Quattor in HellasGrid

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Overview

- **Milestones**

- **Issues**

- **Developments**

- **Current status**

- **Future thoughts**

Milestones

- Periods:

  - 2002 - 2005

    - Use of LCFG & LCFGng for full site installation (no core services)

  - 2006 - August 2007

    - Minor use of Quattor infrastructure (lots of problems)

  - August 2007 - November 2007

    - CDB, SWREP and AII usage

  - November 2007 - now

    - SCDB, AII usage

Till August 2007

- ## Primary usage

  - Quattor is used only for node installation (quattor usage stops at pre-reboot state were the SPMA fails :))

- ## Cons

  - A lot of time till we have a working "please do not touch" node profile

  - This profile is copied and changed to work for all nodes

- ## Pros

  - Once the profile is ready we can have a working OS at all nodes easily

August 2007 - November 2007

- ## Second try to use Quattor

  - swreps are updated, templates look understandable

  - First node that passes the SPMA fails :)

- ## Cons

  - Using Quattor for node management still takes more time than manual management

  - We still need to run yaim to install Grid nodes

  - SPMA removes the packages that yaim installs

- ## Pros

  - Configuration is homogenous within each node type

November 2007 - now

- Usage of SCDB

  - The first WN is installed and management looks easier

  - SE, MON and other node-types are following

- Cons

  - Installing a new node type is not trivial (yet)

- Pros

  - Sites have homogenous configuration

Issues

- Synchronization with LCG QWG repository

- gLite updates

- Component issues

- Heavy use of "Filecopy" component

- New machine-types

Synchronization with LCG QWG repository

- Painful process

- Introduction of "cfg/local" tree for local customizations

- Still done manually

gLite updates

- Updating to the next gLite update is not a clean operation

- need of "test nodes" before applying to the production ones

- Almost no documentation from gLite developers (reverse engineering yaim)

Component issues

- Some components don't behave the way we thought:

  - krb5ctl only supports CERN realm (we haven't tried the latest version)

  - mysql had problems on bootstrapping the server (we haven't tried the latest version)

- We need more components (development has been started)

  - pakiti, ganglia ...

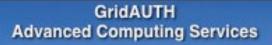# Heavily usage of "Filecopy" component

- Large profiles

- Files remain at the node even when we remove the record from the node's profile

- Lots of garbage in the XML profile

New machine-types

- Troubleshooting errors

    - Usually we need to manually install a node and start diff-ing config files with the one that was installed using quattor till we find the source of the problem

- Still a time consuming operation

Developments

- Components

- Web interface for management

Components

- New components

  - Pakiti (done)

    - conguration of the pakiti client

  - Hydraclient (done)

    - configuration of the hydra client

  - Hydra (done)

    - configuration of the hydra service

  - Ganglia (in progress)

    - configuration of ganglia

- Minor patches to existing components

Web interface for management

- Provide:
  - web based wizard for creating profiles for new nodes based on existing templates
  - interface for the creation of new hardware templates
  - a standard workflow for updating RPM Packages

- Goals:
  - Administrators not familiar with the Quattor should be able to perform basic day to day tasks
  - Quattor information should be able to sync with an external Asset Database

- The whole project is still in design

Current status

- About half of the Greek sites are using Quattor

- Only 2 sites are using Quattor for full management

  - GR-01-AUTH

  - HG-03-AUTH

- ~ 120 nodes profiles are managed in production

- ~ 10 node profiles are managed for test purposes

- Full compilation of the profiles on my laptop takes about 4 minutes

HellasGrid

Future thoughts

- Actively advertise and help other Greek sites to use the quattor infrastructure for full site management

- Migrate our non-grid services to quattor management (i.e. web servers, mail servers)

- Minimize the usage of "filecopy" component

- Automate the repository mirroring for faster installations and repository template updates

Thank you

Questions?