Configuration Management with Puppet

puppet workflow at DESY

History

- **2012 plan to improve config management**
  - A lot of different CM solutions (Salad, Quattor, FAI)
  - balkanized campus
    - OS groups independent (SL vs. Debian)
    - Central IT vs. different *group* IT
- **2013 Start to setup PUPPET**
- **2013 Migrate GRID to puppet**
- **2014 Ongoing migration**
  - SL5 host will not be migrated (salad)
  - FAI support for Ubuntu 12.04 (till 2017)
  - New machines will normally go into puppet
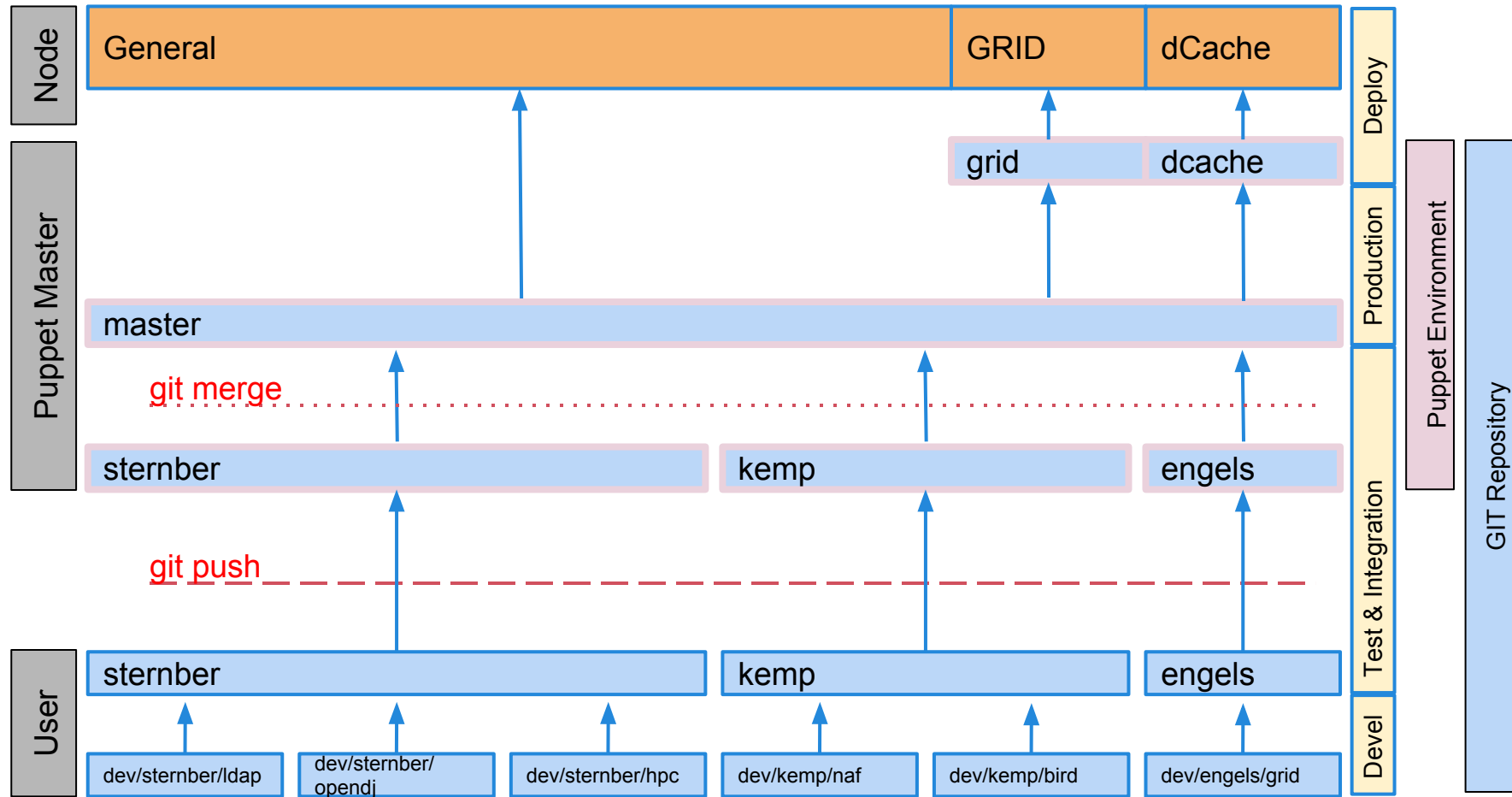
Infrastructure
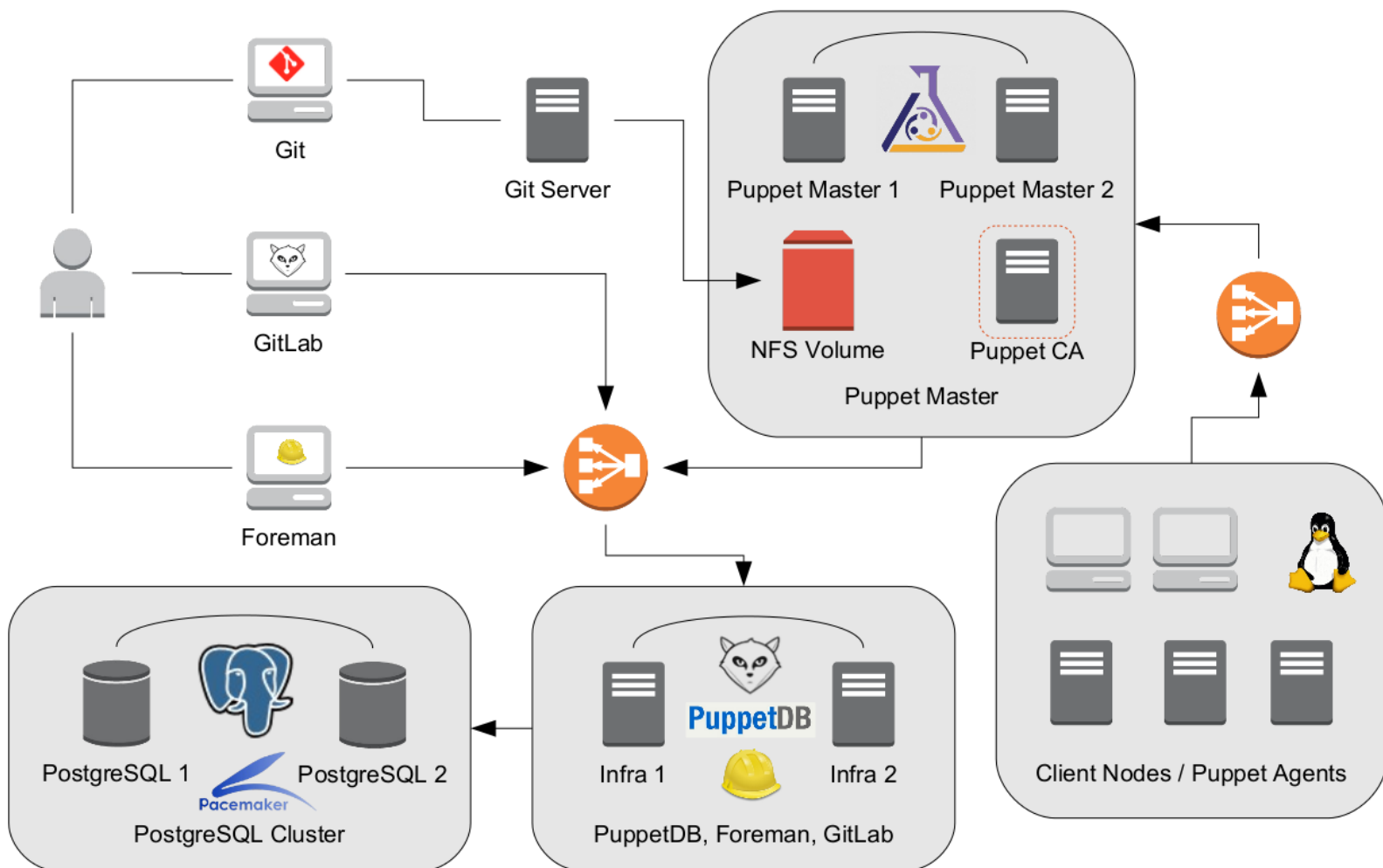
Problems / Remarks

- Quite complex
- Puppet (Ruby) is slow
  - but it scales
- Foreman / PuppetDB
  - redundant data management
  - both great products
- Certificate Handling is complex

Informationflow

Workflow for Puppet User

1. Develop/Improve/Debug feature
2. Test
3. Push feature to git server
4. Integration test with own environment
5. Send pull request to central IT
6. Central IT merge new feature
7. Deploy commit

Problems / Remarks

- Every pull request means work for central IT
    - high frequency changes are annoying for central IT
    - Time to wait for the merge is annoying for users
- User start to use their own environment for production
- User want access to the master
- GIT is for occasional user difficult to master
    - We hope GITLAB will help
- Deploy step *sounds* good ...
    - Need mechanism to control puppet run instead

Multiple Repositories

- One repository per feature
  - difficult to manage
    - how to configure environments?
    - how to update environments?
  - very flexible
    - changes to the master could be done by the developer of the feature
    - groups would be responsible for their features

Success

- One platform for Debian, Ubuntu, RedHat and Scientific Linux
- The integration of all IT groups starts very well.
  - Several trainings all well-attended
  - Version control helps a lot
- Puppet ecosystem is helpful
  - HEP community
  - PuppetForge
  - Documentation
  - Courses, Certification, Conferences ...