

2015 **SophiaConf**

Le cycle azuréen de conférences Open Source

Containers : Outils magiques pour les Devops ?

**OpenNebula et son écosystème pour une
infrastructure cloud agile**



AGENDA

- TAS Group
- REX : OpenNebula
- Questions



TAS GROUP

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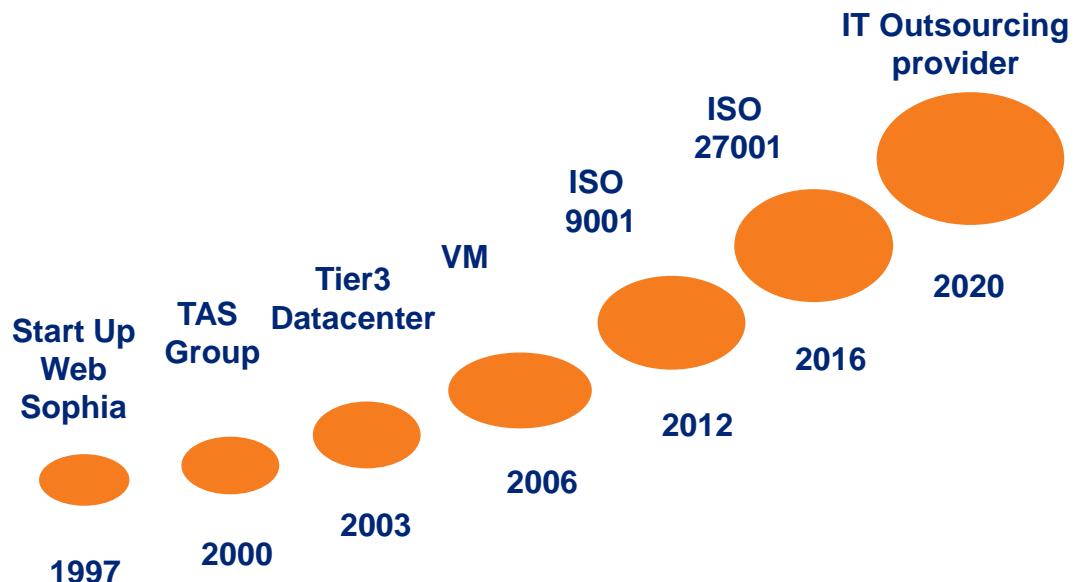
**Software company and system integrator for cashless solutions,
secured payment networks and capital markets**



TAS US	TAS Americas	TAS Iberia	TAS SPA	TAS Helvetia	TAS France
New York	San Paolo	Madrid Cordoba	Bologna Milano Parma Roma Siena	Lugano	Sophia Antipolis

