Contribution ID: **5**   Type: **Demonstration/Tutorial (30 mins)**

Infrastructure Manager (IM): TOSCA deployment and orchestration in the Cloud Continuum

Wednesday, 21 June 2023 15:30 (20 minutes)

The Infrastructure Manager (IM) is a TOSCA-based orchestrator that has been developed throughout the last decade to support the deployment of complex application architectures across a myriad of IaaS Cloud backends, including the most popular public Cloud Platforms (Amazon Web Services, Microsoft Azure, Google Cloud Platform) as well as European public providers such as Open Telekom Cloud, Cloud & Heat and Orange Cloud, European federated platforms such as EGI Cloud Compute and on-premises platforms like OpenStack or OpenNebula. Furthermore, the IM has been running in production for more than 5 years in EGI Cloud Compute, where it is the preferred solution to deploy complex infrastructures in the cloud.

This contribution demonstrates a TOSCA extension, to define FaaS-based applications to be deployed using open-source serverless platforms. Also, the IM has been extended to support application deployment described using these new TOSCA templates. For this, we have relied on the serverless capabilities of the two existing open-source developments. On the one hand, SCAR allows the deployment of Docker-based applications on AWS Lambda and AWS Batch. On the other hand, OSCAR can run event-driven Docker-based applications for data processing purposes on Kubernetes clusters, including low-powered ARM-based devices such as Raspberry PIs clusters, thus approaching the edge of the cloud continuum scenario.

Other key topic

Key Topic

Federated compute continuum

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