AppleShare PC 2.0 (Discontinued)

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NOTE: AppleShare PC was discontinued by Apple in 1990.

Overview

AppleShare PC 2.0 is a revision of the existing AppleShare PC 1.2. This
software allows MS-DOS machines to act as clients to an AppleShare File
Server and to access print services provided on an AppleTalk network.

New features

AppleShare PC 2.0 provides the same functionality as earlier versions with
the addition of support for AppleTalk Phase 2 protocols and the Open
Datalink Interface (ODI), which was designed by Novell in conjunction with
Apple. ODI is a set of specifications that allow a separation between the
network protocol stacks and the device drivers. These drivers are specific
to a particular network medium such as LocalTalk, Ethernet, or Token Ring.
In the past, with versions of AppleShare PC 1.1 and earlier, the network
protocol stacks and Link Access Protocol drivers were integral. They could
not be separated to provide support for third-party network cards and
consequently, only the Apple LocalTalk card worked with AppleShare PC.
Version 2.0 includes drivers for:

- 3COM's EtherLink II and EtherLink/MC (Microchannel)
- Three IBM 802.2 Token Ring cards
- Daystar's Microchannel LocalTalk Card
- Apple's LocalTalk card

Only those cards listed above have drivers included with AppleShare PC 2.0.
Because Novell has published the ODI specifications, drivers for other
network cards, such as Microchannel LocalTalk cards, will be provided by
third-party vendors.

The AppleShare PC 2.0 installation program also has the ability to load
only AppleShare File Services, only AppleShare Print Services, or both.
This is useful when memory use is restricted. AppleShare PC 2.0 now
includes additional batch files, which allow dynamic loading and removal of
AppleShare File Services and Print Services.

Open Datalink Interface

Novell's Open Datalink Interface (previously called MLI/MPI) provides
support for any number of network protocols (such as AppleTalk, AppleTalk
Address Resolution, IPX, Netware, TCP/IP) working with any type of network
media interface. This gives the user the ability to add or change network
protocols without having to change network interface cards.

ODI also provides major benefits to third party developers by allowing
them to write only one device driver for their card. The driver will then
work with any set of network protocols. Because the AppleTalk Phase 2
protocol stack is being written to the ODI specification, AppleTalk
services, such as the AppleTalk Filing Protocols and AppleTalk Print Access
Protocols, can be used over any network card that has a device driver
written to the ODI specification.

Communications between the protocol stack drivers (currently referred to
as the MPI interface) and the network card drivers (currently referred to
as the MLI interface) are handled by the Link Support Layer (LSL). Under
the ODI specification, data packets need only be directed to the LSL
instead of a specified device driver. The LSL then acts as a "postal
service," which correctly directs inbound and outbound packets to the
specified stacks and drivers. This means the system is responsible only for
directing data packets to the LSL instead of the full distance to the
protocol stack or some specified driver.

Installation

The AppleShare PC installation software has been improved. In version 2.0,
each step of the installation has on-screen instructions and is much more
flexible in its options. For example, you can now select which services are
to be loaded into memory. You can choose file services only, print services
only, or both. You can also choose to load only the MLI drivers for certain
network cards or to load the MLI drivers and the AppleTalk protocol stack.

When loading the selected modules into AppleShare PC 2.0, you can now
calculate the amount of memory that will be used based on the options
installed. Below is a table describing the memory requirements:

File and Print Services 117 - 126K
File Services only 91 - 100K
Print Services only   62 - 71K
AppleTalk and MLI driver(s) only   49 - 58K
MLI driver(s) only 13 - 22K
Add 57K to make the DA memory resident
Add 6 - 15K per additional MLI driver

The AppleShare PC 2.0 installation program presents a list of cards that
have MLI drivers resident in the AppleShare PC installation directory. You
can choose one or more MLI drivers corresponding to the cards installed.
For some cards, such as third party Ethernet and Token Ring cards,
additional questions will be presented in the installation, such as the
settings of the card's DIP switches, DMA interrupt addresses, and IRQ
settings. Refer to the card's user guide for the proper setting of these

switches and addresses.

If multiple network cards are installed in a machine, the installer will
ask which MLI driver to use as the default. To change MLI drivers after the
default has been loaded, use the USE option of ANET.

New ANET Features

The ANET command interpreter, which performs functions similar to the DA
through the command line and batch files, has several new subcommands.
These new subcommands now support AppleTalk Phase 2 and ODI features. Below
is the syntax of the four new ANET subcommands.

CONFIGURATION allows you to view configuration information about MPI stacks and
MLI drivers.
CONFIGURATION [[ALL [STACKS | MLIDS]] | MPIstackname | MLIDname]

DEFAULT sets a new MLID as the default when AppleShare PC is started. DEFAULT
with no parameters displays the current default MLID.
DEFAULT [MLIDname]

LIST displays all Apple TSRs, MPI stacks, and MLI drivers.
LIST [TSRS | STACKS | MLIDS | ALL]

REMOVE removes most Apple TSRs, MPI stacks, and MLI drivers from memory.
REMOVE ALL | modulename [modulename]...

STATISTICS allows you to view statistics from the Link Support Layer, MPI
stacks, and MLI drivers.
STATISTICS [LSL | MPIstackname | MLIDname]
STATISTICS ALL [STACKS | MLIDS]

USE allows you to change the currently loaded MLID, card number (if an MLID
supports more than one card in a machine), zone name, and/or suggested network
number.
USE MLIDname [#cardnumber] [Z(zonename)] [H(netnumber)]

AppleTalk Phase 2

AppleTalk Phase 2 is required for AppleShare PC 2.0 environments using
Ethernet or Token Ring networks. For AppleTalk networks using only
LocalTalk cabling, AppleTalk Phase 1 protocols are used.

One consideration to be taken into account when using AppleShare PC 2.0 in
an AppleTalk Phase 2 environment: if an MS-DOS client is on a network with
no routers and a router then comes up on the network, the AppleShare PC 2.0
client may be required to restart their machine. This is because on a
Phase 2 network the zone and network number can be defined by the node if
no routers are present. When the router appears on the network, it will
define the zone and network numbers, which may conflict with those defined
by the node (i.e. the AppleShare PC 2.0 client).

Compatibility

AppleShare PC 2.0 is compatible with MS-DOS 4.0, and all MS-DOS programs
which were compatible with AppleShare PC 1.x.
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