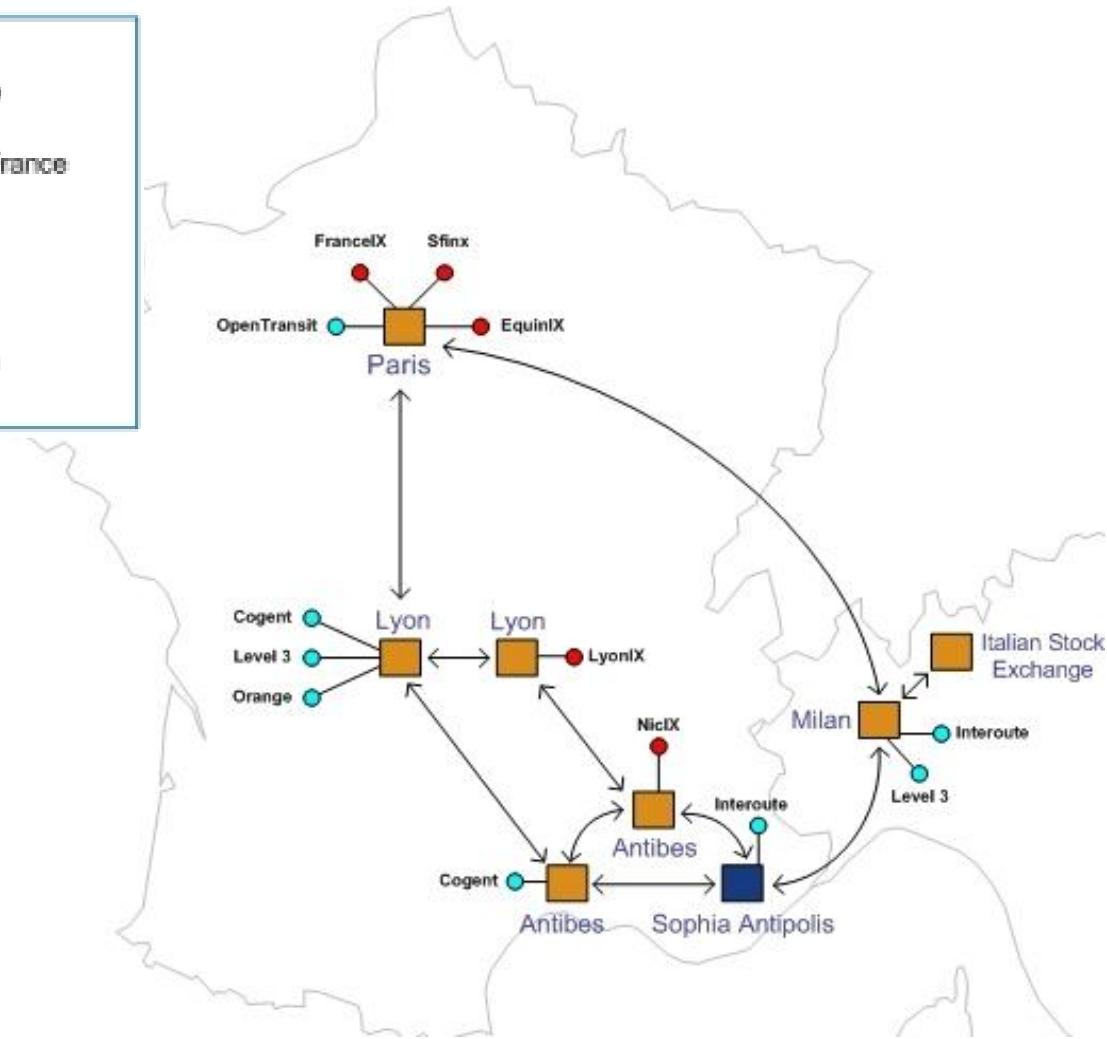
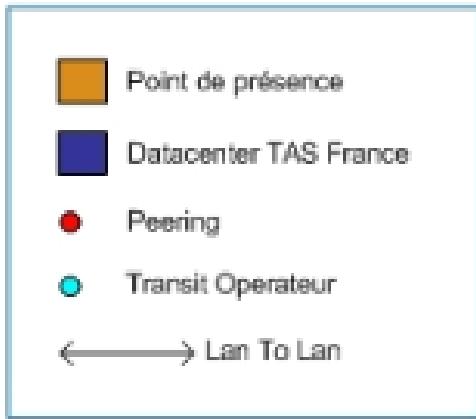
TAS FRANCE

TAS Group French subsidiary is focused on Housing, Hosting services and Cloud Computing expertise



