digital

MS Internet Information Server
Windows NT Prioris MX

DIGITAL HiTest Notes

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Preface

This document provides an overview of DIGITAL HiTest Suites and detailed technical information about interoperability test results for the MS Internet Information Server (IIS) Windows NT Prioris MX HiTest Suite.

Audience

Primary users of this document are DIGITAL and Partners sales representatives and technical support personnel. Secondary audiences include product managers, customers, and the personnel responsible for installing, setting up, and operating a DIGITAL HiTest Suite.

Road Map

This document contains the following chapters:

1. Introduction – Provides a brief summary of the benefits of DIGITAL HiTest Suites and an overview of the Suite covered in this document.

2. Configuration Data – Includes tables of configuration data about the hardware and software components that define the Template, and special configuration rules if any.

3. System Installation and Setup – Presents useful information for installing and setting up this DIGITAL HiTest Suite.

4. Interoperability Tests and Results – Describes how the tests were set up (including database organization), what data and programs were placed on what disks, and how the tests were run.

5. System Limits and Characterization Data – Summarizes any system limitations or characterization data that were identified during testing.

6. Problems and Resolutions – Discusses any problems and resolutions that were discovered during testing.

Appendix A: Detailed Hardware Configuration – Contains more detailed information about the hardware and software components listed in the Configuration Data chapter.

Feedback and Ordering Information

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1
Introduction

DIGITAL HiTest Suite and Its Advantages

DIGITAL HiTest Suites are guidelines for configuring a set of prequalified computer systems. A HiTest Suite often contains all the hardware and software needed for a complete customer solution. DIGITAL HiTest Suites can be used as a basis for configuring systems that satisfy a wide set of customer requirements. Typically, Suites target specific markets such as Data Warehousing or internet server sites that undergo low to medium levels of traffic.

DIGITAL Product Management and Engineering select the components and design the configurations in each HiTest Suite to ensure high system reliability, application performance, and upgradability. A Suite's hardware and software components have been successfully tested for interoperability.

A HiTest Suite specifies allowed ranges of hardware and software components, as well as each component's part number, description, and revision information. These specifications are listed in the *DIGITAL HiTest Template*.

The components in a HiTest Suite are organized into two groups, the *DIGITAL HiTest Foundation* and the *DIGITAL HiTest AppSet*. The HiTest Foundation includes the hardware, operating system, middleware, and database software. The HiTest Foundation can be used as a base on which any customer-desired applications can be installed. The HiTest AppSet includes the software specific to one class of customer solutions.

Configuring a DIGITAL HiTest Suite is straightforward. Select components from the HiTest Template to configure a DIGITAL HiTest System. Any system configured as specified in the DIGITAL HiTest Template can be called a DIGITAL HiTest System.

The HiTest Suite is documented in the *DIGITAL HiTest Notes*. The HiTest Notes list the HiTest Foundation and HiTest AppSet components. HiTest Notes also describe the testing of the Suite and include configuration details, installation instructions, tuning parameters, problems encountered and their solutions, and system diagrams.

Some components listed in the HiTest Foundation or AppSet may be optional. If the minimum quantity is zero (0), then the component is optional. If the minimum quantity is one or more, then you must order at least the minimum quantity.

The maximum quantities represent the largest group of components that were tested for interoperability with all the other components in the Suite. Although it may be possible to place more than the specified maximum quantity of a component on a DIGITAL system, extensive interoperability testing was not done at that level and such a system would not be considered a DIGITAL HiTest System.

You can select any combination of components with quantities ranging from the minimum to the maximum specified. Occasionally, special configuration rules give further guidance or restrict configurations. These rules appear in the Configuration Data chapter of the HiTest Notes.

A customer can include the Suite-specified hardware and software they need and then layer on additional software. Other types of hardware, called *add-on hardware*, can also be added to a DIGITAL HiTest System. The add-on hardware is specified in the Configuration Data chapter of the HiTest Notes, and in the HiTest Systems Web Pages, available through the following URLs:

```
http://cosmo.tay.dec.com              (Intranet)
http://www.partner.digital.com:9003 (Internet)
```

Even though the customer may install application software that is not specified in the Suite, the customer and DIGITAL still experience the advantages of knowing that all of the Suite-based hardware and software interoperates correctly. Of course, the full benefit of configuring a system from a HiTest Suite is obtained when the system includes only specified HiTest Foundation and AppSet components.

