Configuration management tools used in the EGI sites: survey result

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Disclaimer:

eti.eu run the survey
Peter Solagna evaluated the results
Peter Solagna made this summary
I am just presenting the summary
Survey summary

- Survey opened: Jan 28th, closed: Mar 24th
  - Circulated directly among EGI grid sites
  - 87 answers
- Questions:
  - Size of the sites: number of services / number of worker nodes
  - Configuration management tools used (or evaluated)
    - Pros and cons
  - Modules used
    - Product/specific
    - Developed by the site/NGI/others
Why the survey?

- Yaim goal is to configure grid services using an homogeneous set of variables
  - Future support of Yaim is uncertain
- Some EMI services are moving away from yaim to specific configuration files/scripts
  - Error prone, services requires uniform configuration parameters
- Configuration management tools use templates that can re-use the parameters shared between services
  - Allow uniform configuration
Is the site using configuration management tools?

- 42 not yet chosen
- 18 Ansible
- 6 cobbler
- 1 xcat
- 3 Home made solutions
- 6 Puppet

Evaluating?

- 54 total respondents
- 18 not yet chosen
- 6 Puppet
# Number of services deployed vs conf. tool used

<table>
<thead>
<tr>
<th># of services deployed</th>
<th>Quattor</th>
<th>Puppet</th>
<th>Chef</th>
<th>CFengine</th>
<th>Total sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>59</td>
</tr>
<tr>
<td>Less than 30</td>
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<td>7</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Less than 50</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>More than 50</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
</table>
Pros and cons

- **Quattor (15)**
  - + Already grid services templates available, knowledge base in grid community (QWG)
  - - Small community, steep learning curve, complicated to update

- **Puppet (16)**
  - + Huge community, well documented, many plugins available
  - - Lack of grid modules, initial configuration takes time, one more tool to learn

- **Chef (2)**
  - + Reliable, mainstream, cloud interfaces available
  - - Not widely used in the infrastructure, doesn’t configure O.S.

- **CFEngine (4)**
  - + Flexible, easy alteration of config files
  - - CFv2 → CFv3 difficult migration
Custom modules

Do you use specific modules developed for the grid services?

- Yes, but developed by other partners
  - Puppet: 5
  - Quattor: 7
  - CFEngine: 1
  - Chef: 1

- Yes, we have developed the modules in our NGI
  - Puppet: 3
  - Quattor: 1
  - CFEngine: 1
  - Chef: 1

- Yes, we have developed the modules in our site
  - Puppet: 11
  - Quattor: 6
  - CFEngine: 3
  - Chef: 2

- No, used only for the operating system configuration
  - Puppet: 4
  - Quattor: 6
  - CFEngine: 4
Custom modules - 2

• Quattor: generally calling Yaim
  – Customizations for local monitoring, bugs workaround and fine tuning

• Puppet: most of the sites are using modules calling yaim
  – CERN is working on Yaim-free modules for: WN, CREAM, VOMS, MyProxy, BDII, DPM/LSF, Slurm, CVMFS, Argus, FTS, LFC
  – VU-MIF-LCG2, Yaim-free configuration for BDII
  – T3_CH_PSI, configuration modules for dCache and ARC

• Chef: Using Yaim
Outcome of the survey

• Likely, there isn’t a configuration tool good for all the grid sites 😞

• But… Puppet is taking the lead:
  – Growing user community within EGI
    • Already a big user community worldwide (true also for other tools)
  – Big site (CERN) working on a set of templates (master/masterless)
    • Lot of templates, but not all the products are covered
  – Coordination work starting within an Hepix working group
Future actions

- Cooperate with the Hepix WG
- Share the work done by site managers/NGIs
  - Re-use the modules already done, test and improve them
  - Try to fill the gaps, focusing on the missing services (focusing on yaim-free modules)

Words of Peter Solagna
• More and more sites start using Puppet
• Idea: Have some kind of coordination among sites
  – Exchange experience, exchange modules
• This is even more important in light of uncertain future of YAIM
  – CERN doing YAIM-less Puppet configurations
• Status of the WG: Basically just starting
  – Will set up infrastructure (mailing lists, web pages,…) after Bologna meeting

• What do sites expect from the WG?