EtherShare User's Guide

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SECTION 1

Introduction

Overview

EtherShare lets you and other IBM Personal Computer users store information on a shared, hard disk. EtherShare divides this disk into volumes which are similar to the diskettes you use with your IBM Personal Computer. Using EtherShare commands, you create these volumes and link them to a drive specifier on your own computer. From this point on, you can use these volumes with DOS or application programs just as you normally would use diskettes or a fixed disk drive.

EtherShare gives you the benefits of a hard disk and more. By using the EtherShare disk rather than diskettes, you get faster loading of programs, quicker file access and improved reliability. In addition, storing files on a shared disk is more efficient. Programs and data can be designated as public so that one copy can be shared by many users thereby saving disk space. Private data bases can also be shared using passwords to control their use.
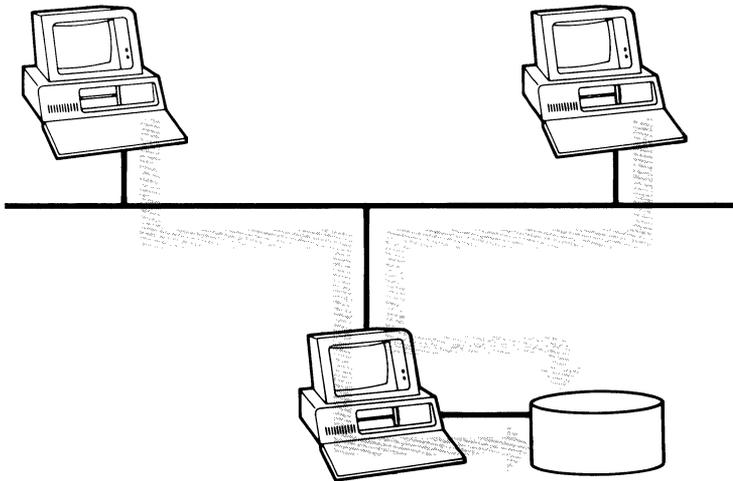
Figure 1-1 IBM PC's Sharing the Disk on a Server

Introduction

EtherShare is a network service which allows IBM PC's on an Ethernet network to share a hard disk drive. The software controls the disk and responds to requests from PCs for access to volumes on the hard disk. Additional software can be added to provide more services to the network. For example, EtherPrint allows all network users to share printers connected to the network server, and EtherMail provides electronic mail.

EtherShare commands which run on each IBM Personal Computer connected to the Ethernet network are used to access the EtherShare disk. The hard disk may be the fixed disk on an IBM PC, or it may be a disk attached to a 3Com Network Server. These commands are described in this manual. See the EtherShare Administrator's Guide for a description of the server installation and all administrative functions.

Functions

There are fifteen EtherShare commands which let you create and maintain EtherShare volumes and users from your IBM Personal Computer. Once your name has been added to EtherShare, you can use any of the commands. They let you:

- Log in and out of the EtherShare Server
- Create, modify, and delete EtherShare volumes
- Link to EtherShare volumes
- Create, modify and delete EtherShare users
- List a directory of users or volumes

The EtherShare commands are easy to use. You can select a command from a menu of command choices or enter your selection by typing the command name directly. EtherShare provides a HELP facility which describes each of the commands. This information is always available when you use EtherShare.

Using this Manual

This manual is arranged in four sections:

Section 2 describes concepts and terminology used by EtherShare. Read this section for a general understanding before you begin.

Section 3 is designed to show you how to use EtherShare. Specific examples for creating volumes, establishing links and using DOS commands and application programs are described. Use the examples as models to adapt EtherShare to your current applications.

Section 4 describes each command and all of its parameters. Once you have gone through Section 2 you can use the reference section to answer questions about your specific application. A command summary is also included.

There are six appendices.

Appendix A is a glossary.

Appendix B describes the LOGIN batch file provided with the EtherShare software.

Appendix C lists other purchased software programs which can be used with EtherShare.

Appendix D explains the semaphore operations used with shared access EtherShare volumes.

Appendix E explains how to upgrade from EtherShare version 1.0 (used with DOS 1.0 or DOS 1.1) to EtherShare version 2.0 (used with DOS 2.0).

Appendix F lists all error messages.

Concepts and Terminology

Overview

EtherShare incorporates several concepts that you should understand before you begin creating and linking volumes. These concepts include logging in to a server, creating and using volumes on a shared disk and controlling volume access.

Read this section for an introduction to the concepts and a definition of the terms associated with them. You will see how to use them in the Using EtherShare section of this manual.

Network Server

A computer on the network which manages resources such as disks and printers. It can be expanded with the addition of software to provide other network services such as electronic mail.

Logging In

In order to use EtherShare, you must log in. Use the ES LOGIN command and the unique user name created for you. You may assign a password to your user name. This password is required each time you log in, thereby protecting your programs and data files from being read or changed by other users.

EtherShare Volumes

EtherShare divides the server's disk drive into volumes that you can make any size from 64KB to 32MB. These volumes function like the diskettes you use with your IBM Personal Computer. After you have logged in to EtherShare, you link an EtherShare volume to a drive specifier on your computer. An IBM PC which has one or two diskette drives uses drive specifiers A: and B: to refer to the diskette drives, so you can use C:, D:, E:, and F: to link to EtherShare volumes. On a PC that has a fixed disk drive, C: is used for the disk, so you use D:, E:, F:, and G: for EtherShare volumes. If you have a second fixed disk, D: refers to that disk; therefore, EtherShare volumes are linked to the next four available drive id's, that is E:, F:, G:, and H:. Linking to a volume simulates inserting a diskette into the drive and closing the door.

A new EtherShare volume can be created by any user. When a new volume is created, space is allocated from the unused portion of the disk to the user requesting the volume. When you create a volume you name it, and if you wish, assign a password. In this manual, the creator of a volume is also called the owner. Volume size is limited by the available disk space on your server.

Concepts and Terminology

Volume Access

Access to an EtherShare volume is determined by its access type. This is either public, private or shared. Private volumes have exclusive read-write access. Only one user can access (be linked to) the volume at a time, and information can be written to the volume and read from it. Public volumes have shared read only access. Several users can access the volume at the same time, but information can only be read from the volume. A volume's owner, however, has a special capability. The owner of a public volume can write or update that volume, even when other users are linked to it. Shared volumes are similar to private volumes with one important difference. Multiple users can read from them and write to them at the same time.

When a volume is created, it is automatically given private access. After files have been written to the volume, you can change the access to public or shared. Public access is especially useful for volumes containing program or data files which many network users need. Once the access has been changed to public, the owner of the volume is the only user who can write to the volume.

Shared volumes allow many users to link and access a volume at the same time. For this reason, they should only be used with semaphores (locks) which can be used to control the access so that simultaneous changes to a file do not occur. Shared volume access should always be managed using the semaphores. Failure to do so could result in lost data and damaged disk directories.

Volume Passwords

Passwords can be assigned to all volumes when they are created. While passwords are optional, one must be assigned to a private or a shared volume you want to share with other users.

Any user who wants to use any volume that has a password must supply it, unless that user is the volume's owner. A public volume without a password is unrestricted and may be used by anyone. A private or a shared volume without a password may be used only by its owner. Table 2-1 shows the relationship between volume access type and passwords.

Volume type	Password Assigned	No Password Assigned
Private Volume		
• Read-write • One user at a time	All users (except the owner) must supply the assigned password	Only the volume owner can access the volume
Public Volume		
• Read only (except the owner)	All users (except the owner) must supply the assigned password	Anyone can access the volume
• Multiple users at the same time		
Shared Volume		
• Read-write	All users (except the owner) must supply the assigned password	Only the volume owner can access the volume
• Multiple users at the same time		

Table 2-1   The Relationship Between Passwords and Volume Access

Batch Files

Your EtherSeries/DOS Diskette includes one batch file. A batch file contains a group of EtherShare commands which are commonly performed together. The batch file you are given, the LOGIN batch file, logs you in to a shared system volume and establishes a link to a shared printer.

Use the LOGIN batch file just as you would an EtherShare command by typing the batch file name and any parameters at the DOS prompt. Once the batch file name is entered, the commands are performed in the order they are given in the batch file. In this way, the LOGIN batch file provides a short cut to performing several EtherShare functions associated with logging in.

An example using this batch file is given in Section 2, and a complete listing is found in Appendix B of this manual.

Concepts and Terminology

Multiple Servers

There can be more than one server in an Ethernet network. For example, each department such as Sales, Marketing and Administration might have its own server. Each server has its own list of users who can log. You can log in to any server from any IBM Personal Computer on the network; you are not limited to a particular PC. You can also access any volume on any server, provided you supply the password if one is assigned.

Server Names

Each server has a unique name. This name is established when the server is registered on the network. You can display a list of all servers with the EtherShare command ES SDIR.

SYS.SYS2 Volume

When a network server is installed and registered on the network, a user is automatically created which has the same name as the server. For example, if the server's name is FINANCE, there is a user named FINANCE on the server. This is the login name that you use to create new users on a new server.

On every server, the user name SYS is a specially defined pseudonym. It always refers to that user with the same name as the server. After logging in to the server in the above example, using SYS is the same as using FINANCE when identifying one of FINANCE's volumes. If FINANCE.DATA is the full name for a volume called DATA which belongs to user FINANCE, you could also use SYS.DATA to identify the same volume.

Each EtherShare server has been configured with a volume named SYS2. It is owned by that user who has the same name as the server so it can be referenced by other users on that server as SYS.SYS2. This volume is a public volume. It contains DOS 2.0, the EtherSeries software including all batch files and any other program files which many network users need. For example, EtherMail is stored on this volume. You can log in and link to the SYS.SYS2 volume on your server in order to use EtherSeries/DOS from the shared disk rather than your computer's diskette.

Cross Server Links

It is possible to link to a volume that is on another server. This is useful when a single volume is chosen to contain a master program or data file to be used by all PCs on the network. If you have multiple servers, one of them may be selected to keep any network-wide data volumes. For example, EtherMail distribution lists may be kept on one server in the volume FINANCE.DIST, yet accessed by all network users.

