

FedCloud F2F report

Enol Fernández

enol.fernandez@egi.eu



The TCB-Cloud provides the focus for the technologies that will be used within the EGI production infrastructure to deliver distributed cloud computing services for the research communities.

- Leads the EGI technical roadmap for the cloud service area and is responsible for its maintenance and evolution
- Periodically revise and update the roadmap

- The TCB-cloud chair (E. Fernández)
- Representative from each Technology Provider
- Representatives from Cloud resource providers
- Appointed representative from OMB (V. Spinoso)
- EGI Foundation chair (linking into Services and Solutions Board) (T. Ferrari)
- Chair of virtual teams initiated by the Groups

- Cloud standards, OCCI (B. Parak/CESNET)
- Cloud standards, CDMI (B. Kryza/CYFRONET)
- VM image management (M. Chatziangelou/IASA)
- IaaS and PaaS (G. Donvito/INDIGO)
- Cloud Integration modules (Á. López/CSIC)

- OpenStack:
 - INFN-RECAS M. Antonacci
 - IN2P3 J. Pansanel
 - IISAS V. Tran
- Synnefo
 - GRNET K. Koumantaros
- OpenNebula:
 - CESNET B. Parak

- Held during 29 & 30 November 2016 @ SciencePark
- Most participants from current EGI fedcloud sites and developers of cloud middleware
 - CSC, SNIC & SURFSara representatives also present
- Review of the EGI cloud services
 - Discussion of current issues with sites
 - Security
 - Ongoing developments
 - Definition of the roadmap
- <https://indico.egi.eu/indico/event/3126/>

- Information Discovery
 - Ongoing development to include VO information
 - Looking forward new mechanisms to deliver information (BDII not good enough for the dynamic information)
- VM Image replication
 - New component CloudKeeper, replacing vmcatcher
 - First releases expected early 2017
- Accounting
 - New usage record being rolled out now
 - Looking into accounting of long-running VMs early 2017

- Monitoring
 - Moved to argo.eu
 - New probes coming: swift, use of AppDB images, image replication, block storage
 - fedcloud.esi.eu and training.esi.eu monitoring to be discussed
- OCCI
 - OCCI 1.2 implementations coming early 2017
 - Snapshotting, resizing VMs, JSON rendering
- VMOps
 - New AppDB dashboard to manage VM
 - Already functional and tested by selected team
 - Several issues found in the infrastructure before going to production

- Selected sites showed their security setup to detect and handle incidents
- Security Survey results presented
 - 8 out 22 sites replied
 - Not every site has intrusion detection or vulnerability checks
- Next steps:
 - Register orchestrators and similar tools in GOCDB with proper contact points
 - Vulnerability assessment of contextualization
 - Definition of default network policy (private network, closed ports)

- Transition to the EGI CheckIn and OpenID Connect during 2017
- Start with integrations with OpenStack
 - PoC working, now need documentation and further testing at sites
 - Drop Keystone-VOMS and move to Keystone v3 federation
 - Improve clients to support OIDC
- Assess the technical developments needed to support OIDC for OpenNebula providers

- Moving towards a hybrid cloud model focusing on federated AAI, data portability & computing portability.
- Multi-cloud orchestrators as enablers of the federated use cases
 - Assessment of technology: IM, SlipStream, Terraform, Scalr, OCCOPUS, INDIGO-DataCloud.
- Define the scenarios for usage of commercial providers (e.g. scaling up computation, procurement of resources, hybrid data platform) in the federation
 - Define a technical blueprint for enabling hybrid-cloud access and review the federation model to fit the scenarios of collaboration with commercial

- Early 2017: define an exploitation plan for the EGI DataHub and FedCloud resources
- Longer term:
 - Integrate data information into information discovery
 - Brokering to co-allocate computing with data
 - Enable processing of sensitive data
 - Provide smart data caching

- Go beyond IaaS and offer more end-user oriented services
- Start with providing templates for orchestrators
 - Users can bootstrap their tools easily from a trusted configuration
- Enable federated access to existing services from NGIs
- In the longer-term provide managed services for most demanded tools (e.g. Hadoop, Spark, Kubernetes,...)
- Look into new service types:
 - Serverless, IoT, machine learning

- Available for comments at <http://go.esi.eu/fedcloud-roadmap>
- TCB-Cloud to meet on Friday 16th to discuss latest version
- Next week to be presented to fedcloud-tf

Thank you for your attention.

Questions?



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