Accessing federated clouds in EGI with the VMOps Dashboard

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Institute of Accelerating Systems and Applications (IASA)
Provides a set of graphical interfaces to high-level services, in order to deploy and manage Virtual Machines and Virtualized Appliances on the EGI Federated Cloud.

- Easy VM deployment with a wizard-like interface, helping users configure and deploy a VM in a few clicks, by selecting from the available resources,
- Manage and monitor the deployed VMs in a single page,
- Perform ad-hoc operations on deployed VMs,
- Enables users to contact cloud provider administrators for troubleshooting,
- Informs users about cloud provider availability to prevent failures
EGI AppDB VMOps dashboard

Why use the VMOps dashboard

VM Authors
- Register Virtual Appliance Version

VO Managers
- Add VMs endorsed by a VO

EGI Fedcloud Site (infrastructure)
- openstack
- OpenNebula

AppDB
- Virtual Appliance
  Registration (web)

VM Catalogue
- Validate/store

Read list of VMs
- VO Image list editor (web)
- compose/publish

On new publish
- VO image lists
  (helix format)
- generate

Cloudkeeper
- Subscribe

VM Caster
Users must have a lot of information at hand, such as:

- Which virtual organization endorses a specific VM
- The cloud providers that support the specific VO
- The available resources (aka templates) that each site provides
- All the intrinsic identifiers needed to specify the (VM, VO, site) combination along with endpoint URLs and authentication strategies
- Generate and provide authentication access tokens for accessing the underlying infrastructure
- Availability of specific cloud provider endpoints at deployment time, as endpoints might be unavailable when they are on scheduled or unscheduled downtime or experiencing network accessibility problems
EGI AppDB VMOPs dashboard
Why use the VMOPs dashboard

VMOPs collects and filters this information using a number of service integrations and data harvesting that runs in the background.

- **EGI AAI Check in**
- **EGI Operations portal**
- **EGI Configuration Database (GOCDB)**
- **Argo monitoring system**
- **Argo messaging service (AMS)**
- **Cloud-info-provider**
- **Infrastructure Manager (IM)**
- and more...
EGI AppDB VMOps dashboard
VMOps features - Deployment/VM Selector
EGI AppDB VMOps dashboard

VMOps features - Deployment/VO Selector

The FedCloud Virtual Organization brings together sites and users interested in running cloud services, testing compatibility and integrating cloud sites into EGI operations infrastructure. Members identify and test technologies, deploy and operate services in a federated cloud. Purpose of VO is to test usability and level of integration using nearly-production computations.

The main aim of the training.egi.eu VO is to integrate and offer resources for training, which can be used by trainers and trainees during organised training events, of by self-paced learners studying EGI-related training materials. Membership in this VO is restricted to EGI trainers and training service providers. Students do not need direct membership in the VO. Instead they gain access to VO resources through short-term, user-specific proxy certificates that are generated from robot certificates. These short-term proxies contain information about the students, enabling tracking of user activities on the VO resources and services.
EGI AppDB VMOPS dashboard

VMOPS features - Deployment/Cloud provider Selector
## EGI AppDB VMOps dashboard

### VMOps features - Deployment/Template Selector

### Topology Builder

Create a new topology and deploy it to the infrastructure.

**Select a resource template (flavour) for your VM instance**

<table>
<thead>
<tr>
<th>Name</th>
<th>CPUs</th>
<th>Memory</th>
<th>Disk</th>
<th>Connectivity</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logical</td>
<td>Physical</td>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2048 MB</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>0481c66b-d60a-4d07-b1e4-1fae3e6ab395</td>
<td>1</td>
<td>1</td>
<td>4096 MB</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>ab1fd4c-324d-4155-bd0f-72f077f0ebce</td>
<td>2</td>
<td>2</td>
<td>4096 MB</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>ab9784d7-e785-4f4e-a115-1d188505b5eb</td>
<td>4</td>
<td>4</td>
<td>8192 MB</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>6cf0bde-85c6-4e92-b7ab-f80c75a695b7</td>
<td>8</td>
<td>8</td>
<td>16384 MB</td>
<td>-</td>
<td>✓</td>
</tr>
</tbody>
</table>

**VM Template**

VM Image resource template
EGI AppDB VMOPs dashboard
VMOPs features - Deployment/Configuration
EGI AppDB VMOps dashboard

VMOps features - Deployment/Configuration
EGI AppDB VMOps dashboard
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VMOps features - Deployment/Configuration
EGI AppDB VMOps dashboard

VMOps features - Deployment/Configuration

Edit user account: joedoe

Username: joedoe
Full name: Joe Doe

SSH

Groups

Advanced

Password

Below you can provide up to 3 SSH public keys in order to enable SSH authentication for this user account. You can leave these fields empty in case you do not want to connect to this account using SSH.