SECTION 3

Using EtherShare

Overview

EtherShare lets you create and use volumes which are stored on a shared, hard disk on the server. EtherShare divides the disk into volumes which are similar to the diskettes you use with your IBM Personal Computer.

In order to use EtherShare volumes, you must first create and format them. Once this has been done, you use the EtherShare commands to link one of your drive specifiers (C:, D:, E:, or F: on an IBM PC with two diskette drives, and D:, E:, F:, and G: on a PC that also has a fixed disk) to the volume you want to use.

After linking, you use the volume as if it was a diskette inserted into a drive on your Personal Computer. It responds to all the DOS commands and works with your programs with only one major difference. Since it is a hard disk and is accessed through a fast network, it responds much more quickly than a diskette.

The examples are divided into four groups: Getting Started, EtherShare Applications, Managing Volumes and Users, and Using Batch Files. The Getting Started examples describe basic functions which you must perform before you can use EtherShare and EtherShare volumes. This includes things like logging in to EtherShare, linking and unlinking volumes and logging out. The EtherShare application examples explain how EtherShare volumes can be used with other application software such as the VisiCalc program. The third section shows how EtherShare commands manage EtherShare volumes and users. The LOGIN batch file is described in the last section.

The examples show how to perform specific operations. EtherShare commands and prompts are given, along with the responses you might enter. You should adapt these examples for your particular applications.

Getting Started

Logging In

You must log in to EtherShare before you can use any of the EtherShare commands. You log in with a user name which has been created with the ES UCREATE command. If you do not have a user name, you can ask someone to create one for you.

A> **ES LOGIN ?** ←┘   Initiates the ES LOGIN command. By using a question mark (?) you receive all prompts.

Your name? **USER1** ←┘   The user name needed to log in to EtherShare.

USER1 logged in to SHARE1.
Your EtherShare drives are C: through F:
    Confirms that you have been logged in to the EtherShare server named SHARE1, and shows the drive specifiers you may use to link to EtherShare volumes.

Once you have logged in, you can use any of the EtherShare commands.

Creating an EtherShare Volume

EtherShare divides its disk into volumes. Use the ES CREATE command to create and automatically format an EtherShare volume.

A> **ES CREATE ?** ◄┘   Initiates the ES CREATE command and prompts for all parameters.

Name? **VOLUME1** ◄┘   Names the volume you are creating. The name can be up to eight characters long.

Password? (◄┘   Assigns a password to the volume. It is not displayed when you enter it. Press ◄┘ without typing any characters if you don't want to assign a password.

Size? **/1** ◄┘   Specifies the volume size; /1 is equivalent to a single sided diskette.

VOLUME1 created.   Confirms that the volume has been created.

Formatting ...   Indicates the new volume is being formatted.

VOLUME1 formatted.   Confirms that the volume has been successfully formatted.

In this example, the logged in user creates a volume, VOLUME1. The volume has no password, and it is single sided. All volumes are created with private access. Private volumes have exclusive read-write access. This means that only one user can link to the volume at a time, and that user can write information to the volume and read information stored there. If the volume has a password assigned to it, any user supplying the password can access the volume. If no password is assigned, only the owner of the volume can access it.

Using EtherShare

Linking to a Volume

To use the volume you have created, you must link it to one of your computer's drive specifiers. Linking an EtherShare volume to a drive specifier simulates inserting a diskette into a diskette drive and closing the door. Usually, C:, D:, E:, or F: is used as the drive specifier. You can use C:, D:, E:, or F: on an IBM PC which has two diskette drives only, or D:, E:, F:, or G: on one that also has a fixed disk.

In most cases you'll insert the EtherSeries/DOS diskette in drive A: and link EtherShare volumes to C:, D:, E:, and F:.

A> **ES LINK ?** ←⏎   Initiates the ES LINK command.

Drive id? **E:** ←⏎   The drive specifier to which you want
                                      to link an EtherShare volume.

Volume? **VOLUME1** ←⏎   The name of the EtherShare volume
                                      you want to link. You can use any
                                      volume you have created.

VOLUME1 linked to E: EtherShare confirms that the link has
                                      been established.

Using DOS Commands

One of the first things you might do with a new EtherShare volume would be to copy the files from an existing diskette to it. Use the standard DOS COPY command to perform this function. Insert the source diskette which contains the files to be copied into drive A:, and enter the COPY command.

A> **COPY A:*.* E:** ←┘   Copies all the files from the source
                                 drive A:, to the destination drive, E:.

Some other uses of DOS commands with EtherShare volumes are:

A> **COPY A:SALES E:** ←┘
                                 Copies the file SALES from A: to the
                                 EtherShare volume linked to E:.

A> **DIR E:** ←┘   Lists all the files stored on the
                                 EtherShare volume linked to drive
                                 specifier E:.

Ending a Link

Use the ES UNLINK command to end the link between an EtherShare volume and a drive specifier.

A> **ES UNLINK ?** ←┘   Initiates the ES UNLINK command.

Drive id or volume? **E:** ←┘
                                 The drive or the volume name you
                                 want to unlink.

VOLUME1 unlinked from E: Confirms that the volume has been
                                 unlinked.

Since you can link only one volume at a time to a drive specifier, you must unlink the volume before you can link another.

Logging Out

You end your connection to EtherShare with the ES LOGOUT command. Logging out ends all existing links you have established with the ES LINK command.

A> **ES LOGOUT** ◄⏎   Initiates the ES LOGOUT command.

USER1 logged out.   Confirms the log out.

Rebooting your computer by pressing **Ctrl-Alt-Del** or turning the power off and on again will also log you out and end your links.

EtherShare Applications

Linking to Other Users' Volumes

With EtherShare you can link to any other users' volumes.

A> **ES LINK ?** ◄⏎   Initiates the ES LINK command.

Drive id? **E:** ◄⏎   The drive specifier to which you want
                             to link the EtherShare volume.

Volume? **USER2.VOLUME2** ◄⏎

                             The volume owner's name, USER2,
                             and the volume name, VOLUME2.
                             Separate the two with a period (.).

Password? (MYPASS) ◄⏎   If the volume has a password, you are
                             prompted for it.

USER2.VOLUME2 linked to E: Confirms the link.

For you to access another user's private or shared volume, the volume must have a password, and you must supply it. If the volume does not have a password, only its owner can link to it.

You may access any public volume that doesn't have a password simply by linking to it. If it has a password, you must know it in order to complete the link.

Listing Volume Names

You can list the volumes linked to a drive specifier or list all EtherShare volumes with the ES DIR command.

A> **ES DIR /L** ◄─┘   Lists all your linked volumes and their associated drive specifiers.

A> **ES DIR** ◄─┘   Lists all EtherShare volumes you have created.

A> **ES DIR *.*** ◄─┘   Lists all EtherShare volumes present on all servers. DOS wild card characters (* and ?) can be used to display groups of volumes.

Using Purchased Software

EtherShare makes it possible to keep all of your data and information files for application software like WordStar or VisiCalc on EtherShare volumes.

Once the EtherShare links have been established, you can run the application as you normally would. In general you'll want to reserve diskette drive A: in your IBM Personal Computer for the application software.

If the software is self-loading, that is, you normally boot your computer to run the program, you should run the AUTOEXEC.BAT file directly instead. If you boot your computer, you are no longer logged in to EtherShare and you lose any existing links you have established.

Using EtherShare

Using WordStar

You can store your WordStar documents in an EtherShare volume. Log in to EtherShare and link to the volume. (Remember, you must first create the volume, link and format it before it can be used to store data.)

A> **ES LINK ?** ←┘   Initiates the ES LINK command.

Drive id? **F:** ←┘   The drive specifier to which you want
                             to link the EtherShare volume.

Volume? **WSDATA** ←┘   The name of the volume which
                             contains your WordStar documents.

WSDATA linked to F: EtherShare confirms the link.

Once the EtherShare volume WSDATA has been linked, insert the WordStar diskette into drive A: and run the program.

A> **WS** ←┘   Loads and runs the WordStar
                             program.

To store and retrieve documents from the EtherShare volume, use the WordStar Preliminary Command "L" to change the logged disk drive to F: and show the directory of your EtherShare volume.

Using VisiCalc

Normally you would have to boot or reset your IBM Personal Computer to run a self-loading application program such as VisiCalc. When you do this, all existing links to printers and EtherShare volumes are lost. You can avoid this by simply running the AUTOEXEC.BAT file directly without booting your PC.

Assume you want to begin using the VisiCalc program, which is self-loading, without losing existing links you have to EtherShare volumes. First you need to establish all links to any EtherShare volumes you may want to use with the VisiCalc program.

A> **ES LINK ?** ◄┘   Initiates the ES LINK command.

Drive id? **E:** ◄┘   The drive specifier to which you want to link the volume.

Volume? **VISIDATA** ◄┘   The name of the volume containing your VisiCalc reports.

Now you can load the VisiCalc program. Place the VisiCalc diskette in drive A:.

A> **AUTOEXEC** ◄┘   Runs the VisiCalc program.

Using EtherShare

The VisiCalc program is loaded and the blank worksheet is displayed on the screen.

Now you can use it just as you normally would to create spreadsheet reports. After you have created the VisiCalc report, you can save it on the EtherShare volume by giving the drive specifier when you identify the storage file.

/S S	Initiates the SAVE option of the VisiCalc STORAGE command.
Storage: File for Saving **E:REPORT1** ←⏎	Saves REPORT1 on the volume linked to E:.

You load VisiCalc reports from an EtherShare volume the same way:

/S L	Initiates the LOAD option of the VisiCalc STORAGE command.
Storage: File to Load **E:REPORT1** ←⏎	Loads REPORT1 which is stored on the volume linked to E:.

Managing EtherShare Users and Volumes

Modifying a Volume

You can use the ES MODIFY command to change the name, access and password of any volume you have created. You cannot change the size of the volume.

A> **ES MODIFY ?** ◄┘   Initiates the ES MODIFY command.

