QUATTOR: Fabric Management for Grids and Clouds

http://www.quattor.org

A system administration toolkit providing a powerful, portable, and modular set of tools for the automated installation, configuration, and management of clusters, farms, grids and clouds.



Quattor^[1] is a distribution of tools aimed at complete system management. It is being used to manage at least 20 separate infrastructures spread across Europe. These range from massive singlesite installation such as Morgan Stanley (where more than 25000 machines are managed) to highly-distributed grid infrastructures (many grid computing sites in France).

In Quattor, templates describing computers and services are written in a declarative language called Pan.^[2] The set of templates describing the configuration of a complete system is stored in a configuration database backed by a versionning system (SVN or Git). Pan templates are compiled to JSON files which are then deployed to managed machines.

Quattor development principles are inspired by the Agile Manifesto.^[4] A key idea of to make small incremental development steps, driven by user needs, with integrated unit testing and delivered in frequent releases (1 release every 2 months).

Quattor source code is hosted on GitHub^[2] and every of its users if welcome to contribute trough pull request or issue tracker. Feature requests are tracked and openly discussed in GitHub issues. The development roadmap is publicly available.^[5]

Quattor components are licensed under Apache v2 license or equivalent that allow free cloning, modification and redistribution.

Quattor developers have a weekly 15 minute

Most of the configuration description is coming from a template library, delivered as part of Quattor releases, relieving sites from the effort of developing and maintaining the basic description of a service. Sites mainly maintain the description of their site parameters.

- The support for Quattor users is organised around several mailing lists:
- quattor-discuss generic discussions
- quattor-grid discussions about about grid components of Quattor

http://sourceforge.net/p/quattor/mailman/

Workshops are organised twice a year and are gather both users and developers to discuss main issues and future evolutions.

meeting^[6] that users are welcome to join if they face any issue they would like to see discussed.

Perspectives **About Devel**

- Current work aims at providing full EL7 support
- Preliminary templates for OpenStack and OpenNebula are available. The first stable version for these projects should be released within the end of 2014.
- Templates for configuring and managing Ceph storage system are currenity in development

The way to install and use Quattor is presented in a detailed documentation.^[3]

• Full integration of the template library with the new configuration database, Aquilon, to foster its adoption by existing sites.

- [1] http://github.com/quattor
- http://en.wikipedia.org/wiki/Pan (programming language) 2
- http://www.quattor.org/documentation/ [3]
- http://en.wikipedia.org/wiki/Scrum (software development) [4]
- http://www.quattor.org/release [5]
- http://indico.cern.ch/category/2921/ 61

Journées Informatique de l'IN2P3 – 13-16 octobre 2014 – Le Grau du Roi

