Planning Extensions to OCCI  
as foreseen by EGI and INDIGO

Boris Parák, Michel Drescher, Zdeněk Šustr

21 May 2015

www.egi.eu

EGI-Engage is co-funded by the Horizon 2020 Framework Programme of the European Union under grant number 654142
Agenda

• Compute Resource Template Profile
• Compute Instance Snapshot Extension
• Compute Export Extension
• Compute Instance Resizing
• Security Groups Extension
An EGI Compute Resource Template Profile

- consistent set of named resource requirements
- A set of pre-defined resource templates with fixed “sizes”
  - Meant to simplify resource allocation and accounting.
  - Defines mixins with some custom attributes applicable to \texttt{infrastructure\#compute} instances.

An **EGI** Use Case:

*Support for users creating snapshots of running VM instances and make these available as first-class VM images that can be instantiated.*

**Goal:**

1. Making a snapshot of a compute instance
   - Choose method (live, deferred) by attribute
   - Create an OS template from the copied images

2. Obtain an identifier of the saved os template
   - So that it could be used, e.g., to instantiate additional compute resources
An **EGI** Use Case:

*Support for users creating snapshots of running VM instances and make these available as first-class VM images that can be instantiated.*

- Same Use Case as on the previous slide, implies snapshot export capability to allow distributing snapshots to other sites.

**Goal:**
- Instructing a CMF to upload existing snapshots to a given location
  - Intended primarily for exporting snapshots for use in other sites
  - What is the correct term. Compute snapshot? Image? Appliance?
  - Expose or upload?
  - How to return links?
An **EGI** Use Case:

*Support for changing attached resources to an executing compute instance.*

Goal:

- Support replacing resource templates for an existing compute instance
- Current assumption: no need for an extra extension
  - Clarify wording in OCCI 1.2 – `resource_tpl` mixins replace each other, thus “resizing” the target compute instance
Security Groups Extension

An **INDIGO** and **EGI** Use Case

- Definition & discovery of networking restrictions to be imposed on a compute resource
  - Open/closed ports
  - Access rules
- Perhaps adopting the current *occi-os* approach?
  - Security groups mixed into compute instances
    - ... and rules.
- **limitation:** applies to the whole compute resource, cannot be defined per interface
- **Discuss!**
– That’s all for today –