A7000 Network Resources Pack

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Introduction

This pack contains the software you require to enable a number of Hard Discless A7000 computers to boot their system resources from a remote 'server' machine.

This server machine can be a Level 4 FileServer, running the Application Accelerator software (supplied *as* part of this product), or from a 'Shared' disc exported by Acorn Access or Acorn Access+.

Seven Network Resource discs are supplied. These include:

- a disc entitled Client Boot Disc which contains an 'emergency' !Boot application which should enable a computer to he used in the absence of network resources. It also contains an application !Clientini which should he used for initial configuration of the client computer.

- a disc entitled Disc 1. This contains an up to date (DCI-4) set of network software which you will need if your server machine is running on old DCI-2 cards. It also contains a new version of !AAServer that you should use. It is DCI-4 compatible, but also allows easier set up of client machines. The !Installer application is used on the server machine to load the remaining resources that the A7000s will need, to the correct place. A copy of SetStation is included in case you need to alter or set your Econet Station number on any machine.

- the remaining five discs contain the resources and support applications for the client computers. They will be requested by the !Install program when

   they are required.

DCI-2 and DCI-4

You can skip this section if you're not interested in the underlying technology, but it's included to help understanding of some of the issues.

DCI-2 (standing for Device Control Interface Version 2) was developed to allow the network software to be run over a number of different manufacturers' Ethernet cards, *as* the original DCI-1 was written as one software module, from a cut down version of the Berkley socket interface to the driver software. DCI-2 cards do not allow the use of the more complex TCP protocol, or the addition of different

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protocols (like NETBEUI which is used with the Acorn SchoolServer products).

DCI-4 was developed to allow much greater flexibility between different protocols and Ethernet cards, to allow parts of the 'protocol stack' to be reloaded, restarted or replaced easily and to maximise performance and reliability.

Therefore, it is generally a good thing to upgrade machines on your network from DCI-2 to DCI-4 as time and resources permit. Don't worry unduly, however. DCI-2 machines are quite happy to talk to DCI-4 machines and vice versa.

If the server machine has an old DCI-2 Ethernet card, you may wish to upgrade the network software to DCI-4. The only reasons for not upgrading may be that you have an Acorn Access (Release 1) card, and are not ready to get an upgrade to Access+ or that you have an obsolete Ethernet 1 (AKA25) card for which there may not be a DCI-4 compatible driver available.

How can you tell if you've already got a DCI-4 compatible card? Open a task window or hit F12 and type at the * Prompt:

```
*Help interne.
```

The computer will give details of either the InternetA module (DCI-2) or Internet (DCI-4) with a version 4.xx - the 4 confirms that it's DCI-4.

Setting up the server machine.

Firstly, you may wish to upgrade the network software to DCI-4. For this there is a copy of !Bootnet with a new !System that contains all the network modules you require on disc NetBoot_l. The safest thing to do is to *Unplug all the old software modules that come off the existing Ethernet card and soft load the new ones with ! Bootnet. You can do this by first seeing which modules are loaded off the network card with

```
*ROMModules
```

This will list (towards the bottom) the modules from each expansion card. Identify those from the ethernet card and then unplug these. For example if you have an AEH54 interface then you should:

```
*Unplug Ether3
*Unplug InternetA
*Unplug Net
```
etc

You will need to update the file !Bootnet.!Configure to load the correct Ethernet driver. Read the comments in this file, and then update the line

```
set Net$Device ""
```

to

```
set Net$Device Ether3-16
```

for example.

If you have AUN Gateways on your network, you should also update the file !BootNet.Files.AddMaps as per the instructions in the file, or explained more fully in the AUN Managers Guide.

Note that as this version of !BootNet expects to find the network modules and drivers inside !System, not inside !BootNet, you should therefore use the !SysMerge provided to update your !System.

