

SlipStream®: DevOps and Multi-cloud application Management Platform

A professional open source PaaS solution

Marc-Elian Bégin, CEO, Co-founder, SixSq



Locations



Global Headquarters
Geneva, **Switzerland**



North American
Headquarters
Montreal, Quebec, **Canada**

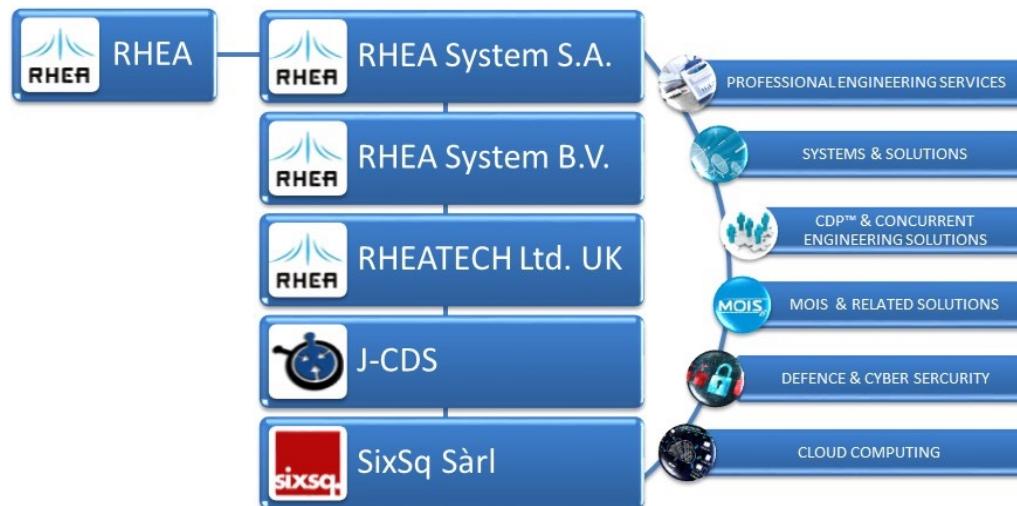


Founded in 2007

- ▶ Innovative
- ▶ Cloud expert
- ▶ Knowledge in all main cloud technologies
- ▶ Delivering cloud neutrality