Volume? **VOLUME1** ◄┘   The name of the EtherShare volume you want to modify.

New name? **VOLUME2** ◄┘   The new name if you want to change it. Press ◄┘ to keep the existing name.

New password? (**NEWPASS**) ◄┘

The new password is entered enclosed in parentheses. Press ◄┘ if you want to keep the existing password.

New access? **/PUB** ◄┘   Changes the volume access to public. All volumes are created with private access (/PRIV).

VOLUME1 modified.   EtherShare confirms that the volume has been modified.

You cannot modify a volume while it is linked to a drive specifier.

Erasing a Volume

When you no longer need a volume, you should delete it from the EtherShare disk. Once it is deleted, the volume and any files it contains are permanently removed from the EtherShare disk.

A> **ES ERASE ?** ◄┘   Initiates the ES ERASE command.

Volume? **VOLUME1** ◄┘   The name of the volume you want to delete.

Are you sure (Y/N)? **Y** ◄┘   EtherShare checks to be sure you want to remove the volume.

VOLUME1 deleted.   EtherShare confirms that VOLUME1 has been erased.

Creating a New User Name

Anyone with a user name which allows them to log in to EtherShare can create other users on the same EtherShare server.

A> **ES UCREATE** ◄┘   Initiates the ES UCREATE command.

Name? **NEWUSER** ◄┘   The new user name.

Checking for NEWUSER on server SHARE1...
                 EtherShare checks that there are no other users with the name NEWUSER on SHARE1 or any other network server.

NEWUSER added.   EtherShare confirms that NEWUSER is now an EtherShare user name. The user with this name can now log in.

Modifying a User Name

You can add a password to your user name or change that password with the ES UMODIFY command.

A> **ES UMODIFY ?** ◄┘   Initiates the ES UMODIFY command.

New password? (FORGES) ◄┘
                 The new password is entered enclosed in parentheses. It is not displayed as it is typed. If you want to remove a password, enter empty parentheses ( ).

NEWUSER modified.   EtherShare confirms that the password has been changed.

Erasing a User Name

You can remove a user from EtherShare with the ES UERASE command. You cannot remove a user name that owns EtherShare volumes; all volumes belonging to a user must be deleted before that name can be removed.

A> **ES UERASE ?** ◄┘   Initiates the ES UERASE command.

User? **ESUSER** ◄┘   The user name you want to remove
                                        from EtherShare.

Are you sure (Y/N)? **Y** ◄┘   Confirms that the deletion is to be
                                        made.

ESUSER deleted.   Confirms that the user name has been
                                        deleted.

Displaying the User Directory

You can display a list of all or some of the EtherShare users with the ES UDIR command. Users who are currently logged in are labeled "logged in". An arrow points to your user name in the list.

A> **ES UDIR** ◄┘   Lists all EtherShare users.

A> **ES UDIR M*** ◄┘   Lists all users with names beginning
                                        with M.

The DOS wild card characters (* and ?) can be used to list groups of users as the example shows.

Using Batch Files

In addition to the EtherShare commands, your EtherShare/DOS Diskette contains a batch file, LOGIN. This batch file logs you in to EtherShare, links you to a shared system volume and links to a shared printer.

A batch file includes a group of EtherSeries commands which are commonly used together. When the batch file is used, the commands are performed in the order they appear. This happens automatically when you give the batch file name and its associated parameters. If you want to cancel a batch file once it has started, press the **Ctrl** and **Break** keys. DOS prompts you to confirm the request.

If any of the ES commands fails, the batch file automatically stops.

The LOGIN batch file was copied to your EtherSeries/DOS Diskette (or fixed disk) during software installation. Using the LOGIN batch file is explained here.

The LOGIN Batch File

The LOGIN batch file contains the EtherSeries commands to log in a user, link SYS.SYS2 (the system volume containing DOS 2.0 and the EtherSeries software) to drive specifier D: make that the default drive and link to a printer on this server.

Use the batch file as you would any EtherShare or DOS command. Type the batch file name followed by any parameters. In the case of LOGIN, you give your user name.

A> **LOGIN CAROLR** ◄┘   Performs all commands found in the batch file.

The LOGIN batch file assumes you have purchased the EtherPrint software and have a printer connected to your server. If you do not have the software or a printer, you can edit the batch file to remove the command which links to the printer.

EtherShare Commands

Overview

Commands are your way of communicating with EtherShare. You can use EtherShare commands to:

- Log in and log out of EtherShare
- Create, modify and delete EtherShare volumes
- Link EtherShare volumes to your IBM Personal Computer
- Create, modify and delete EtherShare users
- List all EtherShare users and volumes

Selecting Commands

You can select commands by choosing an option from a menu or by entering a command name at the A> prompt.

Type ES to display the version number and a menu of EtherShare commands.

A> **ES** ⬅

EtherShare n.n   © Copyright 3Com Corp 1982, 1983

EtherShare Commands:
    1 - Login to the server. (LOGIN)
    2 - Logout from the server. (LOGOUT)
    3 - Link to an EtherShare volume. (LINK)
    4 - Unlink from a volume. (UNLINK)
    5 - List all volumes. (DIR)
    6 - Create and format a new volume. (CREATE)
    7 - Modify an existing volume. (MOD)
    8 - Delete an existing volume. (DEL)
    9 - List all users. (UDIR)
   10 - Create a new user. (UCREATE)
   11 - Delete an existing user. (UDEL)
   12 - Modify your user password. (UMOD)
   13 - List all servers. (SDIR)
   14 - Receive help. (HELP)

Selection?

EtherShare Commands

You can select a command by typing its number and pressing ◄┘. You are then prompted for the command parameters one at a time. Displaying this list of commands is useful when you first use EtherShare.

You can also select a command by entering the command name and parameters on a single line. Command names are made up of two words, ES followed by the name of a specific function such as LOGIN. Use both words when you enter a command name directly. For example:

A> **ES LOGIN** ◄┘

Command Format

All commands consist of the command itself and some parameters which provide additional information about the command. Each parameter must be separated by at least one space as shown in the examples in this section.

Some parameters are required and some are optional. In the command descriptions that follow, optional parameters are shown in square brackets.

Some optional parameters have default values that are assigned if you don't supply one. The description of each command gives the default values for optional parameters.

Prompted and Unprompted Form

You can enter a command in either prompted or unprompted form.

Prompted Form

The prompted form allows you to enter the command name without any parameters. To use the prompted form, type the EtherShare command followed by a space and a question mark (?). You are then prompted for the first parameter. You enter this parameter and are prompted for the second parameter, and so forth. For example:

A> **ES CREATE ?** ◄┘
Name? **VOLUME1** ◄┘
Password? (XYZ5) ◄┘
Size? **/2** ◄┘

Unprompted Form

The unprompted form allows you to enter the command and its parameters on one line. For example:

A> **ES CREATE VOLUME1 (XYZZY) /2** ←

You will probably use the unprompted form once you are familiar with the commands. If you enter some, but not all of the required parameters on the command line, you are prompted for the required parameters you did not provide.

In the examples of the commands that follow, both the prompted and unprompted forms are given.

Multiple Commands on One Line

You can give multiple EtherShare commands on one line by separating each command with a semicolon (;). For example,

A> **ES LOGIN LYNNW; LINK D: SYS.SYS2** ←

The /NP Parameter

/NP is a special parameter which can be used with any EtherShare command. This parameter (short for No Prompt) suppresses EtherShare prompts such as "Strike any key when ready" or "Are you sure (Y/N)?". It is used only with the unprompted form of a command and is useful when commands are executed from a batch file.

This parameter can be placed anywhere within the other command parameters and must be entered as /NP, including the slash (/) which is required.

Cancelling Commands

If you initiate a command but do not want to complete it, press the **Ctrl** and **Break** keys simultaneously. This redisplays the DOS prompt. With the prompted form, this can be done at any time before the last response has been entered; with the unprompted form it should be done before the command is entered with the ← key.

Format Notation

The following notation is used to indicate the format of commands.

CAPITAL LETTERS: denote a keyword. Keywords must be entered exactly as shown, although you can use lower case if you prefer.

Italics: you must supply appropriate information for parameters shown in italics. For example, you would supply a specific volume name for the *volname* parameter.

[Square Brackets]: denote an optional parameter which you can omit. If you use the parameter, you do not type square brackets around it.

Slash (/) and Parentheses ( ): must be included in a parameter where shown.

ES CREATE Command

Creates and formats a new EtherShare volume.

Format

ES CREATE   *volname* [(*password*)] [*size*]

Parameters

volname	The name of the volume. The name can be up to eight characters long. Each volume you create must have its own unique name; however, different users may have volumes with the same name.
(*password*)	A word assigned to a volume to control its use. Anyone other than the owner of the volume must supply the password to use the volume. You must assign a password to private (/PRIV) and shared volumes (/SHAR) if you want to allow other users to be able to access them.
size	The volume size from 64 kilobytes to 32 megabytes.

/1 Creates a single sided (/160KB) volume.

/2 Creates a double sided (/320KB) volume.

/numKB The number of kilobytes, from 64 to 32000.

/numMB The number of megabytes, from 1 to 32.

If you do not indicate a size, /1 is used. The maximum volume size depends on the current amount of space available on the server.

ES CREATE Command

Remarks

The ES CREATE command creates a new EtherShare volume. Each volume uses a portion of the server's disk.

Just like diskettes, volumes must be formatted. This happens automatically when you use the ES CREATE command.

All volumes are created with private access. Private access (/PRIV) is exclusive, read-write access. This means only one user can be linked to the volume at a time. The user can write information to the volume and can read information stored on it.

After you have formatted the volume and written information to it, you can change the access to public access (/PUB) or shared access (/SHAR) with the ES MOD command. Public access is shared, read only access for all users except the owner, who can write and read. Many users can read the volume at the same time; however, only the owner can change the information stored there. Public access is used mainly for program or data files which many network users need. Shared access allows multi-user read-write access. Many users can read from and write to a volume at the same time. This type of access is used for volumes which are changed by more than one user. Changes to data on shared volumes should always be coordinated with semaphores. More than one computer reading and writing the same volume at the same time can result in lost data or damaged disk directories. Programs that run concurrently and access the same volume should always set and check the semaphores to manage the simultaneous reads and writes.

