



Making Simulation Access Easier

Who are we?

1st *

web hoster in Europe,
3rd the world

1999

OVH creation

2012-09

Oxalya buyout

2.1

Tbps of network
capacity



12

datacenters

8

years of R&D

>100

deployed clusters

16

International branches

150 000

servers

2013-06

HPCSpot. opening

*: Netcraft november 2012

A complete range of solutions

HPCSpot.

Based on HPCDrive

From **8 cents per core.hour**
on a shared cluster

From **400 € per dedicated
server** per month

SaaS OpenSource solvers
and visualisation software

HPCDrive.

Web interface for
numerical simulation

Cluster management

Job submission

Visualization sessions

Focused on ease of use

HPC Services.

Consulting

Hardware

Systems integration

Training

Support

HPCSpot.

The top-left screenshot shows a 'Session #0' page with details about a visualization VM: 'vm-viz-centos.3-nvidia-small', 'Visualisation VM with 4 GB 1 Sandy Bridge core at 3.1 GHz and 1 NVIDIA Quadro 4000. OS: Centos 6.3.', and 'Gmsh 2.6-default'.

The top-right screenshot shows a 'Job #6779 - Cube case' page with a 'Running' status and a table of job details:

Job #6779 - Cube case	
User	jdoe(10025)
Group	jdoe(10036)
Application	OpenFoam 2.1
Work dir	/home/users/jdoe/cube
Command	/apps/users/openfoam-2.1-x86_64-def...job.sh simpleFoam

Job details: Running time 14 seconds, Wailtime 1 hour, Priority 4294899731.

Partition cpt	
Submitted	May 21, 2013 6:05:45 PM
Will starts	May 21, 2013 6:05:45 PM
Start	May 21, 2013 6:05:46 PM
End	May 21, 2013 7:05:45 PM

Compute nodes	
Batch host	cpt-5

The bottom-center screenshot shows a 3D visualization of a cube case in a software application, with a 'Pipe Browser' and 'Properties' panel visible.

Simulation as a Service / Dedicated clusters

Where is it coming from?

- Previous Oxalya software



HPCSpot. building blocks

- Master nodes / visualisation nodes
 - 2 x E5-2620, 64GB RAM, 2 x Quadro K4000, 3TB HDD
- Compute nodes
 - 2 x E5-2670, 64GB RAM, 500GB HDD
- Low latency interconnect
 - Low-latency 10GbE with RoCE on all servers
 - QDR infiniband as an option
- 10GbE connexion to the OVH network

HPCSpot. – Simulation as a Service

- Shared cluster
- Prepackaged solvers and visualization software
- Prepaid points
- Pay only for the time you use

HPCSpot. – Dedicated Clusters

- Your own HPCSpot
- Install any solver or software
- Partitioned networks
- Add (or remove) nodes as you need them

HPCSpot. Access

- SFTP
 - Data transfers
- SSH
 - Job submission
- Web
 - Job submission
 - Visualization session reservation
- Remote display
 - Visualization session without installation

HPCSpot. – Prices

- Shared cluster

Computing node	1.28 € per hour (i.e. 0.08 € per core)
Visualisation VM 1 core, 4GB RAM, no graphic card	0.10 € per hour
Visualisation VM 4 cores, 15GB RAM, Quadro K4000	0.90 € per hour
Visualisation VM 12 cores, 60GB RAM, Quadro K4000	2.00 € per hour

- Dedicated cluster

Master node with 2 Quadro K4000	400 € per month
Compute node	400 € per month

Thanks!

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