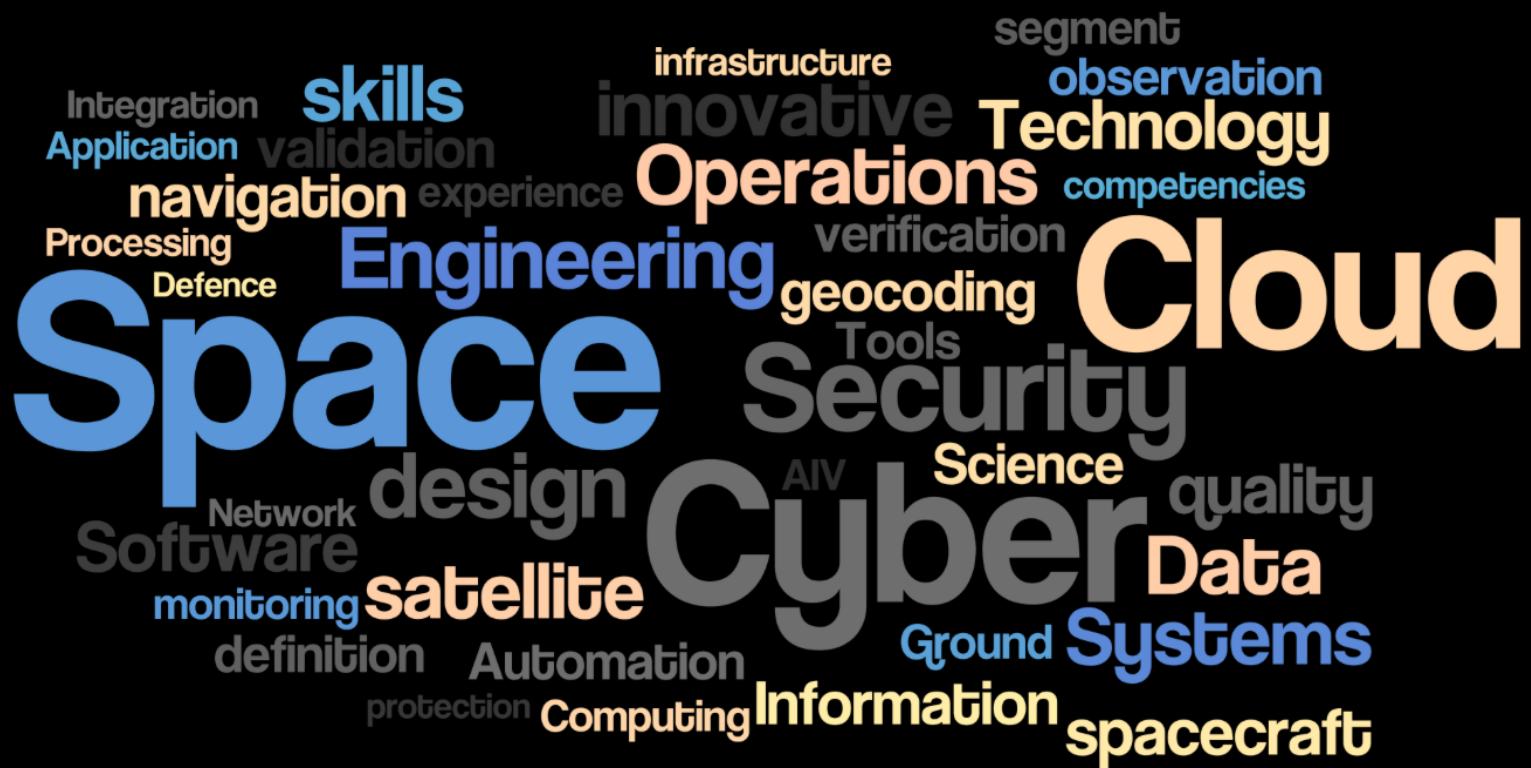
SixSq now member of RHEA Group



What we do

We innovate solutions

for Space System Engineering and Information Technology





scisys

T...Systems...



Customers



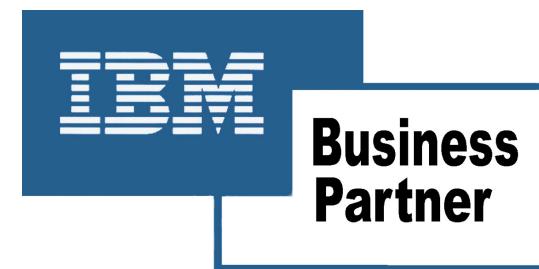
Atos



TERMA[®]



Partnerships and Collaborations





Helix Nebula Initiative

Strategic Plan

- ▶ Establish multi-tenant, multi-provider cloud infrastructure
- ▶ Identify and adopt policies for trust, security and privacy
- ▶ Create governance structure
- ▶ Define funding schemes

CERN

To support the computing capacity needs for the ATLAS experiment

EMBL

Setting up a new service to simplify analysis of large genomes, for a deeper insight into evolution and biodiversity

esa

cnes iap DLR

To create an Earth Observation platform, focusing on earthquake and volcano research

PIC
port d'informació científica

To improve the speed and quality of research for finding surrogate biomarkers based on brain images

Additional Users:

ECMWF

Suppliers

Atos CGI CloudSigma CSA cloud security alliance™ DANTE www.dante.net esgi indra interoute from the ground to the cloud MEMSET HOSTING

Adopters

RWST Capgemini CLOUDEO CNRS DataCentred deac Ifremer NEPHOS TECHNOLOGIES

SAP sixsq SWITCH ...T...Systems the SERVER LABS ultimum technologies

Prologue Telefónica terradue 20 THALES vito Vandex



PaaS
Open Source
Multi-Cloud
Multi-Tenant
...it's all about automation...



