MetaCentrum

GUOCCI

The Entryway to Federated Cloud for Small-scale Users

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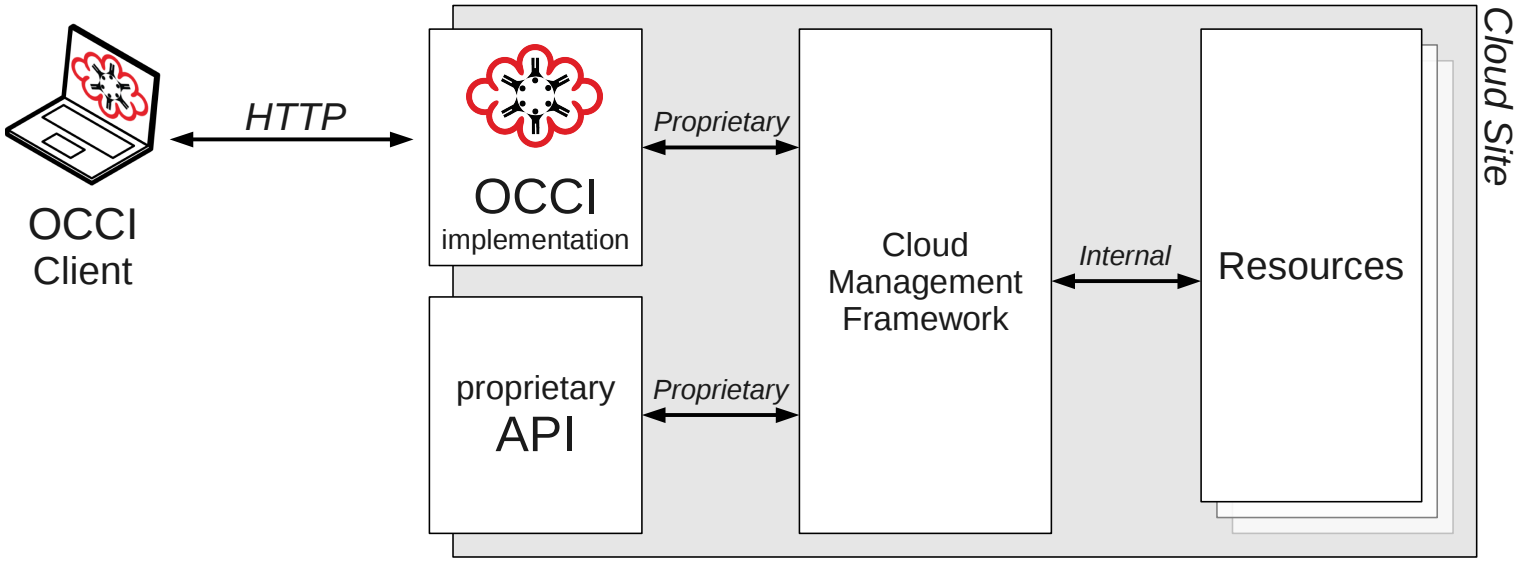
Motivation

Curent state in open cloud computing

- Open Cloud Computing Interface (OCCI)
- Management API for cloud infrastructure
- Management of resources like VMs, networks, volumes ...
- Ruby and Java APIs,
- rOCCI cli

Motivation

OCCI overview



Motivation

Curent state in open cloud computing

- EGI FedCloud
- Multiple cloud sites
- Different technologies (OpenStack, OpenNebula, Synnefo)
- Available through OCCI
- Appliance database - AppDB

Motivation

Current work flow for small scale user

- Registration
- x509 credentials
- Search for site and appliance in AppDB
- Proxy-certificate retrieval (VOMS)
- rOCCI cli or Ruby/Java API
- Resource creation
- Resource access

... but you just wanted one or two VMs.

Goals

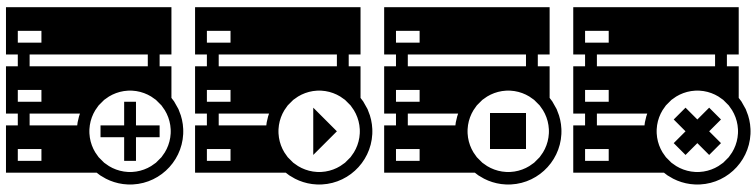
- Simplify access to OCCI resources
- Speed up simple tasks
- Maintain x509 authentication
- Visualize status of user resources

