

EGI Federated Cloud

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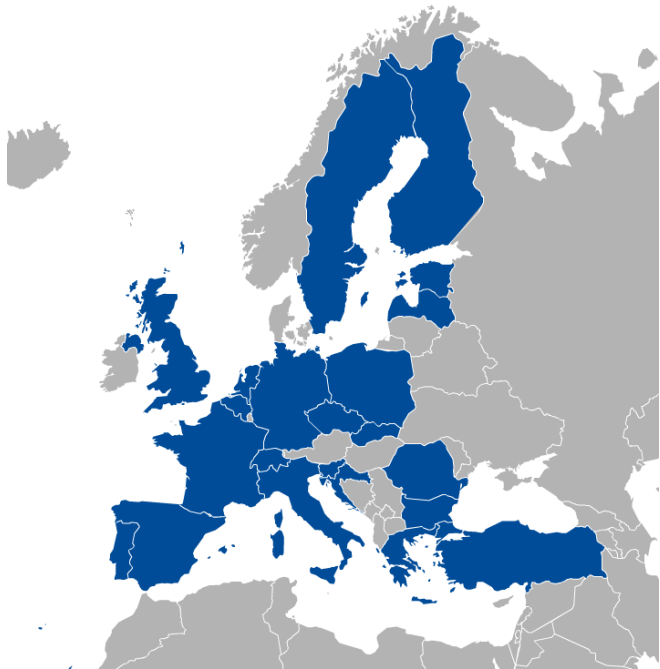


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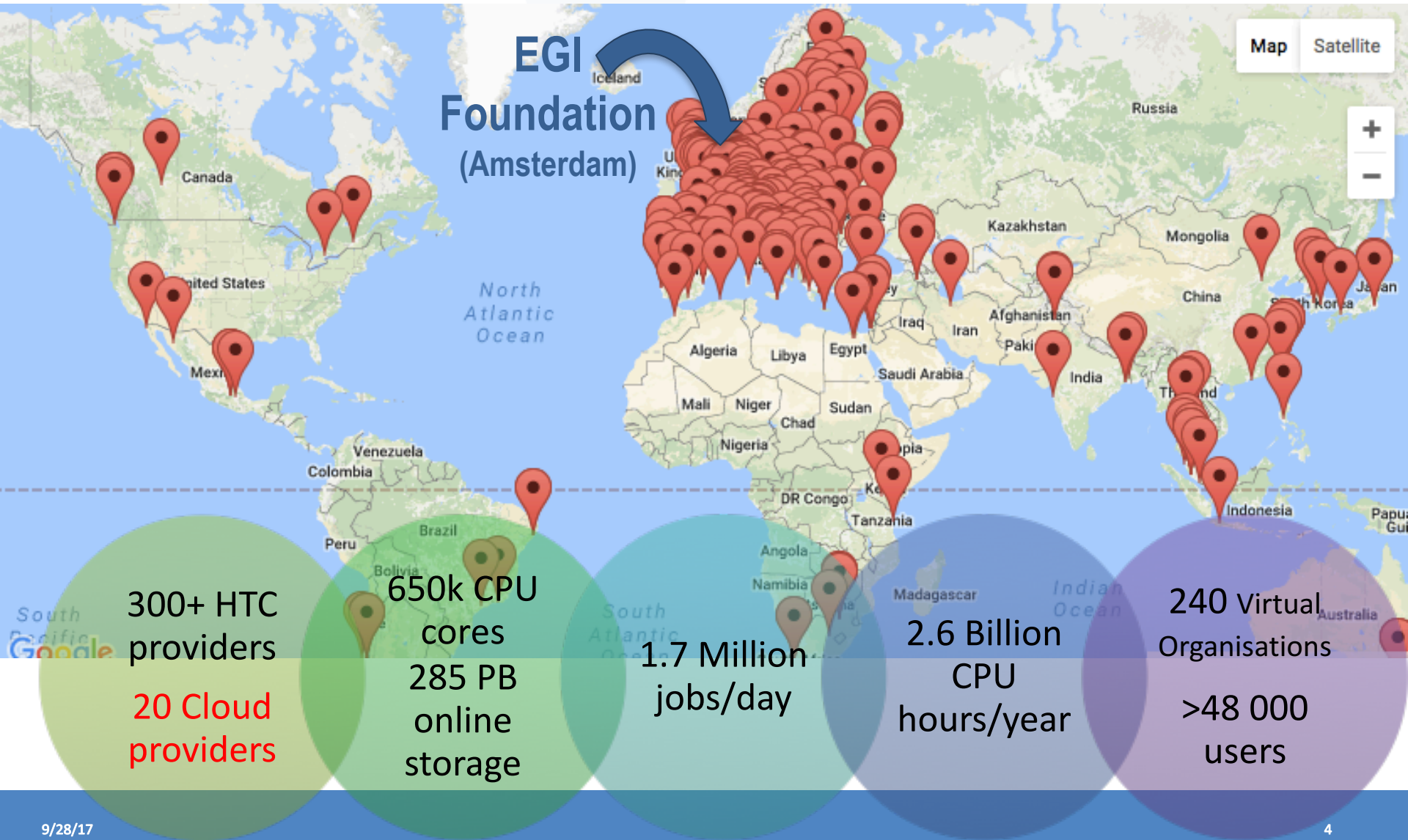
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EGI's mission is to create and deliver open solutions for science and research infrastructures by federating digital capabilities, resources and expertise between communities and across national boundaries.

