AUN/Level 4 Fileserver Release Note

Introduction

These notes refer to Release 3 of the AUN and Level 4 Fileserver software and to Release 1 of the Application Accelerator, and give guidance and advice on installation and any restrictions in their operation.

Discs and applications supplied

The product consists of four $3\frac{1}{2}$" discs:

- AUN disc
- Level 4 Fileserver Applications disc
- Level 4 Fileserver Support disc
- Application Accelerator disc.

AUN disc

The AUN disc contains all the software that is required to use Ethernet for traditional Econet applications.

Level 4 Fileserver Applications disc

The Level 4 Fileserver Applications disc contains:

- The three applications: !Server, !Spooler and !Manager.
- !Mailman, which enables you to support simple mail services.
- A !System directory holding a number of updated modules which are required by the product.
- A new version of SetStation, suitable for RISC OS 3 machines.
- Additional programs and applications.

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The **Level 4 applications** are:

- !Server 1.32 14 Jan 1994
- !Spooler 1.10 19 Aug 1992
- !Manager 1.10 19 Aug 1992

You can, of course, run all these applications on a single machine. However, for best performance and the minimisation of problems we recommend that you run !Server and !Spooler on separate machines.

The **Mailman** version supplied is:

- !Mailman 1.06 25 Jun 1992

The **updated modules** supplied in !System are:

- ABCLib 4.01 11 Feb 1991
- Econet 5.56 18 Sep 1991
- IRQUtils 0.14 09 Aug 1990
- NetFS 5.60 11 Nov 1991
- NetPrint 5.38 29 Aug 1991
- WimpMan 1.92 13 Jun 1991
- WimpUtils 0.04 09 Mar 1989

You must install ABCLib and WimpMan on any machine running the Level 4 applications. We also strongly advise that if you have any RISC OS 2 client machines, you should install both this version of Econet – as it prevents errors occurring on the network – and this version of NetPrint – so you can take advantage of the extra performance it delivers.

To install the modules you need to use the !Merge application to update your !System from the supplied one:

1 Double click on the !Merge application.

2 Drag your existing !System into the dialogue box that appears, followed by the !System supplied with the Level 4 software.

If you need more detailed instructions, choose **Help** from !Merge's Filer menu.

The **additional programs and applications** are:

- A Level 4 program, that uses some of the !Server code, but runs in a standalone mode.

- A copy of !Merge, to enable the !System to be updated easily.

- The RISC OS 3.1 NetUtils application, to ensure correct network operation with RISC OS 3.1 clients.

- Read_LFAU, a small program which enables the Network Manager to ascertain what the LFAU is on the fileserver disc to see if it is optimum.

- A directory called Extras which contains:

    - example !ArmBoot and !Boot applications

    - !Scrap

    - a !Fonts directory that is designed for use on a mixed RISC OS 2 and 3 network

    - !Fonts1 (included with permission of SJ Research Ltd.) that enables large numbers of fonts to be available over the network, without adversely affecting application loading time over the network.

Level 4 Fileserver Support Disc

The Support disc contains programs and utilities for BBC Master and Model B computers, and also RISC OS example boot files. Please refer to the *Network Managers' Guide* for details.

Application Accelerator disc

The Application Accelerator disc contains software which provides a fast way of delivering applications over an Ethernet network. It can also be used to deliver any other read-only files.

Memory Requirements

Although the manual states that a 1MB machine may be used for the applications, and 2MB is the minimum if the AUN modules are also being run, you cannot run both !Server and !Spooler on a 1MB machine.

!Server

NetUtils

If client machines running RISC OS 3 (versions 3.10 and 3.11 only) manipulate large files of 128K or more over the network, there is a possibility of the files being corrupted. To ensure that this does not occur, make sure that any 3.10 or 3.11 client machines load the NetUtils module. We suggest that you use the supplied !Armboot application to ensure that this occurs.

NFS Mounts

It is possible that !Server will halt with an error box if an NFS connection that it is exporting fails. Ensure that the connection is working before specifying it in the Exports file inside !Server; a faulty mount command may prevent the Server from starting.

Ensure that the exported mount does not require a password. If a password is expected, the server will not start until this password is typed at the keyboard, although no indication is given of this.