On all volumes except those designated as /1, /2, /160KB, /180KB, /320KB, or /360KB the available disk space will be 16 kilobytes less than requested number to accommodate the disk directory which requires 16 kilobytes of space. These disk directories may contain up to 512 entries.

On volumes designated as /1, /2, /160KB, /180KB, /320KB, or /360KB the full 160, 180, 320, or 360 kilobytes are available. The number of directory entries is specified by DOS, 64 for a 160 kilobyte volume (a single-sided diskette) and 112 for a 320 kilobyte volume (a double-sided diskette).

Examples

Prompted

> A> **ES CREATE ?** ←┘
> Name? **REPORTS** ←┘
> Password? (   ) ←┘
> Size? **/200KB** ←┘
> REPORTS created.
> Formatting ...
> REPORTS formatted.

Creates a volume called REPORTS. The volume has a password defined. Notice that passwords are not displayed when they are entered. This volume is 200 kilobytes in size (184 Kilobytes available for files), and has been formatted.

Unprompted

> A> **ES CREATE REGION1** ←┘

Creates a volume called REGION1. Since no parameters are given, the volume takes on default values, single sided (/160 KB) with no password.

> A> **ES CREATE MEMOS (QUIET)** ←┘

Creates a single sided volume called MEMOS. This volume has a password, QUIET. The password is entered enclosed in parentheses.

ES DIR Command

Lists EtherShare volumes.

Format

ES DIR   [[*username.*]*volname*] [*/L*] [*/P*] [*/W*]

Parameters

[*username.*]*volname*	The name of the volume. If you do not own the volume, you must supply the owner's name as the *username* parameter. Use a period (.) to separate the user name from the volume name. If you do not specify a volume name, all of your volumes will be listed.
/L	Displays the volumes that are currently linked to your computer and the drive specifiers to which they are linked.
/P	Pauses the listing after a full screen has been displayed.
/W	Produces a wide listing. Several volumes are listed on one line. If you do not specify /W, one volume is listed on each line.

Remarks

The listing shows which volumes are currently in use by you, or other EtherShare users on every server.

The DOS wild card characters (* and ?) can be used to list specific groups of volumes.

Examples

Prompted

A> **ES DIR ?** ◄──┘
Volume? **VISIDATA** ◄──┘
    VISIDATA   PRIV   160KB

Displays information about the volume requested.

Unprompted

A> **ES DIR /L** ◄──┘
C: not in use
D: TESTPROG   PRIV   160KB
E: REPORTS   PUB   120KB
F: not in use

The /L parameter lists all available drive specifiers and all currently linked volumes.

A> **ES DIR *.*** ◄──┘

Server ADMIN:
ADMIN.SYS2	PUB	320KB	in use
BILLK.INBOX	PRIV	64KB	
CAROLR.DATA	SHAR	620KB	in use
GREGS.SALES	PRIV	120KB	
LYNNW.MEMOS	PRIV	320KB	
MARKT.DATAMGR	PUB	1250KB	

Server MARKET:
JEFFM.INBOX	PRIV	100KB	
JOANL.VISIDATA	PRIV	160KB	in use
STEVEP.MEMOS	PRIV	160KB	in use
STEVEP.REPORTS	PRIV	360KB	

Lists all EtherShare volumes on all network servers.

Use the DOS wild card characters (*and?) to match any user name and volume name.

A> **ES DIR STEVEP.***
STEVEP.MEMOS	PRIV	160KB	in use
STEVEP.REPORTS	PRIV	360KB	

Lists all volumes owned by user STEVEP.

ES ERASE and ES DEL Commands

Permanently erases or deletes an EtherShare volume.

Format

ES ERASE *volname*

ES DEL *volname*

Parameters

volname   The name of the EtherShare volume
                               to be deleted.

Remarks

ES ERASE deletes EtherShare volumes. Once you delete a volume it is permanently erased from the EtherShare disk. You cannot recover the information. Therefore, several checks are provided to help protect you from errors.

- Only the owner of a volume can delete it.

- A volume cannot be erased while it is linked to a drive specifier.

- Only one volume can be deleted at a time.

- You are asked to confirm a deletion.

When a volume is deleted, the disk space becomes available for new volumes.

Examples

Prompted

A> **ES DEL ?** ←┘
Volume? **LETTERS** ←┘
Are you sure (Y/N)? **Y** ←┘
LETTERS deleted.

The volume LETTERS has been erased.

Unprompted

A> **ES ERASE SALES** ←┘
Are you sure (Y/N)? **N** ←┘
***Cancelled.

ES HELP Command

Gives information about EtherShare commands.

Format

ES HELP [*commandname*]

Parameter

commandname   The EtherShare command about
                                  which you want information. If you do
                                  not give a specific command name, a
                                  list of all EtherShare commands and a
                                  brief description of their function is
                                  displayed.

Remarks

The HELP command is organized in two levels. The first level displays a
list of the EtherShare commands. The second level gives format and
parameter information about individual commands. You can go directly to
the second level by giving the command name.

Examples

A> **ES HELP** ←

Displays a list of all EtherShare commands and a brief description of their
use.

A> **ES HELP LINK** ←

Displays the LINK command format and a short description of its function.

ES LINK Command

Creates a link between an IBM Personal Computer drive specifier and an EtherShare volume.

Format

ES LINK   *drive* [*username.*]*volname* [(*password*)]

Parameters

drive	Specifies the drive to which you want to link. You can link to any of four drive specifiers depending on the configuration of your IBM PC. It is usually C:, D:, E: or F:.
[*username.*]*volname*	The name of the EtherShare volume to which you want to link. The *username* parameter is the owner's name. The owner's name is required if the volume does not belong to you. Separate the username and the volume name with a period (.).
(*password*)	The password assigned to the EtherShare volume. A public volume (/PUB) created without a password may be linked by anyone. A private volume (/PRIV) or a shared volume (/SHAR) without a password may be linked only by its owner. The password must be given to use any volume that has one.

Remarks

You must establish a link between a DOS drive specifier on your computer and an EtherShare volume before you can use files stored on the volume.

You can link an EtherShare volume to any of four drive specifiers. If you have a diskette-only system, you can link to drives C:, D:, E:, or F:. If you have a PC with a fixed disk, you can link to drives D:, E:, F:, or G:.

Only one volume can be linked to a drive specifier at a time. If you attempt to link a second volume before unlinking the first, you will be asked if it is OK to unlink the first volume. An affirmative answer will complete the command, a negative answer will abort it.

You cannot link a volume to a drive specifier which has been associated with another drive specifier using the DOS ASSIGN Command. You can, however, use the ASSIGN Command following a link.

You can link to any EtherShare volume on any server. If you did not create the volume, you must give the owner's name in addition to the volume name. You must also supply the password for any volumes you do not own, unless the volume has public access and does not have a password. A private or shared volume without a password can be accessed only by its owner.

A public volume is read only for all users except the owner; they cannot write to it. If you own a public volume, you have write access; you can add, delete, or change files at any time even when other users are linked to the volume for reading. If you are logged in at two computers and link to your public volume from both computers, only the first link has write access. The second has read only access. This ensures that no two users can simultaneously update the same file on a public volume and possibly destroy data on the disk. Access to shared volumes is controlled by setting and checking signals within programs called semaphores. These signals coordinate the access to a volume so that data is changed in an orderly way without risk of loss.

If you reset your computer by pressing **Ctrl-Alt-Del,** you are automatically logged out and lose all links to EtherShare volumes.

Examples

Prompted

```
A> ES LINK ?  ◄┘
Drive id?  E:  ◄┘
Volume?  REPORTS  ◄┘
REPORTS linked to E:
```

Links the EtherShare volume REPORTS to drive specifier E:.

```
A> ES LINK ?  ◄┘
Drive id?  F:  ◄┘
Volume?  CAROLR.SALES  ◄┘
Password? (      )  ◄┘
CAROLR.SALES linked to F:
```

ES LINK Command

Links the volume SALES created by another user, CAROLR, to drive specifier F:. This volume has a password which you must supply.

Unprompted

A> **ES LINK F: LYNNW.NEWS** ←⏎
LYNNW.NEWS linked to F:

This example links an EtherShare volume, NEWS, owned by LYNNW, to drive specifier F:. This is a public volume with no password.

A> **ES LINK E: JEFFM.TEST** ←⏎
Password? ( ) ←⏎
JEFFM.TEST is linked to E:

This links the volume TEST created by JEFFM to drive specifier E:. You are prompted for the password.

A> **ES LINK E: BILLK.LETTERS** ←⏎
Password? ( ) ←⏎
***JEFFM.TEST is linked to E: ... OK to unlink (Y/N)? **Y** ←⏎
BILLK.LETTERS linked to E:

Only one volume can be linked to a drive specifier at a time. Since the volume JEFFM.TEST was already linked to E: when the command was entered, it must be unlinked first. This is done automatically by typing Y after the message "OK to unlink?". The volume BILLK.LETTERS is then linked to E:.

A> **ES LINK E: BILLK.LETTERS /NP** ←⏎
Password? ( ) ←⏎
BILLK.LETTERS Linked to E:

Links the volume BILLK.LETTERS to drive specifier E: just as the previous example does. The /NP parameter, however, bypasses the confirmation prompts normally supplied.

ES LOGIN Command

Establishes a connection with EtherShare.

Format

ES LOGIN *username* [(*password*)]

Parameters

username	The name which identifies you as an EtherShare user. This name is established with the ES UCREATE command.
(*password*)	A word which may be assigned to user names with the ES UMODIFY command. Passwords must be enclosed in parentheses when they are used.

Remarks

The ES LOGIN command establishes a connection between your IBM Personal Computer and the server which has your username in its directory of users. You may log in from any IBM PC in the network, you are not restricted to using a particular computer.