SlipStream in the * as a Service

SaaS: Software as a Service

PaaS: Platform as a Service

IaaS: Infrastructure as a Service

SlipStream in the * as a Service

SaaS: Software as a Service

PaaS: Platform as a Service

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IaaS

IaaS



IaaS

IaaS

PaaS

PaaS



IaaS

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IaaS

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SlipStream.

SaaS



IaaS

PaaS



is a

SlipStream.

SaaS



IaaS

PaaS

SlipStream.

SaaS

uses

is a





↑ Welcome to SlipStream

The welcome page provides you with all currently published modules and root modules, including yours and the ones shared with you.

[New project](#)

App Store



[minecraft-app](#) > v 481

Publisher sebastien.fievet
Description A Minecraft Server



[openerp](#) > v 336

Publisher sebastien.fievet
Description An OpenERP instance backed with PostgreSQL



[windows-server...](#) > v 391

Publisher sixsq
Description Standard installation of the Windows Server 2012 R2 operating system (For



[centos-6](#) > v 544

Publisher sixsq
Description Minimal installation of the CentOS 6 operating system.



[wordpress](#) > v 564

Publisher sixsq
Description simple, single node deployment of WordPress



[ubuntu-12.04](#) > v 569

Publisher super
Description Minimal installation of the Ubuntu 12.04 (LTS) operating system.

Projects

aas

cloud

n

sixsq.

SlipStream.

Dashboard Help ▾ meb ▾

SlipStream.

Dashboard Help ▾ meb ▾

⌚ Dashboard

Control and monitor your cloud activity

⌂ / dashboard

Usage

ec2-eu-west exoscale-ch-gva

5 1

Deployments / Runs / Builds

Virtual Machines

Metering

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swiss made software

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Open source under Apache 2.0 License.

centos-6 > v 544

Publisher sixsq
Description Minimal installation of the CentOS 6 operating system.

wordpress > v 564

Publisher sixsq
Description simple, single node deployment of WordPress

ubuntu-12.04 > v 569

Publisher super
Description Minimal installation of the Ubuntu 12.04 (LTS) operating system.

Projects

The dashboard displays two usage metrics: 5 for ec2-eu-west and 1 for exoscale-ch-gva. Below these are sections for Deployments / Runs / Builds, Virtual Machines, and Metering. At the bottom, there's copyright information for SixSq, a logo for 'swiss made software', and a note about the software being powered by SlipStream v2.5 and open-sourced under the Apache 2.0 license. A list of projects is shown, each with a name, version, publisher, and description.



SlipStream.

Dashboard Help ▾ meb ▾

SlipStream.

Dashboard Help ▾ meb ▾

⌚ Dashboard

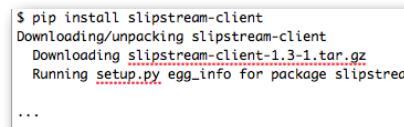
Control and monitor your cloud activity

⌂ / dashboard

Usage

ec2-eu-west


5

exoscale-ch-gva


1

Deployments / Runs / Builds

Virtual Machines

Metering

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```
$ pip install slipstream-client
Downloading/unpacking slipstream-client
  Downloading slipstream-client-1.3-1.tar.gz
    Running setup.py egg_info for package slipstream-client

...
$ ss-execute -h
Usage: usage: ss-execute [options] <module-uri>

<module-uri>  Full URL to the module to execute. For example Public/Tutorials/HelloWorld/client_server