Overview of This DIGITAL HiTest Suite

The MS Internet Information Server (IIS) Windows NT Prioris MX HiTest Suite consists of the following software components:

- MS Internet Information Server (IIS)

- Windows NT Server

This suite meets the server needs of web sites that experience low to medium levels of user traffic.

Microsoft IIS is tightly integrated with the Microsoft Windows NT server operating system and is designed to deliver a wide range of internet and intranet server capabilities. Prioris MX systems provide a robust network computing environment for Windows NT servers. A Prioris MX server running IIS offers an ideal low-end web server solution.

Prioris MX network-ready servers feature high-performance disk and network throughput, providing a platform for IIS users that delivers application server performance at file and print server prices.

The advanced dual symmetric multiprocessing (SMP) architecture of the DIGITAL Prioris MX 6000 Series is ideally suited to meet the price and performance requirements of users who want to rapidly and economically configure a groupware server. Together with IIS, it serves as the best platform for both integrating with existing solutions and delivering a new generation of web applications.

2
Configuration Data

This chapter describes the tested DIGITAL HiTest Configuration Suite including the hardware, software, and firmware components, and their revision levels. Special configuration rules are explained if required.

Hardware and Software Components

Table 2-1 identifies the range of hardware and software components that can be configured using the MS Internet Information Server (IIS) Windows NT Prioris MX HiTest Suite.

Table 2-2 lists the Systems Management Console hardware and software.

Table 2-3 lists the revision levels of the components.

The HiTest Template (Table 2-1) consists of three categories:

- **AppSet Software** – Includes software specific to one class of customer solutions, in this case web sites that experience low to medium levels of user traffic.

- **Foundation Hardware** – Includes the base system, storage, and other hardware options.

- **Foundation Software** – Includes the operating system, middleware, and database software.

When ordering an item from a HiTest Template, select a quantity that is within the minimum/maximum range for the item. If the minimum quantity is zero (0), then the component is optional. If the minimum quantity is one or more, then order at least the minimum quantity, but not more than the maximum quantity. The maximum quantity represents the greatest number of components that were tested for interoperability with all the other components in the Suite.

For more details on the HiTest Suite hardware configuration, see Appendix A.

Configuration Data

Table 2-1: MS Internet Information Server Windows NT Prioris MX DIGITAL HiTest Template

<table>
<tr><td colspan="5">MS Internet Information Server <i>HiTest AppSet</i>
Windows NT Prioris MX HiTest Foundation</td></tr>
<tr><td colspan="5"><i>For documentation and updates:</i> http://cosmo.tay.dec.com <i>and</i> http://www.partner.digital.com:9003
<i>For hardcopy of this Suite's HiTest Notes, order EK-HIINM-HN.</i></td></tr>
<tr><td>Line Item</td><td>Description</td><td>Part Number</td><td colspan="2">HiTest Range</td></tr>
<tr><td></td><td></td><td></td><td>Min</td><td>Max</td></tr>
<tr><td colspan="5">AppSet Software</td></tr>
<tr><td>1</td><td>MS Internet Information Server (IIS)
<i>For more information, contact Microsoft at</i>:
http://www.microsoft.com</td><td>Included with item 10</td><td>1</td><td>1</td></tr>
<tr><td colspan="5">Foundation Hardware</td></tr>
<tr><td>2</td><td>DIGITAL Prioris MX 6200, 256 KB cache, 200 MHz

<i>Hardware includes</i>:
• Dual CPUs with 256 KB cache
• 64 MB Memory
• Mylex one channel PCI RAID
• Integrated UltraSCSI controller
• Integrated 10/100 Mbit Fast Ethernet
• SCSI 12X CD-ROM drive
• RX23L-AB 1.44 MB Floppy drive

