

InfoServer Client for Macintosh

Installation and User's Guide

Order Number: AA-PPV5B-TE

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March 1993

This document explains how to install InfoServer Client for Macintosh software and how to access InfoServer device services in a local area network.

Revision/Update Information:	This document supersedes the InfoServer Client for Macintosh Installation and User's Guide Version 1.0
Software Version:	InfoServer Client for Macintosh Version 1.1

Digital Equipment Corporation Maynard, Massachusetts

March 1993

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This document was prepared using VAX DOCUMENT, Version 2.1.

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Preface

Document Purpose

This guide explains how to install and use InfoServer Client for Macintosh software.

Intended Audience

This guide is written for Macintosh users who understand basic Macintosh operations and for managers of local area networks (LANs) that include InfoServer systems and Macintosh clients.

Document Organization

This guide is organized as follows:

- Chapter 1 presents an overview of InfoServer and InfoServer Client for Macintosh functions.
- Chapter 2 lists hardware and software requirements and explains how to install InfoServer Client for Macintosh software.
- Chapter 3 explains how to prepare an InfoServer system for client access and how Macintosh client users access InfoServer virtual device services.

Related Documents

The following documents provide information about InfoServer systems and InfoServer system management:

- InfoServer 100 Installation and Owner's Guide
- InfoServer 150 Installation and Owner's Guide
- InfoServer 1000 Installation and Owner's Guide
- InfoServer System Operations Guide

Conventions

This guide uses the following conventions:

boldface text	Boldface text represents the introduction of a new term or the name of a button or an icon.
	Boldface text is also used to show user input.
UPPERCASE TEXT	Uppercase letters indicate that you must enter a command (for example, enter the SHOW SERVICE command).
monospace text	Monospace text represents InfoServer system messages and displays.
numbers	Unless otherwise noted, all numbers in the text are decimal.

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InfoServer and InfoServer Client for Macintosh Functions

This chapter presents an overview of InfoServer and InfoServer Client for Macintosh functions.

1.1 InfoServer Functions

The InfoServer system is an Ethernet-based, high-performance, **virtual device server**. It can serve physical device media and sets of logical disk blocks to the network. Client systems running the appropriate InfoServer Client software can connect to virtual devices served by the InfoServer system and use them as though they are locally attached.

The InfoServer system is a virtual device server. Unlike a **file server**, the InfoServer system does not impose a file system on the virtual devices that it serves. This means that the InfoServer system can serve a disk with any type of on-disk file structure. Because the client interprets the on-disk structure, each client can use its own native file system. Multiple on-disk structures can be served by and accessed on a single InfoServer system at the same time.

The InfoServer system can perform the following functions:

• MAKE COMPACT DISCS AVAILABLE TO CLIENTS ON THE NETWORK.

The InfoServer system serves compact discs automatically, using their volume labels as service names when the server is booted or when compact discs are inserted into InfoServer drives. You do not have to perform any management action. Client systems simply bind to and mount the compact discs under their volume labels.

The InfoServer system can automatically serve ISO-9660, High Sierra, and Macintosh compact discs to Macintosh clients.

InfoServer and InfoServer Client for Macintosh Functions 1.1 InfoServer Functions

• SERVE READ/WRITE DISK PARTITIONS.

A **partition** is a logical subset of a read/write disk. A single disk can be subdivided into several partitions, each of which can be served to the network independently. To remote client systems, these partitions appear to be whole disks. For example, a client system using InfoServer Client for Macintosh software can access InfoServer partitions and use them as though they are local hard disks.

Figure 1–1 shows the relationship of the InfoServer system to several possible client systems.



Figure 1–1 InfoServer System Serving Clients

In this figure, two compact discs and two hard disks connected to the server appear to the client systems as local devices. The VAX and RISC systems might be using one or two of the compact discs for software distribution and online documentation, while the Macintosh might be referencing a disk partition on the InfoServer system. The X terminal boots from the InfoServer system and uses InfoServer disks for page, font, and customization files.

You can simply connect the InfoServer system to your Ethernet local area network (LAN) and turn it on. After the server is initialized, or **bootstrapped**, the server software automatically makes available, or **serves**, to client systems the device media connected to it. For example, if you insert a compact disc into a server drive, the server detects this new device and automatically serves it to client systems by using the volume label as the service name.

The server bootstraps from its internal read/write device, on which the InfoServer software is preinstalled. Any future InfoServer software updates will be distributed on compact discs. As these new releases become available, you can install the software onto the internal device for subsequent booting. You might want to customize server features. You can control InfoServer functions by logging in to the server and entering server commands, described in the *InfoServer System Operations Guide*.

