

A short presentation from Owen Syngé

SA3 and dCache



Overview

- dCache and I.
- Testing resources DESY provides.
- What is pending integration?
- What is coming to dCache
 - That is of interest to grid Integration.
 - In the next 6 months
 - Sorry dCache is a big team 18 months is to long
- Our internal testing framework.
- How dCache release.
- Questions

dCache and I

• dCache

• Large Storage Project

• Developed initially DESY

- Now in OSG, Glite, NGDF, and VDT (maybe more)

• Now large Collaboration

- With a lot of developers
- With a lot of features.

• Owen Synge

• Integrating the Grid for some time

• 50% EGEE Funding (As an Admin)

- 50% dCache support as 3rd line (Some dev work)

• YAIM Module Developer

- Tester/Packager/Certifier

Development for dCache

- We have a conventional dev model.
 - Feature releases and bug fix releases.
 - Branching and merging.
 - Review of patches to code base.
- Revision control system
 - Mercurial + SVN based code
 - Available for unauthenticated download
 - For Etics and our build system



Pending YAIM work

- Pending YAIM work and/or needs testing
 - Information and monitoring system
 - Glue (dynamic information provider changed)
 - Instability of GLUE 1.3 semantics, but not syntax!!!!
 - Delayed due to use of XML configuration files.
 - Cell monitoring
 - Multiple Group Id's for SRM remove
 - Prod-manager may have more than one GID
 - Current mapping system hard coded
 - Resolves issue some issues with SRM remove.
 - Maria reminded me of more YAIM work!!

dCache Features / Delivery Order

- Immediate future (Very soon)
 - Pin Manager (Release by FQAN)
 - Tape Protection (disable access by VO Role)
- Authorization gPlasma
 - Multiple GID's
 - FQAN -> GID's
 - Is now Dynamic, and based upon proxy details
 - VO, Roles and Groups
 - No longer maps through single identity.
 - LCMAPS
 - Integration planned so UID / GID's should be consistent.

Delivery of ACL's

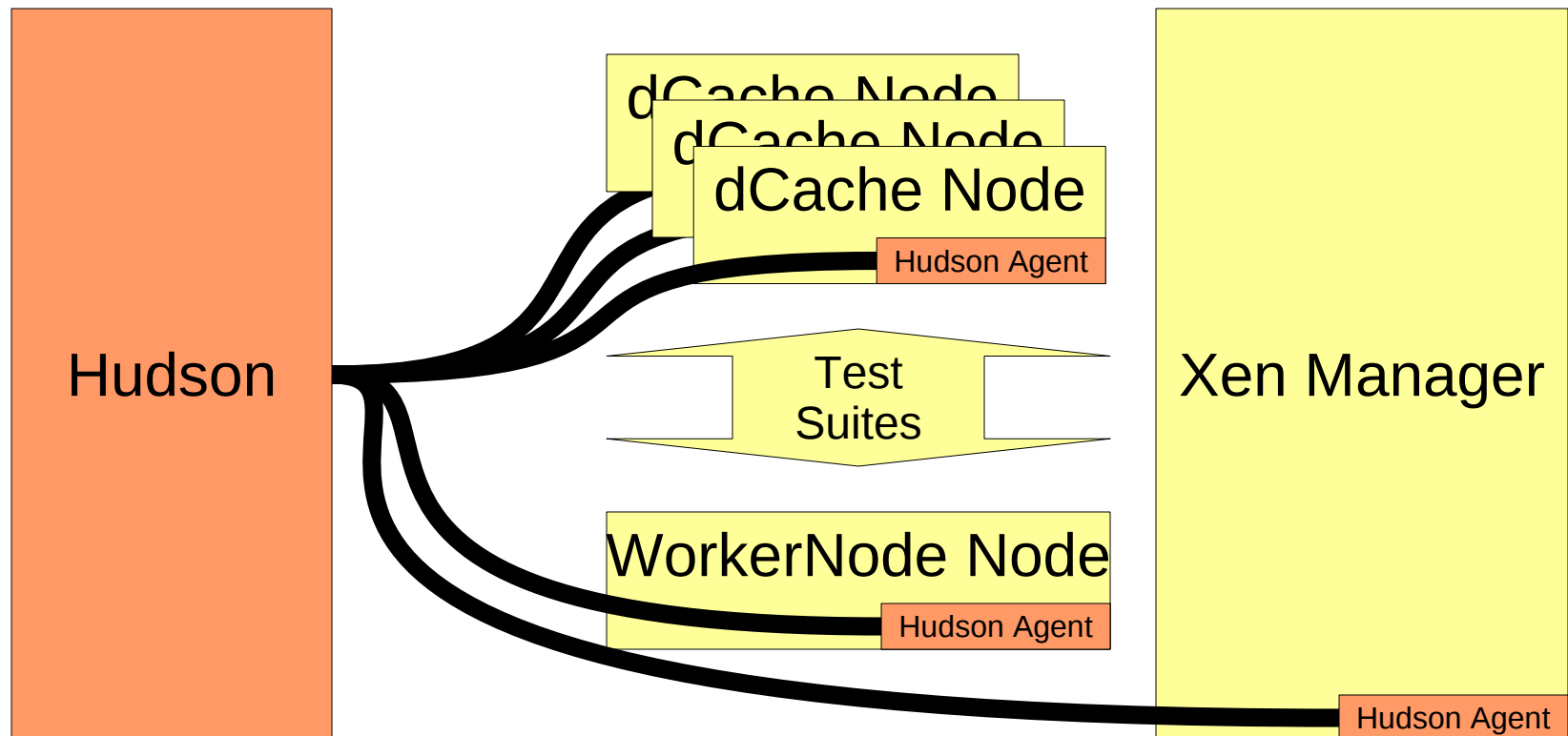
- Dependent on gPlasma Upgrades
- Development phase completed
 - not yet accepted into code base
 - on a branch.
- ACL is standards based.
 - NFS v4.1 ACL's or UNIX permissions
- ACL management
 - Administrator ACL management tool
 - Standard Linux clients available
 - Only with NFS 4.1 mounting, and Kerberos
 - Possibly available with Grid Certs
 - GridNFS client developed by CITI
 - University of Missigan