SSH key example: ssh-rsa AAAAAB3Nzxc1yc2EAAAADAZo94grd.oQABAAAABQJyuser@localhost

1. ssh key

2. ssh key

3. ssh key

Manage user accounts:

Contextualization

Manage user accounts:

Groups: none
Default shell: bash

Add New

Using 1 out of 6 available items
EGI AppDB VMOps dashboard

VMOps features - Deployment/Configuration

Contextualization

Manage user accounts:

Joe Doe

Groups: none
Default shell: bash

Execute shell script:

Below you can define a bash script to be executed in VM upon boot. This is an optional feature and you can leave it empty.
### EGI AppDB VMOps dashboard

#### VMOps features - VM List

<table>
<thead>
<tr>
<th>Name</th>
<th>Site</th>
<th>Platform</th>
<th>Template</th>
<th>Public IP</th>
<th>State</th>
<th>Created At</th>
<th>Updated At</th>
</tr>
</thead>
</table>
## EGI AppDB VMOps dashboard

### VMOps features - SSH Access

<table>
<thead>
<tr>
<th>Description</th>
<th>Log</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Generic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VAppliance:</td>
<td>EGI Docker</td>
</tr>
<tr>
<td>CPU Arch:</td>
<td>x86_64</td>
</tr>
<tr>
<td>CPU Cores:</td>
<td>1</td>
</tr>
<tr>
<td>Memory:</td>
<td>512 MB</td>
</tr>
<tr>
<td>OS Type:</td>
<td>-</td>
</tr>
</tbody>
</table>

### Connect using SSH client

1. **Download the private key from the link below**
   
   Assuming file saved as `/tmp/creds.pem`

2. **Change the file permissions**:
   
   ```
   $ chmod 600 /tmp/creds.pem
   ```

3. **Then connect using the following command**
   
   ```
   $ ssh -i /tmp/creds.pem cloudadm@194.44.37.118
   ```

System User: `cloudadm`

Download key / view key
EGI AppDB VMOps dashboard

VMOps features - VM Actions
# EGI AppDB VMOps dashboard

## VMOps features - Troubleshooting

### Networking

| Public IP  | 194.44.37.118 |

### Access

<table>
<thead>
<tr>
<th>System User</th>
<th>cloudadm</th>
</tr>
</thead>
</table>

```table
<table>
<thead>
<tr>
<th>Endpoint</th>
<th>ost://openstack.blip.kiev.ua:5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template</td>
<td>0</td>
</tr>
</tbody>
</table>
```

---

Open ticket in GGUS

- You can submit up to 10 tickets total
- No tickets found

No previous tickets are opened for this item.
Create ticket for vm EGI_Docker [5f916644992fe610368b0dfe]

Name
Alexander Nakos

Priority
less urgent

Affected Site
UA-BITP

E-mail
nakos.ale@iassa.gr

CC
CC [comma separated]

Subject
Issue with vm EGI_Docker [5f916644992fe610368b0dfe]

Description
Dear site administrators,

I'm having trouble accessing my VM via SSH. Can you please take a look?

Thank you in advance.
EGI AppDB VMOps dashboard

VMOps features - Cloud availability
EGI AppDB VMOps dashboard
How to access the VMOps dashboard

- Direct access: https://dashboard.appdb.egi.eu/vmops/
- Indirect from AppDB portal Cloud Marketplace
EGI AppDB VMOps dashboard
User requirements

Users must fulfill these requirements in order to use the VMOps dashboard:

- Registered with the EGI AAI Check-in
- Enrolled in any Virtual Organization supported by VMOps [wiki]
Future plans:

- More ad-hoc functionality (e.g. adding/removing VMs to/from existing topologies)
- Provide more VM customization out of the box
- Make further use of new Information System, such as cloud providers network resources, SLAs etc.
Thank you for your attention.

Questions?