Options:
  -h, --help            show this help message and exit
  -v, --verbose          verbose level. Add more to get more details.
  -u USERNAME, --username=USERNAME
                        SlipStream username
  -p PASSWORD, --password=PASSWORD
                        SlipStream password
  --cookie=FILE          SlipStream cookie
  --endpoint=URL         SlipStream server endpoint
  --parameters=KEY1=VALUE1,KEY2=VALUE2
                        Deployment or image parameters override. The key must
                        be in a form: <node-name>:<parameter-name>. Several
                        pairs can be provided comma separated.
```

centos-6 ➤ v 544

Publisher sixsq
Description Minimal installation of the CentOS 6 operating system.

word... ➤ v 544

Publisher sixsq
Description simple, single node deployment of WordPress

super ➤ v 544

Publisher super
Description Minimal installation of the Ubuntu 12.04 (LTS) operating system.

Projects

The screenshot displays two main interfaces: the SlipStream dashboard and the SlipStream API documentation.

SlipStream Dashboard: The left side shows a dashboard with various metrics. Key components include:

- Usage:** Two gauge charts showing values for "ec2-eu-west" (5) and "exoscale-ch-gva" (1).
- Deployments / Runs / Builds:** A section showing deployment statistics.
- Virtual Machines:** A section showing VM-related metrics.
- Metering:** A section showing resource consumption details.

SlipStream API Documentation: The right side shows the API documentation for the "Get a module" endpoint.

API Endpoint: `GET https://slipstream.sixsq.com/module/[<module>]/[<version>]`

BODY PARAMETERS:

Parameter	Required	Description
module	true	Unique identifier of the module - e.g. examples/images/ubuntu-12.04.
version	false	Version of the module to update. If not provided, get the latest (most recent)

Notes: To list the root projects, simply omit the `<MODULE>` from the request.

Shell Example:

```
curl https://slipstream.sixsq.com/module/<module> --user <user>:<password> -H "Content-Type: application/xml"
```

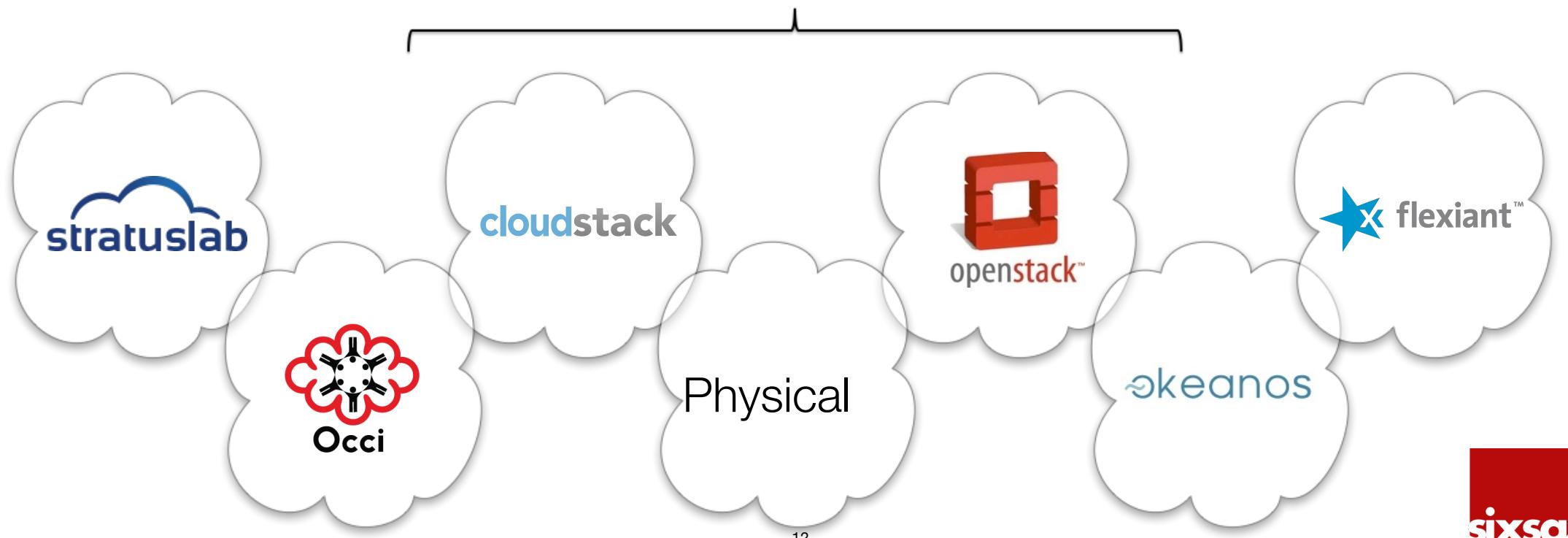
Response Body:

