see 25.2.2, "Start the Installation of a VisualInfo Server" on page 120. When you run the command file CIDVISRV, answer your new client name (SERVER2).

25.6 Installing VI Stand-Alone Systems

You can also install VI stand-alone system with the NetView DM/2 Server. This is what you will have to do before you start your stand-alone installation on one of your CID clients:

1. First you must build a NetView DM/2 change file. You do that by issuing the following commands from the OS/2 prompt:

```
COPY D:\SAMPLES\VISALONE.PRO D:\PROFILES
CDM BUILD D:\PROFILES\VISALONE.PRO FS:VISALONE.CHG
```

2. The next thing you will have to do is to tell NetView DM/2 about the client name of the new machine that you are going to CID install soon (SALONE for example). Tell NetView DM/2 about the client name by issuing the following command from the OS/2 prompt on the NetView DM/2 Server:

```
CDM ADD_WS SALONE
```

3. You will now have to prepare a response file called SALONE.RSP for every product that you are going to install. You can just copy the sample response files into SALONE.RSP.

You must issue the following commands from the OS/2 prompt:

Using a VisualInfo CID Utilities command file

To issue the commands below in list item number 3, run the command file we have provided:

```
D:\SAMPLES\NEWVIS_A.CMD
```

The program will ask you for the name of the stand-alone. Answer SALONE and press Enter.

```
D:
CD D:\IBMNVD2\SHARE_A\RSP\OS2V21
COPY D:\SAMPLES\OS2V21.RSP SALONE.RSP
CD D:\IBMNVD2\SHARE_A\RSP\LAPS
COPY D:\SAMPLES\LAPSSERV.RSP SALONE.RSP
CD D:\IBMNVD2\SHARE_A\RSP\NVDM2
COPY D:\SAMPLES\NVDM2SRV.RSP SALONE.RSP
CD D:\IBMNVD2\SHARE_A\RSP\DB2
COPY D:\SAMPLES\DB2.RSP SALONE.RSP
CD D:\IBMNVD2\SHARE_B\LOG\VI
COPY D:\SAMPLES\STDALONE.RSP SALONE.RSP
```

4. Now you will have to make some small updates on the new response files. This is what you will have to do:
 - The response file for OS/2 does not need to be updated, unless you would like to install a different printer (parameter DefaultPrinter).

- The response file for LAPS needs to be updated with the Token Ring address of the new machine (parameter NETADDRESS). See Appendix B, “Response File for LAPS Installation on a Server” on page 149 for a full listing of the response file.
- The response file for NetView DM/2 needs to be updated with the new client name (SALONE) instead of STDSERVR. See Appendix L, “Response Files for NetView DM/2 Installation” on page 173 for a full listing of the response file.
- The response file for DB2/2 does not need to be updated.
- The response file for VI does not need to be updated.

To change a response file just load it into the editor by issuing the following command from the OS/2 prompt:

EPM D:\IBMNVD2\SHARE_A\RSP\xxxxxxx\SALONE.RSP

Enter the name of the product directory instead of xxxxxxxx, for example LAPS. Make your changes in the response file and press F4 to save and exit.

5. To start the CID install just boot the new machine on the boot diskettes.
6. Enter your new client name (SALONE) at the Pristine Client Agent display.

The machine is now ready for installation. You now have to go to the NetView DM/2 Server and start the installation. The following components have to be installed in blocks. Follow these instructions to install the VisuallInfo stand-alone system (SALONE):

Using a VisuallInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\CIDVIS_A.CMD

This command file will execute the following commands up until 25.7, “Installing Multiple CID Clients Simultaneously” on page 132.

The program will ask you for the name of the stand-alone. Answer SALONE and press Enter.

1. To start the installation of REXX, PARTDISK, OS/2, LAPS and NetView DM/2 Client, issue the following command from the OS/2 prompt:


```
CDM INSTALL IBM.REXXLOAD.PRISTINE.REF.1.0+IBM.PARTDISK.PRISTINE.REF.1.0+
IBM.OS2V21.INST.REF.2.1+ IBM.UPDCONF.INST.REF.1.0+IBM.LAPS.INST.REF.1.0+
IBM.NVDM2.INST.REF.2.0 /WS:SALONE
```
2. To start the installation of UPDINI, OS21MNT and LAPMAINT), issue the following command from the OS/2 prompt:


```
CDM INSTALL IBM.UPDINI.INST.REF.1.0+IBM.OS2V21.MAINT.REF.2.1+
IBM.LAPS.MAINT.REF.1.0 /WS:SALONE
```
3. To start the installation of CPP and TK21 issue the following commands from the OS/2 prompt:


```
CDM INSTALL IBM.CPP.INST.REF.1.0+IBM.TK21.INST.REF.1.0 /WS:SALONE
```
4. To start the installation of DB2/2, issue the following command from the OS/2 prompt:

CDM INSTALL IBM.DB2.INST.REF.1.0 /WS:SALONE

5. To start the installation of VI and Reboot, issue the following command from the OS/2 prompt:

CDM INSTALL IBM.VISALONE.INST.REF.1.0+IBM.REBOOT.INST.REF.1.0 /WS:SALONE

6. To start the installation of GENSTART and DBTUNEUP issue the following command from the OS/2 prompt:

CDM INSTALL IBM.GENSTART.INST.REF.1.0+IBM.DBTUNEUP.INST.REF.1.0 /WS:SALONE

The installation is finished when you see the VI Server PM programs on your desktop and the hard disk activity have stopped.

25.7 Installing Multiple CID Clients Simultaneously

It is possible to install several CID clients at the same time. There are a few issues to be considered in such a scenario.

- You don't have to make copies of the boot diskettes. You will boot the machine on the diskettes twice during the installation. The time between the start of the installation and removing boot diskette 2 the second time, is approximately 10 minutes. Then you can use the same diskettes on the next CID Client. Just be sure to enter a different client name.
- If you have several people performing the CID installation you will need to make copies of the diskettes - one pair for each CID installer - using DISKCOPY or running the commands in 24.1, "Creating Boot Diskettes" on page 93. No changes are necessary.
- Copy and prepare all the response files in advance.
- If you reach a limit in the number of CID clients that you can install at the same time, you have a tuning problem. There are a couple of parameters that can be changed to increase the maximum numbers of simultaneous CID installations:
 - Try to increase the parameters MaxRequests, Maxclients and MaxShrFiles in the file D:\IBMNVDM2\IBMNVDM2.INI.
 - Try to increase the parameters SESSIONS, NCBS and NAMES in the file C:\IBMCOM\PROTOCOL.INI.
- How many CID clients can you install simultaneously? On our Model 95 PS/2 CID server we found that the elapsed time to install a CID Client did not vary much when we ran 1-5 simultaneous installations. You will see a slower installation if you run 10 or more simultaneous installations.

25.8 Reinstalling a CID Client

If, for any reason, you need to reinstall a CID Client, there is some cleanup that needs to be performed, because NetView DM/2 maintains a database of the installation history of the different change files on each client. It is not possible to install a change file twice on the same client.

NetView DM/2, therefore, needs to be purged of the history of all the products that were ever installed on that CID client (for example, STDSERVER). To do this, issue the following commands:

Using a VisualInfo CID Utilities command file

To issue the commands below, run the command file we have provided:

D:\SAMPLES\CLEANLOG.CMD

The program will ask you for the name of the CID Client whose history files you want to delete.

This command file will execute the following commands up until the end of this chapter.