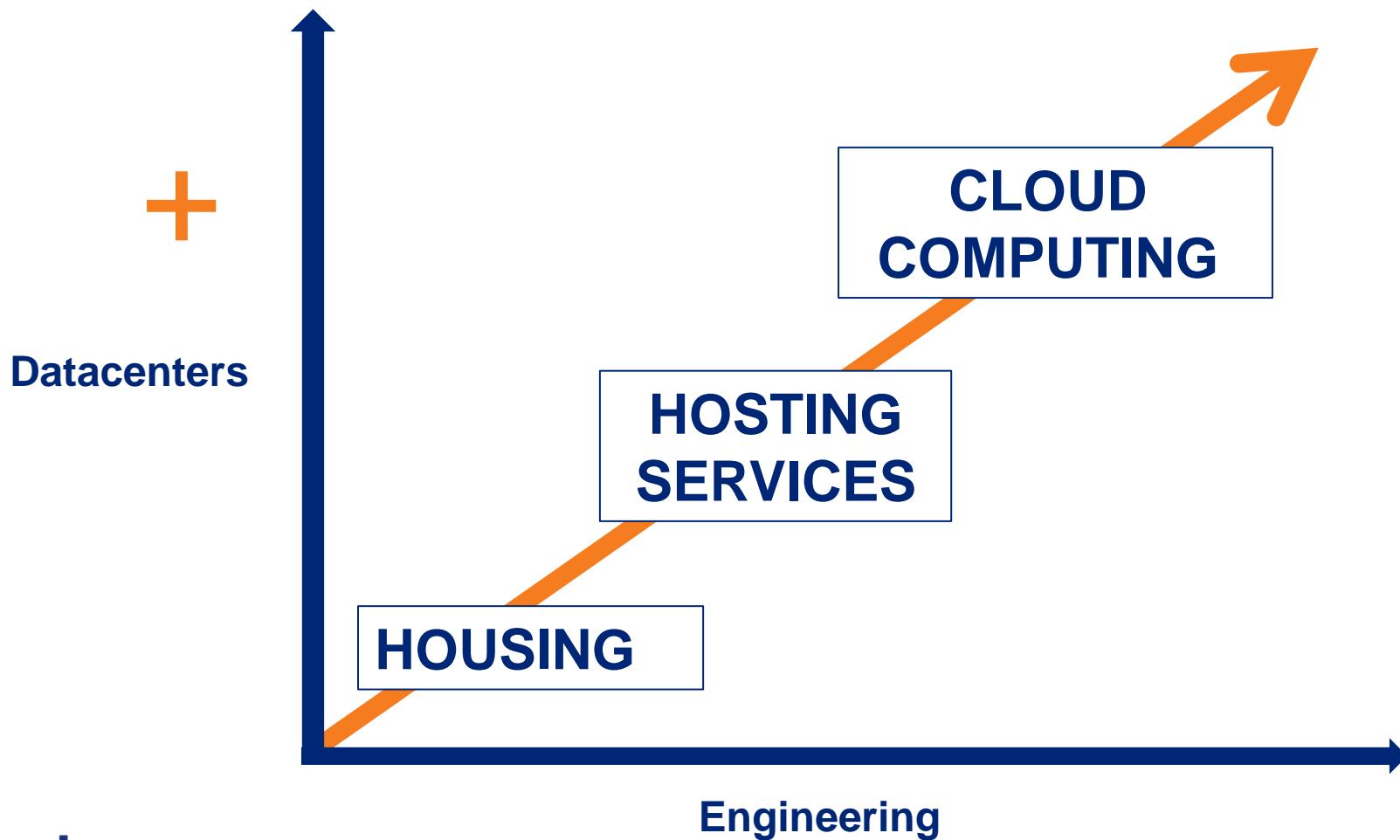
- Managed Services Provider since 1997 for SMB companies
- 500 m² Datacenter in Sophia Antipolis
- E-Commerce expertise
- 1500 physical servers
- 3000 hosted web sites
- 4000 domain names
- 10000 mail boxes
- 10 local experts