1.2 InfoServer Client for Macintosh Functions

InfoServer Client for Macintosh software enables clients running the Macintosh operating system to access virtual device services offered by InfoServer systems on a LAN. The software also provides the following availability features:

- Disk service failover. When a service is interrupted (for example, a compact disc is removed from a drive), the client attempts to reconnect to the service. If a duplicate read-only service is offered elsewhere on the network, the client automatically connects to the duplicate volume. File operations continue as normal, and users experience almost no service disruption.
- Disk service load balancing. When duplicate read-only devices are available under identical service names, the client balances the load among the available devices.

InfoServer Client for Macintosh software provides extensive help. The Help window presents a summary of InfoServer Client functions. You can click on the magnifying glass buttons to make the text larger or smaller, and you can use the up and down arrows and **Previous Topic** and **Next Topic** buttons to control the help display. To close the Help window, click on the **OK** button or the close box.

On System 7, you can use Balloon Help to get help on menu items and window components.

InfoServer Client for Macintosh software components include the following:

• LASTport driver

The LASTport driver provides reliable data transfer services for its clients. It interacts with the Data Link driver and the LASTport/Disk driver as an efficient transport for a virtual device service. The LASTport driver can support other applications, such as a primitive data queueing service.

• LASTport/Disk client driver

The LASTport/Disk client driver presents a standard block device interface to the system. The Macintosh file system interacts with the LASTport/Disk client driver as if the driver is a local disk driver. The LASTport/Disk client driver supports both raw and buffered interfaces.

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Installing InfoServer Client for Macintosh Software

This chapter describes InfoServer Client for Macintosh software and hardware requirements and explains how to install the software.

2.1 Software Requirements

Your software bill of materials lists the number and contents of your media. Check the contents of your kit with this information. If contents are missing or damaged, contact your sales representative.

To install InfoServer Client for Macintosh software, you need the following:

- The installation diskette labeled InfoServer Client for Macintosh, which is part of the media kit.
- A blank diskette to make a backup copy of the installation diskette.

To serve Macintosh compact discs and read/write disks, the InfoServer system must be running InfoServer Software Version 2.1 or later.

2.2 Hardware Requirements

To install InfoServer Client for Macintosh software, you need the following hardware:

- One Ethernet controller board
- One Ethernet cable

For complete information on supported hardware, including Macintosh systems and Ethernet controller boards, refer to the System Support Addendum (SSA) document supplied with your kit.

2.3 Installation Steps

To install InfoServer Client for Macintosh software, follow these steps:

- 1 Make sure that the InfoServer Client distribution diskette is write protected.
- 2 Make a backup copy of the distribution diskette. The backup copy must have the same volume name as the distribution diskette.
- **3** Make sure your Macintosh is powered up with the appropriate system software. InfoServer Client for Macintosh software requires System 6.0.7 or later, or any version of System 7.
- 4 Insert the backup diskette into a drive. The InfoServer Client installation window (Figure 2–1) displays the Click Me to Intall and Read Me icons.

Figure 2–1 InfoServer Client Installation Window



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You might want to read the Read Me file; it contains information that was not available when the documentation was printed. The installation procedure copies this file to your startup disk.

5 Double-click on the **Click Me to Install** icon to start the Installer application and then click on the **OK** button on the product title screen to display the Easy Install dialog box.

Figure 2–2 Easy Install Dialog Box

Easy Install	
Click the Install button to install: InfoServer Client for Macintosh LASTport Driver and Control Panel Foreign File System Software Apple Photo Access on the hard disk named internal	Install
······	Eject Disk Switch Disk
3.4 Help	Customize Quit

6 Click on the Install button to install InfoServer Client for Macintosh components. The Installer transfers all necessary software to the startup disk. Note that Apple Photo Access functions are not supported on a 68000 central processor and require QuickTime Version 1.5 or later. QuickTime software is not included in the InfoServer Client for Macintosh kit.

Because the installation adds system software components, you must restart your Macintosh. Click on the **Restart** button in the dialog box that appears at the end of the installation.

7 When your computer restarts, choose Control Panels from the Apple menu. Double-click on the **LASTport** icon in the Control Panels folder. The system displays the LASTport dialog box.