- Major national e-Infrastructures: 22 NGIs
- EIRO: CERN (European Intergovernmental Research Organisation)
- Membership fees sustain the federation and community
 - EGI Foundation
 - Collaboration & federation



EGI Federation largest e-infrastructure federation of the world



External service catalogue

<https://www.esi.eu/services/>

Compute



Cloud Compute

Run virtual machines on demand with complete control over computing resources



Cloud Container Compute BETA

Run Docker containers in a lightweight virtualised environment



High-Throughput Compute

Execute thousands of computational tasks to analyse large datasets

Storage and Data



Online Storage

Store, share and access your files and their metadata on a global scale



Archive Storage

Back-up your data for the long term and future use in a secure environment



Data Transfer

Transfer large sets of data from one place to another

Training



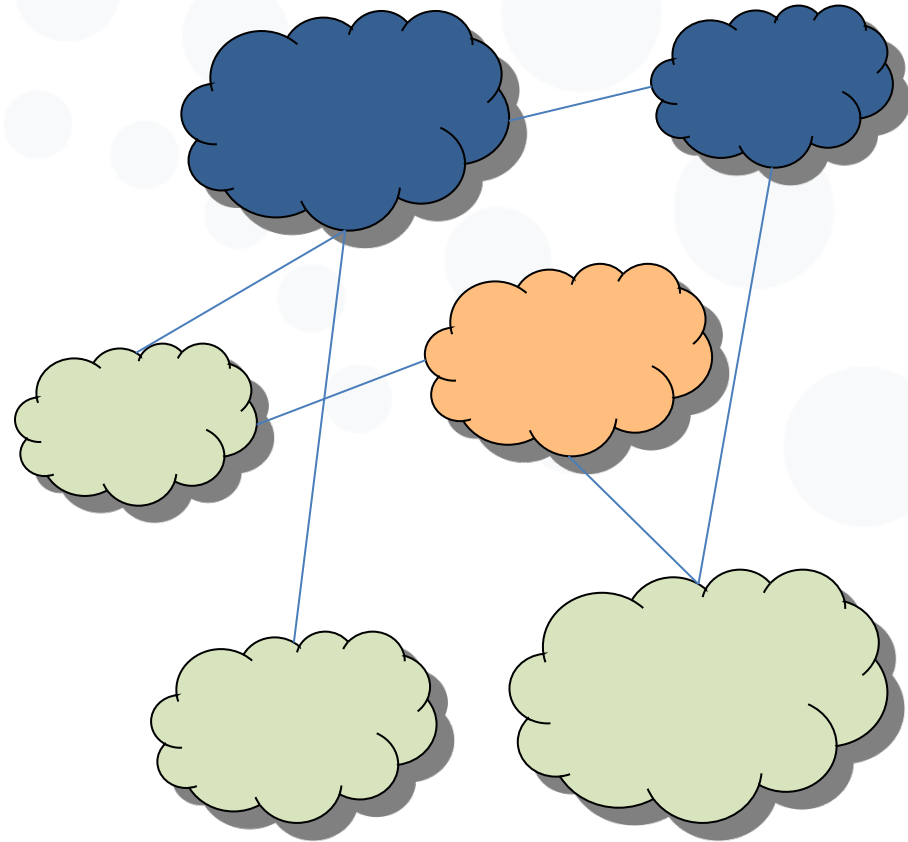
FitSM training

Learn how to manage IT services with a pragmatic and lightweight standard

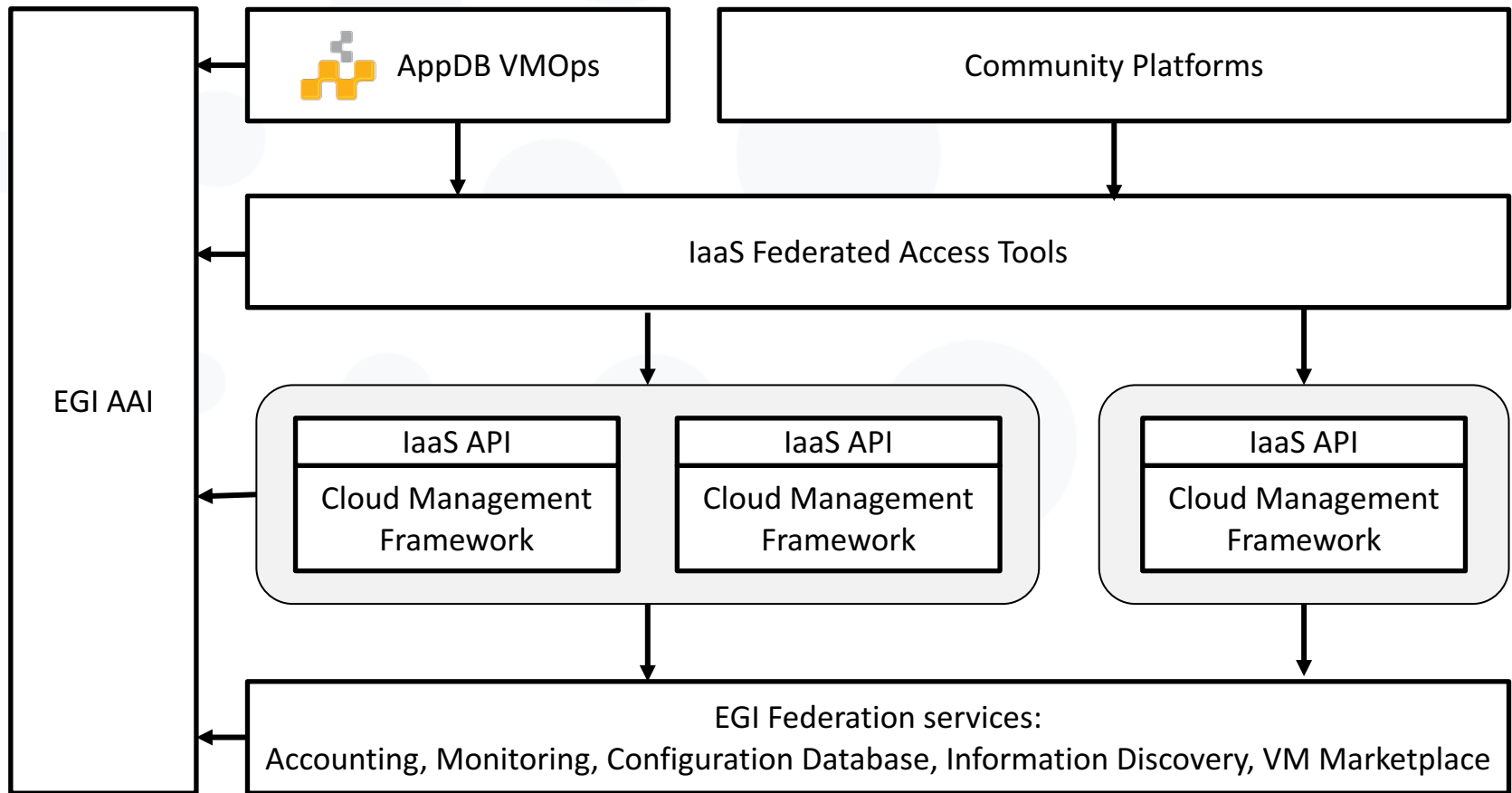


Training infrastructure

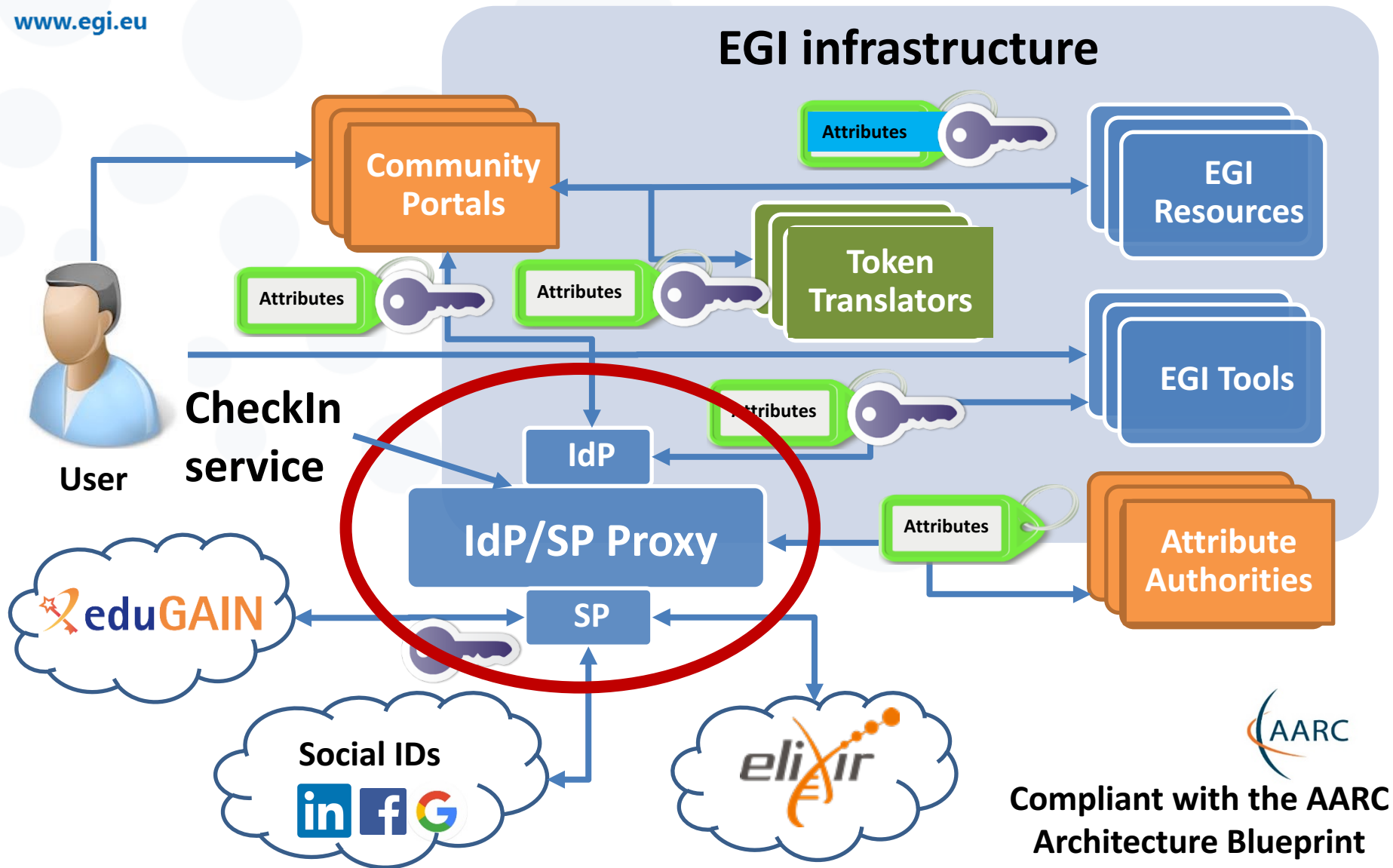
Dedicated computing and storage for training and education