Better user experience

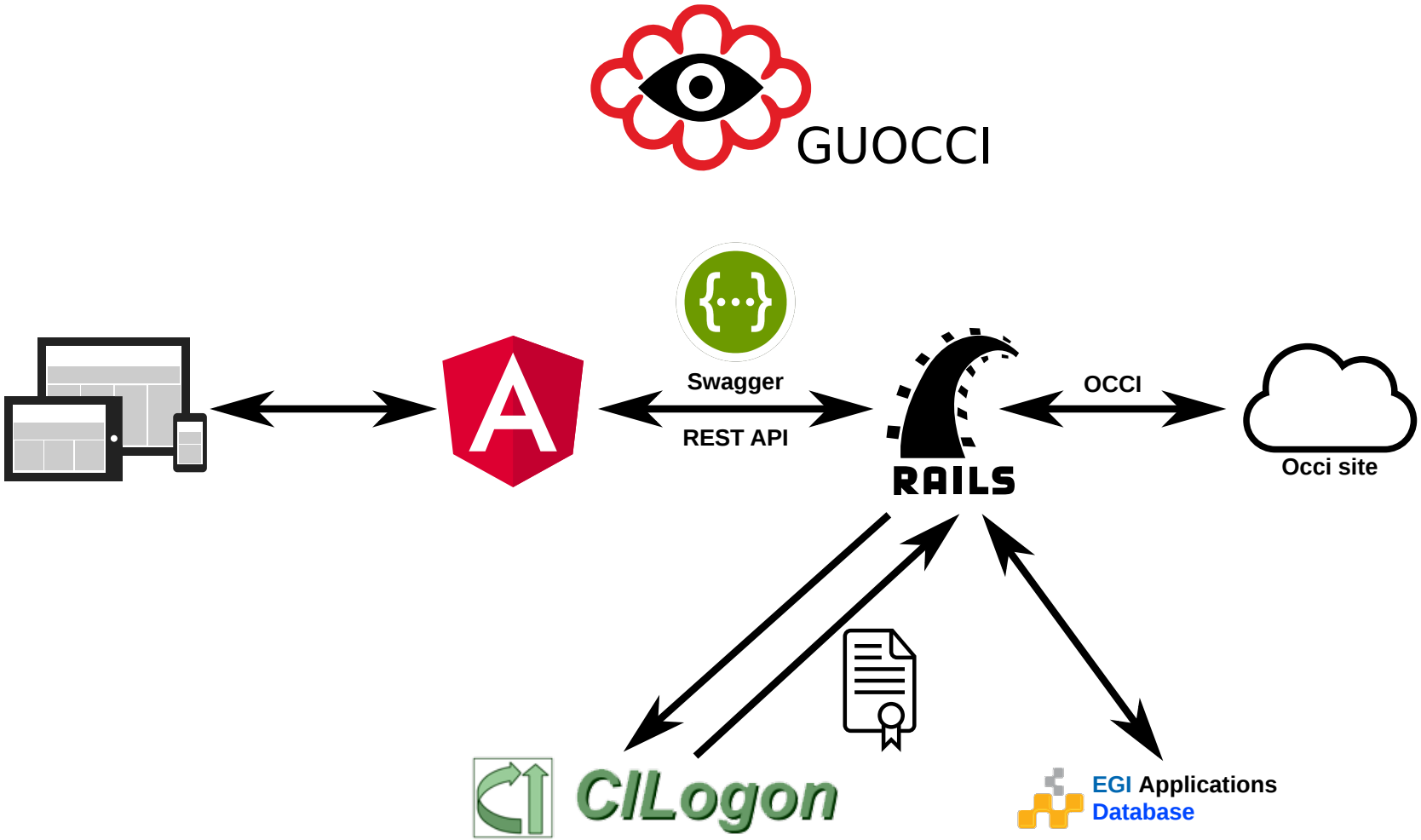
Solution

GUOCCI - Graphical User interface for OCCI

- Web based application
- Provide secure login
  - CI login
- Collect data from appdb
  - Sites, Appliances, Flavors
- Resource management with OCCI
  - Communication with site endpoints
  - Virtual machine management



