

Service Provider Application Form

Company Organisation Details:

Name: Safe Swiss Cloud AG

Company headquarters: Alte Landstrasse 64, 8800 Thalwil, Switzerland

Webpage: <https://www.safeswisscloud.ch>

Contact person (name, affiliation, email):

Prodosh Banerjee, CEO, Safe Swiss Cloud AG, Prodosh.banerjee@safeswisscloud.ch

Service Provider category (tick one or more):

- Connectivity Provider
- Infrastructure-as-a-Service Provider (IaaS)
- Platform-as-a-Service Provider (PaaS)
- Software-as-a-Service Provider (SaaS)
- Integrator
- Consultant
- Broker

Company's Objective:

Summarise your company's objectives to participate in Helix Nebula.

We want to make a good amount of our large capacity available to the research community while gaining experience with running large, diverse, analytical and other workloads.

State-of-art in the provision of cloud computing services:

Position your company's services with respect to the currently most advanced use of cloud computing.

- Instantly create virtual server and networking equipment (routers, firewall) instances.
- Highly available clustered primary storage (CEPH). Massively parallelized IO allows high performance. No single point of failure. No limit on the size of disk volumes. Disk volumes are permanent and survive instance restarts.
- Streaming S3 compatible storage for backups and media storage.
- Very low downtime thanks to live migration technology.
- Virtual Data Centres provide water tight isolation between customers.
- Software Defined Networking allows the design of complex network topologies
- APIs and scripting to automate tasks
- Works with SixSQ Slipstream
- Secure and 100% Swiss / European

Expected Impact and Benefits:

By using the services provided by your company, what impact will the result have on the scientific field? What benefit will it bring to the scientific community and the European Research Area?

We are able to provide highly scalable and flexible multi-tenant services that go beyond what most cloud providers offer.

We want to participate in the consultation processes with the research organizations to understand their requirements and tailor our services to meet these special requirements.

Existing or potential partnership:

Which partner(s) of company, and in particular SME, would enjoy access to Helix Nebula through its participation?

Our partners include:

- SixSQ: <http://sixsq.com/> : providers of the Slipstream platform which powers Helix Nebula
- Gridmine: <http://www.gridmine.com/> : a big data analysis platform which can be instantiated on Safe Swiss Cloud for running large analytic problems.
- Many more – please contact us for a detailed list

Technical Characteristics:

Describe the computing characteristics of your cloud computing services:

Characteristic	Description
CPU cores available	➤ 2000
CPU RAM available (GB)	➤ 5000 GB
Minimum Server configuration	1 Core, 1GB RAM, 10GB storage
Maximum Server Configuration	32 Cores, 64 GB RAM, any storage
Provisioning time for VM	15 – 60 seconds
Image Upload Access	Yes.
Hypervisor(s)	KVM
Storage available (TB)	192
IPv6	Not yet.
Public network traffic capacity	16 Gb/s (more available on request)
Private network traffic capacity	1.28 Tbps switching capacity on core switches, max. forwarding rate 952 Mpps, latency < 2 micro secs, all servers have dual redundant 20 Gbps physical connections
Operating environments supported (operating system and version, libraries etc.)	Windows, all versions of Linux, BSD, any operating system which runs on an Intel instruction set.
External provisioning API	Cloudstack v4.5, AWS
Peering agreements	Init7, t-Systems We announce our network: ch.safeswisscloud We accept all
Computing centre locations (current, future)	Interxion, Glattbrugg, near Zürich Equinix, Zürich
PaaS Services available	Slipstream
SaaS Services available	Gridmine: Big Data analytics package based on Apache Sparc, Hadoop etc.
Cloud on-boarding service available	Yes
Other comments	Support and managed services available

Current status of maturity:

Indicate if the cloud computing services are under development or already being used in a different environment.

In production with paying customers since 2012.

Current architecture is in its second generation.

Proposer Resources:

Indicate the level of resources (manpower and funds) your company is willing to contribute towards the cost of implementing services for the flagship use cases until end of 2016.

TBD.

Proposer Motivation:

Explain which aspects (such as scalability of resources, portability between service suppliers, use of standardized interfaces etc.) you consider to be the most important to investigate during the pilot phase.

Verify performance under various workloads and ability to handle diverse use cases.

Proposer Long-term Objectives:

Assuming your service is successfully being used during the pilot phase, what would be the long-term objectives of your company?

A long term partnership with the research community with the aim of offering state of the art, secure cloud computing made in Europe.