To delete the history of the REXX installation type

CMD UNCATALOGCM IBM.REXXLOAD.PRISTINE.REF.1.0 /WS:STDSEVR

To delete the history of the PARTDISK installation type

CMD UNCATALOGCM IBM.PARTDISK.PRISTINE.REF.1.0 /WS:STDSEVR

To delete the history of the OS/2 installation type

CMD UNCATALOGCM IBM.OS2V21.INST.REF.2.1 /WS:STDSEVR

To delete the history of the LAPS installation type

CMD UNCATALOGCM IBM.LAPS.INST.REF.1.0 /WS:STDSEVR

To delete the history of the NVDM/2 installation type

CMD UNCATALOGCM IBM.NVDM2.INST.REF.2.0 /WS:STDSEVR

To delete the history of the CM/2 installation type

CMD UNCATALOGCM IBM.CM2.INST.REF.1.1 /WS:STDSEVR

To delete the history of the UPDCONF installation type

CMD UNCATALOGCM IBM.UPDCONF.INST.REF.1.0 /WS:STDSEVR

To delete the history of the UPDINI installation type

CMD UNCATALOGCM IBM.UPDINI.INST.REF.1.0 /WS:STDSEVR

To delete the history of the OS21MNT installation type

CMD UNCATALOGCM IBM.OS2V21.MAINT.REF.2.1 /WS:STDSEVR

To delete the history of the LAPSMOINT installation type

CMD UNCATALOGCM IBM.LAPS.MAINT.REF.1.0 /WS:STDSEVR

To delete the history of the C Set ++ installation type (not necessary for VI clients)

CMD UNCATALOGCM IBM.CPP.INST.REF.1.0 /WS:STDSEVR

To delete the history of the Toolkit installation type (not necessary for VI clients)

CMD UNCATALOGCM IBM.TK21.INST.REF.1.0 /WS:STDSEVR

To delete the history of the DB2/2 installation type (not necessary for VI clients)

CMD UNCATALOGCM IBM.DB2.INST.REF.1.0 /WS:STDSEVR

To delete the history of the VI Server installation type (only necessary for VI Servers)

CMD UNCATALOGCM IBM.VISERVER.INST.REF.1.0 /WS:STDSERV

To delete the history of the VI Client installation type (only necessary for VI clients)

CMD UNCATALOGCM IBM.VICLIENT.INST.REF.1.0 /WS:STDSERV

To delete the history of the VI stand-alone installation type (only necessary for VI stand-alones)

CMD UNCATALOGCM IBM.VICLIENT.INST.REF.1.0 /WS:STDSERV

To delete the history of the REBOOT installation type

CMD UNCATALOGCM IBM.REBOOT.INST.REF.1.0 /WS:STDSERV

To delete the history of the GENSTART installation type

CMD UNCATALOGCM IBM.GENSTART.INST.REF.1.0 /WS:STDSERV

To delete the history of the DBTUNEUP installation type

CMD UNCATALOGCM IBM.DBTUNEUP.INST.REF.1.0 /WS:STDSERV

After this you can reinstall your CID Client again.

Chapter 26. Verifying the Installation

We refer you to the *VisuallInfo Installation Guide* for this task. The module C10 of the Installation Guide provides the instructions necessary to verify the VisuallInfo installation.

Appendix A. Response File for OS/2 2.1 Installation

```
*
* OS2V21.RSP - Response file for OS/2 version 2.1 installation
*
*
* Advance Power Management
*   Specifies whether or not to install APM.
*   0=Don't install
*   1=Autodetect (DEFAULT)
*   2=Install
*
APM=1
*
* AlternateAdapter
*   Specifies secondary adapter for two display systems.
*   This should be a lower or equal resolution display since
*   the highest resolution display will be primary for PM.
*   0=None (DEFAULT)
*   1=Other than following (DDINSTAL will handle)
*   2=Monochrome/Printer Adapter
*   3=Color Graphics Adapter
*   4=Enhanced Graphics Adapter
*   5=PS/2 Display Adapter
*   6=Video Graphics Adapter
*   7=8514/A Adapter
*   8=XGA Adapter
*   9=SVGA Adapter
*
AlternateAdapter=0
*
* BaseFileSystem
*   Specifies which file system should be used to format
*   the install partition
*   1=HPFS (DEFAULT)
*   2=FAT
*
BaseFileSystem=2
*
* CDROM
*   Specifies which, if any, CD ROM devices you wish to
*   install support for.
*   0 = None
*   1 = Autodetect
*   2=CDTechnology T3301
*   3=HitachiCDR-1650,1750,3650
*   4=HitachiCDR-3750
*   5=IBMCD-ROM I
*   6=IBMCD-ROM II
*   7=NEC25,36,37,72,73,74,82,83,84
*   8=NECMultiSpin 38,74,84
*   9=PanasonicCR-501,LK-MC501S
*   10=PioneerDRM-600
*   11=PioneerDRM-604X
*   12=SonyCDU-541,561,6211,7211
*   13=SonyCDU-6111
*   14=TelexDM-3021,5021
*   15=TelexDM-3024,5024
*   16=Toshiba3201
*   17=Toshiba3301,3401
*   18=OTHER
*   NOTE: Autodetection is enabled only when all SCSI
*   device drivers are loaded.
*
```

CDROM=0

```
*
* CountryCode
*   Specifies which country should be installed. This
*   causes all country information to be installed.
*   3 digit country code (DEFAULT shipped version)
*
```

CountryCode=001

```
*
* CountryKeyboard
*   Specifies which country keyboard should be installed.
*   This causes all keyboard information to be installed.
*   2-5 character keyboard code (DEFAULT="US")
*
```

CountryKeyboard=US

```
*
* DefaultPrinter
*   Specifies which default printer to install
*   0=None
*   or
*   Keyvalue=printer driver index (DEFAULT=line # of
*   42XX) in PRDESC.LST shipped on first printer diskette
*   NOTE: the driver index is the line number in the
*   PRDESC.LST file that contains the printer
*   name.
*
```

DefaultPrinter=130

```
*
* DiagnosticAids
*   Specifies whether or not to install certain RAS
*   utilities.
*   0=Don't install
*   1=Install (DEFAULT)
*
```

DiagnosticAids=1

```
*
* DisplayAdapter
*   Specifies which adapter should override the primary
*   adapter detected by the install process
*   0=Accept as correct (DEFAULT)
*   1=Other than following (DDINSTALL will handle)
*   2=Color Graphics Adapter
*   3=Enhanced Graphics Adapter
*   4=Video Graphics Adapter
*   5=8514/A Adapter
*   6=XGA Adapter
*   7=SVGA Adapter
*
```

DisplayAdapter=0

```
*
* Documentation
*   Specifies which documentation should be installed
*   0=None
*   1=All (DEFAULT)
*   2=OS/2 Command Reference
*   3=OS/2 Tutorial
*   4=Rexx Documentation
*
```

Documentation=2,3

```
*
* DOSSupport
*   Specifies whether or not to install DOS Box.
*   0=Don't install DOS
*   1=Install DOS (DEFAULT)
*
```

DOSSupport=1

```

*
* WIN-OS/2Support
*   Specifies whether or not to install WIN-OS/2
*   Environment. If do, select WIN-OS/2 groups or
*   other components. This option is valid only
*   when option 1 (DOSSupport) is selected for
*   the DOSSupport keyvalue.
*   0=Do NOT install WIN-OS/2
*   ---- Followings INSTALL WIN-OS/2 -----
*   1=All available groups and components (DEFAULT)
*   2=WIN-OS/2 Readme File
*   3=WIN-OS/2 Accessories Group
*   4=WIN-OS/2 Screen Save Utility
*   5=WIN-OS/2 Sound Utility
*   6=WIN-OS/2 Main and Startup Group ONLY (Minimum support)
* Note:
*   * WIN-OS/2 Main Group and StartUp Group will be
*   installed mandatorily when WIN-OS/2 supported
*   ( case 1,2,3,4,5 ).
*   * Case 6 is minimum WIN-OS/2 support.
* Example:
*   WIN-OS/2Support=3,4
*   would install WIN-OS/2 Main Group, StartUp Group and
*   WIN-OS/2 Accessories and Screen Save Utility.

```

```

*WIN-OS/2Support=1

```

```

*
* WindowedWIN-OS/2
*   Specifies whether Windows** applications should run in
*   windowed sessions on the Presentation Manager desktop
*   or in Full Screen sessions. This option is valid only
*   when option 1 (WIN-OS/2 Support) is selected for the
*   DOSSupport keyvalue.
*   0=Windowed WIN-OS/2 sessions
*   1=Full Screen WIN-OS/2 sessions

```

```

*WindowedWIN-OS/2=1

```

```

*
* WIN-OS/2Desktop
*   Specifies what the WIN-OS/2 desktop should look like.
*   This option is valid only when option 1 (WIN-OS/2
*   Support) is selected for the DOSSupport keyvalue.
*   Option 1 should be selected only if Windows** currently
*   exists (two related options follow this one).
*   Option 2 should be selected only if WIN-OS/2 has
*   previously been installed.
*   0=Install standard WIN-OS/2 desktop (DEFAULT)
*   1=Copy existing Windows** desktop and use as the
*   WIN-OS/2 desktop (two related options follow)
*   2=Preserve WIN-OS/2 desktop currently installed

```

```

*WIN-OS/2Desktop=0

```

```

*
* ExistingWindowsPath
*   Specifies the path to an existing Windows** system.
*   This option is valid only when option 1 is selected
*   for the WIN-OS/2Desktop keyvalue.
*   A string that specifies the path to the existing
*   Windows** system (Example: C:\WINDOWS)

```

```

*ExistingWindowsPath=

```

```

*
* ShareDesktopConfigFiles
*   Specifies that the desktop configuration files should
*   be shared between an existing Windows** system and the
*   WIN-OS/2 system being installed. If this option is