<i>Software includes</i>:
• ServerWORKS CD-ROM</td><td>FR-B41WW-AC</td><td>1</td><td>1</td></tr>
<tr><td>3</td><td>Country kit (accessories, keyboard, documents, mouse, and power cord)</td><td>FR-PC94K-AA</td><td>1</td><td>1</td></tr>
<tr><td>4</td><td>128 MB 60ns Parity SIMMs (2 x 64 MB)</td><td>FR-PC77M-BM</td><td>0</td><td>2</td></tr>
<tr><td>5</td><td>4.3 GB Wide SSB disk drive</td><td>FR-CECBA-CA</td><td>1</td><td>2</td></tr>
<tr><td>6</td><td>9.1 GB UW SCSI disk drive</td><td>FR-CFCBA-CA</td><td>0</td><td>1</td></tr>
<tr><td>7</td><td>4/8 GB DAT SCSI tape drive</td><td>FR-PCXAT-AJ</td><td>1</td><td>1</td></tr>
<tr><td>8</td><td>Fast Ethernet Adapter</td><td>FR-DE500-AA</td><td>0</td><td>1</td></tr>
<tr><td>9</td><td><i>Select one high-resolution color monitor (the 17 inch is recommended):</i>
15" flat-square 0.28 dot pitch
17" flat-square 0.28 dot pitch</td><td>FR-PCXBV-YW
FR-PCXBV-ZW</td><td>1</td><td>1</td></tr>
<tr><td colspan="5">Foundation Software</td></tr>
<tr><td colspan="5">Note: <i>Order the exact versions and revisions of the software shown below. Paper documentation can be ordered separately.</i></td></tr>
<tr><td>10</td><td>Windows NT Server 4.0
<i>Please purchase from a Microsoft reseller or contact Microsoft at:</i> http://www.microsoft.com</td><td>Microsoft</td><td>1</td><td>1</td></tr>
<tr><td>11</td><td>Windows NT Service Pack 3 (SP3)
<i>To access service packs, connect to</i>:
ftp://ftp.microsoft.com/bussys/winnt</td><td>Microsoft</td><td>1</td><td>1</td></tr>
<tr><td>12</td><td>System Management Console</td><td>See Table 2-2</td><td>0</td><td>1</td></tr>
</table>

Table 2-2: System Management Console Template

MS Internet Information Server *HiTest AppSet* System Management Console				
For documentation and updates: http://cosmo.tay.dec.com *and* http://www.partner.digital.com:9003 *For hardcopy of this Suite's HiTest Notes,* EK-HIINM-HN.				
Line Item	**Description**	**Part Number**	**HiTest Range**	
			Min	**Max**
System Management Console Hardware				
Note: *This HiTest Suite supports the use of a systems management console. When the system management option is included, this HiTest Template identifies the items required. When system management is to be provided through other means, this system management console option may be omitted without invalidating the HiTest Suite.*				
1	**Prioris XL 6200 Server** *Hardware includes:* • 200 MHz CPU, 256 KB cache • Integrated Fast Ethernet • 12X CD-ROM • One 2.1 GB wide SCSI disk drive • 1.44 MB diskette drive • 32 MB 60ns EDO DIMM memory *Software includes:* • ServerWORKS CD-ROM **Note:** *A functionally equivalent Intel system may be substituted without invalidating this HiTest Template*	**FR-B60WW-XD**	1	1
2	**Country Kit** **Note:** *Non-North American orders should substitute the appropriate country kit.*	**FR-PC94K-AA**	1	1
3	**32 MB 60ns EDO DIMM Memory**	**FR-PCSMA-AC**		
4	*Select one high-resolution color monitor (the 17 inch is recommended):* **15" flat-square 0.28 dot pitch** **17" flat-square 0.28 dot pitch**	**FR-PCXBV-YW** **FR-PCXBV-ZW**	1	1
Management Console Software				
5	**Windows NT Server V4.0** *Please purchase from a Microsoft reseller or contact Microsoft at:* http://www.microsoft.com	Microsoft	1	1
6	**Windows NT Service Pack 3 (SP3)** *To access service packs, connect to*: ftp://ftp.microsoft.com/bussys/winnt	Microsoft	1	1
7	**System Management Server (SMS) V1.2** *Please purchase from a Microsoft reseller or contact Microsoft at:* http://www.microsoft.com	Microsoft	1	1
8	**SMS Service Pack 1 (SP1)** *To access service packs, connect to*: ftp://ftp.microsoft.com/bussys/winnt	Microsoft	1	1
9	**SQL Server V6.5** *Please purchase from a Microsoft reseller or contact Microsoft at:* http://www.microsoft.com	Microsoft	1	1

The following table lists the revision levels of the components.

