New procedures for restarting the MC farms.
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(UTA-Hep/Computing/0005)

The following procedure applies both to rebooting the farm and to restarting it after power glitch. They are supposed to replace those described in note 001.

Introduction

There are three types of nodes in the farm: the server, file servers and execution nodes. The servers are cse000 and hepfm000. The file servers are hepfm001-3 and cse001. The remaining nodes are execution nodes.

All nodes mount their home directories on server. All execution nodes mount cache disks on file servers. Main server mounts all cache disks on all nodes.

Order of starting nodes

1. Power on man server (hepfm000 on hep farm, cse000 on cse farm). Once it is up and running
2. Power on the file servers (hepfm001-3 and cse001). Once they are up and running
3. Power on remaining nodes. Sometimes nodes do not boot properly after first time. Try to ping them and/or logon to them to see if they are ok. If not – reboot them again, until all nodes are ok.

Starting farm software and mounting NFS disks

Starting farm software and mounting NFS disks is now done in one step. From mcfarm account on main server do

start_farm

This will mount NFS, start distribute daemon, lock manager, monitor daemon and execute daemons at worker nodes. Some execution daemons might report that they were not started properly. In most cases this is a glitch: logon to such node and try to run

start_execute

as user mcfarm on this node. It will start the execute daemon.

Fix crashed jobs

If the farm was down due to power problems then there are likely crashed jobs staying idle on machines. To fix them do

jobstat -r

The output will give list of jobs in the run directories and their status. For every job with status
STALLED or INCONSISTENT do

check_job –f *jobname*

This will fix this job.

Once all jobs are fixed

Start the gather daemons

On the main server, as user mcfarm do

start_gather --method=cache

Start sam station and sam gather daemons

For the time being this applies to hep farm only, we do not run sam on cse.
Sam daemons run on three nodes: hepfm000,004 and 005. Logon to each one of those nodes and do:

As user sam:
source ~products/etc/setups.sh
setup ups
setup sam
export SAM_STATION=uta-hep
ups start sam_bootstrap

This will start sam station daemons. Then **as user mcfarm** do

start gather –method=sam

on the same node.

Start bookkeeping package

On main server, as user mcfarm do

cd ~/production_logs/bookkeeper
start_dolog

You will be prompted for mcfarm password.

That's all folks.

Warning about rebooting hepfm000
Once upon a time a faulty piece of shareware software has damaged boot sector on hepfm000 disk. Ever since hepfm000 will not boot from its hard disk. For that reason we boot it using a floppy disk, inserted permanently into its floppy drive. Do not take this floppy out. The disk problem will be fixed in some distant future, when we change linux version to Linux 7.*. For the time being booting hepfm000 must be done from floppy.