```

```
* selected, the Windows** desktop will be updated when
* changes are made to the WIN-OS/2 desktop. This
* option is valid only when option 1 is selected for the
* WIN-OS/2Desktop keyvalue.
* 0=Do not share the Windows** desktop configuration
* files
* 1=Share the Windows** desktop configuration files
*
```

```
*ShareDesktopConfigFiles=1
```

```
* DPMI
* Specifies which DPMI options to install.
* 0=none
* 1=All (DEFAULT)
* 2=Virtual DOS Protect Mode Interface
* 3=Virtual Expanded Memory Management
* 4=Virtual Extended Memory Support
*
```

```
DPMI=1
```

```
* ExitOnError
* Specifies if the install program should exit with an
* error code if an error occurs. This also determines
* whether the installation process will exit with a return
* code when it completes rather than the C-A-D panel.
* 0 = Do not exit when error occurs; display panel
* (DEFAULT)
* 1 = Exit quietly with a return code
*
```

```
ExitOnError=1
```

```
* Fonts
* Specifies which fonts should be installed
* 0 = None
* 1 = All (DEFAULT)
* 2 = Courier (Bitmap)
* 3 = Helvetica (Bitmap)
* 4 = System Mono-spaced (Bitmap)
* 5 = Times Roman (Bitmap)
* 6 = Courier (Outline)
* 7 = Helvetica (Outline)
* 8 = Times New Roman (Outline)
*
```

```
Fonts=1
```

```
* FormatPartition
* Specifies whether or not to format the install
* partition
* 0=Do not format (DEFAULT)
* 1=Format
*
```

```
FormatPartition=1
```

```
* Include
* For a description of the function of this keyword,
* see IncludeAtEnd which is functionally equivalent
* to this keyword.
* KEYWORD = valid filename
*
```

```
*Include=include.rsp
```

```
* IncludeAtEnd
* Specifies another response file to process along
* with the current one. There may be multiple
* occurrences of this keyword. The "included"
* response file is appended to the end of all
```



```

* response files that have been processed before
* this one.
* eg.
* File1.RSP Processing
* -----
* IncludeAtEnd=File2.RSP Mouse=1
* IncludeAtEnd=File4.RSP Mouse=2
* Mouse=1 Mouse=4
* Mouse=3
* File2.RSP
* IncludeAtEnd=File3.RSP
* Mouse=2
* File3.RSP
* Mouse=3
* File4.RSP
* Mouse=4
* No validity checking is done.
* KEYWORD = valid filename

```

*IncludeAtEnd=atend.rsp

```

* IncludeInLine
* Specifies another response file to process along
* with the current one. There may be multiple
* occurrences of this keyword. The "included"
* response file is processed immediately when the
* keyword is found.
* No validity checking is done.
* eg.
* File1.RSP Processing
* -----
* IncludeInLine=File2.RSP Mouse=3
* IncludeInLine=File4.RSP Mouse=2
* Mouse=1 Mouse=4
* Mouse=1
* File2.RSP
* IncludeInLine=File3.RSP
* Mouse=2
* File3.RSP
* Mouse=3
* File4.RSP
* Mouse=4
* KEYWORD = valid filename

```

*IncludeInLine=inline.rsp

```

* MigrateConfigFiles
* Specifies whether or not to migrate configuration files
* from a previous release of the operating system.
* 0=Don't migrate
* 1=Migrate files (DEFAULT)

```

MigrateConfigFiles=0

```
* MigrateApplications
* Specifies whether or not to migrate existing DOS,
* Windows** and OS/2 applications. Only those
* applications listed in the database specified will
* be migrated.
* Drives to search, database to use for search
* (Example: C:D:,C:\OS2\INSTALL\DATABASE.DAT)
*
```

```
*MigrateApplications=
```

```
* MoreBitmaps
* Specifies whether or not to install more bitmaps.
* 0=Don't install More Bitmaps
* 1=Install More Bitmaps (DEFAULT)
*
```

```
MoreBitmaps=0
```

```
* Mouse
* Specifies which mouse device driver, if any, to
* install
* 0 = No pointing device support
* 1 = PS/2 Style Pointing Devicee (DEFAULT)
* 2 = Bus Version
* 3 = Serial Version
* 4 = InPort Version
* 5 = Logitech (tm) 'C' Series Serial Mouse
* 6 = IBM PS/2 Touch Display
* 7 = Logitech 'M' Series Mouse
* 8 = PC Mouse Systems (tm) Mouse
* 9 = Other Pointing Device for Mouse Port
*
```

```
Mouse=1
```

```
* MousePort
* Specifies to which port a serial-type mouse should
* be attached (valid for serial or Logitech(tm) mice)
* 0 = No port necessary (DEFAULT)
* 1 = COM1
* 2 = COM2
* 3 = COM3
* 4 = COM4
*
```

```
MousePort=0
```

```
* OptionalFileSystem
* Specifies whether or not to install optional file
* system(s) i.e. HPFS
* 0=Do Not Install Optional File System(s)
* 1=Install Optional File System (DEFAULT)
*
```

```
OptionalFileSystem=1
```

```
* OptionalSystemUtilities
* Specifies whether or not to install the following
* system utilities.
* 0=Install none
* 1=Install all (DEFAULT)
* 2=Backup Hard Disk
* 3=Change File Attributes
* 4=Display Directory Tree
* 5=Manage Partitions
* 6=Label Diskettes
* 7=Link Object Modules
* 8=Picture Utilities
* 9=PMREXX
* 10=Recover Files
*
```

```
*      11=Restore Backed-up Files
*      12=Sort Filter
*      13=Installation Aid
* Example:
*      OptionalSystemUtilities=2,9,4
*      would install Backup, PMREXX and Tree utilities.
*
```

OptionalSystemUtilities=1

```
* OS2IniData
* Specifies a profile string to be written to the
* user configuration file OS2.INI. There may be
* multiple occurrences of this keyword.
* KEYWORD = /AppName/KeyName/KeyValue/
* NOTE: Since each of these names can contain
* imbedded blanks and whitespace, the "slash"
* character must be used as a delimiter. There
* must be three tokens delineated on all sides or
* this keyword will be ignored.
*
```

*OS2IniData=/AppName/KeyName/KeyValue/

```
* PCMCIA
* Specifies whether or not to install PCMCIA.
* 0=Don't install
* 1=Install (DEFAULT)
*
```

PCMCIA=0

```
* PrimaryCodePage
* Specifies whether "national" or "multi-lingual" code
* page is primary (first active code page before
* switching).
* 1=National (DEFAULT)
* 2=Multilingual
*
```

PrimaryCodePage=1

```
* PrinterPort
* Specifies to which printer port the default printer
* should be attached
* 1=LPT1 (DEFAULT)
* 2=LPT2
* 3=LPT3
* 4=COM1
* 5=COM2
* 6=COM3
* 7=COM4
*
```

PrinterPort=1

```
* ProcessEnvironment
* Each of the Keyword/Keyvalue statements specified in
* this response file may be added to the environment as
* environment variables.
* This makes it possible for user programs, batch files,
* etc. (UserExit) to access response file settings.
* 0 = Do not add keyword/keyvalue statements specified
* in this response file to environment.
* 1 = Add all keyword/keyvalue statements specified
* in this response file to environment (DEFAULT).
*
```

ProcessEnvironment=1

```
* ProgressIndication
* Specifies whether or not to display progress indicators
*
```

```
* during the installation. Disabling this will allow a
* frontend program to display something else while we do
* our job in an unattended environment.
* 0 = No progress indication
* 1 = Progress indication (DEFAULT)
*
```

```
ProgressIndication=1
```

```
* RebootRequired
* Specifies if the machine should be automatically
* warm booted when installation is complete. This is
* ignored if the ExtendedInstall response is specified.
* 0=Ask user to reboot (DEFAULT)
* 1=Auto-reboot
*
```

```
RebootRequired=0
```

```
* REXX
* Specifies whether or not to install REXX
* 0=Don't Install REXX
* 1=Install REXX (DEFAULT)
*
```

```
REXX=1
```

```
* SCSI
* Specifies which, if any, CD ROM adapter support you
* wish to install support for.
* 0 = None
* 1 = Autodetect
* 2=Adaptec1510, 1520, 1522
* 3=Adaptec1540, 1542
* 4=Adaptec1640
* 5=Adaptec1740, 1742, 1744
* 6=DPTPM2011, PM2012
* 7=FutureDomain 845,850,850IBM,860,875,885
* 8=FutureDomain 1650,1660,1670,1680,MCS700
* 9=FutureDomain 7000EX
* 10=IBMPS/2 SCSI Adapter
* 11=IBM16-Bit AT Fast SCSI Adapter
*
```

```
SCSI=1
```

```
* SerialDeviceSupport
* Specifies whether or not to install the serial
* device driver.
* 0=Don't install
* 1=Install (DEFAULT)
*
```

```
SerialDeviceSupport=1
```

```
* SourcePath
* Specifies a single media (no disk switching) that should
* be used as a source drive and directory from which to
* install.
* KEYVALUE=drive and optional path (D:\OS2SE20\...)
* DEFAULT=A:\
*
```

```
*SourcePath=D:\os2se20
```

```
* TargetDrive
* Specifies the target drive to which OS/2 should be
* installed. This drive is assumed to be a valid
* partition. If a partition other than C: is specified,
* it is assumed that the Boot Manager is already installed
* to enable booting an operating system from any partition
* KEYVALUE=d:
```

```
*      where "d:" is a valid partition that OS/2 may be
*      installed to.
*      DEFAULT=first acceptable partition
*
```