- Grid of clouds
- Harmonised operational behaviour
- Based on open standards and open technologies
- Primarily an IaaS cloud, but with community-hosted PaaS and SaaS on top
- Infrastructure **AND** Technology stack



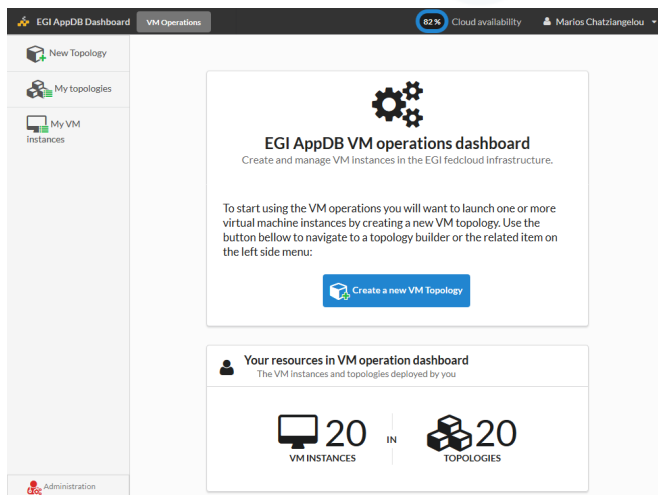
The new EGI AAI architecture



 **Compliant with the AARC Architecture Blueprint**

- Provide access to the heterogeneous IaaS frameworks:
 - IaaS provisioning systems that allow to define infrastructure as code and manage and combine resources from different providers, thus enabling the portability of application deployments between them (e.g. IM, Terraform)
 - *Smart* brokers providing matchmaking for workloads to available providers (e.g. INDIGO-Orchestrator)
 - Cloud Management Software that provides a unified console for accessing resources and deploy workloads following a set of user-defined established policies (e.g. Scalr or RightScale)

- Unified resource management on the Federated Cloud
- Complete EGI CheckIn integration
- Personalized, wizard-like, topology builder:
 - Manage multiple-VM topologies with associated storage and contextualization
 - Fine grained control of VMs within topologies



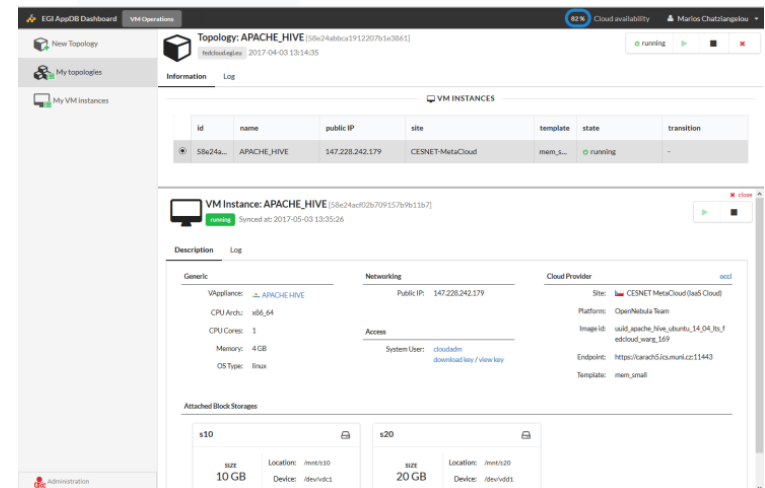
EGI AppDB VM operations dashboard
Create and manage VM instances in the EGI federated infrastructure.

