



Open Cloud Computing Interface

A Status Update

Thijs Metsch

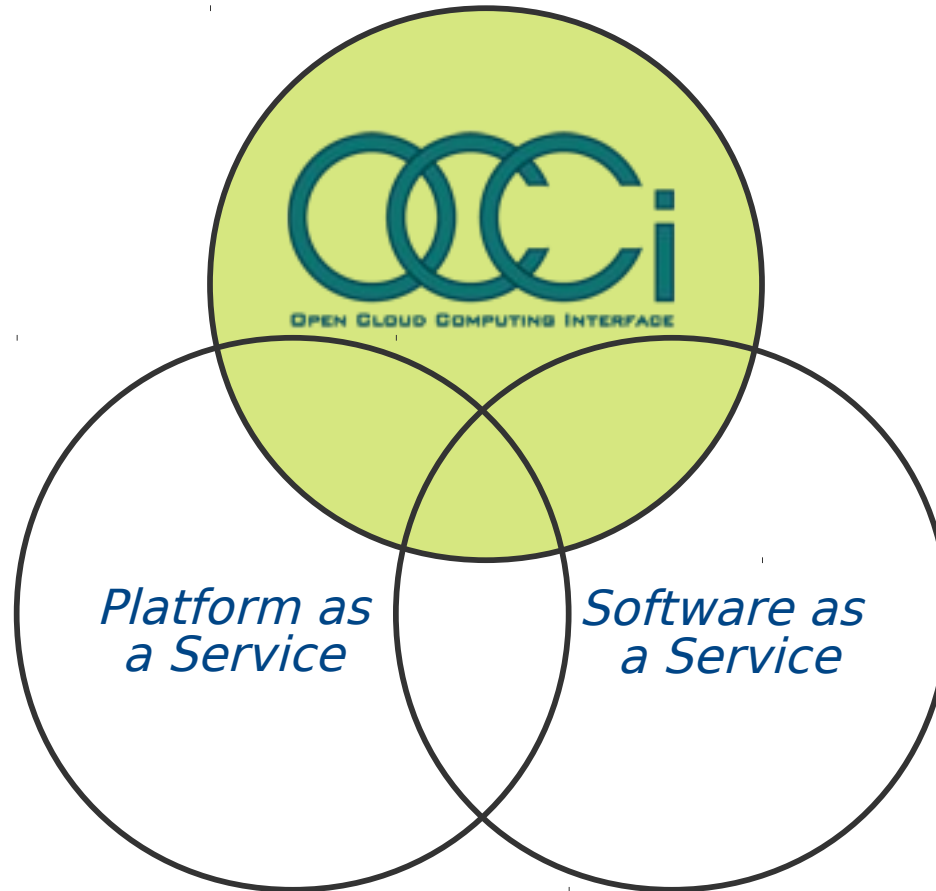
Software Engineer Cloud, Grid and Virtualization

