# Virtual Machine Management
## Status Report & Roadmap

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– OCCI –

- Still only OCCI v1.1 w/ certain limitations
- Implemented in three major server-side components:
  - rOCCI-server for OpenNebula, AWS EC2
  - OCCI-OS for OpenStack
  - snf-occi for Synnefo
- Implemented in libraries:
  - rOCCI-{core, api} for Ruby
  - pyssf for Python
  - *work in progress* jOCCI-{core, api} for Java
- Conceptual and performance problems should be addressed in the upcoming OCCI v1.2

OCCI v1.2

- Considerable hold-up, should have been in the public comment phase right now
- At least 9 documents in total, including:
    - Separated rendering & transport protocols
    - New (and standardized) JSON rendering
    - *Notification*, *Monitoring*, simplified *Billing* & *SLA* documents
- Working on PaaS extension, should be included as well
- Will address issues with:
    - Pagination
    - Discoverable mixin attributes
    - Mismatching actions
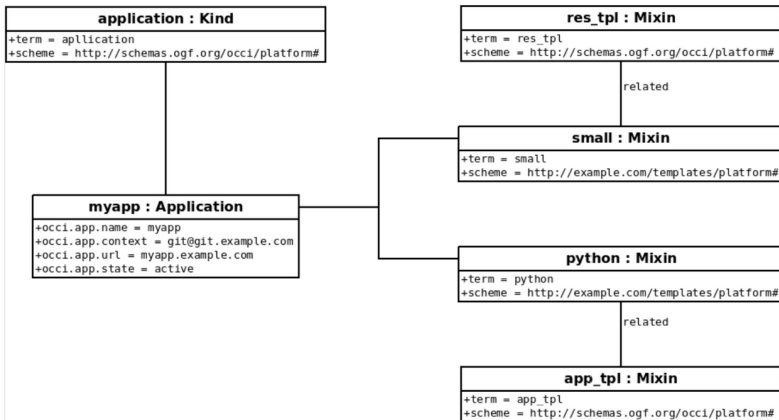
PaaS Overview

– rOCCI –

rOCCI Overview

rOCCI-cli
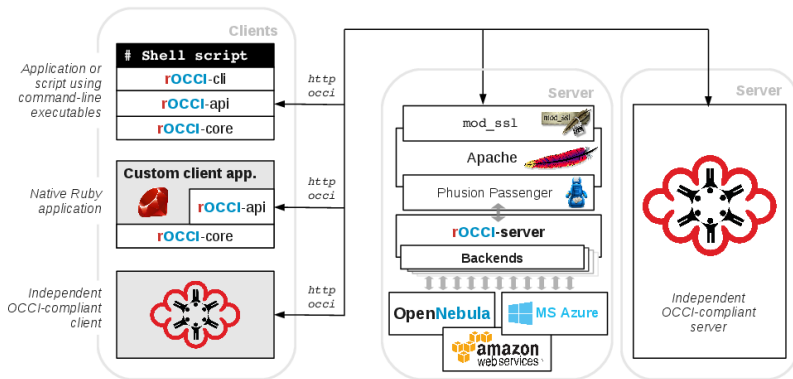
- Works on all three platforms in FC
- Still used in:
  - DIRAC (VMDIRAC)
  - SixSq. SlipStream (cloud orchestration tool)
  - COMPSs (COMP Superscalar)
  - Catania Science Gateway Framework (JSAGA OCCIadaptor)
- Needs rewrites and improvements for OCCI v1.2
- Possible shell interface rewrite (if relevant)

- AWS EC2 support still largely untested (need volunteers)
- Will be introducing the MS Azure backend shortly (in a month or two)
- Introduced *autocreate* for selected VOs
- Implemented basic *per-user sub-proxy* support for gateways (only for accounting purposes)

– OCCI-OS –

– snf-occi –

– Next Steps –

- Authentication (Keystone-like protocol for all implementations)
- Align actions, their side-effects and prerequisites (wiki table)
- Establish and clearly document a baseline for users (available features)

Align behavior for:

- Default appliance networking
- Public addresses (detection, attaching, detaching)
- Private addresses (detection, attaching, detaching)
- Explore advanced concepts & networking appliances

- Provide native libraries for languages other than Ruby
- Implementation for Java already in the works
  → jOCCI-{core, api}
- *DEMO VIDEO*

– Discussion –

- Feedback from users
- Roadmap priorities
- Planning the next iteration
- Platform-specific VM management problems

– That's All Folks! –