You must log in before you can use any other ES commands except the ES HELP command.

Passwords prevent other users from gaining access to your EtherShare volumes.

Logging in automatically logs out any current users from the same computer; however, two persons using the same user name at different computers can be logged in at the same time.

If ES LOGIN cannot establish a connection to a server, it asks if you would like to try again. If the /NP parameter is used with ES LOGIN, the software automatically keeps trying. Press **Ctrl-Break** to end this loop.

ES LOGIN Command

Examples

Prompted

> A> **ES LOGIN ?** ◄┘
> Name? **STEVEP** ◄┘
> Password? (░░░░░) ◄┘
> STEVEP logged in to SHARE1.
> Your EtherShare drives are C: through F:

Gives user STEVEP access to EtherShare server SHARE1. The password is not displayed when it is typed. The log in message tells you that you can link EtherShare volumes to drive specifiers C:, D:, E: and F:.

Unprompted

> A> **ES LOGIN LYNNW (SECRET)** ◄┘
> LYNNW logged in to ALPHA1.
> Your EtherShare drives are D: through G:

Logs in LYNNW. The password must be enclosed in parentheses. It is displayed when you use the unprompted form of the command. The log in message tells you that you can link EtherShare volumes to drive specifiers D:, E:, F: and G:.

ES LOGOUT Command

Ends a connection to EtherShare.

Format

ES LOGOUT

Remarks

This command ends your connection to EtherShare established with the ES LOGIN command. It also ends all links to EtherShare volumes established with the ES LINK and EP LINK commands.

Rebooting your computer has the same effect as the ES LOGOUT command.

Examples

A> **ES LOGOUT** ⏎
BILLK logged out.

The current user is logged out. No user name is required.

ES MODIFY and ES RENAME Commands

Changes the name, password and/or access of an EtherShare volume.

Format

ES MOD[IFY]   *volname* [*newname*] [(*newpass*)] [*newaccess*]

ES REN[AME]   *volname* [*newname*] [(*newpass*)] [*newaccess*]

Parameters

volname	The name of the EtherShare volume you want to modify.
newname	The new name you want to give the volume.
(*newpass*)	The new password you want to give the volume. This password must be enclosed in parentheses. (The end parenthesis is optional.) An empty parentheses ( ) removes an existing password.
newaccess	Volumes are created with private access. Private volumes can be used by only one user a time, and they have read-write access. Once a volume has been created and files have been loaded, you may want to change the access to public or shared.
	Enter one of these parameters to change the current access.
	/PUB Indicates public access.
	/PRIV Indicates private access.
	/SHAR Indicates shared access.

Remarks

Public access volumes can be linked by many users at once. They have read only access; the owner, however, can also write to the volume. Public volumes often contain program files which all network users need.

Shared volumes have read-write access and may be linked for use by many users at the same time. These volumes usually contain data which is changed by different users. Since several users can access the volume to change data at the same time, access must be sychronized by setting and checking "in use" status flags called semaphores. Programs must use these semaphores in order to prevent simultaneous access which could result in a loss of data.

This command has two forms, ES MODIFY (or ES MOD) and ES RENAME (or ES REN). You can use either form to change the volume name, the password and the access. The size of the volume cannot be changed.

You must be the owner of the volume to use the ES MODIFY or ES RENAME commands.

Volumes cannot be modified while they are linked to a drive specifier.

The ES MODIFY command is used to change the access of volumes from private to public or shared after the volume has been created and files have been loaded.

After a volume has been changed to public, the owner may still write to the volume. In this way, one person may change the files on a volume while others are linked to and using it. The owner of a public volume should use caution when modifying files on such a volume.

Examples

Prompted

```
A>  ES MODIFY ?  ◄┘
Volume? MEMOS  ◄┘
New name?  ◄┘
New password?  ◄┘
New access? /PUB  ◄┘
MEMOS modified.
```

Changes only the access. The name and password do not change. Even though you want to change only the access, EtherShare prompts you for all parameters. Press the ◄┘ key to keep the existing one and display the next prompt.

```
A>  ES RENAME ?  ◄┘
Volume? REPORTS  ◄┘
New name? REGION1  ◄┘
New password?  ◄┘
New access?  ◄┘
REPORTS modified.
```

Changes the name of the EtherShare volume from REPORTS to REGION1.

Unprompted

```
A>  ES MODIFY PROGRAMS /PUB  ◄┘
PROGRAMS modified.
```

Changes the access to public. In general, only volumes which several EtherShare users need should be public.

```
A>  ES MOD VOLUME1 ( )  ◄┘
VOLUME1 modified.
```

Removes the password from VOLUME1.

```
A>  ES RENAME VOLUME1 VOL1  ◄┘
VOLUME1 modified.
```

Changes the name of the volume from VOLUME1 to VOL1.

ES SDIR Command

Lists the names of all servers on the network.

Format

ES SDIR   [*servername*] *[/W] [/P]*

Parameters

servername	The name assigned to server when it is installed. Each server has a unique name which is assigned using the Register function of the server's ADMIN program. You can use the DOS wild card characters (* and ?) to list specific groups of servers.
	If you do not give a specific server name, the names of all servers are listed.
/W	Produces a wide listing. Several servers are listed on one line. If you do not specify /W, one server is listed on each line.
/P	Causes the listing to pause after a full screen has been displayed.

Remarks

The ES SDIR command lists the names of all servers in an EtherSeries network. You can access EtherShare on any server in a network by having a user name in its directory so that you can log in. User names must be unique on the network; therefore, you need a different user name to log in to EtherShare on each server.

Anyone can access an EtherPrint printer on a server by providing the *servername* parameter in the EP LINK command.

ES SDIR Command

Examples

A> **ES SDIR** ←┘
  SALES
  ADMIN
  MRKT

Lists all servers in the network.

ES UCREATE Command

Adds a new user to EtherShare.

Format

ES UCREATE *username*

Parameters

username   The name which will identify this
                              person as an EtherShare user. The
                              name can be up to eight characters in
                              length. No two users on the network
                              can have the same user name.

Remarks

Any user can use the ES UCREATE command to add a new user name to
EtherShare.

If your Ethernet network has more than one EtherShare server, you must
use a name that is unique on all the servers. No two users can have the
same user name, even if they are using different servers. When a new
name is created, all servers are checked to be sure the name does not
duplicate one already on the network before the new name is added.

Once a new name has been added to the directory, the user can log in
and use the ES UMOD command to assign a password.

Examples

Prompted

A> **ES UCREATE ?** ◄┘
Name? **CAROLR** ◄┘
Checking for CAROLR on server SHARE1...
CAROLR added.

This example adds the name CAROLR to server, SHARE1.

ES UCREATE Command

Unprompted

A> **ES UCREATE JEFFM** ◄┘
Checking for JEFFM on server SHARE1...
JEFFM added.

This example adds the name JEFFM to server SHARE1. This is the log in name for this user. EtherShare checks to be sure the name is not currently in use before accepting it.

ES UDIR Command

Lists the names of all EtherShare users on the network.

Format

ES UDIR [[*server.*]*username*] [/*P*] [/*W*]

Parameters

[*server.*]*username*   The name of the user(s) about whom you are requesting information. You can use the DOS wild card characters (* and ?) to identify specific groups of users.

Use the server name parameter to list the users on a specific server or group of servers. If you do not give a server name, all users on the network are listed.

/*P*   Causes a pause when the directory fills the screen.

/*W*   Produces a wide listing. Several names are listed on one line. Only the names are listed; no other information is given.

Remarks

ES UDIR lists EtherShare users. Users who are currently logged in to EtherShare are indicated by the message "logged in". The user requesting the listing is indicated by an ➞ next to the user name.

ES UDIR Command

Examples

A> **ES UDIR** ←

Server MARKET:
    BILLS
    BOBP
    FREDH
    MARYS   logged in
    MIKEP   logged in

Server SALES:
➤ CAROLR   logged in
    JOHNH
    NANCYV
    STEVEP
    WENDYK   logged in

Lists all users on all network servers.

A> **ES UDIR M* /W** ←

Server ADMIN:
    *** No Match

Server FINANCE:
    MARY   MIKE

By using the asterisk (*) in the username parameter, you are able to list groups of users; for example, those whose names begin with M. Only the name is given on wide lists. If no user names on a server match the requested group, the message "*** No Match" is displayed.

A> **ES UDIR MARKET.*** ←

Server MARKET:
    FRED
    MARYS
    JOEP   logged in

Lists all users on the server named MARKET.

ES UERASE and ES UDEL Commands

Deletes a user name from EtherShare.

Format

ES UERASE *username*

ES UDEL *username*

Parameters

username   The name used to identify this person
                    as an EtherShare user. This is the
                    name used to log in to EtherShare.

Remarks

ES UERASE removes a user name from the EtherShare directory. Once a name has been removed, the user cannot log in to EtherShare to create or link volumes.

Several checks are provided to protect against unintentional deletions.

- A user name cannot be deleted if that user has volumes stored on the EtherShare disk. (Volumes must be deleted first.)

- Only one name can be deleted at a time.

- The message "Are you sure (Y/N)?" is displayed. You must respond "Y" before the deletion is performed.

ES UERASE and ES UDEL Commands

Examples

Prompted

A> **ES UERASE ?** ←⏎
Name? **LYNNW** ←⏎
Are you sure (Y/N)? **Y** ←⏎
LYNNW deleted.

This example removes the user name LYNNW from the list of EtherShare users. A confirmation is required before the name is deleted.

Unprompted

A> **ES UERASE STEVEP** ←⏎
Are you sure (Y/N)? **N** ←⏎
*** Cancelled.

In this example the delete is cancelled. The name remains in the directory; the user can still log in to EtherShare.

A> **ES UDEL CAROLR** ←⏎
*** Volumes still exist.

You can not delete a user name while EtherShare volumes still exist.

ES UMODIFY Command

Adds or changes the password assigned to your user name.