Table 2-3: Component Revision Levels

Hardware Component	Hardware	Firmware	Software
Phoenix BIOS	–	4.05	–
DAC 960 BIOS	–	3.00.07	–
Prioris 6200 MP/2	1.05	–	–
Single Channel RAID Controller (FR-PCTAR-EA)	A03	3.50-0-18	–
4.3 GB disks (FR-CECBA-CA)	A01	0702	–
9.1 GB disk (FR-CFCBA-CA)	A02	LXTA	–
Fast Ethernet Adapter (FR-DE500-AA)	B01	1.1	–
4/8 GB DAT SCSI tape drive (FR-PCXAT-AJ)	A02	0172	–
Software Component	**Version/ Revision**	**Patch Level**	
Windows NT Server	4.0	Service Pack 3 (SP3)	
MS Internet Information Server	3.0	–	
System Management Server	1.2	Service Pack 1 (Build 786)	
Prioris System Configuration Utility (SCU)	1.05	–	
ServerWORKS Quick Launch CD	3.2	–	
Mylex Disk Array Controller Configuration Utility	4.40	–	

Special Configuration Rules

The *Prioris MX 6200 Server System Reference* (order number ER-B40WW-UA) provides detailed configuration information needed to properly install memory and PCI options.

It is possible to order more memory options than are supported by this DIGITAL HiTest Template. To comply with the HiTest Template, keep the total installed to 320 MB or less.

_____ **Note** _____

Service Packs must be reapplied after installing any new software.
_____

The following configuration rules also apply:

- The CD-ROM drive should always be connected to the on-board Adaptec UltraSCSI controller to support the bootable ServerWORKS Quick Launch CD.

- The CD-ROM drive and the two half-height devices located in the upper bays can only be connected to the narrow SCSI bus.

3
System Installation and Setup

This chapter presents information that is useful when installing and setting up a DIGITAL HiTest System configured from this DIGITAL HiTest Suite. System preparation includes installation of the hardware, operating system, and applications.

Hardware Installation

The hardware was installed and interconnected as shown in Appendix A.

System Firmware

To determine the firmware version of Phoenix BIOS on your system:

1. Choose Administrative Tools (Common) from the Programs menu.

2. Choose Windows NT Diagnostics and click the System tab.

If the version shown is prior to the version required by the HiTest Suite configuration, run the Phoenix BIOS upgrade utility (PHLASH.EXE). This utility is located in the BIOS update kit, which can be obtained from:

`http://www.windows.digital.com/~ftp/index/in_prioris_mx6.htm`

RAID Configuration

Configure and setup RAID Arrays using the Mylex Disk Array Controller Configuration Utility (DACCF.EXE). (See Step 4 in the section Operating System and IIS Installation later in this chapter.)

Prioris System Configuration Utility (SCU)

Even if PCI or EISA options are not present on the system, running SCU ensures that the NVRAM data is in a format compatible with Windows NT.

_____ **Note**_____

See the chapter titled Server Software and Utilities in the *Prioris MX 6200 Series Server System Reference* (Part Number: ER-B40WW-UA).

_____

Operating System and IIS Installation

Perform the following steps to install the Windows NT Server and IIS:

1. Power up your system.

2. Insert the Quick Launch CD into the CD-ROM drive.

3. Boot the Quick Launch CD and choose the appropriate language.

4. Create the RAIDsets and initialize the logical drives using the Mylex Disk Array Controller Configuration Utility (DACCF.EXE), which is automatically launched by Quick Launch.

    For information about configuring RAIDsets, see the chapter on Preparing the Array in the *DAC CF Utilities Installation Guide and User Manual*. To access an online copy of this manual, Click User Documentation on the Quick Launch main menu.

    See Table 4-1 and Table 4-2 for the minimum and maximum RAIDset configurations for this HiTest Template.

5. Select Installation and Utilities from the Quick Launch menu.

6. Click the Express Installation tab.

7. Click the MS Windows icon and select "Windows NT 4.0" from the pop-up menu.

8. Fill in the appropriate information to begin the Windows NT Server installation.

9. When Quick Launch displays a check box for installing IIS, make sure the box is checked.

10. Create a 100 MB partition when prompted by Quick Launch. (Quick Launch requires an MS-DOS partition of at least 35 MB to install Windows NT Server.)

11. Insert the Windows NT V4.0 CD-ROM when prompted.

    The installation is completed using the information already gathered by Quick Launch.