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Installing InfoServer Client for Macintosh Software 2.3 Installation Steps

Figure 2–3 LASTport Dialog Box

LASTPort	
digital Local Area System Transport	
Network Port:	
EtherNet EtherNet Slot #1 Slot #2	수 (-)
Changes take effect after restart	
More	
 LJG-0004	4-MAC

- 8 Click on the Ethernet hardware adapter that you want to use. If you see only one adapter, click on that adapter.
- 9 Click on the **More** button. The system displays the LASTport Parameters dialog box.

Figure 2–4 LASTport Parameters Dialog Box

digital Local Ar	ea System Transport ters
Options: Large Network Disk Failover	Group Code:
Activity Icon Diption 2 Diption 3	
ОК	(Cancel)

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You can set network size (large is 20 nodes or more) and group code (see Section 3.1.1). In addition, you can enable or disable disk failover and enable or disable the network activity icon. When enabled, this icon appears to the left of the Apple menu icon. The network activity icon blinks when your system is communicating with InfoServer systems.

10 Close the LASTport and Control Panels windows.

Your installation is complete. The InfoServer Client for Macintosh application and the Read Me file are copied to a folder named InfoServer Folder on your startup disk.

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Accessing InfoServer Device Services

This chapter explains how to prepare an InfoServer system for client access and how to select and mount InfoServer device services.

3.1 Preparing an InfoServer System for Client Access

To ensure that clients can access InfoServer systems after installing InfoServer Client for Macintosh software, you must verify the following:

- The InfoServer LASTport group matches the client group code.
- One or more services in the APPLE, HIGH_SIERRA, or ISO_9660 service classes are available on the InfoServer system.

Section 3.1.1 and Section 3.1.2 discuss these requirements.

3.1.1 Verifying InfoServer LASTport Group and Client Group Code

Because both the InfoServer LASTport group and the client group code are set to 0 by default, generally you do not have to take action. You can use the InfoServer command SHOW SERVER to show the InfoServer LASTport group. If the LASTport group is not 0, you can specify a matching client group code in step 9 of the installation procedure in Chapter 2.

Alternatively, you can change the InfoServer LASTport group to 0 using the InfoServer command SET SERVER LASTPORT GROUP (see the InfoServer System Operations Guide).

3.1.2 Creating Compact Disc Services

The InfoServer system reads volume labels on ISO-9660, High Sierra, and Macintosh compact discs and automatically serves the discs using their volume labels as service names. This action occurs unless you have disabled the InfoServer AUTOMOUNT feature.

Accessing InfoServer Device Services 3.1 Preparing an InfoServer System for Client Access

If you insert a compact disc into an InfoServer drive, and the expected new service is not offered within a few seconds, the disc might not have a volume label. You must then create a service in the appropriate service class using the InfoServer command CREATE SERVICE. Note that if a volume label contains characters that are invalid in InfoServer service names (see the *InfoServer System Operations Guide*), InfoServer software substitutes underscore (_) characters.

To determine whether services are available, enter the following command on the InfoServer system:

InfoServer> SHOW SERVICE

Service Name	Service Class	Disk:Partition			
CANADA	[APPLE]	DK5:	[4	connections]
DEC_EXPLORER	[ISO_9660]	DK7:	[12	connections]

To create a new service, use the InfoServer CREATE SERVICE command. When creating a service for a removable device such as a compact disc, make sure the device is inserted in the drive before you enter the CREATE SERVICE command. For example, you might insert a disc with the label BUILDER into drive DK2 and then enter commands like the following:

InfoServer> CREATE SERVICE BUILDER FOR DK2 WRITERS 0 CLASS APPLE
%ESS-I-CREATED, Create service completed successfully.
InfoServer> SHOW SERVICE

Service Name	Service Class	Disk:Partition			
BUILDER CANADA DEC_EXPLORER	[APPLE] [APPLE] [ISO_9660]	DK2: DK5: DK7:	 []	4 12	connections]

InfoServer> SAVE

Be sure to enter the SAVE command if you want to maintain the service across InfoServer reboots. Be sure also to delete any service you create for a removable device before you insert a different volume in the drive. Otherwise, the new volume will have incorrect service information.

3.1.3 Creating Read/Write Services

You can create read/write services for InfoServer disks and partitions. For example, to create a service named MAC_RW for an entire hard disk in drive DK11, you would enter the following commands:

```
InfoServer> CREATE SERVICE MAC_RW FOR DK4 CLASS APPLE
%ESS-I-CREATED, Create service completed successfully.
InfoServer> SAVE
```

Accessing InfoServer Device Services 3.1 Preparing an InfoServer System for Client Access

For information on creating services for disk partitions, see the InfoServer System Operations Guide.