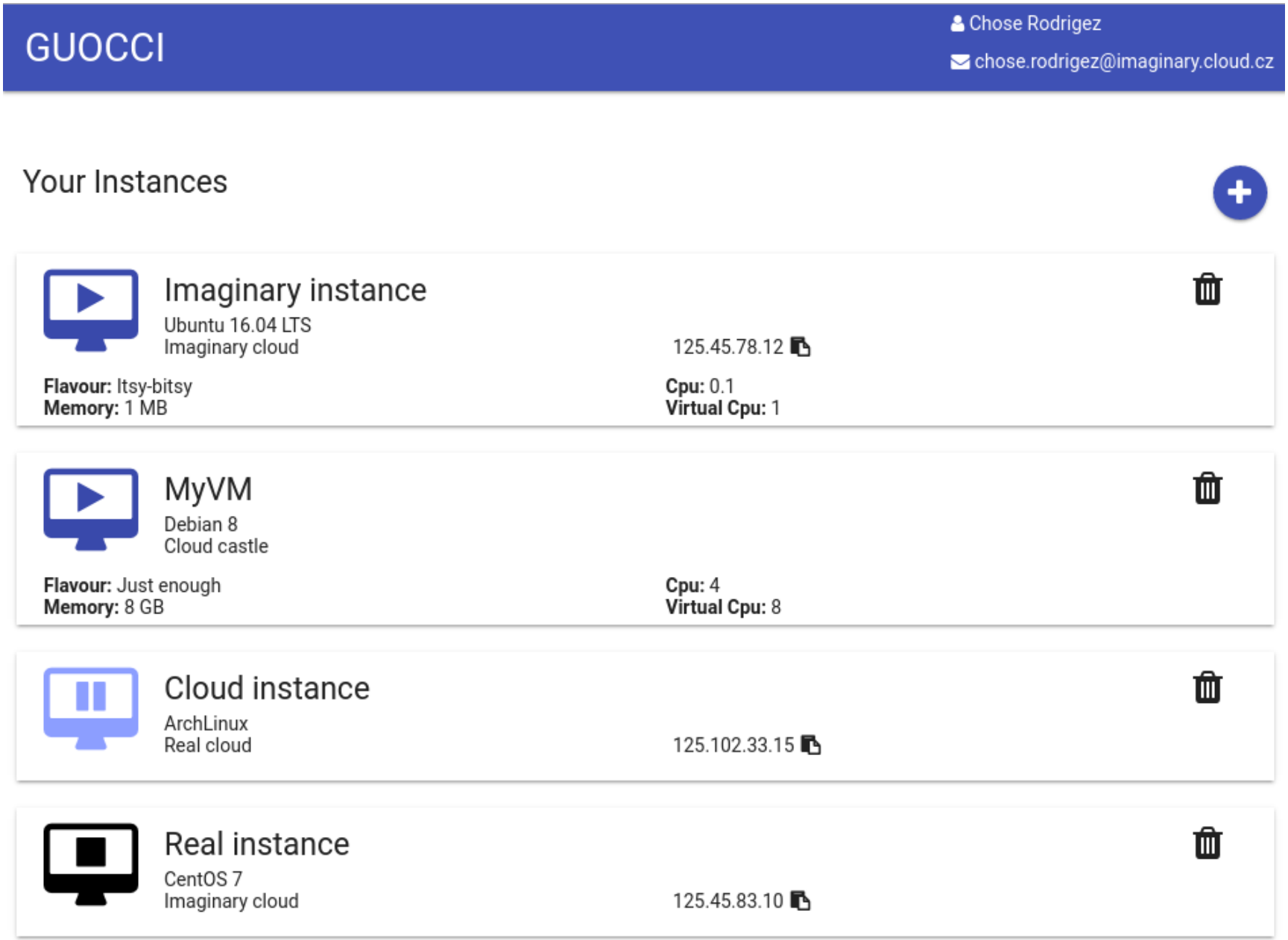
The Big Picture

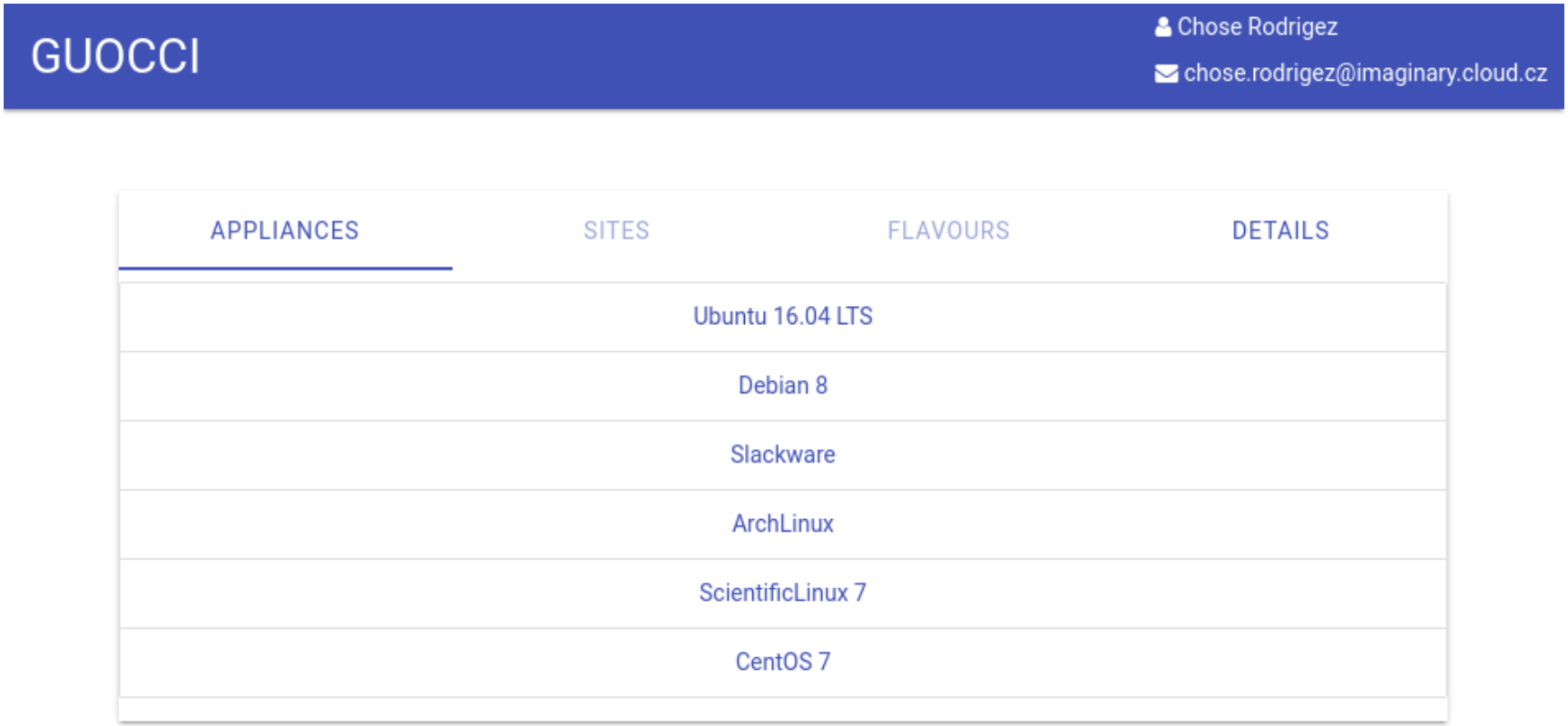


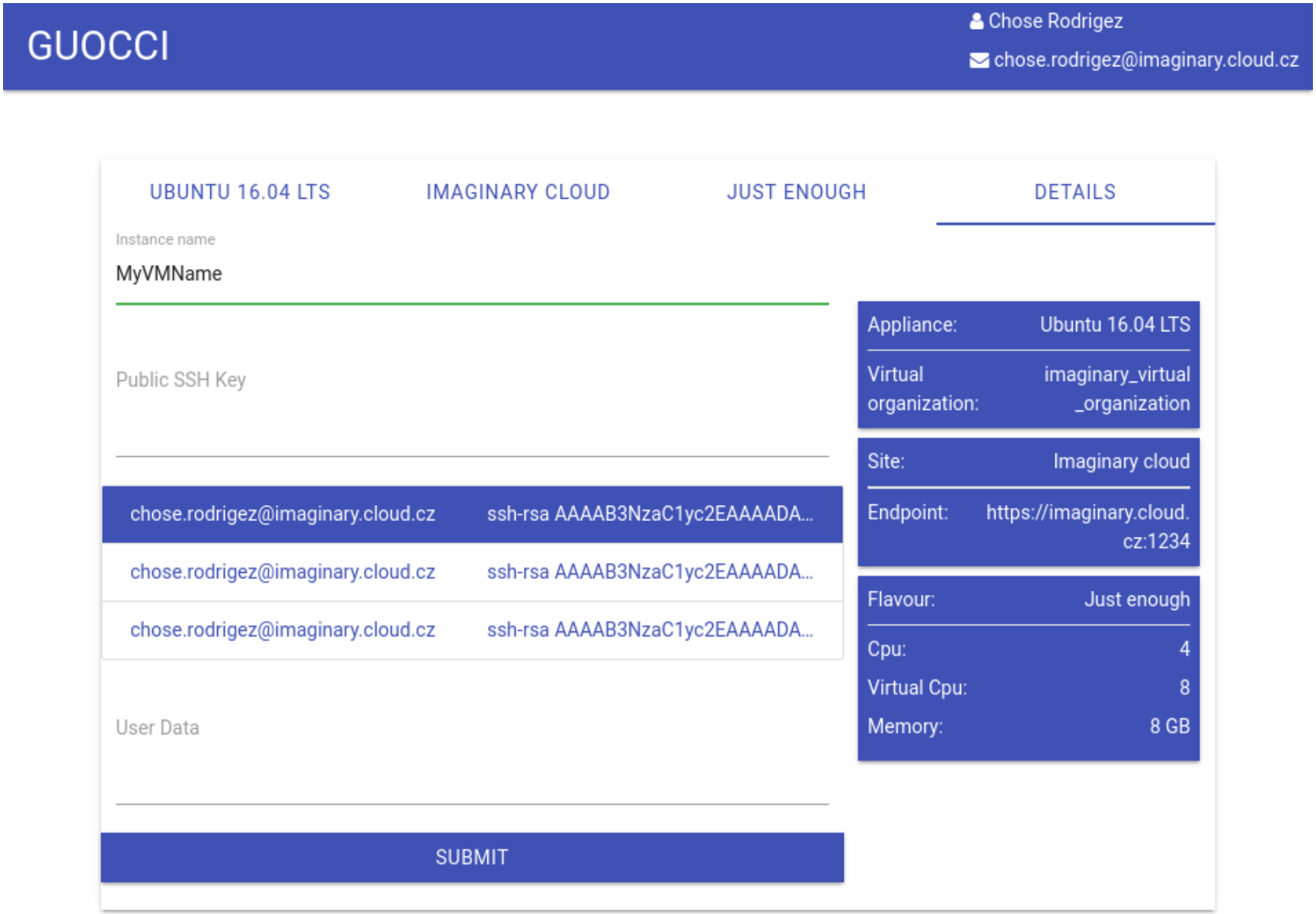
Solution

Authentication

- CILogon
- User chooses account to login with (google account, shibboleth etc.)
- Certificate manipulation handled by server
- No certificate is presented to end user


GUOCCI
Chose Rodrigez
chose.rodrigez@imaginary.cloud.cz
Your Instances
Imaginary instance
Ubuntu 16.04 LTS
Imaginary cloud
125.45.78.12
Flavour: Itsy-bitsy
Memory: 1 MB
Cpu: 0.1
Virtual Cpu: 1
MyVM
Debian 8
Cloud castle
Flavour: Just enough
Memory: 8 GB
Cpu: 4