```
<imageModule category="Image" creation="2013-12-02 17:00:37.421 UTC" deleted="false" description="Minimal installation of the Ubuntu 12.04 (LTS) operating system." imageId="8c7e0ae-3a30-4031-a5e6-29832d85d7cb" isBase="true" isLatestVersion="true" lastModified="2014-05-04 12:36:06.105 UTC" loginUser="ubuntu" logoLink="http://design.ubuntu.com/wp-content/uploads/ubuntu-logo14.png" parentUrl="module/examples/images" platform="ubuntu" shortName="ubuntu-12.04" version="480"><parameters> ... </parameters> <entry> <string>extra.disk.volatil... </string> <parameter category="Cloud" description="Volatile extra disk in GB" isSet="false" mandatory="true" name="extra.disk.volatil..." order="0" order_= "0" readonly="false" type="String"/> </entry> <entry> <string>exoscale-ch-gva.instance.type</string> <parameter category="exoscale-ch-gva" description="Instance type (flavor)" isSet="true" mandatory="true" name="exoscale-ch-gva.instance.type" order="0" order_= "0" readonly="false" type="String"/> <value>Small</value> <defaultValue>Small</defaultValue> </parameter> </entry> ... <entry> <string>ec2-eu-west.security.group</string> <parameter category="ec2-eu-west" description="Security groups (comma separated list)" isSet="true" mandatory="true" name="ec2-eu-west.security.group" order="0" order_= "0" readonly="false" type="String"/> <value>default</value> </parameter> </entry>
```

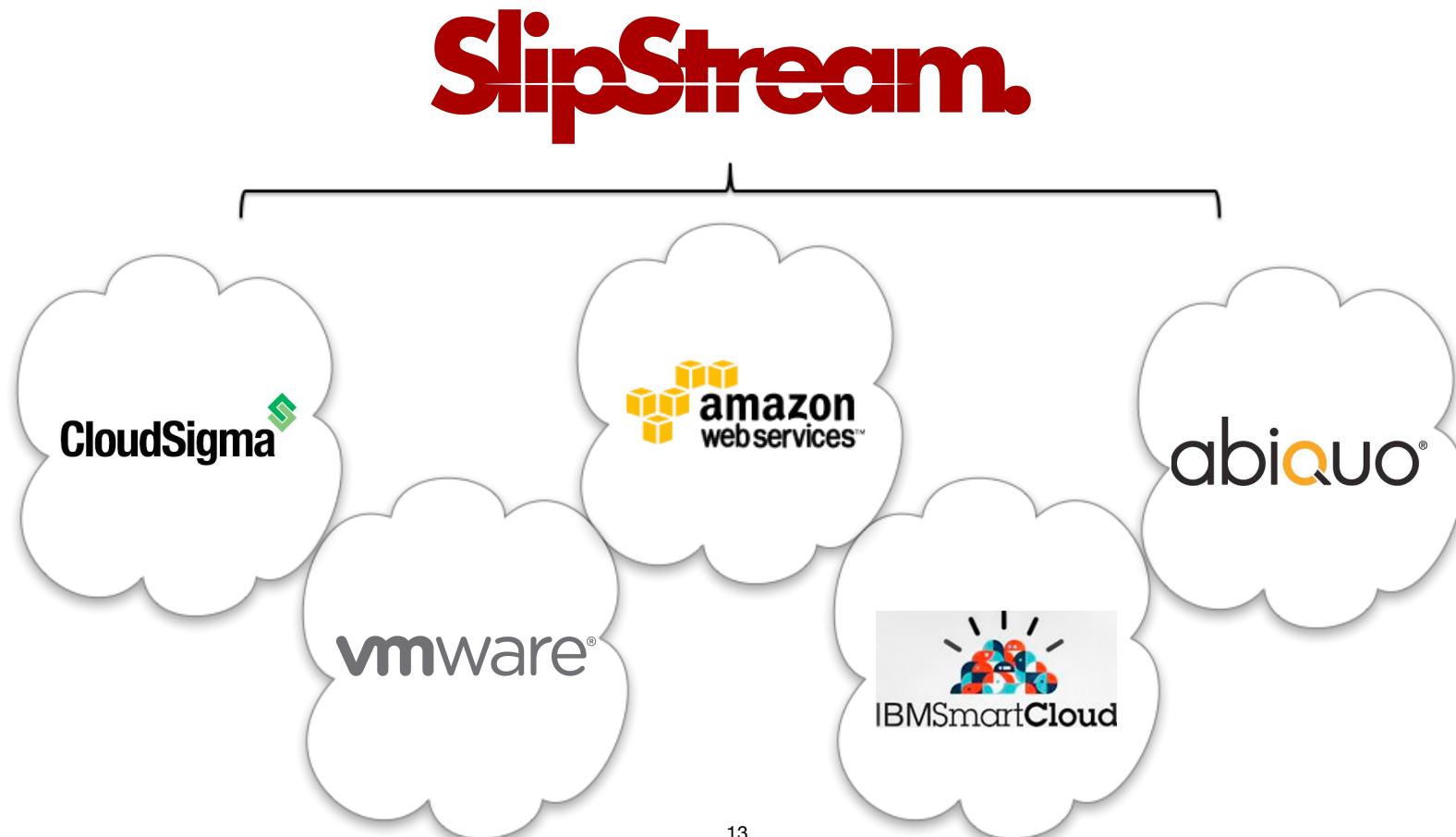
sixsq.

Supported IaaS (Open Source)

SlipStream.



Supported IaaS (Proprietary)



In a Nutshell

- **Open Source:** Released under the Apache 2.0 license, giving you openness and transparency
- **Professional:** A dedicated team designs, develops, tests and supports SlipStream based solutions
- **Multi-Cloud:** A truly multi-cloud and cloud agnostic provisioning platform giving you freedom of choice, avoiding lock-in