TargetDrive=E:

```
* WIN-OS/2TargetDrive
*   Specifies which valid partition drive to install
*   WIN-OS/2.
*   Valid Parms: any valid FORMATTED partition.
*   C: (DEFAULT)
*   D:
*   .
*   .
*   Z:
* Example:
*   WIN-OS/2TargetDrive=D:
*   would install WIN-OS/2 to partition D: located in
*   \OS2\MDOS\WINOS2
*
```

WIN-OS/2TargetDrive=E:

```
* ToolsAndGames
*   Specifies whether or not to install tools and games
*   such as editors and jigsaw.
*   0=Install none
*   1=Install all (DEFAULT)
*   2=Enhanced Editor
*   3=Search and Scan Tool
*   4=Terminal Emulator
*   5=Chart Maker
*   6=Personal Productivity
*   7=Solitaire - Klondike
*   8=Reversi
*   9=Scramble
*   10=Cat and Mouse
*   11=Pulse
*   12=Jigsaw
*   13=Chess
* Example:
*   ToolsAndGames=2,8,13
*   would install the Enhanced Editor, Reversi and
*   Chess.
*
```

ToolsAndGames=2,3,7,11

```
* ConfigSysLine
*   Specifies a text line to be appended to CONFIG.SYS.
*   There may be multiple occurrences of this keyword.
*   No validity checking is done.
*   KEYWORD = a valid CONFIG.SYS statement
*
```

ConfigSysLine=rem This OS/2 system was installed with OS2V21.RSP

```
* Copy
*   Specifies a source file and destination directory
*   of a file to be copied during install. Errors are
*   ignored, though they will be logged. Packed files
*   are acceptable since UNPACK will do the copy.
*   There may be multiple occurrences of this keyword.
*   No validity checking is done.
*   KEYWORD= source file destination
*   where source file = valid filename
*   and destination = valid directory name
*   ex: Copy = readme.dat c:\os2
*
```

```

*Copy=vga c:\ /n:ini.rc
*
*   EarlyUserExit
*   Specifies the name of a program that Install will
*   DosExec after the target drive is prepared. Install
*   waits for the program to return. This keyword may occur
*   more than once. Each will be executed in the order that
*   they appear at the end of OS/2 Install. The only
*   difference between this keyword and the UserExit keyword
*   is that this one is executed early in the installation
*   process while the latter is executed at the very end.
*   KEYVALUE=user exit program name (DEFAULT=none)
*
*EarlyUserExit=T c:\config.sys
*
*   ExtendedInstall
*   Specifies program to be run asynchronously while SE
*   Install DosExits
*   KEYVALUE=full pathname of program
*   (DEFAULT=none)
*
*ExtendedInstall=PROGRAM.EXE
*
*   ID
*   Specifies some identification string which may be
*   used by install or UserExit to identify the
*   response file(s) used for this installation
*   KEYWORD = ASCII string
*
ID=OS2V21 Sample Response File
*
*   SeedConfigSysLine
*   Specifies a text line to be appended to the CONFIG.SYS
*   written to the seed system from which PM Install boots.
*   This will allow device drivers (that may be required) to
*   become part of that seed system.
*   There may be multiple occurrences of this keyword.
*   No validity checking is done.
*   KEYWORD = a valid CONFIG.SYS statement
*
*SeedConfigSysLine=REM This is a remark line in the seed CONFIG.SYS.
*
*   UserExit
*   Specifies the name of a program that Install will
*   DosExec before exiting memory. Install waits for the
*   program to return. This keyword may occur more than
*   once. Each will be executed in the order that they
*   appear at the end of OS/2 Install.
*   KEYVALUE=user exit program name (DEFAULT=none)
*
*UserExit=T.EXE C:\OS2\INSTALL\INSTALL.LOG
*
*   Version
*   Specifies specific version of the operating system for
*   which this file is intended. The file can be used for
*   future versions, though some keywords may no longer
*   be valid.
*   KEYWORD = some version string (determined later)
*
*Version=OS2V21
*
*   DDIInstall
*   Use OS/2 Device Driver Installation to install external
*   loadable device drivers. A Device Driver Profile ( a
*   text file with a .DDP file name extension) must be
*   provided by the device driver author to control the

```

```
*      installation of the device driver.
*      DDISrc = Directory where the .DDP files are.
*      DDIDest = Directory where to copy the device driver
*              files.
*      DDIDDP = List of .DDP files to install.
*              (example: file1.DDP,file2.DDP)
*
*DDISrc = X:\IMG\IAA
*DDIDest = E:\
*DDIDDP = IAA.DDP
```

Appendix B. Response File for LAPS Installation on a Server

```
;
; LAPSSERV.RSP - Machine-specific response file for the
;               installation of the LAN Adapter and Protocol
;               Support. Change the TR address near the
;               bottom of the file.
;
;               This response file installs the support for
;               the NETBIOS and IEEE 802.2 (APPC) protocols.
;
;
INST_SECTION = (
  INSTALL = product
  TARGET = E:
  UPGRADE_LEVEL = new
)

PROTOCOL = (
  [PROT_MAN]

  DRIVERNAME = PROTMAN$

  [IBMLXCFG]

  IBMTOK_nif = IBMTOK.nif
  LANDD_nif = LANDD.NIF
  NETBEUI_nif = NETBEUI.NIF

  [LANDD_nif]

  DriverName = LANDD$
  Bindings = IBMTOK_nif
  ETHERAND_TYPE = "I"
  SYSTEM_KEY = 0x0
  OPEN_OPTIONS = 0x2000
  TRACE = 0x0
  LINKS = 8
  MAX_SAPS = 3
  MAX_G_SAPS = 0
  USERS = 3
  T1_TICK_G1 = 255
  T1_TICK_G1 = 15
  T2_TICK_G1 = 3
  T1_TICK_G2 = 255
  T1_TICK_G2 = 25
  T2_TICK_G2 = 10
  IPACKETS = 250
  UIPACKETS = 100
  MAXTRANSMITS = 6
  MINTRANSMITS = 2
  TCBS = 64
  GDTS = 30
  ELEMENTS = 800

  [NETBEUI_nif]

  DriverName = netbeui$
  Bindings = IBMTOK_nif
  ETHERAND_TYPE = "I"
  USEADDRREV = "YES"
  OS2TRACEMASK = 0x0
  SESSIONS = 128
  NCBS = 95
```

```

NAMES = 21
SELECTORS = 5
USEMAXDATAGRAM = "NO"
ADAPTRATE = 1000
WINDOWERRORS = 0
MAXDATARCV = 4168
TI = 30000
T1 = 500
T2 = 200
MAXIN = 1
MAXOUT = 1
NETBIOS_TIMEOUT = 500
NETBIOS_RETRIES = 2
NAMECACHE = 0
PIGGYBACKACKS = 1
DATAGRAM_PACKETS = 2
PACKETS = 350
LOOP_PACKETS = 1
PIPELINE = 5
MAX_TRANSMITS = 6
MIN_TRANSMITS = 2
DL_CRETRIES = 5

```

```

;
; Token-Ring Adapter parameters
;
; Change the TR address below to the address assigned to the
; machine you are installing.
; Change the ADAPTER response to "ALTERNATE" if the adapter
; to be used is the second TR adapter
; The transmission values defined below are adequate for the
; basic, 4Mbps, 16K TR adapter.
; If you have a better adapter, like the 4/16Mbps, set it to
; use 32K with the Reference Diskette and change the values
; below to the following ones:
;
; For 16Mbps setting           For 4Mbps setting
;
; MAX_TRANSMITS = 30           MAX_TRANSMITS = 30
; RECVBUFS = 12               RECVBUFS = 12
; RECVBUFSIZE = 2040          RECVBUFSIZE = 2040
; XMITBUFS = 1                XMITBUFS = 1
; XMITBUFSIZE = 17952         XMITBUFSIZE = 4456
;
;