Format

ES UMOD[IFY]   (*newpass*)

Parameters

(*newpass*)   Changes the password assigned to
                           your user name. The password must
                           be enclosed in parentheses. Use an
                           empty parentheses ( ) to remove a
                           password.

Remarks

If you are a new user, you can assign a password to your name with this
command. You can also change or remove an existing password.

You must enclose the password in parentheses when you use this
command.

This command has two forms, ES UMODIFY and ES UMOD. You may use
either form.

Examples

Prompted

A> **ES UMOD ?** ←┘
New password? (██████) ←┘
STEVEP modified.

Assigns or changes a password associated with an EtherShare
username. This password must be given when you log in. The password
is not displayed when it is entered.

Unprompted

A> **ES UMOD (FORGET)** ←┘
USER2 modified.

Assigns or changes the password which belongs to the logged in user
name.

ES UNLINK Command

Ends the link between a drive specifier and an EtherShare volume.

Format

ES UNLINK *drive*

ES UNLINK [*username.*]*volname*

Parameters

drive   The drive specifier to which the
                                 EtherShare volume is linked.

[*username.*]*volname*   The name of the EtherShare volume to
                                 which you are currently linked. The
                                 username parameter is the owner's
                                 name. The owner's name is required if
                                 the volume does not belong to you.
                                 Separate the user name and the
                                 volume name with a period (.).

Remarks

Use the ES UNLINK command to end the link between the drive specifier
and an EtherShare volume. This makes the drive available to link to
another volume. It also releases private volumes for use by other
EtherShare users.

You can unlink by identifying either the drive specifier to which an
EtherShare volume is linked or by supplying the linked volume name.

You can unlink all volumes by specifying an * in place of a drive specifier.

Examples

Prompted

A> **ES UNLINK ?** ◄┘
Drive id or volume? **C:** ◄┘
REPORTS unlinked from C:

Ends the link between the EtherShare volume REPORTS and drive specifier C:.

Unprompted

A> **ES UNLINK SALES** ◄┘
SALES unlinked from D:

The volume SALES is no longer linked to drive specifier D:.

A> **ES UNLINK *** ◄┘
All volumes unlinked.

Unlinks all currently linked volumes.

EtherShare Commands

Command Summary

ES CREATE *volname* [(*password*)] [*size*]
    Creates and formats a new EtherShare volume.

ES DEL *volname*
    Permanently deletes an EtherShare volume.

ES DIR [[*username.*]*volname*] [/L] [/P] [/W]
    Lists EtherShare volumes.

ES ERASE *volname*
    Permanently deletes an EtherShare volume.

ES HELP [*commandname*]
    Gives information about EtherShare commands.

ES LINK *drive* [*username.*]*volname* [(*password*)]
    Creates a link between a drive specifier and an EtherShare volume.

ES LOGIN *username* [(*password*)]
    Establishes a connection with EtherShare.

ES LOGOUT
    Ends a connection to EtherShare.

ES MO[DIFY] *volname* [*newname*] [(*newpass*)] [*newaccess*]
    Changes the name, password and/or access of an EtherShare volume.

ES REN[AME] *volname* [*newname*] [(*newpass*)] [*newaccess*]
    Changes the name, password and/or access of an EtherShare volume.

ES SDIR [*servername*] [/W] [/P]
    Lists the names of all servers in the network.

ES UCREATE *username*
    Adds a new user to EtherShare.

ES UDEL *username*
    Deletes a user from EtherShare.

ES UDIR [[*server.*]*username*] [*/P*] [*/W*]
Lists the names of EtherShare users.

ES UERASE *username*
Deletes a user from EtherShare.

ES UMOD[IFY] (*newpass*)
Adds or changes the password assigned to your user name.

ES UNLINK *drive*
ES UNLINK [*username.*]*volname*
Ends the link between a drive specifier and an EtherShare volume.

Glossary

Glossary

Access

The right or capability to use software or hardware. For example, in order to access EtherShare, you must login with a user name. Without the user name, you cannot access EtherShare to use the commands (software) or store volumes on the EtherShare disk (hardware). Access is also used to describe the attributes of private, public, and shared EtherShare volumes.

Batch File

A file containing a group of EtherShare and DOS commands commonly used together. By entering the batch file name, you are able to perform all commands contained in the file as if you had typed them directly.

Boot

Load software into the computer memory. When you boot, either by pressing **CTL-ALT-DEL** or turning the power OFF/ON, you are automatically logged out from your server; therefore, you lose all existing communication links such as links to EtherShare volumes.

Drive Specifier

The DOS name used to identify a diskette drive or a device with similar data storage capability. With EtherShare you can assign up to four drive specifiers. If your IBM PC has two diskette drives, they are C:, D:, E:, and F:. On a PC with one fixed disk, you can use D:, E:, F:, and G: to link to EtherShare volumes. If your PC has two disk drives, E:, F:, G:, and H: can be linked to EtherShare volumes.

Link

Establish a connection across the network between a DOS drive specifier or a printer name on your IBM Personal Computer and a volume or printer on a server.

Log in

A procedure performed by using the ES LOGIN command that controls your ability to use (access) EtherShare. When you log in, you give your EtherShare user name. The EtherShare program will find your server (if several exist on the network) and connect you to it. Use the ES CREATE command to add a new user name to the list of users.

Glossary

Password

A private word which can be assigned to both user names and EtherShare volume names. Assigning passwords limits access to EtherShare in general and to specific volumes. This makes the information you have stored on EtherShare volumes as secure as possible.

Private Volume

A type of access which you can assign to an EtherShare volume. Private access is assigned when you create a volume.Private volumes can be used by one user at a time and can be written to as well as read. If users other than the owner want to access a private volume, the volume must have a password which those users must supply when they link to the volume.

Public Volume

A type of access which you can assign to an EtherShare volume. Public volumes can be shared by many EtherShare users at the same time. Users other than the owner can only read files or programs from the volume. The owner can both read and write. A public volume without a password may be linked by any user. User's must supply the password if a public volume has one.

Semaphore

A semaphore is a flag that can be unlocked or locked to indicate that a shared resource, for example a file, is currently available or not available for use by other programs. All programs that will access a shared file must cooperate by checking to see if the corresponding semaphore is locked or unlocked before accessing it.

Shared Volume

A type of access which you can assign to an EtherShare volume. Shared volumes can be linked by many users at the same time to be both written to and read from. Writing to shared volumes should be coordinated by using the semaphores to protect against the potential loss of data caused by many users writing to a file simultaneously. Users other than the owner must supply the volume password when they link to a shared volume.

User Name

The name you use to log in to EtherShare. This name gives you the ability to use all EtherShare functions. User names can be created by any user who is logged in.

Volume

Similar to a diskette you use with your IBM personal computer. EtherShare divides the hard disk into various sized areas which you specify when you create a volume. These areas are assigned a name, access type, password and size with the ES CREATE command. From this point, you can link it to a drive specifier on your IBM Personal Computer and use it like a diskette or fixed disk drive.

The LOGIN Batch File

The LOGIN Batch File

One batch file, LOGIN, is provided with EtherShare. The contents of this file and its functions are described in this appendix.

LOGIN is part of your EtherSeries Software User Diskette. It is copied onto your EtherSeries/DOS diskette during software installation.

You can create your own batch files or modify LOGIN with the DOS editor, EDLIN, or the EtherMail editor, MED.

Diskette Drives

Use the available drive specifiers as follows, depending on the configuration of your IBM PC.

Drive A:	The EtherSeries/DOS diskette
Drive B:	Available for an actual diskette
Drive C:	EtherShare volumes
Drive D:	EtherShare SYS.SYS2 volume used for EtherSeries/DOS, EtherShare software, EtherMail software and distribution lists.
Drive E:	EtherShare volumes
Drive F:	EtherShare volumes

Batch File Description

In the following, the /NP parameter (No Prompt) suppresses confirmation prompts while the batch file is running. If you want to cancel a batch file that has started, press the **Ctrl** and **Break** keys simultaneously.

EtherShare Batch Files

The LOGIN Batch File

Format

LOGIN *username*

Function

Logs you in to EtherShare, links you to the public EtherSeries/DOS system volume and establishes a link to a shared printer connected to your EtherShare server.

Once you have logged in with the LOGIN batch file, D:, which is linked to the shared system volume, SYS.SYS2, becomes your default drive, and PRN: (or LPT1:) is linked to the printer connected to your server. When you are finished, you should change the default drive back to A:, and log out with the ES LOGOUT command. If your server does not have a SYS.SYS2 volume, refer to the EtherShare Administrator's Guide for further information.

Listing

ECHO OFF

Turns off the display of batch commands as they are read from the batch file.

ES LOGIN %1; LINK D: SYS.SYS2 /NP

Initiates the ES LOGIN command. The name supplied for the username parameter is substituted for the %1 variable. Links the EtherShare volume SYS.SYS2 to drive specifier D:.

IF ERRORLEVEL 1 GOTO FAIL

Tests for errors. If there was an error, the GOTO is performed and the batch file stops. If there were none, the next batch file command is used.

D:

Changes the default drive to D:

EP LINK /NP

Establishes a link to printer /1 connected to the server.

:FAIL

In the case of errors, the batch file stops.

Using Purchased Software

Using Purchased Software

There are many purchased software programs which can be used with the network. These programs are used in the normal way, except that you have the added advantage of being able to access data files on an EtherShare volume and print files on a shared printer.

Examples of loading and using purchased programs with EtherShare are given in Section 3.

Table C-1 lists purchased software which can be used with EtherShare and shows how you would run the program.

To run these programs, establish any links you require, insert the software diskette in drive A: (your default drive) and type the program name given in table C-1. If the program is self-loading, you can use the AUTOEXEC.BAT file directly to load the software without breaking network links. Refer to "Using VisiCalc" in Section 3 for more information on using self-loading programs.