Sun Microsystems

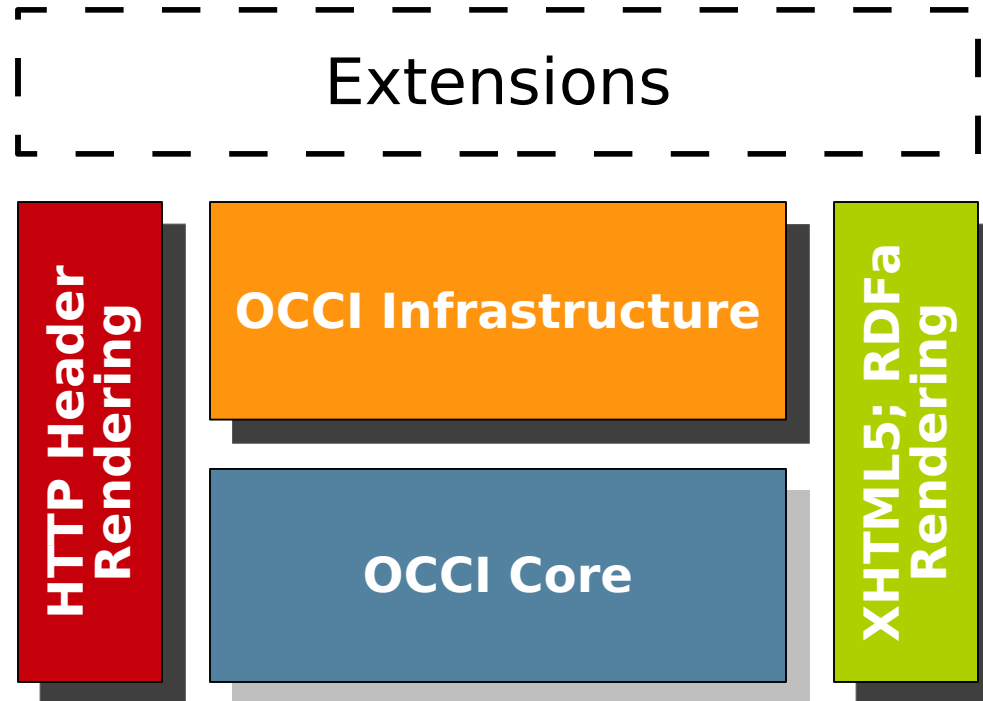
Cloudscape II, Brussels, Feb 23, 2010



Infrastructure as a Service

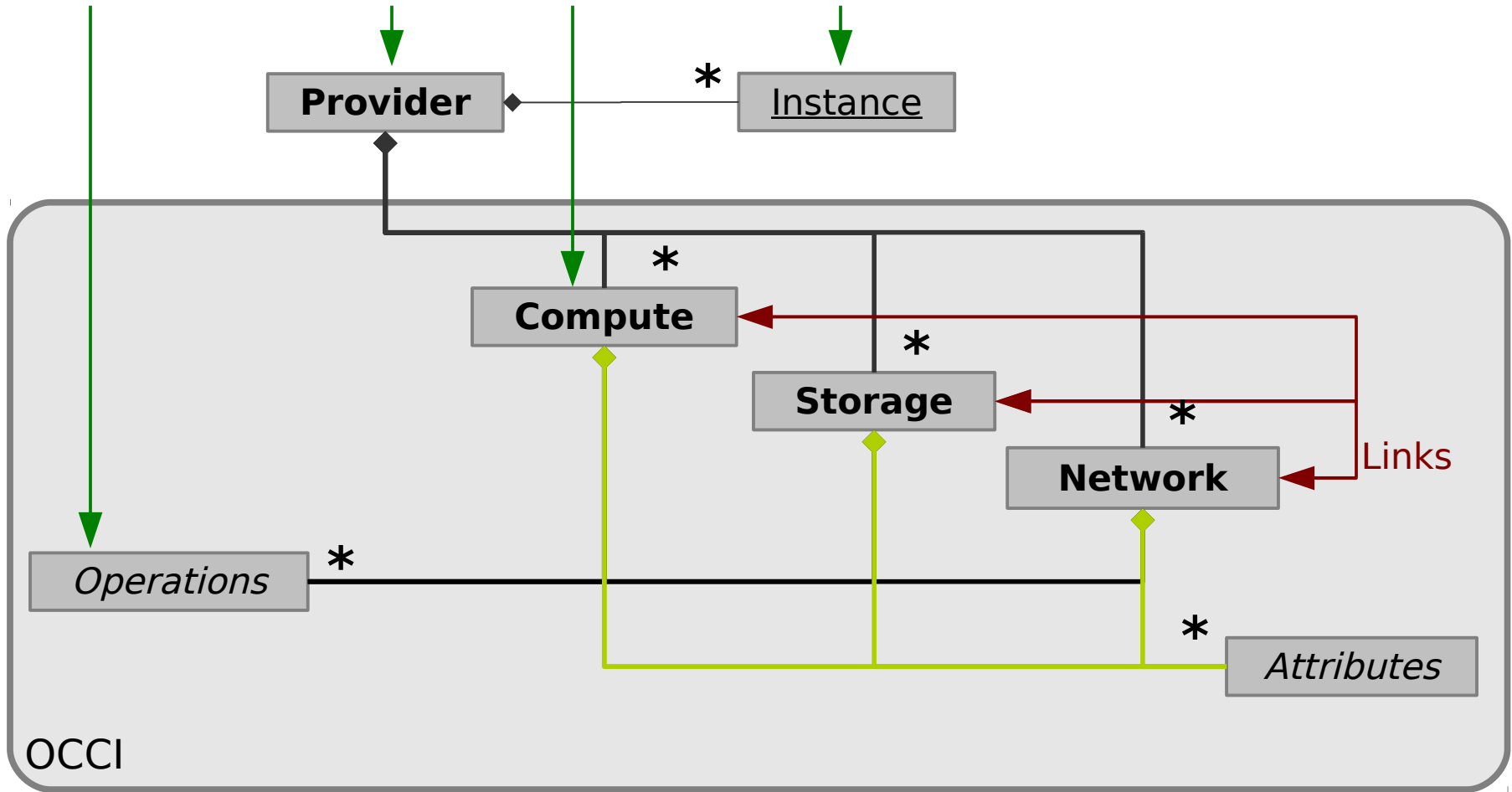


Our focus



OCCI - a first look

GET http://abc.com/compute/uid123foobar/



OCCI - a second look

Request

```
> GET /us-east/webapp/vm01 HTTP/1.1
> User-Agent: occi-client/1.0 (linux) libcurl/7.19.4 OCCI/1.0
> Host: cloud.example.com
> Accept: */*
>
```

Get a Resource

Any format

Response

```
< HTTP/1.1 200 OK
< Date: Sat, 10 Oct 2009 12:56:51 GMT
< Content-Type: application/ovf
< Link: </us-east/webapp/vm01;start>;
  rel="http://purl.org/occi/action/start";
  title="Start"
< Link: </us-east/webapp/build.pdf>;