12. Install Service Pack 3 for Windows NT 4.0.

_____ **Note** _____

Service Packs must be reapplied after installing any new software.
_____

Installing the DC2114X.SYS Driver

_____**Caution**_____

The installation of the DC2114X.SYS Driver is a required procedure. If it is not completed, the network will hang.
_____

Use the following procedure to install the DC2114X.SYS driver required by the DIGITAL Semiconductor 21143 10/100 Mbit Ethernet LAN controller. This procedure replaces the Version 4.03 driver installed by Windows NT Server with the required Version 4.12 driver.

1. Visually inspect the Prioris motherboard as shown in Figure 3-1 to determine which controller chip is installed.

System Installation and Setup

Figure 3-1: Ethernet Controller Location

ML014178
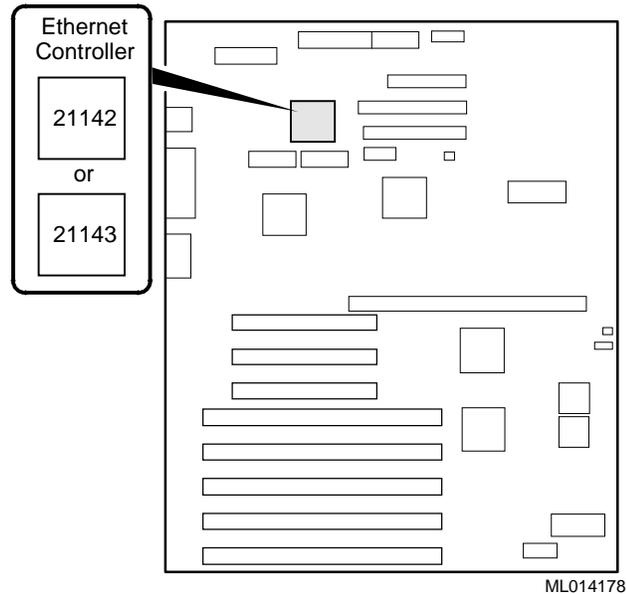
2. Install the Windows NT Server V4.0 operating system as described in the section Operating System and IIS Installation earlier in this chapter.

    Note that even if the Ethernet chip installed is a DC21143, the system will indicate that a DC21142 was detected.

3. Install Service Pack 3.

4. Insert the Quick Launch CD.

    Quick Launch automatically starts up.

5. Select Installations and Utilities from the Quick Launch menu.

6. Select the Conventional tab on the Installations and Utilities menu.

7. Insert a blank formatted floppy diskette.

8. Click the Microsoft icon and select Windows NT Server V4.0 from the drop-down list.

9. Click Continue, then select the MX6 server from the checklist which is displayed.

10. From the list of options to install, select "Digital On-Board Ethernet DC21142/DC21143."

11. When prompted, type `esc` to extract the files to the floppy.

12. Exit Quick Launch and remove the floppy diskette.

13. If the controller chip in use is DC21142, it is only necessary to copy the new driver from `a:\winnt` to `winnt\system32\drivers` on the server.

14. If the controller chip is DC21143:

    a. From the Control Panel, click Networks.

    b. Click the Protocol tab, select TCP/IP, and click Properties.

    c. From the IP Address tab, record the IP address, subnet mask, and gateway.

    d. Click the Adapters tab, select the currently installed network adapter, and remove it.

    e. Restart the server.

f. From the Control Panel, click Networks and add an adapter using the Have Disk button.

g. Insert the floppy diskette.

h. Enter the path `a:\winnt` when prompted.

i. Select "DEC PCI Fast Ethernet DC21143" from the list.

j. Re-enter TCI/IP information as needed.

k. Restart the server.

Applications

Install Internet Information Server (IIS). IIS is installed during the Windows NT server installation process. To verify IIS installation follow these steps:

1. Open the Control Panel.

2. Select Network from the display.

3. Click the Services tab.

4. Make sure Microsoft Internet Information Server 3.0 is listed.

4

Interoperability Tests and Results

This chapter describes how the tests were set up (including database organization), what data and programs were placed on what disks, and how the tests were run.

This chapter describes:

- Test Environment

- Test Tools

- Test Configuration

- Test Process and Results

Overview of Results

Interoperability testing was performed successfully on the MS Internet Information Server (IIS) Windows NT Prioris MX HiTest Suite. The tests verified that the business processes functioned correctly.