Now add a line to the server machine's !Boot file or application to run !Bootnet on start up, preferably before the machine enters the desktop. On a RiscPC you should create a small obey file that simply contains for example

```
*Run ADFS::4.$.NetStuff.!Bootnet
```

and place this into !Boot.Choices.Boot.PreDesk

On older machines, incorporate this command into an appropriate place in the boot sequence.

You should now reboot the server machine, and check that normal client stations can still access it as before.

New AAServer software

A new version of the !AAServer application is included. You will need this if you have updated your network software to DCI-4. It also allows the exported mount to be shared as a 'Protected' mount instead of a 'Read only' mount so that client station information can be written back into the !ShareBoot directory while you are setting up the client machines, and also the use of a shared !Scrap between all the clients. More about this later.

Copy this new version into the appropriate place on the server's hard disc, having moved the existing version into a temporary area for safe keeping.

Installing the !ShareBoot resources

Ensure that you have sufficient space on the hard disc of your server to place all the A7000 resource data. This totals 10 MBytes. If you are very short of space, you may choose to omit some of the data files, but be careful that you do include all the files that the client machines expect to find.

Insert disc NetBoot_1 into the floppy drive of the server machine and double-click on the !Installer icon. The application will then commence, first inviting the user to define where the directory containing the !ShareBoot is to be located and then asking for discs to be inserted as required, informing the user of the progress of the installation.

By default the data will be put into a directory called $.A7000_Disc. You may wish to place it elsewhere. but it is recommended that it is not placed too far away from the root of the disc.

Sharing the directory

It is wise to reserve a separate 'Shared disc' for A7000 discless machines, as other machines, especially older ones, should not be tempted to run the !ShareBoot application that was designed for the A7000, although it will complain reasonably if you try to do this. The default name of A7000_Disc should be used unless there is a good reason for doing otherwise.

You may share this directory either by using the copy of !AAServer supplied with this product, or if you have Acorn Access or Access+ by using an appropriate

line in the server's bootfile.

With the Application Accelerator !AAServer, you may now export a directory as a protected mount. You should use this facility so that you can save individual client machine's choices back to the server, and make use of a shared !Scrap. Double click on the !AAServer application (or ensure that a line in the Boot file of the server starts the application) and then drag the A7000_Disc directory onto the AAServer icon on the icon bar and select the protected option to share this directory.

Alternatively, if you are using an Access or Access+ shared disc, then add a line such as:

```
*Share ADFS::4.$.A7000_Disc -protected
```

When all machines have been set up, you could export the Boot mount as read only, to ensure that no data is changed, but in this case you must ensure that a copy of !Scrap with appropriate write access is available to the client machines.

Note that you will not be able to export the 'disc' from a Risc PC with the hard drive locked, as write access is required for the exported !Scrap.

Client configuration

When the server is up and running, you should then go to each client A7000 in turn and configure these machines so that they can boot their resources from the server.

Discless A7000's are set by default to have no hard disc configured when they leave the factory, but be warned that the action of a Power-on-Delete will reconfigure an IDE Hard disc. Setting an IDE disc as present will have the effect of making a 60 second timeout take place before the operating system decides that no disc is present.

The disc entitled 'ClientBoot' contains an 'emergency' !Boot application that can be used if the network is not operational and an application called !Clientini which is used to configure the client machines.

At each client machine, perform the following actions:

- Insert the floppy disc 'ClientBoot'
- Reboot the machine
- When the machine complains that it cannot hoot, click on the 'Floppy boot' option
- A 'Discs' window will appear with the protected disc 'A7000_Disc' in it
- Double click on the A7000_Disc Icon. The mount will be placed on the icon bar.
- Menu on that mount, and save choices.
- Re-boot the client machine, and confirm that it boots correctly.

You may then alter the configuration of the machine by double-clicking on the ! ShareBoot application, and using the configuration window in the same way as a machine with a hard disc.

If you then wish to prevent users from altering their saved configuration, you should alter the access permissions on the directory !ShareBoot.MchConfig to remove the public write access attribute.