  rel="related";
  title="Documentation";
  type="application/pdf"
< Category: compute;
  label="Compute Resource";
  scheme="http://purl.org/occi/kind/"
< Server: occi-server/1.0 (linux) OCCI/1.0
< Connection: close
< <?xml version="1.0" encoding="UTF-8"?>
< <Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-in
  xmlns:ovf="http://schemas.dmtf.org/ovf/envelope/1"
  xmlns="http://schemas.dmtf.org/ovf/envelope/1"
  xml:lang="en-US"
> ...
```

It's OVF

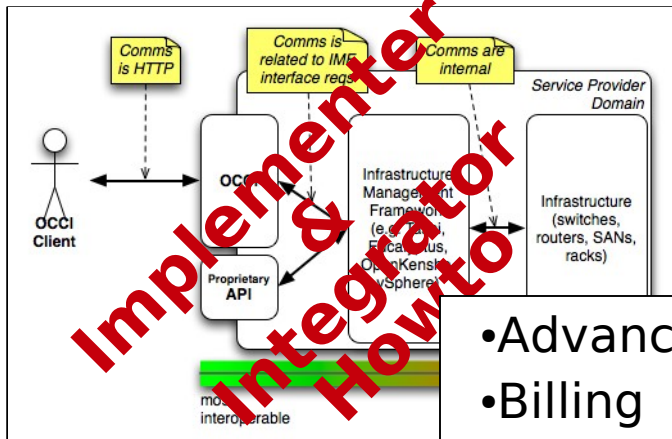
You can start it

Some description

Type of resource

Plain Old OVF (POO)

OCCI - an example



Implementer
Integrator
Howto

- Advance Reservation
- Billing
- Monitoring
- Snapps/setting
- ...