Test Environment

Figure 4-1 shows the MS Internet Information Server (IIS) Windows NT Prioris MX test environment.

Figure 4-1: Test Environment
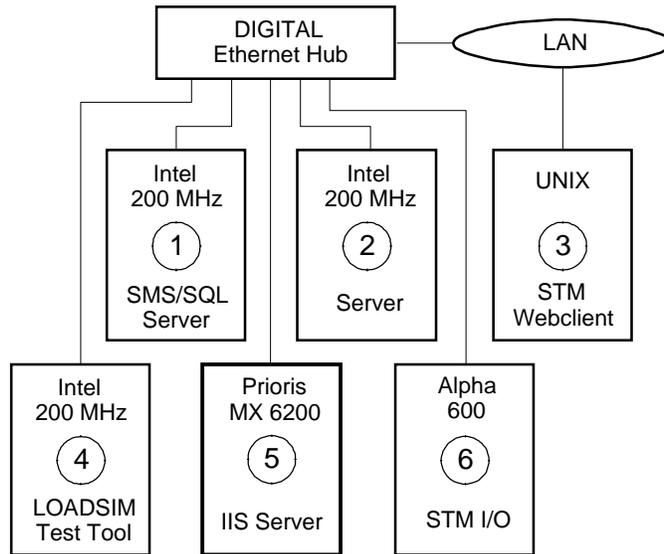
ML014177

❶ SMS Server polls/audits Prioris MX 6200

❷ Primary server for test environment domain

❸ Client making web page requests

❹ Creating and deleting folders and performing general mail tasks

❺ Prioris MX 6200 IIS Server under test

❻ File share testing

Test Tools

Interoperability testing was performed using the following tools:

- **STM Webclient**, **Version 1.1 (Internal Digital Equipment Corporation test tool)**

  The STM Webclient tool generates web page accesses. The size of pages accessed ranges from 1–64 Kbytes. This tool performs data integrity checks on every page accessed.

- **STM I/O Tool, Version 1.1-002 (Internal Digital Equipment Corporation test tool)**

  STE_IO.EXE generates and copies data to the file shares and performs data integrity checking on the data copied.

Test Configuration

The test load was generated as follows:

- The average test duration was 40 hours.

- STM Webclient ran several processes, performing accesses to web pages every 0.01 seconds.

- STM I/O Tool was run continuously throughout the test.
- Windows NT Backup was used to perform data backup during the test.
- SMS performed routine tasks during the test.

Minimum Configuration

The minimum configuration includes one disk connected to the integrated SCSI controller, as shown in Table 4-1.

Table 4-1: Disk Configuration for the Minimum Configuration

Quantity	Capacity	Disk Content/Data	Disk Controller	RAID Configuration
1	4.3 GB	Windows NT Server system and paging file IIS application and data File shares Log files	Integrated	–

Maximum Configuration

The maximum configuration includes one disk and a mirror set connected to the SCSI RAID controller (FR-PCTAR-EA), as shown in Table 4-2.

Table 4-2: Disk Configuration for the Maximum Configuration

Quantity	Capacity	Disk Content/Data	Disk Controller	RAID Configuration
1	9.1 GB	Windows NT Server system Paging file IIS application	FR-PCTAR-EA	JBOD
1	4.3 GB mirror set (two 4.3 GB disk drives)	IIS data File shares Log files	FR-PCTAR-EA	RAID 1

Test Process and Results

Interoperability testing of the MS Internet Information Server (IIS) Prioris MX systems was divided into the following sections:

- **Internet Information Server (IIS)** – During the test, the system served about 6.6 million web pages. The STM Webclient reported no errors. Neither STM Webclient nor Webstone reported any errors.
- **File Shares** – STM I/O tool reported no errors and found no data corruption.
- **Windows NT Backup** – Windows NT Backup performed the data backup and verification with no errors.

5

System Limits and Characterization Data

This chapter describes any system limits that may have been determined as a result of the testing, along with information about the system characterization during testing.

Network – When operating a server that is expected to provide high-performance network services (such as the Internet, Web, and Exchange), the server should be on its own LAN segment, preferably with a high-speed interconnection such as Fast Ethernet. This can be achieved by the use of an Ethernet switch.