Virtual Cpu: 8
Cloud instance
ArchLinux
Real cloud
125.102.33.15
Real instance
CentOS 7
Imaginary cloud
125.45.83.10


GUOCCI
Chose Rodrigez
chose.rodrigez@imaginary.cloud.cz
APPLIANCES
SITES
FLAVOURS
DETAILS
Ubuntu 16.04 LTS
Debian 8
Slackware
ArchLinux
ScientificLinux 7
CentOS 7


GUOCCI
Chose Rodrigez
chose.rodrigez@imaginary.cloud.cz
UBUNTU 16.04 LTS
IMAGINARY CLOUD
JUST ENOUGH
DETAILS
Instance name
MyVMName
Public SSH Key
chose.rodrigez@imaginary.cloud.cz ssh-rsa AAAAB3NzaC1yc2EAAAADA...
chose.rodrigez@imaginary.cloud.cz ssh-rsa AAAAB3NzaC1yc2EAAAADA...
chose.rodrigez@imaginary.cloud.cz ssh-rsa AAAAB3NzaC1yc2EAAAADA...
User Data
SUBMIT
Appliance: Ubuntu 16.04 LTS
Virtual organization: imaginary_virtual_organization
Site: Imaginary cloud
Endpoint: https://imaginary.cloud.cz:1234
Flavour: Just enough
Cpu: 4
Virtual Cpu: 8
Memory: 8 GB

Roadmap

Current progress

- Proof of concept done
- Gui completed 80%
- Backend 50%

To do

- Finish integration of components
- Testing & debugging
- Deployment in the EGI Federated Cloud

Contact Info

Do you have any questions?

- ask **NOW!**
- ask us directly
  - janca@cesnet.cz
  - parak@cesnet.cz
- send your questions to cloud@metacentrum.cz