Extended Directories

It is not possible to have more than 77 objects in the root of an exported filing system. Although in some circumstances it may be possible to create more than 77, they may not always be accessible. When creating new users that have their User Root.Directories in the fileserver root, ensure that this limit is not breached. Symptoms of this are Not found error messages, and sometimes objects vanishing from filer windows.

CD-ROM

If an entry in the exports file specifies a CD-ROM drive, ensure that, whenever the Server is started, the drive is switched on and a suitable CD-ROM is inserted into the drive. A missing or unsuitable CD (such as an audio one) will prevent the Server from starting.

If a CD-ROM is changed while it is still being accessed by a network client, the client will receive the error message Not found rather than Disc changed.

Use of 'Open $'

Under some circumstances, it is possible that the **Open $** command from the desktop can result in the wrong directory being displayed. This may occur if more than one filing system is being exported and both client and server machines are running RISC OS 3 version 3.10 or later.

'No Reply' errors

Under conditions of heavy load, especially when both Econet and Ethernet are being used, it is possible for No reply errors to be reported on the client machine. Under these circumstances, retry the network transaction.

Exports

Ensure that any filing system that is to be exported has a valid name. A floppy disc with a disc name such as 15_41_Fri will not allow the Server to start, because it starts with a number. Either choose a valid name for the disc, or add a name at the end of the export line in the same way that you can for CD-ROMs.

Note that with RISC OS 3 (version 3.10) servers, it may not be possible to export the RAM filing system by changing its name; use the technique of adding the export name as for CD-ROM.

Using !Server from BBC Model B and Master computers

The BBC Model B cannot access more than 77 files in a library directory on the fileserver.

If you attempt from a BBC Model B or Master to change directory to a disc that does not exist, the server will lose its context handles and disconnect you. You will then have to log on to the server again.

The ADT XFER program has been known to corrupt files when used with the Level 4 Fileserver.

Use of Read_LFAU

In some circumstances, in particular when a fileserver is set up with several hundred users, each of which have a number of directories which may be either empty or only have a little data inside them, then as each directory consumes space on the disc, it may be that a significant amount of disc space is 'lost'. By reducing the Large File Allocation Unit, the map size on the disc is increased, but the 'lost space' is reduced. This is particularly true with larger discs, say 150 MB and more.

As a first approximation, you may wish to halve the default LFAU size, if you feel your fileserver structure will contain large numbers of (near) empty directories.

Double click on the Read_LFAU program, and follow its instructions to determine what the current size is on the selected disc. Then reformat the hard disc, as per the manufacturer's instructions, and enter the new LFAU size as appropriate when prompted. Do not forget that reformatting a disc will destroy all the information stored on it.

!Manager

Use on Fileserver machine

When using !Manager on the machine that is also running !Server, the fileserver list may be seen to contain the actual name of the fileserver as well as the name **Local Server**. Always select **Local Server** to make changes to or examine the local **Users** data.

Note: If Econet is not fitted, due to Ethernet being the only used medium, then local manipulation of the **Users** data may only be done by opening the !Server directory and dragging the Users file to the Manager Icon on the Icon bar.

!Spooler

Impression

It is not possible to use **Pamphlet** format printing from Computer Concepts' Impression via a Level 4 Spooler. Some data on the second side of paper may be lost.

AUN

Devices supported

The device drivers included are for Econet, Acorn Ethernet 2 and Acorn Ethernet 3. Drivers for other third party cards are available from the third party suppliers themselves, as stated. The directory Extras contains an unsupported driver for Ethernet 1 cards.

Dual Routing

The version of NetFS (5.78) in the RISC OS 3 (version 3.10) ROM cannot reliably support *dual routing* – i.e. where there are two possible routes for messages to take between a single Level 4 Fileserver and a single client station. This arrangement is technically possible via AUN software if both machines are connected to the same AUN Ethernet network as well as to the same native Econet network. This restriction is hinted at in the AUN Manager's Guide (see *Using redundant Econet interfaces* on page 6), but requires stronger emphasis.

TCP/IP Protocol Suite

The AUN Manager's Guide (*Appendix: AUN and* TCP/IP) describes how software components from the AUN Software disc may be used together with software components from Acorn's full standard TCP/IP product, the TCP/IP Protocol Suite. This is the case only with TCP/IP Protocol Suite Release 2, or later.