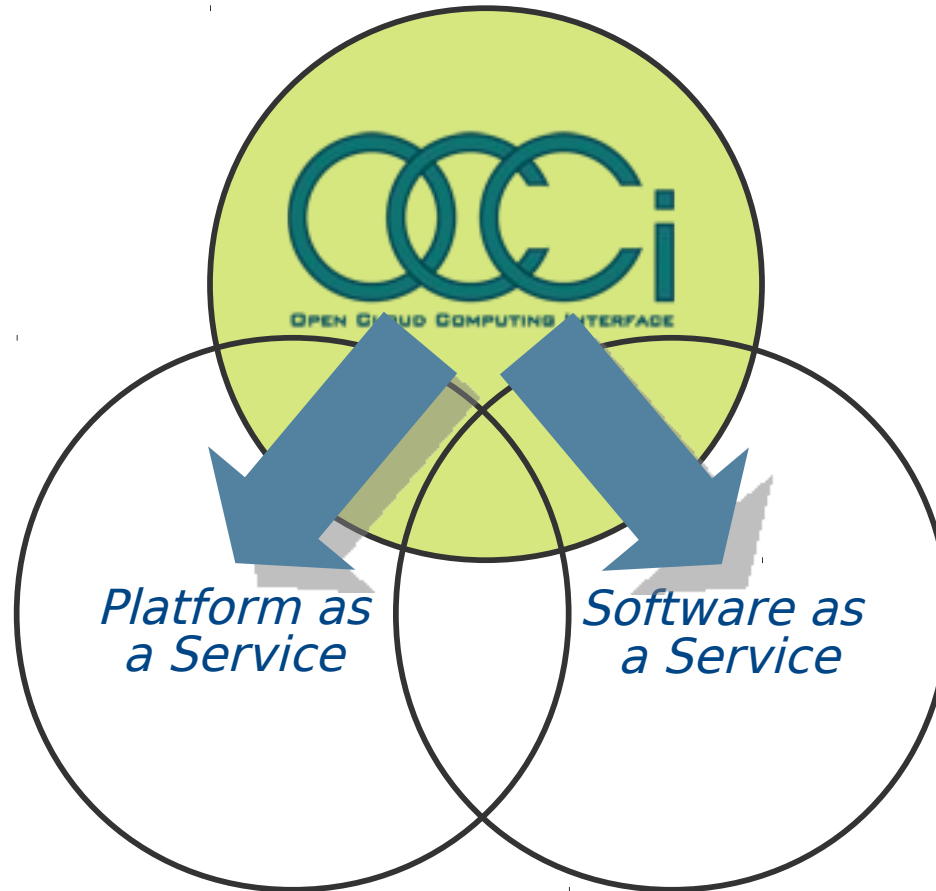
Extensions

OpenNebula

Implementations

Status

Infrastructure as a Service



Status (2)

What's happening?

140

Latest: #OCCI kicks ass - I know: that was a very productive comment and helped a lot of people :-)

update

Real-time results for #OCCI

Remove this saved search

befrea #OCCI kicks ass - I know: that was a very productive comment and helped a lot of people :-)

samj @ajfisher @jamesurquhart: we have quantitative performance metrics (eg storage device latency, bandwidth) in #OCCI to allow some flexibility

samj @jclouds: I would go one step further and say that a bit of competition is good for team motivation

deri /bsp #API

dizz RT stand @mon

samj We given up (#OCCI)