```

```
[IBMTOK_nif]
```

```

DriverName = IBMTOK$
ADAPTER = "PRIMARY"
NETADDRESS = "400050002004"
MAX_TRANSMITS = 6
RECVBUFS = 2
RECVBUFSIZE = 256
XMITBUFS = 1

```

```

;
; Remove the semicolon from the following "RAM=" statement
; when the Token Ring adapter is an AT-bus adapter. Append
; the value 0xD800 (for primary) or 0xD400 (for alternate)
; after the equal sign.
;
;

```

```
; RAM =
```

```
)
```

Appendix C. Response File for LAPS Installation on a Client

```
;
; LAPSCLIE.RSP - Machine-specific response file for the
;               installation of the LAN Adapter and Protocol
;               Support. Change the TR address near the
;               bottom of the file.
;
;               This response file installs the support for
;               the NETBIOS and IEEE 802.2 (APPC) protocols.
;
;
INST_SECTION = (
  INSTALL = product
  TARGET = E:
  UPGRADE_LEVEL = new
)

PROTOCOL = (
  [PROT_MAN]

  DRIVERNAME = PROTMAN$

  [IBMLXCFG]

  IBMTOK_nif = IBMTOK.nif
  LANDD_nif = LANDD.NIF
  NETBEUI_nif = NETBEUI.NIF

  [LANDD_nif]

  DriverName = LANDD$
  Bindings = IBMTOK_nif
  ETHERAND_TYPE = "I"
  SYSTEM_KEY = 0x0
  OPEN_OPTIONS = 0x2000
  TRACE = 0x0
  LINKS = 8
  MAX_SAPS = 3
  MAX_G_SAPS = 0
  USERS = 3
  T1_TICK_G1 = 255
  T1_TICK_G1 = 15
  T2_TICK_G1 = 3
  T1_TICK_G2 = 255
  T1_TICK_G2 = 25
  T2_TICK_G2 = 10
  IPACKETS = 250
  UIPACKETS = 100
  MAXTRANSMITS = 6
  MINTRANSMITS = 2
  TCBS = 64
  GDTS = 30
  ELEMENTS = 800

  [NETBEUI_nif]

  DriverName = netbeui$
  Bindings = IBMTOK_nif
  ETHERAND_TYPE = "I"
  USEADDRREV = "YES"
  OS2TRACEMASK = 0x0
  SESSIONS = 128
  NCBS = 95
```

```

NAMES = 21
SELECTORS = 5
USEMAXDATAGRAM = "NO"
ADAPTRATE = 1000
WINDOWERRORS = 0
MAXDATARCV = 4168
TI = 30000
T1 = 500
T2 = 200
MAXIN = 1
MAXOUT = 1
NETBIOS_TIMEOUT = 500
NETBIOS_RETRIES = 2
NAMECACHE = 0
PIGGYBACKACKS = 1
DATAGRAM_PACKETS = 2
PACKETS = 350
LOOP_PACKETS = 1
PIPELINE = 5
MAX_TRANSMITS = 6
MIN_TRANSMITS = 2
DL_CRETRIES = 5

```

```

;
; Token-Ring Adapter parameters
;
; Change the TR address below to the address assigned to the
; machine you are installing.
; Change the ADAPTER response to "ALTERNATE" if the adapter
; to be used is the second TR adapter
; The transmission values defined below are adequate for the
; basic, 4Mbps, 16K TR adapter.
; If you have a better adapter, like the 4/16Mbps, set it to
; use 32K with the Reference Diskette and change the values
; below to the following ones:
;
; For 16Mbps setting           For 4Mbps setting
;
; MAX_TRANSMITS = 30           MAX_TRANSMITS = 30
; RECVBUFS = 12                RECVBUFS = 12
; RECVBUFSIZE = 1096          RECVBUFSIZE = 1096
; XMITBUFS = 1                 XMITBUFS = 1
; XMITBUFSIZE = 17952         XMITBUFSIZE = 4456
;
;

```

```
[IBMTOK_nif]
```

```

DriverName = IBMTOK$
ADAPTER = "PRIMARY"
NETADDRESS = "400051002026"
MAX_TRANSMITS = 6
RECVBUFS = 2
RECVBUFSIZE = 256
XMITBUFS = 1

```

```

;
; Remove the semicolon from the following "RAM=" statement
; when the Token Ring adapter is an AT-bus adapter. Append
; the value 0xD800 (for primary) or 0xD400 (for alternate)
; after the equal sign.
;
;

```

```
; RAM =
```

```
)
```

Appendix D. Universal Response File for LAPS Installation

This response file can be used on any machine because it uses the Universally Administered Token-Ring address built into every adapter.

```
;
; LAPSUNIV.RSP - Universal response file for the installation
; of the LAN Adapter and Protocol Support.
;
; This response file can be used without
; modifications on any machine because it uses
; the universally administered Token-Ring
; address built in every TR adapter.
;
INST_SECTION = (
  TARGET_DRIVE = E:
  INSTALL = PRODUCT
  UPGRADE_LEVEL = NEW
)

PROTOCOL = (

[protman]
  drivename = protman$

[netbeui_nif]
  drivename = netbeui$
  bindings = mac

[mac]
  drivename = IBMTOK$

;
; Remove the semicolon from the following "ADAPTER=" statement
; when this Token Ring adapter should be assigned as the
; second Token Ring adapter.
;
; ADAPTER = ALTERNATE

;
; Remove the semicolon from the following "RAM=" statement
; when the Token Ring adapter is an AT-bus adapter. Append
; the value 0xD800 (for primary) or 0xD400 (for alternate)
; after the equal sign.
;
; RAM =

)
```

Appendix E. Response File for CM/2 Installation on a VI Server

```
;
; CM2SERVR.RSP - CM/2 response file for a VisualInfo
;               Standard Server (Library, Object and
;               configuration server on the same machine)
;
;
;
; Include the common response file to set the basic values.
; They will be overridden by the responses in this file.
;
INCLUDE=X:\RSP\CM2\CM2BASE.RSP
CMUSERCFG = VISERVER
;
; LAN_DLC
; Communication and System Managements LAN ID
;
LAN_DLC = (
NAME = 0
SEND_COUNT = 8
RECEIVE_COUNT = 8
MAX_LINK_STATION = 12
MAX_I_FIELD_SIZE = 8201
PER_INCOMING_CALLS = 0
CASM_LAN_ID = LAN12345
)
;
; Local CP
;
; NAME is the fully qualified Local CP Name. Specify it
; as the NETID and CP NAME separated by a period.
;
LOCAL_CP = (
NAME = USIBMD1.ABC12345
)
;
```


Appendix F. Response File for CM/2 Installation on a VI Client

```
;
; CM2CLIEN.RSP - CM/2 response file for a VisualInfo Client
;
;
; Include the common response file to set the basic values.
; They will be overridden by the responses in this file.
;
INCLUDE=X:\RSP\CM2\CM2BASE.RSP
CMUSERCFG = VICLIENT
;
; LAN_DLC
;
; Communication and System Managements LAN ID
;
LAN_DLC = (
NAME = 0
SEND_COUNT = 8
RECEIVE_COUNT = 8
MAX_LINK_STATION = 8
MAX_I_FIELD_SIZE = 8201
PER_INCOMING_CALLS = 0
CASM_LAN_ID = LAN12345
)
;
; Local CP
;
; NAME is the fully qualified Local CP Name. Specify it
; as the NETID and CP NAME separated by a period.
;
LOCAL_CP = (
NAME = USIBMD1.ABC12345
NODE_TYPE = 3
)
;
; LOGICAL_LINK
;
; DESTINATION_ADDRESS
; Specifies the TR address of your Network Node (NN)
;
LOGICAL_LINK = (
NAME = LINK0001
DLC_NAME = IBMTRNET
ACTIVATE_AT_STARTUP = 1
CP_CP_SESSION_SUPPORT = 1
ADAPTER_NUMBER = 0
ADJACENT_NODE_TYPE = 2
DESTINATION_ADDRESS = 400050002004
ETHERNET_FORMAT = 0
EFFECTIVE_CAPACITY = -1
COST_PER_BYTE = -1
COST_PER_CONNECT_TIME = -1
PROPAGATION_DELAY = -1
SECURITY = -1
USER_DEFINED_1 = -1
USER_DEFINED_2 = -1
USER_DEFINED_3 = -1
LIMITED_RESOURCE = 0
LINK_STATION_ROLE = -1
SOLICIT_SSCP_SESSION = 0
MAX_ACTIVATION_ATTEMPTS = 0
USE_PUNAME_AS_CPNAME = 0
)
)
```