6
Problems and Resolutions

This chapter describes any problems that may have been encountered during the testing that have not been fixed and eliminated. A resolution for each problem is given. The resolution provides the system manager or user with a fix or workaround for the problem.

The following problems were identified during testing:

Hardware

No problems were encountered.

Operating System

Latest DC2114X.SYS Driver Not Installed

Problem   The network hangs when using the version 4.03 DC2114X.SYS driver installed with the Windows NT Server V4.0 operating system.

The Prioris MX 6200 in this test was equipped with an Ethernet Adapter featuring the DC21143 controller chip. This chip requires version 4.12 of the DC2114X.SYS driver.

When using either Quick Launch or standard Microsoft installation procedures, the newest version of the driver is not installed, even though it does exist on the Quick Launch CD. Furthermore, the DC21143 controller is detected by NT as type DC21142, making it necessary to verify by inspection exactly which chip is in use.

Resolution   Follow the procedure in Chapter 3 for Installing the DC2114X.SYS Driver.

Application

No problems were encountered.

A

Detailed Hardware Configuration

This appendix describes the minimum and maximum hardware configuration for the following:

- System Diagram
- Prioris MX configurations, including:
  - System motherboard
  - PCI backplane slot usage (minimum and maximum configurations)
  - Memory configuration
  - Storage configuration

System Diagram

Figure A-1 shows a diagram of the entire HiTest Suite.

Figure A-1: System Diagram
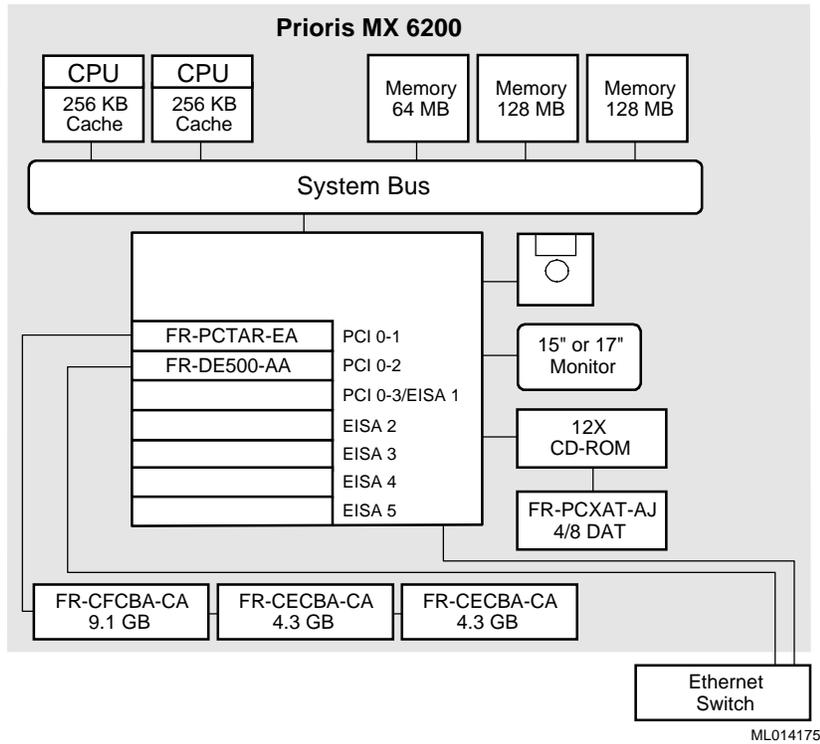
Prioris MX Configurations

This section shows the Prioris MX system motherboard and describes the minimum and maximum hardware configurations used in this HiTest Template.

System Motherboard

Figure A-2 shows the Prioris MX system motherboard.

Figure A-2: Prioris MX Motherboard
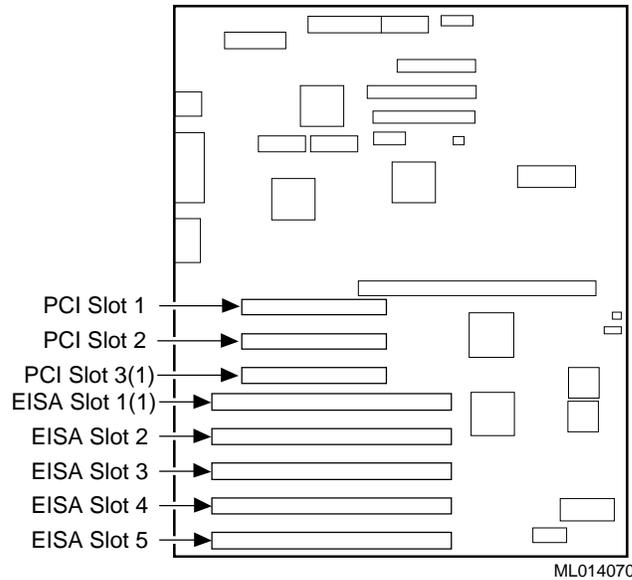
[1] PCI slot 3 and EISA slot 1 share an expansion slot at the rear of the server.

