

SARA dCache Environment

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SARA Computing and Networking services

HPCV

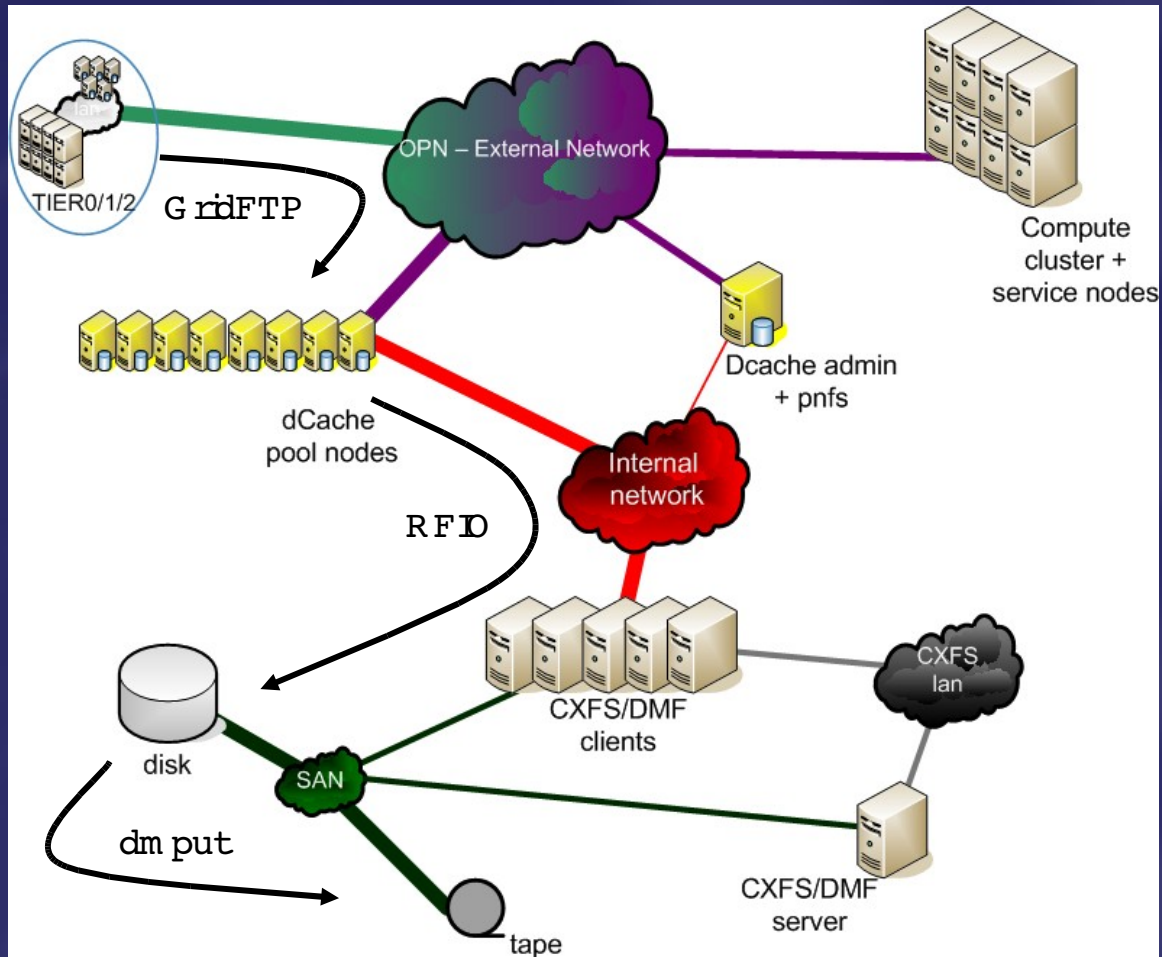
- Tier1 (LHC data)
- Other grid related projects
- Archive

Hardware

- ▀ Storage servers
 - ▀ 15 dual AMD Opteron, local disk space
- ▀ Grid servers
 - ▀ 6 Dual Intel Xeon
- ▀ Mass storage clients
 - ▀ 3 dual Intel Xeon, SAN attached
- ▀ Mass storage server
 - ▀ Quad R16K MIPS, SAN attached, 1.6 TB filesystem
- ▀ Tape Library
 - ▀ Sun/StorageTek Powderhorn
 - ▀ Sun/StorageTek SL8500



- External LAN
 - Interface to Tier0/1/2
 - Gigabit
- Internal LAN
 - Interface to Mass storage environment
 - Gigabit
- Management LAN
 - TCP/IP services and remote login
- Console LAN
 - Remote console connection



- Cfengine
 - Change management
 - Install new software
 - Run commands
- Systemimager
 - Quick installation
- Scripts

Nagios

- Easy overview
- Notifications
- Highly customizable
- Plug-ins

Ganglia

- Graphs

The screenshot shows the Nagios web interface in Mozilla Firefox. The main content area displays 'Current Network Status' and 'Host Status Totals'. Below this, there are 'Service Status Totals' and a table for 'Service Status Details For All Hosts'. The table lists services like 'DiskSpace' and 'sara_radpointml' with their respective statuses (WARNING, CRITICAL), last check times, durations, and status information.

Host	Service	Status	Last Check	Duration	Attempt	Status Information
rad1	DiskSpace	WARNING	17-01-2007 09:39:42	54d 11h 26m 28s	4/4	DISK WARNING - free space / 60 GB (93% node=99%, root 0 GB (90% node=99%), space 163 GB (11% node=99%)
rad1	sara_radpointml	CRITICAL	17-01-2007 09:40:09	6d 20h 42m 9s	4/4	CRITICAL: VolumeSet 1 degraded: drive 9 (GT3500036AS, 500.1GB)

The screenshot shows the Ganglia Cluster Report for Wed, 17 Jan 2007 09:44:08 +0100. It displays a 'Cluster Report for Wed, 17 Jan 2007 09:44:08 +0100' with a 'Metric' of 'load_one' and 'Sorted' by 'descending'. Below the report, there are several graphs: 'Overview of Tier1 Cluster', 'Tier1 Cluster Load last hour', 'Tier1 Cluster CPU last hour', 'Tier1 Cluster Memory last hour', and 'Tier1 Cluster Network last hour'. A 'Cluster Load Percentages' pie chart is also visible.

- World readable files
- Admin node restart → Pools too?
- dCache database unavailable means losing files
- SRM database size
- Stability

Questions?

Thanks for listening