Appendix G. Basic Response File for CM/2 Installation

This CM/2 response file is included from the specific response files for VisualInfo clients and Servers. It contains keywords that are common to both types of systems.

```
;
; CM2BASE.RSP - Common CM/2 response file for
; VisualInfo clients and Servers
;
;
; Installation Keywords
;
;
; CMUPDATETYPE
; Specifies the operation to be preformed.
; 0=No processing
; 1=New installation
; 2=Upgrade previous version
; 3=Configuration change with installation
; 4=Configuration change without installation
; 5=Refresh installation
; 6=Cleanup installation
;
; CMUPDATETYPE = 1
;
; CMUSERCFG
; The name of the configuration file that the installation
; creates or modifies. Can also include drive and path.
; Default path is \CMLIB and the default drive is the
; installation drive.
;
; CMUSERCFG = VI
;
; CMTARGET
; Specifies the CM/2 target drive.
; Default is the same drive if running upgrade and the OS/2
; bootdrive if running a new installation.
;
; CMTARGET = D:
;
; CMWORKSTATIONTYPE
; Specifies the CM/2 Workstation type.
; 1=Single workstation (Default)
; 4=Distributed feature
;
; CMWORKSTATIONTYPE = 1
;
; CMINSTALLFOLDERS
; Create folder and icons.
; 0=No
; 1=Yes (Default)
;
; CMINSTALLFOLDERS = 1
;
; CMINSTALLSSM
; Install Subsystem Management.
; 0=No
; 1=Yes (Default)
;
; CMINSTALLSSM = 1
;
; CMINSTALLKEYBDREMAP
; Install Keyboard Remap Feature.
```

```

;
; 0=No
; 1=Yes (Default)
;
CMINSTALLKEYBDREMAP = 1
;
;
; CMINSTALLROPS
; Install Remote Operation.
; 0=No (Default)
; 1=Yes
;
CMINSTALLROPS = 0
;
;
; CMINSTALLPD
; Install Problem Determination Aids
; 0=No
; 1=Yes (Default)
;
CMINSTALLPD = 1
;
;
; CMINSTALLCOMMANDREFERENCE
; Install Command Reference Online Book
; 0=No
; 1=Yes (Default)
;
CMINSTALLCOMMANDREFERENCE = 0
;
;
; CMINSTALLMESSAGEREFERENCE
; Install Message Reference Online Book
; 0=No
; 1=Yes (Default)
;
CMINSTALLMESSAGEREFERENCE = 0
;
;
; CMINSTALLKEYLOCK
; Install the Keylock function. This function can protect
; your configuration with a password.
; 0=No
; 1=Yes (Default)
;
CMINSTALLKEYLOCK = 0
;
;
; CMINSTALLCONFIGDIALOG
; Install the Configuration Interface.
; 0=No
; 1=Yes (Default)
;
CMINSTALLCONFIGDIALOG = 1
;
;
; CMINSTALLOVERVIEW
; Install the Overview Online Book.
; 0=No
; 1=Yes (Default)
;
CMINSTALLOVERVIEW = 0
;
;
; CMINSTALLGLOSSARY
; Install the Glossary.
; 0=No (Default)
; 1=Yes
;
CMINSTALLGLOSSARY = 0
;
;
; CMINSTALLPDGUIDE
; Install the Problem Determination Guide
; 0=No (Default)
;

```

```

;
; 1=Yes
;
; CMINSTALLPDGUIDE = 0
;
; CMSEVER
; Install code to support Distributed Feature clients.
; 0=No (Default)
; 1=Yes
;
; CMSEVER = 0
;
; CMINSTALLUPM
; Install User Profile Manager. Default if installing 5250
; is 1, else default is 0.
; 0=No
; 1=Yes
;
; CMINSTALLUPM = 0
;
; CONFIGSYSTEMMAXDUMPS
; Specifies the maximum number of system dumps to be kept
; Default is 32.
;
; CONFIGSYSTEMMAXDUMPS = 32
;
; CONFIGSYSTEMDUMPPATH
; Specifies the path where systemdumps are kept.
; Default is C:\OS2\SYSTEM.
;
; CONFIGSYSTEMDUMPPATH = E:\OS2\SYSTEM\
;
; CONFIGAPPLMAXDUMPS
; Specifies the maximum number of applicationdumps to be
; kept.
; Default is 32.
;
; CONFIGAPPLMAXDUMPS = 32
;
; CONFIGAPPLDUMPPATH
; Specifies the application path where dumps are kept.
; Default is C:\OS2\SYSTEM.
;
; CONFIGAPPLDUMPPATH = E:\OS2\SYSTEM\
;
; CONFIGMSGLOGNAME
; Specifies the name of the message log.
; Default is C:\OS2\SYSTEM\OS2MLOG.DAT
;
; CONFIGMSGLOGNAME = E:\OS2\SYSTEM\OS2MLOG.DAT
;
; CONFIGWSID
; Specifies a unique workstation name.
;
; CONFIGWSID = PRGWKSTN
;
; CONFIGWSSERIAL1
; CONFIGWSSERIAL2
; CONFIGWSTYPE1
; CONFIGWSTYPE2
; Specifies the machine type and serial number.
;
; CONFIGWSSERIAL1 = 00
; CONFIGWSSERIAL2 = 0000000
; CONFIGWSTYPE1 = 8565
; CONFIGWSTYPE2 = 000
;

```

```

; CONFIGDISPLAYMSG
;   Specifies whether to show message on the screen or not.
;   0=No
;   1=Yes (Default)
;
CONFIGDISPLAYMSG = 1
;
; Configuration Keywords
;
;
; LAN_DLC
; NAME
;   Specifies adapter number.
;   0=First adapter
;   1=Second adapter
; ADAPTER_TYPE
;   Specifies adapter type.
;   1=PC Network
;   2=IBM Token Ring Network (Default)
;   3=Etherand Network
; CASM_LAN_ID
;   Specifies the Communication and System Managements LAN ID
; SEND_ALERT
;   Should we send alert for beaconing.
;   0=No (Default)
;   1=Yes
;
LAN_DLC = (
  NAME = 0
  ADAPTER_TYPE = 2
  MAX_LINK_STATION = 004
  PER_INCOMING_CALLS = 000
  FREE_LINK = 0
  MAX_I_FIELD_SIZE = 1929
  SEND_COUNT = 4
  RECEIVE_COUNT = 4
  CASM_LAN_ID = X21885
  SEND_ALERT = 0
  LINK_ESTABLISHMENT_RETRANSMISSION = 8
  MAX_ACTIVATION_ATTEMPTS = 0
  LOCAL_SAP = 04
  RETRANSMISSION_THRESHOLD = 8
)
;
; WORKSTATION
;
WORKSTATION = (
  COMMENT = VI Server CM/2 Configuration
  TRANS_TABLE = ACSGTAB.DAT
  LOAD_SNA_APPC = 1
  LOAD_SRPI = 1
  LOAD_X25_API = 1
  LOAD_ACDI = 1
  USE_ACDI_API = 0
  USE_ARTIC_ADAPTER_WITHOUT_X25 = 0
  USE_LAN_PROTOCOLS_USING_ISDN = 0
)
;
; ATTACH_MANAGER
;
ATTACH_MANAGER = (
  START = 1
)
;
; LOCAL_CP
; NAME

```

```

; Specifies the Local CP Name. The Local CP Name should be
; your NETID and your NAME separated with a period.
; CP_ALIAS
; Specifies the CP Alias Name. The CP Alias Name will not
; be used here so we use NOTUSED
; NODE_ID
; Specifies the Node ID.
; NODE_TYPE
; Specifies the Node TYPE.
; 2=Network Node
; 3=End Node
;
LOCAL_CP = (
NAME = USIBMD1.GHR12332
CP_ALIAS = NOTUSED
HOST_FP_SUPPORT = 1
NAU_ADDRESS = 0
NODE_ID = 05D00000
NODE_TYPE = 2
NW_FP_SUPPORT = 0
MAX_COMPRESSION_LEVEL = 0
MAX_COMPRESSION_TOKENS = 0
)
;
; SNA_DEFAULTS
;
SNA_DEFAULTS = (
DEFAULT_TP_CONV_SECURITY_RQD = 0
DEFAULT_TP_OPERATION = 2
DEFAULT_TP_PROGRAM_TYPE = 0
DIRECTORY_FOR_INBOUND_ATTACHES = *
IMPLICIT_INBOUND_PLU_SUPPORT = 1
DEFAULT_MODE_NAME = BLANK
MAX_HELD_ALERTS = 10
MAX_MC_LL_SEND_SIZE = 32767
NUMBER_OF_SNA_CHANNELS = 255
)
;
; Copy the CMWAIT Productivity Aid.
;
; To avoid an error, put only one blank between the FROM and
; the TO parts of the COPY statement.
;
COPY = X:\IMG\CM2\CMWAIT\CMWAIT.EXE D:\CMLIB
COPY = X:\IMG\CM2\CMWAIT\CMWAIT.ICO D:\CMLIB
COPY = X:\IMG\CM2\CMWAIT\CMWAIT.DOC D:\CMLIB
COPY = X:\IMG\CM2\CMWAIT\CMWAIT.C D:\CMLIB