TAS NETWORK

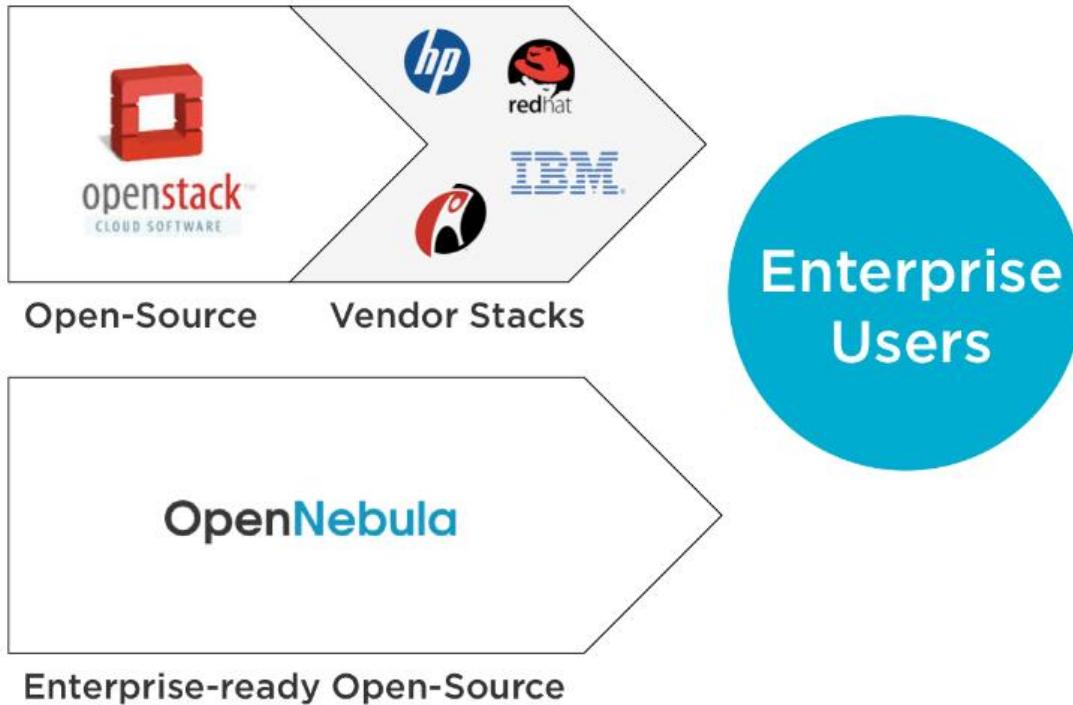


VALUE PROPOSITION

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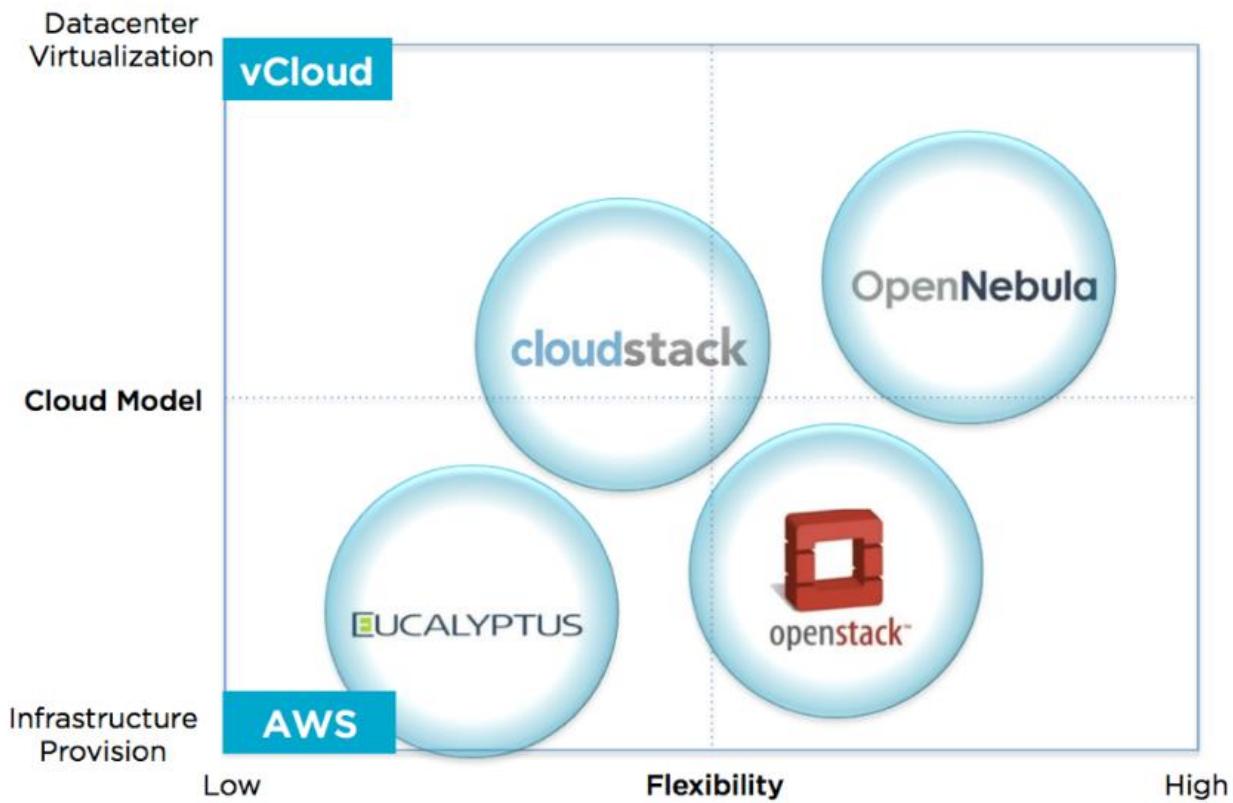