To start using the VM operations you will want to launch one or more virtual machine instances by creating a new VM topology. Use the button below to navigate to a topology builder or the related item on the left side menu:

[Create a new VM Topology](#)

Your resources in VM operation dashboard
The VM instances and topologies deployed by you

20 VM INSTANCES IN 20 TOPOLOGIES



Topology: APACHE_HIVE [58b244bba1912207b5e33861]

id	name	public IP	site	template	state	transition
58b244...	APACHE_HIVE	147.228.242.179	CESNET-MetaCloud	mem_s...	running	-

VM Instance: APACHE_HIVE [58b244b02b709157b9b13b7]

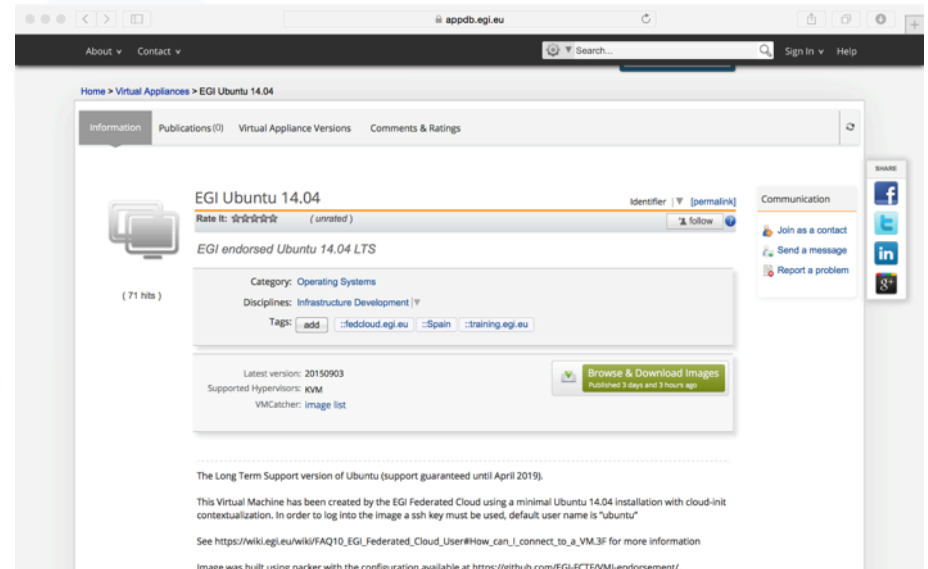
Description Log

Generic	Networking	Cloud Provider
Vmpliance: √ APACHE_HIVE CPU Arch: x86_64 CPU Cores: 1 Memory: 4GB OS Type: linux	Public IP: 147.228.242.179 Access: System User: cloudbin download key / view key	Site: CESNET MetaCloud (x86 Cloud) Platform: OpenNebula Team Image ID: x86_64_apache_hive_ubuntu_14_04_jls_f45b0d2_wmg_549 Endpoint: https://carach5.komuni.cz:11443 Template: mem_small

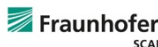
Attached Block Storages

size	Location	size	Location
10 GB	lms4/s30 Device: ibw/vdc1	20 GB	lms4/s30 Device: ibw/vdc1

- Open Library of Virtual Appliances
 - Use on clouds or for personal download
 - Re-use, share, associate contextualization
- EGI endorsed VM images, securely configured and tested
- Community curated sets of images
 - Automatic distribution of sets to cloud providers



The FedCloud infrastructure



Build your federation

Component	EGI Technology	Standards
EGI Federated Service Management	-	FitSM
EGI Service Registry	GOCDDB	-
EGI AAI compliance	EGI CheckIn	OpenID Connect, SAML, X.509
EGI Accounting	cASO, oneacct-export, APEL	OGF Cloud UR
EGI Monitoring	EGI ARGO	-
EGI Information Discovery	cloud-info-provider, BDII	OGF GlueSchema, LDAP
VMI replication	cloudkeeper	OVF, HEPIX image lists
VMI catalogue	AppDB	-
IaaS standard interface	rOCCI, ooi	OCCI 1.2
EGI helpdesk	GGUS	-

Thank you for your attention.

Questions?



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