Note that before a client user can access an InfoServer read/write device, the device must be initialized (formatted). When a user first connects to a newly created read/write device (mounts it on the Desktop), the Macintosh Finder prompts the user to initialize the device.

3.2 Selecting and Mounting InfoServer Services

You select and mount InfoServer device services from the InfoServer Client dialog box. Open the InfoServer Folder on your startup disk and double-click on the **InfoServer** icon. (You might want to move the icon to the Desktop.) The system displays a dialog box similar to the one shown in Figure 3-1.

InfoServer Client
A DEV.CD_APR_92
DEV.CD_VOL_VII
👩 🗴 PCD0892
Com X QUESTAR_DEMO
🕯 🗆 Mount read only
💯 🗆 Save password in Connection Document
💢 Create Connection Document
Look for Services
Password:
Help Mount
L.IG_0006_MA

	Figure 3	3–1	InfoServer	Client	Dialog	Box
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The top panel shows the names of available services. Icons to the left of each service name provide service information:

- A pencil with a stroke through it indicates a read-only service.
- A padlock indicates a read/write service that you have chosen to mount read only.
- A drive holding an apple indicates a Macintosh device.
- A drive holding a compact disc indicates an ISO-9660 device.
- A drive holding two mountain peaks indicates a High Sierra device.

By default, the InfoServer Client dialog box displays High Sierra, ISO-9660, and Macintosh services. If you want to see a different set of services, you can choose Specify Volume Formats from the File menu. In the dialog box (Figure 3–2), click on services you want to add or eliminate from the default display and then click on the **OK** button. To restore the defaults, click on the **Default** button and then click on the **OK** button.

Figure 3–2 Specify Volume Formats Dialog Box



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If you want to know which InfoServer systems offer specific services, you can choose the **Show all service info** option from the File menu. The InfoServer Client dialog box (Figure 3–3) now shows the names of the InfoServer systems along with a description of each device type.



InfoServer Client	
APPLE_TEST@HALF_PINT(Macintosh) 及 DECOCTCD@OPEM_ESS(ISO-9660 CDROM) 及 DEV.CD_VOL_VII@PAULS_LOCS(Macintosh) 函 没 QUESTAR_DEMO@TAPE_ESS(ISO-9660 CDROM) 谷 次 RIVEQ2AL@PAULS_ESS(High Sierra CDROM) 西 父 VV_Y-VAMPIRE@HALF_PINT(Macintosh)	수 (수)
Mount read only Save password in Connection Document Contection Document Look for Services	
Password:	
Help Maun	
LJG-00	

To mount a service on the Desktop, select the service from the list, check off the options you want, and click on the **Mount** button.

You can check the following options:

- Mount read only. If the selected device is currently a read/write device, you can mount it as a read-only device. The read-only state is stored in any connection document you create for the service.
- Save password in Connection Document. If you create a connection document for a service that requires a password, you can save the password in the connection document. If you do so, you are prompted for a new password only if the password you save is incorrect.
- Create Connection Document... Connection documents are small applications that mount a specific InfoServer service. These documents are similar to System 7 alias files but are independent of System 7. After you create a connection document for a particular service, you can mount that

service by launching the connection document. Connection documents are independent of the InfoServer Client application.

Once an InfoServer service is mounted on the Desktop, you can access the service as you would any local device, by double-clicking on the device icon.

To dismount the device, drag the icon to the trash.

3.3 Reconnecting to Services

If a service is disconnected (for example, a compact disc is removed from an InfoServer drive, or an InfoServer system fails or is disconnected), the client attempts to reconnect to the service before dismounting it. If another service with the same name is available on the LAN, the client connects to that service automatically and you experience almost no service disruption. After a service is restored, it is displayed automatically the next time you open the InfoServer Client dialog box or click on the **Look for Services** checkbox.

3.4 Creating System 7 Aliases

If your Macintosh is running System 7, you can create aliases to connection documents and to InfoServer volumes and files. However, because the Macintosh Alias Manager does not know about InfoServer systems, if you click on the alias for a file or volume that is not currently mounted, the Finder displays the following error message:

The alias "Your Alias" could not be opened because the disk "Its_InfoServer_Volume" could not be found.

When an InfoServer volume has been mounted on the Desktop, aliases to files on that volume work.

If you create an alias to a connection document, you can click on the alias to mount its associated volume.

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