In a Nutshell (2)

- **Multi-Tenant:** Build for enterprise, with multi-tenancy support
- **Automation:** Built-in Enterprise App Store feature makes using SlipStream child's play, without compromising security
- **Scalable:** Used by distributed teams, with demanding workloads, means SlipStream will scale with your usage

Use cases

- **Enterprise App Store / Self-Service IT:** Provisioning applications inside an organisation should be as simple as installing an app on a mobile
- **Hybrid Cloud Provisioning:** The ability to burst or scale-out to public or remote clouds can yield significant tactical, strategic and cost benefits
- **LAMP and complex application provisioning:** What most organisations want is the ability to reason in terms of application or even sets of interrelated applications

Use cases (2)

- **DevOps platform:** Teams need to be able to *fluidify* their development and deployment process, such that apps be deployed in (pre-)production in the most efficient way
- **Cloud Marketplace** (Helix Nebula Cloud Exchange - HNX): Federate several clouds under the same *broker* or *facade* to reduce cloud switchover costs and remove lock-in
- **Auto-Scale and Mutable Deployments:** Grow and shrink cloud resources automatically to reduce cost, improve service quality and security

The background of the image is a vibrant blue sky filled with wispy, white, cirrus-like clouds. A group of approximately ten dark-colored birds, likely geese or swans, are captured in flight across the center of the frame. They are positioned at various heights and angles, some with wings fully extended and others partially folded. The overall composition suggests a sense of movement and freedom.

Thanks :-)
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