

Open Cloud Computing Interface

An Overview

Thijs Metsch

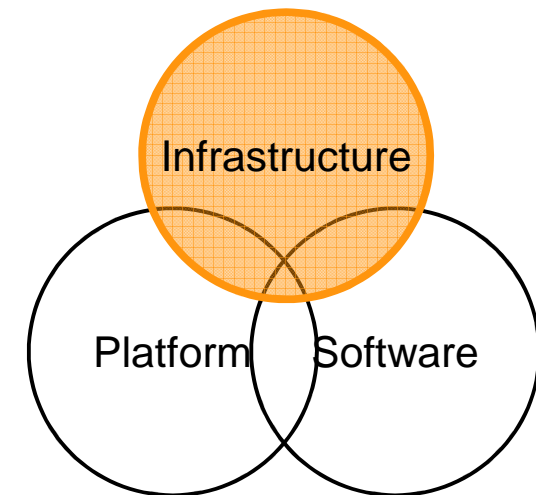
Principal Software Engineer Cloud, Grid and Virtualization

Sun Microsystems – RESERVOIR project

SNIA Mini summit , July 22nd, 2009

Motivation

- The current lack of a standard for IaaS based Clouds lead to the creation of the group
 - OCCi was founded as Cloud API BoF during OGF 25 in March 2009 by Ignacio Llorente and Thijs Metsch
 - Renamed to Open Cloud Computing Interface working group and started work in April 2009
- The creation is driven based on the background of:
 - **Interoperability** – ability to let different system interoperate (HybridCloud)
 - **Portability** – ability to move services and port them as easy as possible
 - **Integration** – wire up cloud computing with the legacy resources



Contributors & Implementors



- Four different chairs to represent the whole cloud community
 - **Academia** – Andy Edmonds (SLA@SOI - Intel)
 - **Industry** – Thijs Metsch (RESERVOIR - Sun Microsystems)
 - **End-Users** – Sam Johnston (Australian Online Solutions)
 - **Service Providers** – Alexis Richardson (RabbitMQ & CohesiveFT)
- Over 170 members on the mailinglist – ~ 30 contributing actively
- 4 Providers and 2 projects are going to implement the OCCI standard
- Interest in the group has been huge
 - Used to setup use cases and requirements according to the needs of the Cloud community
 - Interactive development of the API on the Wiki

Open Process = Open Standard

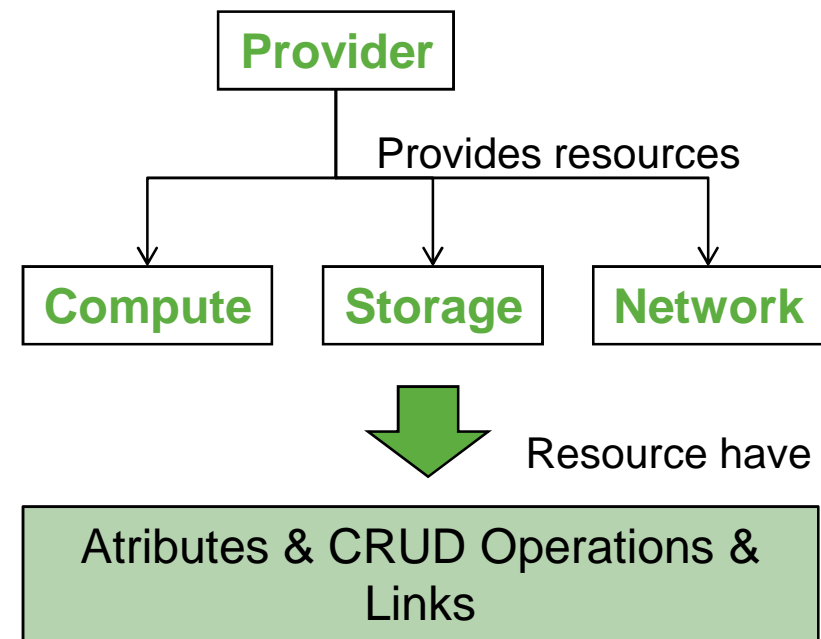
- The Open Grid Forum has an established open process where anybody can join and collaborate
 - Many people and companies joined and are so able to be part of the game
- Very aggressive timeline to be one of the first APIs in the field Clouds
 - OGF 25 – BoF session and creation of the group (100 Attendees)
 - OGF 26 – First presentations at a OGF meeting in Chapel Hill
 - OGF 27 – Presentation of the first API which will be ready to implement
 - OGF 28 – Start working on extensions to the API
- Feel free to join the discussion at:

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

The OCCI Cloud API

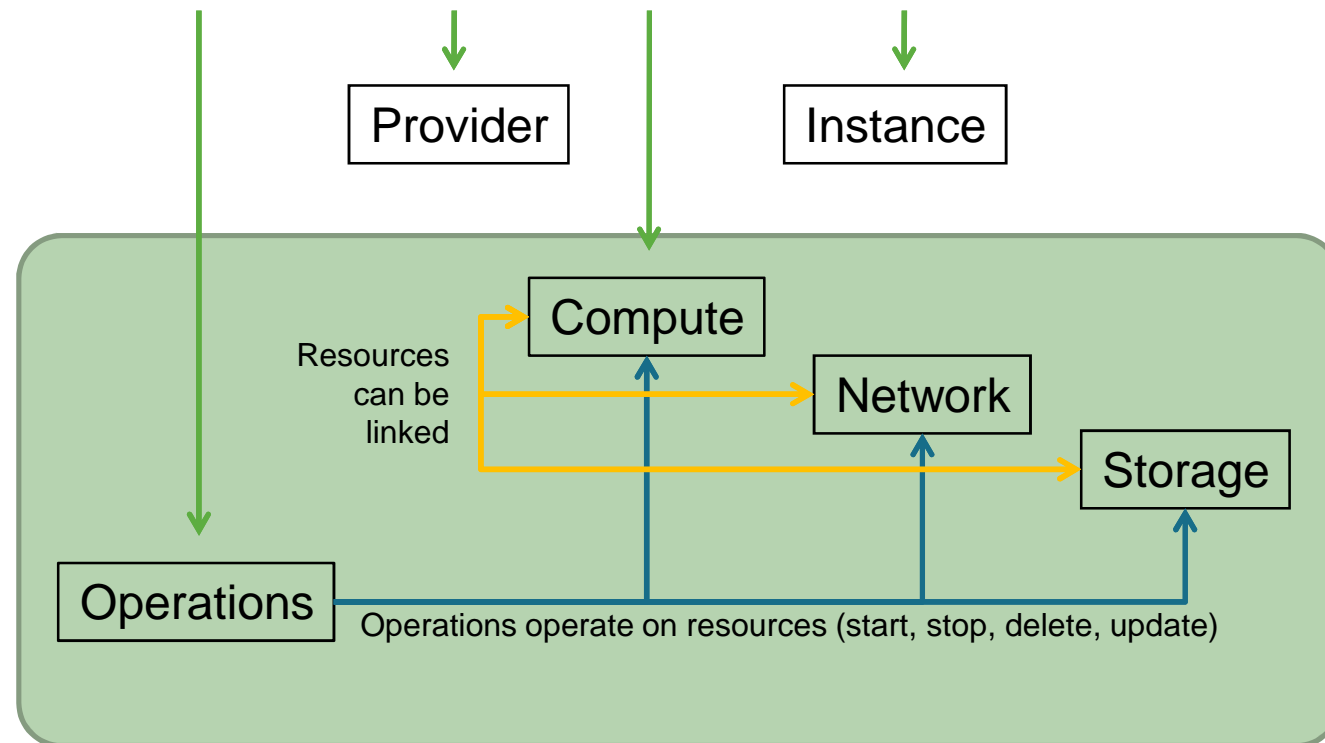


- Focused on the Infrastructure as a Service based Clouds
 - Small overlap with Software and Platform as a Service based Clouds
- Goal was the creation of a simple and **RESTful** API
 - Simple means ~15 commands → **slim**
 - Very **extensible**!
- Based on the requirements and ideas of existing APIs
- Still work in progress but many hurdles have already been taken



