UEA Computing Centre Alpha Unix Systems

Notes on the clone configuration and building procedures

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These notes describe how the Unix workstations and servers can be cloned from
a master system based on the standard Digital DMS client model.

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Cost £0.00

Contents

The UEA DMS configuration

The standard Digital DMS (Dataless Management Services) environment is described in the Digital Unix documentation set title ' Sharing software on a local area network ' .

In the standard model a client workstation uses a local disk for page/swap only . It has a private write area for root & var held on the servers disks and shares a read only copy of usr with other clients. The client is booted over the network .

The local modification to this model builds a single client only in the DMS area which can act as a 'clone' for building a real clients root & var partitions on the local disk but retaining the shared usr from the server.

This modification has also recently been extended to clone the Unix servers by using the same DMS client but additionally copying the /usr partition to a local disk to make an independent system.

The advantages of this are that the standard Digital setup scripts such as nfssetup/nissetup etc. which configure the local UEA parameters of the system and the set of layered products such as compilers need only to be installed once on the master client system. The clone installation subsequently only takes about 15 mins. for a workstation or 90 mins. for a server compared with a typical 'best part of a day' for a standard installation from a Digital cdrom. Another advantage is that the clone systems are given a consistent set of parameters/files.

The configuration on the DMS server (cpca8) is as follows:

DMS area   /var/adm/dms/dms0.alpha/root

This is the initial build area from which all clients in the standard model are derived.

The standard model actually allows for multiple DMS areas (dms1.alpha etc.) for situations where different usr software profiles are required.

Client area   /clients/cpcw99   (actually /var/clone/cpcw99)

This is the single clone client area for root & var .

Considering the server system filestore as a whole there are therefore multiple versions of files which would only appear once on a simple system. For example

/etc/fstab appears in the following

For cpca8 proper   /etc/fstab

For the DMS build area   /var/adm/dms/dms0.alpha/root/etc/fstab

For the Client   /clients/cpcw99/etc/fstab

Clone building scripts

The /ueasystem directory holds the information needed . Note that just as in the example above there are 3 areas (/ueasystem , /var/adm/dms/dms0.alpha/root/ueasystem and /clients/cpcw99/ueasystem) to consider when updating files.

cpcw99on *name*

This takes a single parameter as the node name of the target workstation or server for the clone. It picks up the ethernet hardware address from e.g. cpcw1.ha & runs the dmu utility to set up the bootptab entry for a network boot.

wsinstall

This script is run from the network booted clone to copy root & var information from the clone area to the local disk. It is tailored to the CPC workstations configuration and will not work in the general case.

For the servers the corresponding script is **srv400install** or **srv900install** or **srv901install** depending on the model. The differences result from the differing system disk configurations on the various models.

wschangeto *name*

Once the clone has been built on the local disk as cpcw99 this script will change the identity to the node specified as a parameter . It also configures the fddi interface and copies some commonly updated files from /sw1/cluster-common to produce an up to date system with respect to recent UEA changes (e.g. automounter files).

For the servers the corresponding script is **srvchangeto** and is the same for all servers.

System start-up files (**/sbin/init.d/UEA-local**)

Host specific and local boot time scripts can be run from /sbin/init.d/UEA-local which is entered after all the normal Digital scripts have been executed.

Printing

Each host has a local copy of /etc/printcap . LAT / Terminal Server printers are accessed remotely via cpca6 . The local postscript printers are also accessed remotely via cpca6.

Email

cpca2 acts as the mail hub for the Alpha cluster. It provides a mail spooling area & handles all inbound mail from the uea.ac.uk hub (mailgate1) . Outbound mail from the Alpha cluster is also routed via cpca2 (smtp.uea.ac.uk).

Global user start-up files (cshrc , profile , login)

The prototype user files source a system wide file. Prototype files are maintained on /sw1/prototype-user for copying to new accounts .

The global files source user specific files (.cshrc.mine , .profile.mine , .startup.tty) following the standard Athena template.

cshrc also sources .environment & .path in the 'once per session' section
profile   "   .environment.sh & .path.sh   "

Old Athena created accounts source the new global files by virtue of a link from /usr/athena/lib/dotfiles to /usr/local/dotfiles .

Each client & server in the new configuration has a local copy of the global files held on /usr/local/dotfiles (actually /var/local/dotfiles) .

Server and Client partitions in DMS and UEA configurations

UEA Client(cpcw1)   DMS Client (cpcw99)