samj @bpo open proc my knowle

samj @jame about using from atom. N

dizz RT @deri dcs u know

samj RT @tvone clarifications, let thanks-docs inco

befrea 798 tw

360 following 196 follow

Verified-Olympian a list of verified Olympians on T

Home

@befrea

Direct Messages

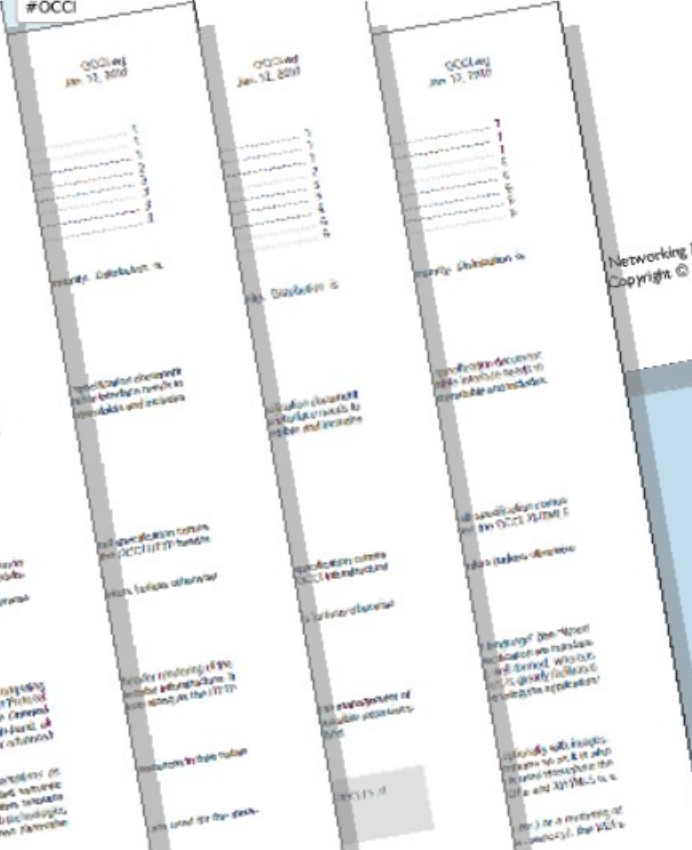
Favorites

Retweets

#OCCI

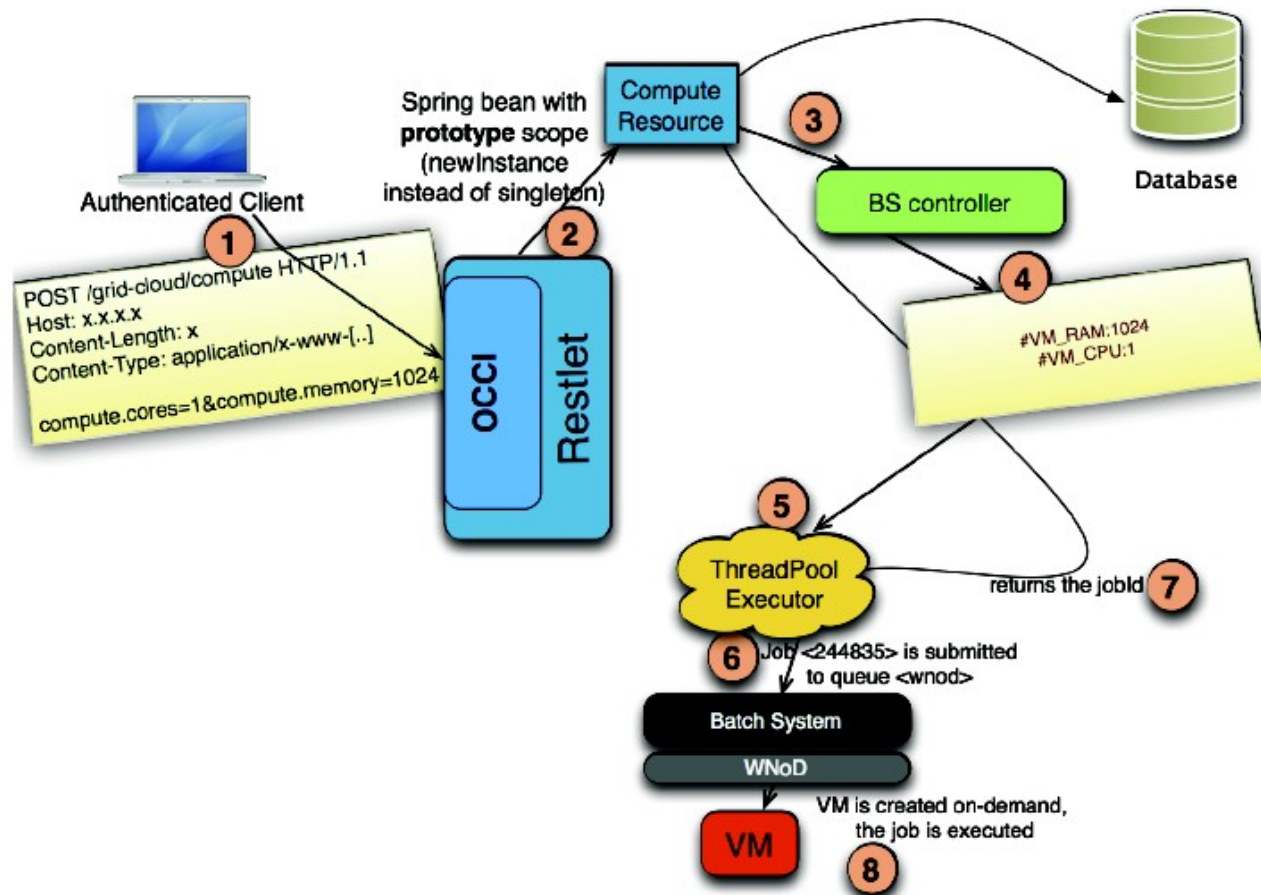


Cloud Storage for Computing



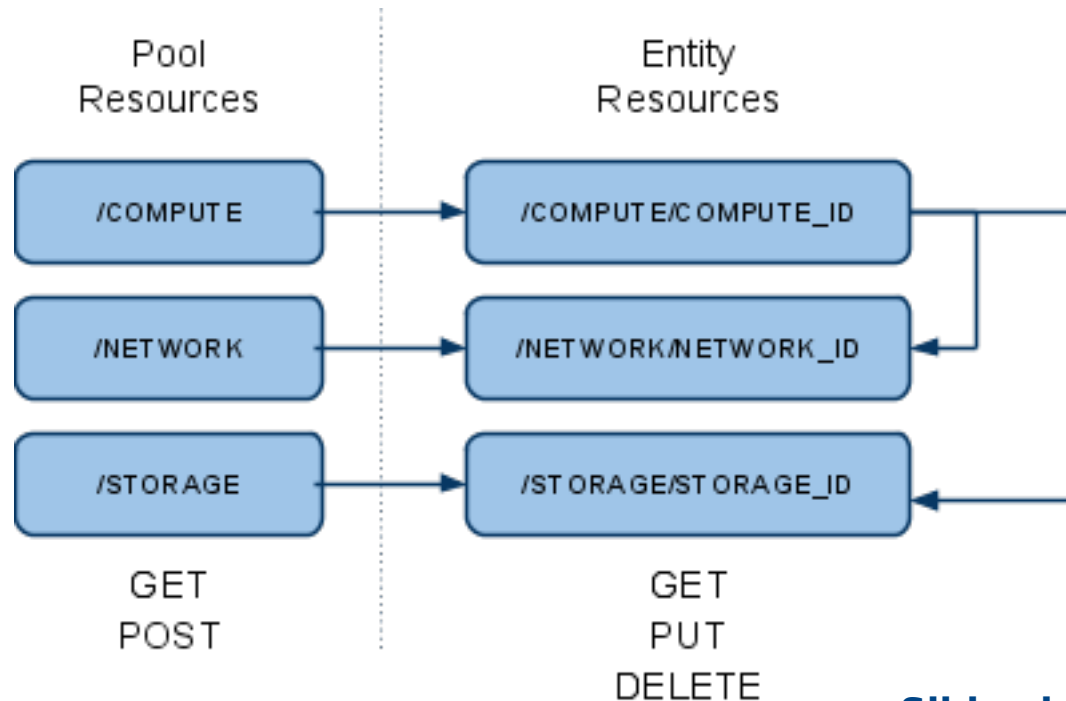
Documents, Tweets, Blogs...

Flow of control: create a new VM



OpenNebula OCCI RESTful web service

- Launches and manages **images**, **virtual networks** and **virtual machines**



Slides by Tino Vazquez

The COMPUTE element

```
<COMPUTE>
  <ID>123AF</ID>
  <NAME>Web Server</NAME>
  <INSTANCE_TYPE>small</INSTANCE_TYPE>
  <STATE>running</STATE>
  <DISKS>
    <DISK image="234" dev="sda1"/>
    <SWAP size="1024" dev="sda2"/>
    <FS size="1024" format="ext3" dev="sda3"/>
  </DISKS>
  <NETWORK>
    <NIC network="4567f" ip="19.12.1.1"/>
    <NIC network="0"/>
  </NETWORK>
</COMPUTE>
```