A RESTful view of the API

RESTful operation: *GET* <http://abc.com/compute/uid123foobar/>



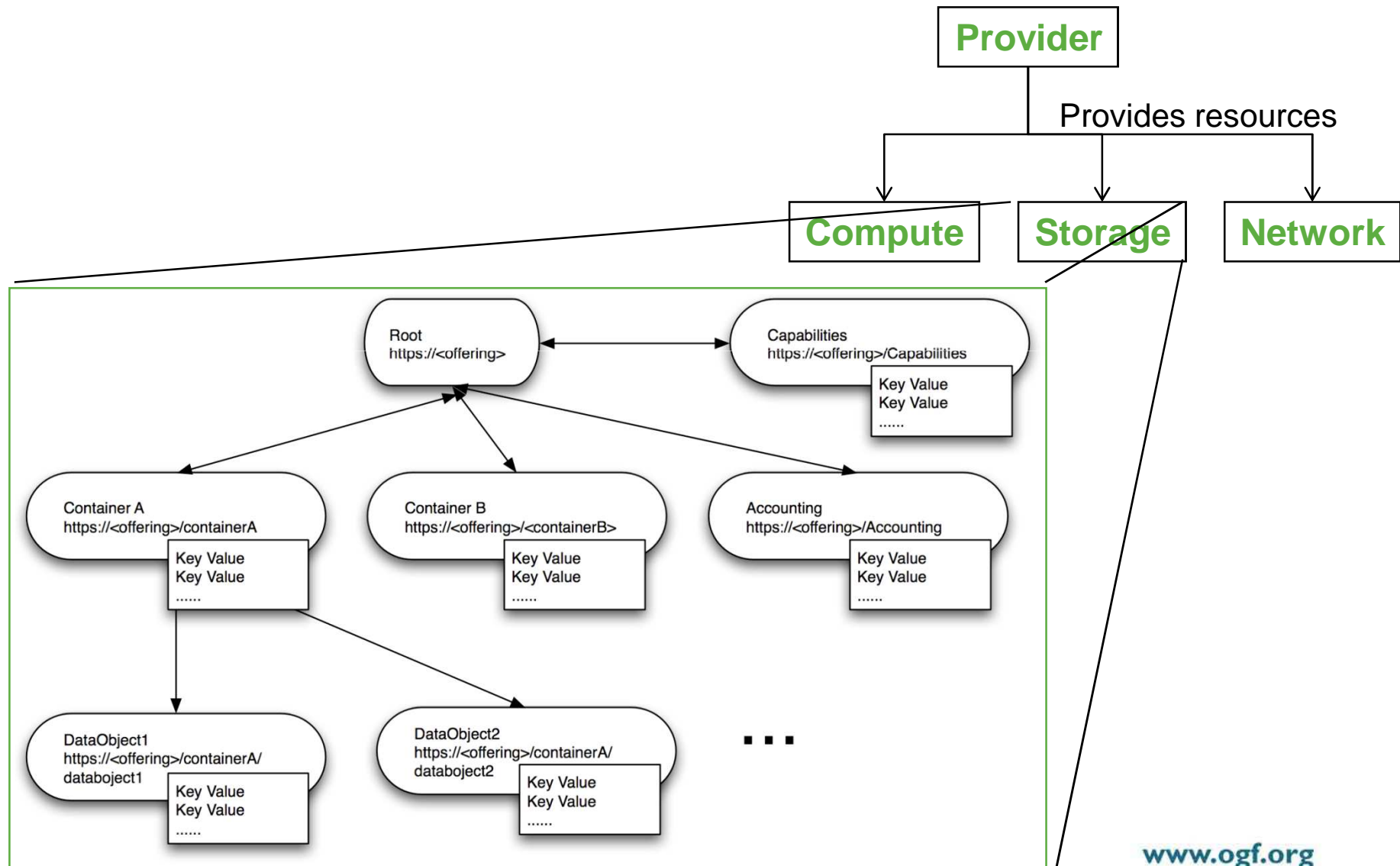
Covered by OCCl

OCCI & Storage



- Currently the OCCI specification states the following about storage
 - A storage resource is capable of mass storage of data (e.g. a virtual hard drive).
 - **storage.reliability** which can be *transient*, *persistent*, *reliable*
 - **storage.size** an Integer (10^9 bytes) Drive size in gigabytes
- Collaboration between OCCI and SNIA Cloud TWG needed!

OCCI & Storage (2)



Conclusions & Future work



- Currently the group is working on
 - **Requirements & Use cases** – prioritize and finalizing the document on requirements
 - **API design** – creation of the draft API description which can be implemented
 - **Members and Implementers recruitment** – Gather all the members and implementers of OCCI
- Also OCCI is involved and engaging in collaboration efforts
 - OGF has a work register describing the collaboration with DMTF – And therefore also the Cloud Incubator
 - The OCCI working group will have joint meeting with the SNIA Cloud technical working group (Storage)
 - OCCI is aware and contributing to the SCRM group which tries to coordinate all Cloud standards efforts

Full Copyright Notice



Copyright (C) Open Grid Forum (2009). All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works.

The limited permissions granted above are perpetual and will not be revoked by the OGF or its successors or assignees.