PCI Backplane Slot Usage (Minimum and Maximum Configurations)

Table A-1 describes the minimum and maximum hardware configurations used in this HiTest Template.

Table A-1: Prioris MX Usage (Minimum and Maximum Configurations)

Slot	Minimum Configuration Options	Maximum Configuration Options	Description
PCI slot 1	open	FR-PCTAR-EA	RAID controller
PCI slot 2	open	FR-DE500-AA	10/100 Fast Ethernet adapter
PCI slot 3/ EISA slot 1	open	open	–
EISA slot 2	open	open	–
EISA slot 3	open	open	–
EISA slot 4	open	open	–
EISA slot 5	open	open	–

Memory Configuration

Figure A-3 and Table A-2 show the PCI slot usage for the minimum and maximum configurations of this HiTest Template.

**Figure A-3: SIMM Layout for Memory Banks 0 through 3**
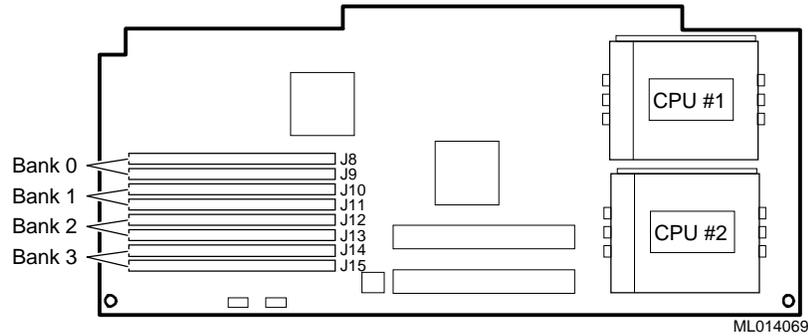
Table A-2: PCI Slot Usage (Minimum and Maximum Configurations)

Slots	Minimum Configuration Options	Maximum Configuration Options	Description
Bank 0-J8	32 MB SIMM	64 MB SIMM	1 of 2
Bank 0-J9	32 MB SIMM	64 MB SIMM	2 of 2
Bank 1-J10	open	64 MB SIMM	1 of 2
Bank 1-J11	open	64 MB SIMM	2 of 2
Bank 2-J12	open	32 MB SIMM	1 of 2
Bank 2-J13	open	32 MB SIMM	2 of 2
Bank 3-J14	open	open	–
Bank 3-J15	open	open	–

Storage Configuration

Figure A-4 shows the storage configuration used in this HiTest Template. The callouts in this figure are described in Table A-3 and Table A-4.

Figure A-4: Storage Configuration
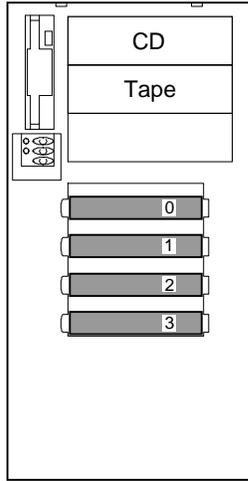
ML014157

Minimum Configuration

Table A-3 lists the minimum slot configuration for this HiTest System.

Table A-3: Minimum Configuration

Slot	Option/ Part Number	Description
0	FR-CECBA-CA	Windows NT Server and paging IIS File shares Log files
1	open	–
2	open	–
3	open	–

Maximum Configuration

Table A-4 lists the maximum slot configuration for this HiTest System.

Table A-4: Maximum Configuration

Slot	Option/ Part Number	Description
0	FR-CFCBA-CA	Windows NT Server, paging, and IIS application
1	FR-CECBA-CA	Mirror set (RAID 1):
2	FR-CECBA-CA	IIS data, file shares, and log files
3	open	–