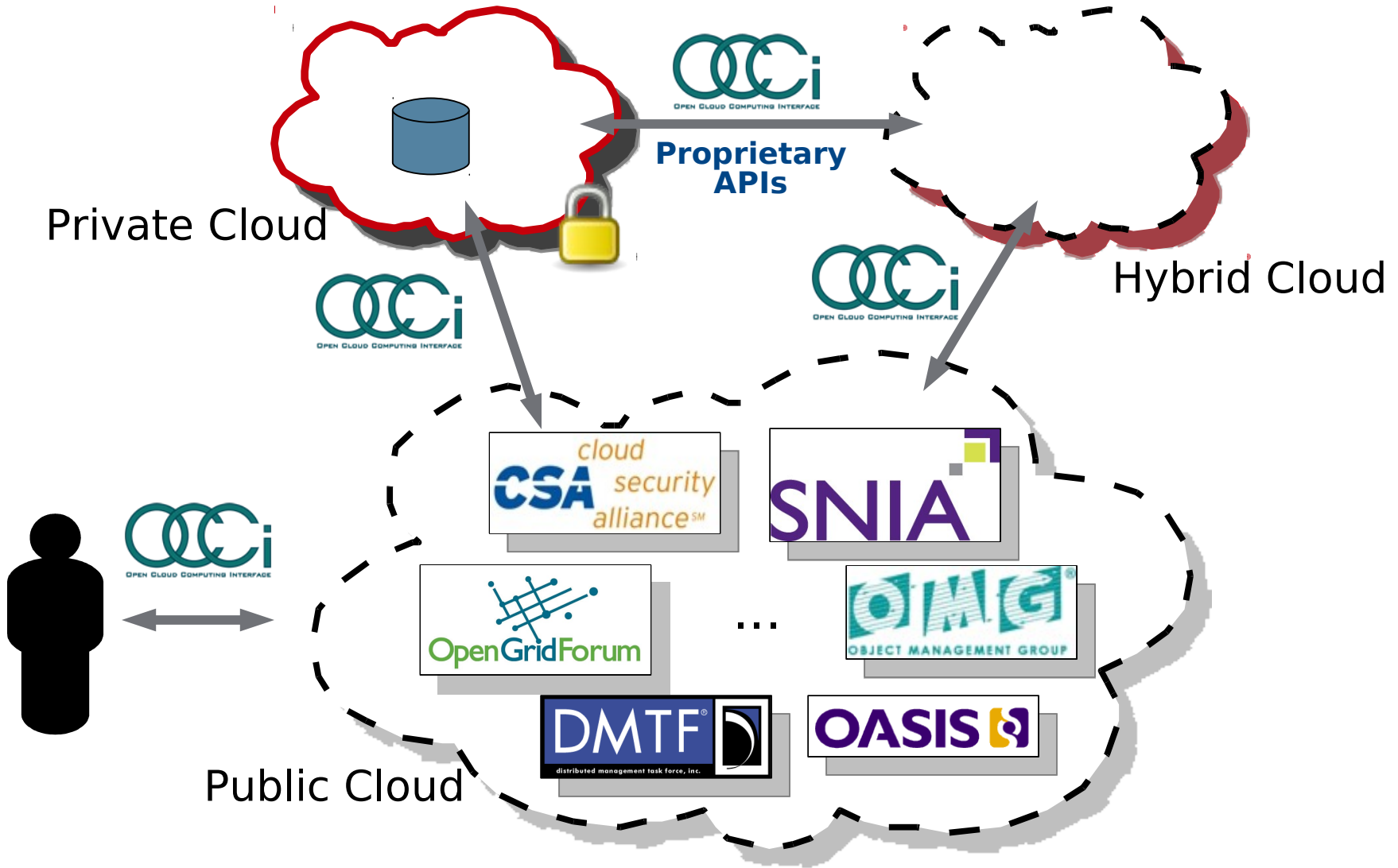
Benefits of OCCI WG for OpenNebula

Public Cloud

- Integration with the emerging ecosystem that will be created around OCCI WG
- Reference implementation on top of OpenNebula (in the context of RESERVOIR)

Hybrid Clouds

- Single interface to access different providers
- Develop a plug-in to access OCCI
 - will provide access to all standard compliant clouds



<http://cloud-standards.org/>

Conclusions & Questions



Thijs Metsch

Sun Microsystems

<mailto:thijs.metsch@sun.com>

<http://www.nohuddleoffense.de>

<http://www.twitter.com/befreax>

OCCI working group website

<http://www.occi-wg.org>

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