Program	Program Name	Self-Loading
VisiCalc	VC80	Yes (AUTOEXEC)
SuperCalc	SC	No
WordStar	WS	No
EasyWriter 1.1	EW	Yes (AUTOEXEC)
pfs: FILE	FILE	Yes (AUTOEXEC)
pfs: REPORT	REPORT	Yes (AUTOEXEC)
pfs: GRAPH	GRAPH	Yes (AUTOEXEC)
VisiDesktop/Plan	BASIC MENU	Yes (AUTOEXEC)
VisiFile	VF	Yes (AUTOEXEC)

Table C-1. EtherShare Compatible Software

Using Purchased Software

These and any other programs which meet the following criteria can be used with EtherShare:

■ Must use IBM PC DOS Version 2.0, or MSDOS Version 2.0

■ Must use the standard diskette driver and/or the standard printer driver

■ Must be relocatable

■ When loaded into memory, the program and data must leave approximately 5400 bytes available for the Ethernet drivers

■ Must not depend on linking to EtherShare volumes while the program is running. All data to be accessed must be linked before running the application program.

Purchased software programs which are known not to meet these criteria are:

■ EasyWriter 1.0

■ Visitrend/Plot 1.0

■ VisiDex 1.0

■ VisiSchedule

■ Time Manager

For information on EtherShare compatibility with software not listed here, call the 3Com customer support number, (415)964-5561.

Semaphores

Overview

EtherShare allows you to share files among individual Personal Computers on a network. You can share files on both a read-only and a read-write basis. Allowing many users to read a common file causes no problems; however, writing to a common file is potentially dangerous and can result in a loss of data. For this reason, semaphores are provided. They allow you to designate which files and records are being changed to ensure that only one PC is updating a file at any given time.

Programs must cooperate with one another to ensure file system integrity when you are updating shared files. Programs can control multiple accesses to common files with semaphore operations. These operations must programmatically bracket shared file accesses with lock and unlock semaphore calls to ensure that only one user is updating a file at a time. If the programs accessing a shared file are not cooperating, multiple writes to the same record of a file can result in lost information since the last write could overwrite previous ones. By locking a file or record during an update operation, any other cooperating program which wants that file or record will wait until it is unlocked. When the blocked program is able to lock, it can then read the data to ensure it has a current copy of it, modify it, write it back and then unlock it. *Existing programs will have to be modified to use semaphores before they can be used with shared access volumes.*

EtherShare Volume Access

EtherShare volumes can have three kinds of access: private, public or shared. All EtherShare volumes are created with private access. After files have been loaded, the access may be modified to public or shared.

Each of these volume types has different access restrictions associated with it. Private volumes are read-write but may be accessed by only one user at a time. Public volumes may be shared by many users at the same time, but they have read-only access. Only shared volumes can be accessed by many users at the same time with both read and write capability. For this reason, semaphores are provided for use with shared access volumes and provide a means to protect against the loss of data that may occur when multiple programs update the same file.

Semaphore Operations

Three semaphore operations are provided by EtherShare servers: LOCK/
WAIT, LOCK/RETURN, and UNLOCK. These operations are used to
programmatically bracket shared file access operations. If a file or record
is locked before it is updated, any other cooperating program which
wants it has to wait until it is unlocked.

In order to properly access shared volumes using semaphores, your
programs should:

> —lock the semaphore

> —read the file and/or record

> —write the new and/or changed data

> —flush the buffer

> —unlock the semaphore

Any existing programs must be modified to include semaphores if they
will update files in EtherShare volumes with shared access.

All three semaphore operations are implemented using software interrupt
60H with the appropriate command code in register AH. The status of the
operation is returned in register AL. All registers except AX are
preserved.

Semaphore Names

A semaphore name is any ASCII string up to 31 bytes long. The name
must be terminated with byte containing a zero regardless of its length.
The maximum string is 32 bytes, including the zero byte. There are no
predefined strings; however it is helpful if cooperating programs follow a
naming convention. For example, the name of the application might be the
first part of the string so that different applications using the same network
server would not have the same semaphore names. *It is up to the
cooperating programs to define and adhere to the convention.*

You can use an asterisk (*) as a match character in semaphore names to
match none or more occurrences of all characters. The asterisk (*)
cannot, however, occur in the first eight characters of the name in order to

prevent an application from inadvertently locking out all semaphores. Only one pattern match character can occur in a semaphore name and it must be the last character in the string. For example, "filename*" matches "filenamexxx". Therefore, an attempt to lock "filename*" when "filenamexxx" is locked will fail as would an attempt to lock "filenamexxx" if "filename*" is locked.

The pattern match capability allows record and file locking to be easily supported. If the convention to lock a record is to use a semaphore name made up of the filename and the record number, that is "filename123" locks record 123 of file "filename", then you can lock the entire file by issuing a lock on "filename*". The attempt to lock "filename*" will fail as long as any record is locked. When all records are unlocked and "filename*" locks, any attempt to lock an individual record will fail as long as the file lock "filename*" remains in effect.

Multiple Server Networks

There are three ways to identify the server which is managing the specified semaphore. First, you can use the drive id to which the volume is linked. Secondly, you can give an Ethernet address. Thirdly, if you do not specify either of the others, the server to which you are logged in is used. If the logged in server is used, a lock on the wrong server may occur if the link is to a volume on a different server.

$AL =$ The drive id to which the EtherShare volume containing the data is linked. It must be an EtherShare drive and must not have been assigned by the DOS ASSIGN command. $(1 = A, 2 = B,$ etc.)

         $AL = 0$ if not used

$ES:SI =$ A pointer to the Ethernet address of the server which is managing the semaphore. (Used if $AL = 0$)

         $SI = 0$ if not used

If the explicit Ethernet address is passed in ES:SI, it should be declared in byte order, that is, if the address is 02608C010203, it should be declared as:

         eaddr   db   02H,60H,8CH,01H,02H,03H

If $AL = 0$ and $SI = 0$, the logged in server is used.

Semaphores

Use INT 60H with the function code in AH as follows:

LOCK/WAIT

Locks a semaphore. If the lock is successful, it returns a status code immediately. If it is unsuccessful, it keeps trying until the lock can be performed, or the timeout value supplied has expired.

Call:

AH = 11H

AL = Drive id or 0 if not used

DS:BX = Pointer to name (semaphore)

ES:SI = Pointer to Ethernet address or SI = 0 if not used

If AL and SI both equal 0, then use the address of the server to which you are logged in.

DX = Number of seconds to wait for lock

Return Status Code in AL:

0 = Operation successful

1 = Timeout

2 = Server not responding

3 = Invalid semaphore name (Name must have at least one character and no more than 31; there must not be an asterisk (*) in the first eight characters.)

4 = Semaphore list is full

5 = Invalid drive id (The drive is either not an EtherShare drive, or it has been assigned.)

6 = Invalid Ethernet address (It cannot be multicast or broadcast.)

7 = Not logged in (Attempt to use default logged in server when not logged in.)

8 = Write to network failed

9 = Semaphore already locked by this PC

LOCK/RETURN

Locks a semaphore. Returns a status code immediately whether the lock is or is not successful.

Call:

AH = 12H

AL = Drive id or 0 if not used

DS:BX = Pointer to name (semaphore)

ES:SI = Pointer to Ethernet address or SI = 0 if not used.

If AL and SI both equal 0, then use the address of the server to which you are logged in.

Return Status in AL:

0 = Operation successful

1 = Semaphore currently locked

2 = Server not responding

3 = Invalid semaphore name (Name must have at least one character and no more than 31; there must not be an asterisk (*) in the first eight characters.)

4 = Semaphore list is full

5 = Invalid drive id (The drive is either not an EtherShare drive, or it has been assigned.)

6 = Invalid Ethernet address (It cannot be multicast or broadcast.)

7 = Not logged in (Attempt to use default logged in server when not logged in.)

8 = Write to network failed

9 = Semaphore already locked by this PC

Semaphores

UNLOCK

Unlocks a currently locked semaphore.

Call:

AH = 13H

AL = Drive id or 0 if not used

DS:BX = Pointer to name (semaphore)

ES:SI = Pointer to Ethernet address or SI = 0 if not used

If AL and SI both equal 0, then use address of the server to which you are logged in.

Return status in AL

0 = Operation successful

1 = Semaphore not locked

2 = Server not responding

3 = Invalid semaphore name (Name must have at least one character and no more than 31; there must not be an asterisk (*) in the first eight characters.)

4 = Semaphore list is full

5 = Invalid drive id (The drive is either not an EtherShare drive, or it has been assigned.)

6 = Invalid Ethernet address (It cannot be multicast or broadcast.)

7 = Not logged in (Attempt to use default logged in server when not logged in.)

8 = Write to network failed

Remarks

If you plan to have several programs running concurrently and reading and writing to files on the same volume, you should be familiar with the way DOS allocates file space, uses the File Allocation Table (FAT) and directories, and buffers sub-block reads and writes. (See Appendixes B, C, and D of the IBM Disk Operating System Manual.)

Shared files should be fixed length, and if they are to change size, you should preallocate the space. This is necessary to ensure that Personal Computers sharing the same files have a valid copy of the File Allocation Table (FAT). DOS keeps a copy of the File Allocation Table in each Personal Computer. This table keeps track of all disk blocks, for example, which blocks currently belong to a file and which ones are free. The table is read from the disk when a file is opened and is rewritten when a file is closed. By preallocating space for shared files, you ensure that all PCs sharing those files will have a valid copy of the FAT.

A request to lock a semaphore initiates a search of the list of those currently locked. If no match is found, the named semaphore is entered into the list of locked semaphores. The list in each server can contain up to 50 names. If a match is found, then the status "semaphore currently locked" is returned. Alternatively, the program can request to wait until the lock succeeds.

Programs using semaphore operations to lock records or files should do so for the shortest time possible so that other programs are not blocked.

Semaphores

When using the LOCK/RETURN function, care should be taken to ensure that the operation, if unsuccessful, is not immediately tried again. Your program should delay before retrying the operation. Otherwise, you will "flood" the network server with requests which must be processed. Rapid retransmission of lock requests may cause the server to be less available for processing other IBM PC's requests for disk or printer access.