Pre cert Functional Testing Framework

- Hudson based system
 - Agent based model of operation.
 - Integrates scripts to a “build system”.
 - Uses virtual machines to test fresh installs.
 - Yum based installs, followed by dCacheConfigure.sh
 - Xen based -> vmimagemanager.py
- Unit testing
 - Use jUnit, and getting better fast.
- Functional testing
 - Not bad here.
- Regression testing
 - Don't do enough but some work done.

Hudson Agents

Hudsons Agents, launch Scripts,
These scripts run tests and virtual machines (SL4)
Leads to fresh install testing, via dCacheConfigure.sh*
and upgrade testing.



*YAIM now uses dCacheConfigure to configure dCache.

What Cert Resources do we provide?

- We have one computer
 - 8 core, 8 Gb RAM
 - 10 virtual hosts
 - 6 dCache instances
 - 2 SL3 instances to be decommissioned
 - 2 SL4 instances running PNFS (32/64bit)
 - 2 SL4 instances running Chimera (32/64)
 - 2 User interface nodes
 - 1 site level BDII
- Administered and run by me
 - Monitoring started using Hudson
 - Scripts originally written for SA3 acceptance testing, but never accepted.

Performance Testing dCache

- We have none!
- Help please?
 - Could we use the PPS for this?
 - Performance testing on National labs
 - BUT on production services!!!!!!!!!!!!
 - Not good at all.
 - We at DESY cant do this or we would!
 - Have I made this point clear?



What is on Testing Road map

- Work needed
 - Support for non rpm based systems
 - Solaris and then Debian
 - Development on demand tests
 - Allowing developers to fresh install their own hosts
 - Host recycling (to test more layouts)



Parallel Release model

- Releases of dCaches come from three places
 - Web site (latest version)
 - These are developers releases. (not by me)
 - Internal testing. (we are improving this)
 - Repository releases (safe version)
 - These releases will auto install and run, I have done more than release testing. (judgment)
 - SA1 upgrade too if they have production bugs.
 - We never recommend downgrade
 - SA3 Release (safest version)
 - At least 1 week on the dCache Repository.
 - With no new production bugs reported.

Questions

- Can I destroy my SL3 nodes?
- Ask anything from me!
 - Ill try and answer, if I know.