```


Appendix H. Response File for DB2/2 Installation

```
*
* DB2.RSP - Response file for DB2/2 installation
*
*
* DBUpdateType: 0 Nothing
*                1 New installation
*                2 Migration from previous release
*                3 Reinstallation (feature addition or removal)
*                4 Configuration change to an existing DB Mgr
*                5 Remove all of DB2/2
*                6 Restore a DB Mgr configuration from backup
*                files
*
DBUpdateType=1
*
* DBStopCommunications: 0 Do not attempt to stop DB Mgr
*                       1 Stop DB Mgr. If unable, continue
*                       2 Stop DB Mgr. If unable, terminate
*
DBStopCommunications=0
*
* DBTarget: Drive on which to install DB2/2
*
DBTarget=D
*
* DBCommunicationType: 0 Standalone System. RDS will not be
*                       installed.
*                       1 DB Server
*                       2 DB Client
*                       3 DB Client with local databases
*
DBCommunicationType=0
*
* DBInstallDatabaseTools: Y or N
* DBInstallQueryManager : Y or N
* DBInstallDocumentation: Y or N
*
DBInstallDatabaseTools=Y
DBInstallQueryManager=Y
DBInstallDocumentation=Y
*
* DBUpdateConfigSys: Y or N
*
DBUpdateConfigSys=Y
*
* DBModelCFG: File specification for the user's DB configurat.
*             to be migrated. Following values are possible:
*
*             x:[path]\cfgname: use this file as model
*             *DEFAULT          : apply system defaults to the
*                               configuration file based upon
*                               the value of the
*                               DBCommunicationType keyword.
*             *CURRENT          : use the current cfg as model.
*
DBModelCFG=*DEFAULT
```

Appendix I. Response File for the Installation of a VI Standard Server

```
;
; Response file for VisualInfo Standard Server
;
;
; Installation Keyword Parameters
;
;— Update CONFIG.SYS automatically —————
CFGUPDATE      = AUTO
;— Overwrite files during installation —————
OVERWRITE      = YES
;— Paths for product and data directories —————
FILE           = D:\VI
WORK           = D:\VI\WORK
;— Description of component to be installed —————
COMP           = Standard Server
;— This keyword must be NO to be able to remove VI-
DELETEBACKUP = NO

;
; General Keyword Parameters
;
;— Do not display the prerequisites screen —————
FRNNODISP      = YES
;— Language to be used in this system —————
FRNLANGUAGE    = ENU

;
; Network Table Keyword Parameters
;
;— Install a customized Network Table —————
FRNNTACTION    = CUSTOM
;— VI System Configuration File to be used —————
FRNRCFILE      = X:\IMG\VI\STD CFG.CFG
;— Nickname of this node —————
FRNFQNODE      = STDSERVER

;
; CM/2 Keyword Parameters
;
;— Create a CM/2 configuration file —————
FRNCMACTION    = YES
;— Model CM/2 Configuration File —————
FRNCFGN        = VISERVER
;— SNA Network ID —————
FRNNETID       = USIBMD1
;— SNA Local Node Name —————
FRNNETNM       = VISERVER
;— Last 5 digits of Local Node ID —————
FRNNODID       = 00000
;— APPN Node Type (NN=Network Node, EN=End Node) —
FRNNODY        = NN
;— For an EN: Adapter address of NN Server —————
;— For an NN: Any Adapter address, not used —————
FRNNDA         = 40000000000
;— Type of adapter for APPN communications —————
FRNDLCNM       = IBMTRNET
;— Adapter to use for APPN communications —————
FRNADAPT       = 0
;— Home drive of CM/2 —————
FRNCFGD        = D
```

```

;
; Mandatory Keywords for all Server types
;
;— User ID and password of administrator —————
FRNUSERID   = USERID
FRNPASSWORD = PASSWORD
;— Database name for Library Server —————
FRNLDBNAME  = LIBSRVR2
;— Database name for Object Server —————
FRNOBDBNAME = OBJSRVR2

;
; Library Server Keyword Parameters
;
;— Create the Library Server database —————
FRNLDBACTION = YES
;— Database drive for Library Server —————
FRNLDBDRIVE  = F
;— Database description for Library Server —————
FRNLDBCOMMENT = OS/2 Library Server Database
;— Variable character length for LABEL column ———
FRNLDBLABELL = 50
;— Variable character length for VALUE column ———
FRNLDBVALUEL = 100
;— Variable character length for NAME column ———
FRNLDBNAMEL  = 80
;— Variable character length for DIRECTORY column —
FRNLDBDIRL   = 120
;— Load the sample data —————
FRNSAMPLEDATA = YES

;
; Object Server Keyword Parameters
;
;— Create the Object Server database —————
FRNOBDBACTION = YES
;— Database drive for Object Server —————
FRNOBDBDRIVE  = F
;— Database description for Object Server —————
FRNOBDBCOMMENT = OS/2 Object Server Database
;— Path to staging area —————
FRNOBJPATH    = F:\STAGING\
;— Initial object drive —————
FRNOBJDRIVE   = F

```

Appendix J. Response File for the Installation of a VI Standard Client

```
;  
; Response file for VisualInfo Standard Client  
;  
;  
; Installation Keyword Parameters  
;  
;— Update CONFIG.SYS automatically —————  
CFGUPDATE = AUTO  
;— Overwrite files during installation —————  
OVERWRITE = YES  
;— Paths for product and data directories —————  
FILE = D:\VI  
WORK = D:\VI\WORK  
;— Description of component to be installed —————  
COMP = Standard Client Workstation  
;— This keyword must be NO to be able to remove VI-  
DELETEBACKUP = NO  
  
;  
; General Keyword Parameters  
;  
;— Do not display the prerequisites screen —————  
FRNNODISP = YES  
;— Language to be used in this system —————  
FRNLANGUAGE = ENU  
  
;  
; Network Table Keyword Parameters  
;  
;— Install a customized Network Table —————  
FRNNTACTION = CUSTOM  
;— VI System Configuration File to be used —————  
FRNNCFILE = X:\IMG\VI\STDCFG.CFG  
;— Nickname of this node —————  
FRNFQNODE = STDCLIEN  
  
;  
; CM/2 Keyword Parameters  
;  
;— Create a CM/2 configuration file —————  
FRNCMACTION = YES  
;— Model CM/2 Configuration File —————  
FRNCFGN = VICLIENT  
;— SNA Network ID —————  
FRNNETID = USIBMD1  
;— SNA Local Node Name —————  
FRNNETNM = VICLIENT  
;— Last 5 digits of Local Node ID —————  
FRNNODID = 00000  
;— APPN Node Type (NN=Network Node, EN=End Node) —  
FRNNODY = EN  
;— For an EN: Adapter address of NN Server —————  
;— For an NN: Any Adapter address, not used —————  
FRNNDA = 400050002004  
;— Type of adapter for APPN communications —————  
FRNDLCNM = IBMTRNET  
;— Adapter to use for APPN communications —————  
FRNADAPT = 0  
;— Home drive of CM/2 —————  
FRNCFGD = D
```

Appendix K. Response File for the Installation of a VI Stand-Alone System

```
;
; Response file for VisualInfo stand-alone System
;
;
; Installation Keyword Parameters
;
;— Update CONFIG.SYS automatically —————
CFGUPDATE      = AUTO
;— Overwrite files during installation —————
OVERWRITE      = YES
;— Paths for product and data directories —————
FILE           = D:\VI
WORK           = D:\VI\WORK
;— Description of component to be installed —————
COMP          = stand-alone System
;— This keyword must be NO to be able to remove VI-
DELETEBACKUP = NO

;
; General Keyword Parameters
;
;— Do not display the prerequisites screen —————
FRNNODISP      = YES
;— Language to be used in this system —————
FRNLANGUAGE    = ENU

;
; Network Table Keyword Parameters
;
;— Install default Network Table for stand-alone —
FRNNTACTION    = DEFAULT

;
; Mandatory Keywords for all Server types
;
;— User ID and password of administrator —————
FRNUSERID      = USERID
FRNPASSWORD    = PASSWORD
;— Database name for Library Server —————
FRNLDBNAME     = LIBSRVR2
;— Database name for Object Server —————
FRNODBNAME     = OBJSRVR2

;
; Library Server Keyword Parameters
;
;— Create the Library Server database —————
FRNLDBACTION   = YES
;— Database drive for Library Server —————
FRNLDBDRIVE    = F
;— Database description for Library Server —————
FRNLDBCOMMENT  = OS/2 Library Server Database
;— Variable character length for LABEL column ———
FRNLDBLABELL   = 50
;— Variable character length for VALUE column ———
FRNLDBVALUEL   = 100
;— Variable character length for NAME column ———
FRNLDBNAMEL    = 80
;— Variable character length for DIRECTORY column —
FRNLDBDIRL     = 120
```

```
;— Load the sample data —————
FRNSAMPLEDATA = YES

;
; Object Server Keyword Parameters
;
;— Create the Object Server database —————
FRNODBACTION = YES
;— Database drive for Object Server —————
FRNOBDRIVE = F
;— Database description for Object Server —————
FRNODBCOMMENT = OS/2 Object Server Database
;— Path to staging area —————
FRNOBJPATH = F:\STAGING\
;— Initial object drive —————
FRNOBJDRIVE = F
```