If a Personal Computer has a lock in effect and is turned off or goes down, the lock remains in effect and can block other programs. Locks that have been set can be cleared by:

—using the UNLOCK function

—logging out from the server

—logging in as a new user

—rebooting your IBM Personal Computer

—using the Administration functions from a server (See the EtherShare Administrator's Guide)

Each lock is associated with the Ethernet address of the Personal Computer that requested the lock. You must request the unlock from that same PC unless you use the Administration functions from a server.

Appendix E

Upgrading to EtherShare 2.0

Overview

If you are currently using EtherShare version 1.0 with DOS 1.0 or 1.1 and are upgrading to EtherShare version 2.0 with DOS version 2.0, you must follow the two procedures described in this appendix. First, you must change the switch settings on your IBM Personal Computer's system board, and secondly, you must convert your existing EtherShare volumes for use with version 2.0.

Setting the Drive Switches

Remove the cover of your IBM Personal Computer to change switch 1 to reflect the actual number of drives that your computer contains.

Refer to Installation section of your EtherLink User's Guide, version 1.0, for instructions on removing the system unit cover (pages 2-8 and 2-9) and locating the switch on the system board (page 2-14).

Set switch positions 1, 7 and 8 as indicated. Do not change the positions of switches 2, 3, 4, 5 or 6.

If you have one drive:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

ON ↑
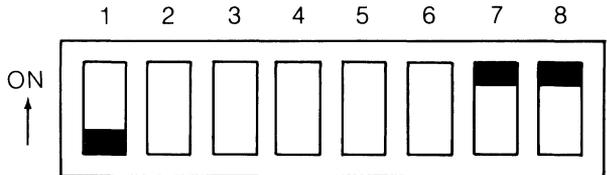
If you have two drives:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

ON ↑
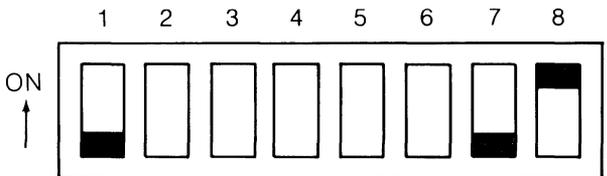
Return to your EtherLink User's Guide, version 1.0, for instructions on replacing the system unit cover and reconnecting the cables and power.

Converting EtherShare 1.0 Volumes for Use with EtherShare 2.0

All EtherShare volumes created with DOS version 1.1 as double sided (/2) with EtherShare version 1.0 must be converted for use with DOS 2.0 and EtherShare version 2.0. A batch file, CONVERT.BAT, and the program ECONVERT.COM are provided on your EtherSeries User Software Diskette, version 2.0 for this purpose. They have *not* been copied onto your EtherSeries/DOS Software Diskette during software installation.

Single sided volumes (/1 or 160KB) do not need to be converted.

The Convert Batch File

Converts an EtherShare 1.0 double sided volume to an EtherShare 2.0 volume.

Format

CONVERT oldvol newvol

Function

Links you to the current volume (oldvol), creates a new double sided volume (newvol) and links that volume. The batch file then copies the old volume to the new volume converting it in the process and lists the contents of the new one to make sure it is as expected. The old volume is then deleted and the new volume is renamed to the old volume name.

Listing

ECHO OFF   Turns off the display of DOS commands as they are read from the batch file.

ES CREATE %2 /2; LINK E: %1; LINK F: %2
                             Creates the new volume and links it to drive specifier F:. Links the existing volume to E:. The name supplied for the new volume is substituted for the %2 variable; the name supplied for the old or existing volume is substituted for the %1 variable.

IF ERRORLEVEL 1 GOTO FAIL

> Tests for an error. If an error occurs, the GOTO is performed. If no errors occur, the next command is performed.

ECONVERT E: F:

> Converts the old volume to the new volume.

CHKDSK F:

> Uses the DOS CHKDSK command to check the new volume.

DIR F: /P

> Lists the contents of the new volume for you to verify.

PAUSE

> Suspends the batch file and displays the message: "Strike any key when ready…"

ES UNLINK E:; UNLINK F:; DEL %1 /NP; RENAME %2 %1

> Unlinks the old volume from drive specifier E:; unlinks the new volume from drive specifier F:; deletes the old volume; renames the new volume to the old volume. The name supplied for the old volume is substituted for the %1 variable; the name supplied for the new volume is substituted for the %2 variable.

:FAIL

> If errors occur, the batch file stops.

Error Messages

Error Messages

EtherShare error messages are displayed in the form of ***Error message.** This appendix lists these messages alphabetically, explains the message and recommends recovery action.

The words VOLUME, USER and SERVER represent any volume name, user name or server name. The actual volume name, user name or server name is substituted when the message is displayed.

Error Message	Meaning/Action
A value must be supplied.	A parameter value is required. No default is assigned.
Bad character.	An illegal character has been typed for this parameter.
Bad server.user name format.	A user name can be an optional server name and a period followed by a user name.
Bad user.volume name format.	A volume name can be an optional user name and period followed by a volume name.
Can't find user USER.	The specified user could not be found on any server on the network.
Can't link to an assigned drive.	You cannot link to any drive id which has been redefined using the DOS ASSIGN command.
Caution: Overlaying default drive X:	You are requesting to link a volume to your default drive. This can get you into trouble.
Caution: At least one server did not respond, so a duplicate user name may result. Add user anyway (Y/N)?	When adding a new user, all EtherShares are checked for that user name. If one of the EtherShares does not respond, it is possible the user already exists on that server. If you are sure the user is unique, go ahead. Otherwise, cancel the operation, and try again later.

Error Messages

Error Message	Meaning/Action
Cross server access failed.	There was a failure in a request to access a server other than the one to which you are logged in.
#CROSS is a reserved user name.	#CROSS is used by EtherShare internally and is not available for general use.
Drive X: in use…OK to unlink (Y/N)?	The requested drive has a volume linked to it. You are asked if the volume can be unlinked.
Enter only one value.	More than one value has been entered for a command parameter. Remember, use a space to separate parameter values.
Enter /P for pause.	In a directory listing, /P is used to request a pause.
Enter /PUB, /PRIV, or /SHAR.	These are the acceptable values for the access parameter.
Enter /W for a wide listing.	In a directory listing, /W is used to display several entries on one line.
Enter /1 or /2, /64KB - /32000KB, or /1MB - /32MB.	Volume size options. /1 is single sided; /2 is double sided. You can also indicate the size in kilobytes (KB) or megabytes (MB).
Ethernet driver not loaded.	You must boot using the EtherSeries/DOS diskette.
Failure formatting volume.	There was a write error while automatically formatting the volume being created. Delete and recreate the volume. If failure continues, you are possibly out of disk space on your server. Use the server ADMIN functions to remove unnecessary undelivered mail and files waiting to be printed, and restart the EtherSeries software.
Maximum users logged in.	No more users can log in to EtherShare. Someone needs to log out before you can log in.

Error Message	Meaning/Action
Max of 2 characters.	More than two characters have been given for a drive id value such as C: or D:.
Max of 8 characters.	A server, user or volume name can contain a maximum of eight characters.
No match.	No name matches the request.
Not enough disk space, numKB remain.	Not enough disk space to create the volume requested.
Nothing to modify.	You must include at least one of the parameters in the ES MODIFY command.
No volumes linked.	You are requesting to list currently linked volumes with the ES DIR /L command. There are none, or you are attempting to "unlink*" and there are no volumes linked.
No volume linked.	No volume is currently linked to the drive specifier given.
Password incorrect.	The password given is not correct. Try again. Be sure you have typed the correct password.
Passwords must be enclosed in parens.	Enter the password enclosed in parentheses ( ). The right parenthesis is not required.
Please log in first.	You must log in to use any EtherShare commands.
Selection must be 1-14.	Select a command by typing the number next to the command option. Only 1-14 can be used.
Semicolon (;) must be followed by a space.	There must be at least one space after each semicolon (;) to separate multiple EtherShare commands entered on one line.

Error Messages

Error Message	Meaning/Action
Server not ready.	The EtherShare server is not responding. It may be too busy or not operating. Try a few more times, then check the EtherShare.
Server not ready ... Correct login name?	No server is responding to your log in request. It may be an unknown user name, or the server may be too busy or not operating. If you are sure the log in name is correct, try again.
Server SERVER not ready.	The server named SERVER is either not operating or too busy.
Unknown command.	EtherShare commands are used in the form ES COMMAND. It must be one of the 15 defined commands.
Use /L or a volume name, not both.	You can list volumes or linked volumes, not both. Use either ES DIR /L or ES DIR volname.
USER already exists on server SERVER.	The user name you want to add to EtherShare already exists on the server named SERVER. User names must be unique on the entire network.
USER unknown.	The user name you want to delete does not exist on the EtherShare to which you are logged in.
Value must be X: through X:.	You can link EtherShare volumes to the drive specifiers shown only.
Values ignored from XXX.	Too many parameters have been given. The command has been executed, but all values including XXX have been ignored.
VOLUME already exists.	Each volume you create must have its own unique name.
VOLUME has no assigned password.	You cannot access another user's volume unless a password has been assigned and you give that password.

Error Message	Meaning/Action
VOLUME is a private volume and already in use	Private volumes have exclusive access. Once a private volume has been linked, no other user can link it.
VOLUME is linked.	You cannot modify or erase a linked volume. You must first unlink the volume using ES UNLINK and make sure no one else has it linked.
VOLUME is linked to X: ... OK to unlink (Y/N)?	The requested drive is currently linked to VOLUME. Confirm if it is all right to unlink VOLUME.
VOLUME not linked.	When requesting an ES UNLINK for VOLUME, it is not currently linked.
VOLUME space is full.	All EtherShare disk space has been used. An EtherShare volume must be deleted before space will be available.
VOLUME unknown.	There is no EtherShare volume with this name. Check the spelling. Make sure you include the owner's name if it is not your volume.
Write to network failed.	Your IBM Personal Computer cannot access the network probably because the network itself has a problem. Consult the EtherLink User's Guide for help in finding the problem.

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