Appendix L. Response Files for NetView DM/2 Installation

L.1 Response File for NetView DM/2 Client Installation

CLIENTNAME = STDCLIEN
SERVERNAME = NVDMSRV

L.2 Response File for NetView DM/2 Server Installation

CLIENTNAME = STDSERV
SERVERNAME = NVDMSRV

Appendix M. Tips from the VisuallInfo Performance Team

This section contains miscellaneous tuning tips for some of the VisuallInfo components.

M.1 Client Workstation

M.1.1 Client Application

- Scanning
 - Unless needed, do not display the speedbar, property bar, or information line in the view window.
 - Do not overlap the view window and the Basic or Advance Scan windows.
 - Press the 'Pause' button in the Basic or Advance Scan window when not actively scanning. (For example, when saving under Basic scan, or on the scanner in advance scan when it has finished with its paper load.)
 - Use the 'Bypass save window' feature if possible.
- Document/Folder Viewing
 - If the view window for documents is not needed, set the window layout to not open it.
 - Unless needed, do not display the speedbar or property bar in the view window.
 - Use the note log rather than notes on the document image if possible.
 - If you do not need to update the item, open it for browse.
 - Set the working directory for external content class to a virtual disk if possible. Avoid applications on remote disks.
- Workbaskets
 - If the workbasket contains a large number of items, consider making it a system assigned workbasket.
 - Keep the item count interval for Workbaskets set high, or turn it off entirely.
- Searching
 - Structure searches to return only the items actually needed.
 - Take advantage of the type (document or folder), work in process, and suspension filters if possible,
 - Structure your index class with obvious key fields and set up database indexes for those fields.

M.1.2 List Manager

File FRNCACHE.CTL (found in drive:\root\LSTMGR\CTL) is used by the List Manager to reclaim its disk storage based on a least recently used (LRU) algorithm. The following figure depicts the default values of FRNCACHE.CTL:

Logging (0 - No Logging, 1 - Trace Requests, 2 - Debug): 0

Maximum Consumable Disk Space (0 .. 4000000000): 10000000

Storage Reclamation Termination Percentage (1 .. 99): 80

The "Maximum Consumable Disk Space" value of 10000000 is the actual size of the cache. The "Storage Reclamation Termination Percentage" value of 80 is the approximate amount of disk space left in use after disk space reclamation takes place. That is, 20% of the disk space is reclaimed. The process of reclaiming space is time consuming and should not be done frequently.

When retrieving objects, the List Manager must first search the list of items in the cache to determine if the object is already there. If the list is long, the search can be time consuming.

The following suggestions should be considered to help reduce the time the List Manager spends when storing and retrieving objects:

- For scanning workstations set the "Maximum Consumable Disk Space" to a size that will comfortably hold the largest object to be scanned. Set the "Storage Reclamation Termination Percentage" value to 1 in order to reclaim all available disk space.
- For Client Workstations that do not re-use objects (i.e., it usually retrieves objects from an object server) set the values as in a scanning workstation.
- For Client Workstations that do re-use objects from the cache, set the "Maximum Consumable Disk Space" as appropriate or take the default. Consider setting the "Storage Reclamation Termination Percentage" to 50% or less.

M.1.3 Communication Isolator

In file FRNOLINT.TBL (on client workstation or configuration server) set the SESSION_TIMEOUT to '10000' (in milliseconds) for high activity users. Set to '0' for all others. The SESSION_TIMEOUT value is used to determine how long the conversation with the server is to remain open after the server responds to the client request.

Set the SESSION_TIMEOUT value via the System Performance Management function in the System Configuration Utility See the example below:

```
SERVER: LIBSRVR2 REMOTE APPN
        TP           = FRNI
        LU_NAME      = NNNNNNNN.UUUUUUU
        MODE         = FRNOSRCL
        SECURITY     = NONE
        SESSION_TIMEOUT = 0      <----- leave as is or set higher
        SERVER_TYPE  = FRNLSOS2   for high activity users
```

M.1.4 Non-HPFS Users

Since your system has more than 8MB of memory, the IFS=HPFS.SYS parameter has been included into CONFIG.SYS. This will automatically start HPFS at IPL, even if you are using FAT as your fixed disk file choice. HPFS uses an additional .5MB of memory for its program files, so removing this parameter from CONFIG.SYS is to your advantage if you are not using HPFS.

M.2 Object Server

- Do not migrate objects during periods of high activity
- At all cost, avoid filling the staging area. When this happens, the object server goes into the quiesce state and refuses all requests (stores and retrieves). It does not resume accepting requests until the "Staging Percent Stop" is reached. If your staging area is very large, the quiesce state can last for hours.
- An ideal environment is one where destaging never occurs (i.e., the "Staging Percent Start" is never reached) during prime working hours. Save it for off hours, if possible. This means that your staging area should be large enough to hold all objects to be stored during a single day plus migrated objects that will be retrieved during the day. If this is not possible, attempt to maintain an object store rate that does not overrun the destager. This rate is anywhere from 1500-2000 objects per hour depending on the speed of your object server and the size of your objects. If this is the mode you want to operate in, make the following settings:
 - Destager cycle = 1 min.
 - Purger cycle = 1 min.
 - Stage Batch Size = 250 or larger
- Another alternative to avoid destaging during the day is to store objects after the work day completes and destage and migrate during off hours. This approach prepares your work for the following day.
- Isolate the staging area in a separate physical drive.
- Keep the DB2/2 log files and the DB2/2 object server database on separate physical drives.
- Pause the windows on the Object Server status window.
- Re-org the BASE_OBJECTS table frequently when first putting system into production, or use Object Server Re-Org Utility
- LAN Server performance must be considered in an environment where there is a heavy load on the LAN or where large files are being transferred between server and requester. A number of changes should be made to the Object Server IBMLAN.INI file and on the optical server.

1. MAXTHREADS

the parameter MAXTHREADS defines the number threads within a requester that can be used to handle simultaneous network requests. This is most likely to occur when multiple applications are simultaneously making request of the requester. This parameter must be altered in concert with both MAXCMDS and NUMWORKBUF. If MAXTHREADS is changed the individual values for MAXCMDS and NUMWORKBUF should be greater than or equal to MAXTHREADS.

	Default	Recommended
MAXTHREADS	10	20
MAXCMDS	16	32
NUMWORKBUF	15	30

2. SESSTIMEOUT

This parameter specifies the time, in seconds, that the requester waits before disconnecting a session from the server that is not responding to a request. If the server workload is extremely heavy, it may be necessary to increase this value.

	Default	Recommended
SESSTIMEOUT	45	300

3. WRKHEURISTICS

The parameter WRKHEURISTICS enables the RAW read and write server message block(SMB) protocol that allows transfer across the LAN without the SMB header. The protocol transfers large files directly between server memory and the workstation cache.

	012345678901234567890123456789012
Default	111111111311111111000101112011122
Recommended	111111111310001111000101112011122

M.3 Library Server

- Keep the DB2/2 log files and the DB2/2 library server database on separate physical drives.
- Pause the graph on the Library Server status window.
- Re-org major tables frequently when first putting system into production. Major tables include:

- SBTITEMS
- SBTPARTS
- SBTLINKS
- Index Classes (AVT00...)
- SBTEVENTS (POSSIBLE)
- SBTWIPITEMS (POSSIBLE)
- SBTWIPSUSPITEMS (POSSIBLE)

Optionally, use the Library Server Re-Org Utility

- Set the ROWLIMIT value in the CNTL table to more accurately reflect your search requirements as opposed to the default value of 5000.

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CID Installation**

Publication No. GG24-4415-00

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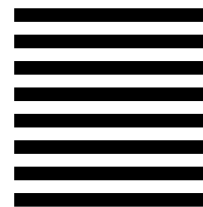
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