CLOUD FRAMEWORKS



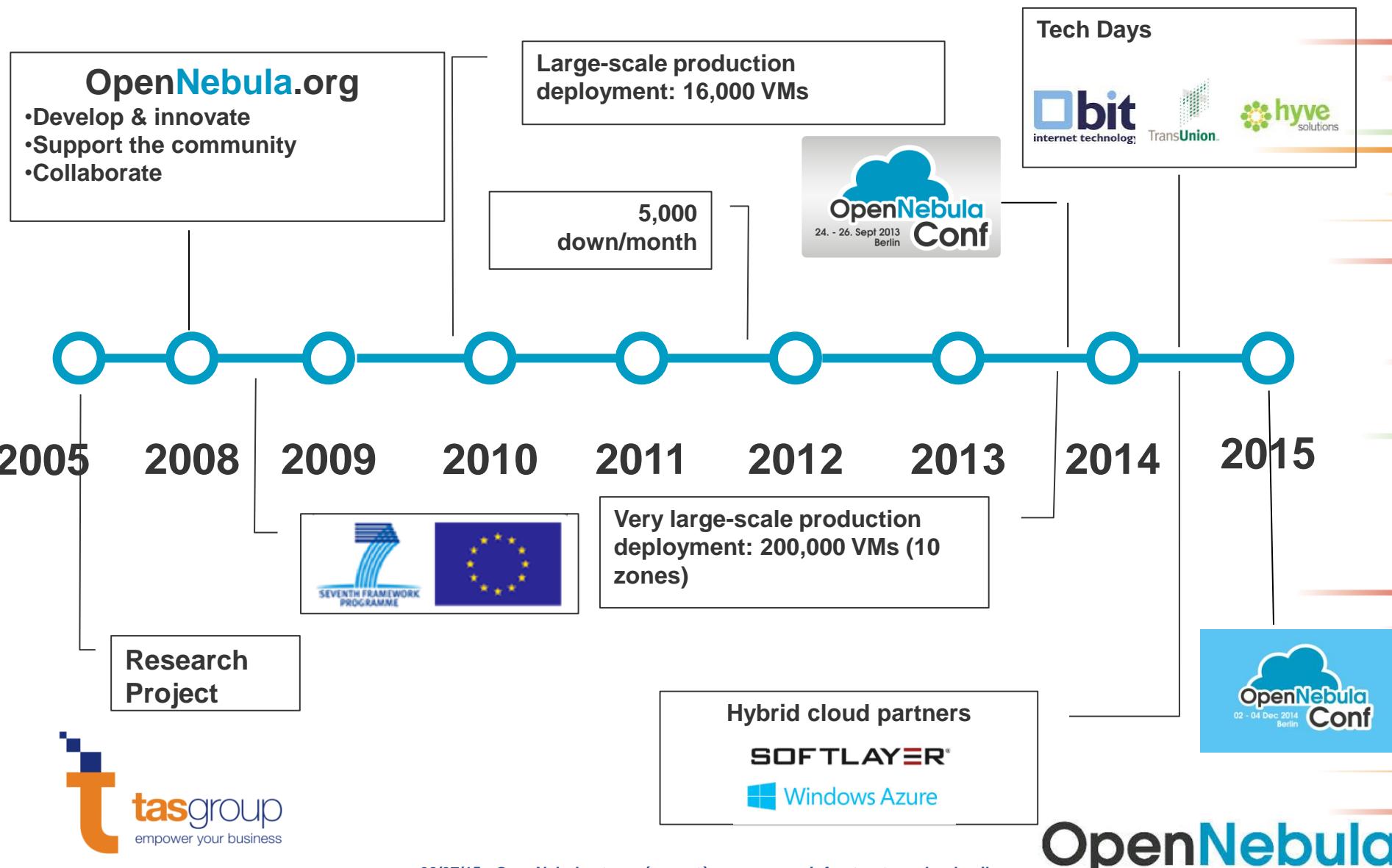
Source : opennebula.org

CLOUD FRAMEWORKS

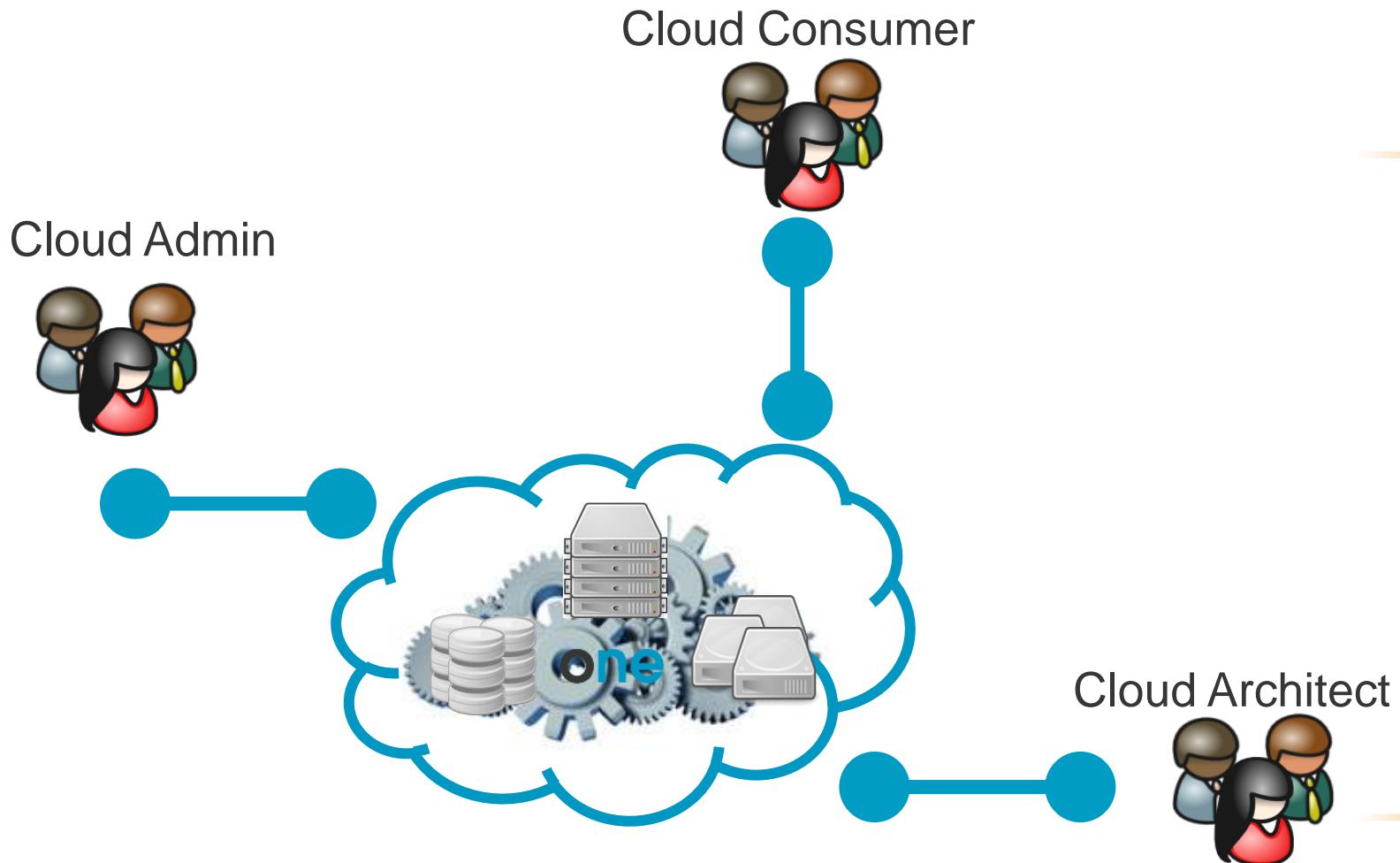


Source : opennebula.org

THE OPENNEBULA PROJECT



THE ANATOMY OF THE CLOUD



THE CLOUD CONSUMER PERSPECTIVE



Cloud View

- Simple one-click provisioning portal
- Pre-loaded set of configurations
- Access to usage information and quotas



Flow

- Multi-VM applications
- Elasticity Rules
- Easy parameterization of VMs



MarketPlace

- Catalog of appliances
- Meeting point for users, admins and devs
- Distributed and maintain cloud contents



Interfaces & APIs

- Cloud APIs: Amazon EC2 & OCCI
- CLI tools
- Multiple API Bindings

THE CLOUD ADMIN PERSPECTIVE



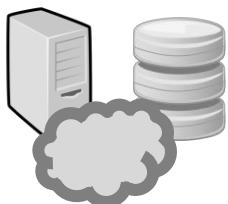
Interfaces

- Sunstone GUI
- Powerful CLI



Deployment and Integration

- Simple installation and upgrade
- Hook system and HA configurations
- VM contextualization



Virtual Infrastructure Management

- Life cycle manag: storage, network & VM
- Extensible monitor system
- Fine-grain resource operations



Capacity Management

- Scheduling policies (storage & compute)
- User & Groups
- Accounting, quotas, permissions & ACLs

THE SYSTEM ARCHITECT PERSPECTIVE



Federation of Multiple DCs

- User access to multiple DCs
- Local management of DC resources
- Minimal synch. to tolerate big latencies



Hybrid Cloud Computing

- Seamless integration of external cloud
- Local & Remote VM profiles
- Allocation policies



Provisioning of Virtual Datacenters

- Group users, resources and infrastructure
- Delegate management of virtual resources
- Partition/isolation cloud resources



Flexibility & Extensibility

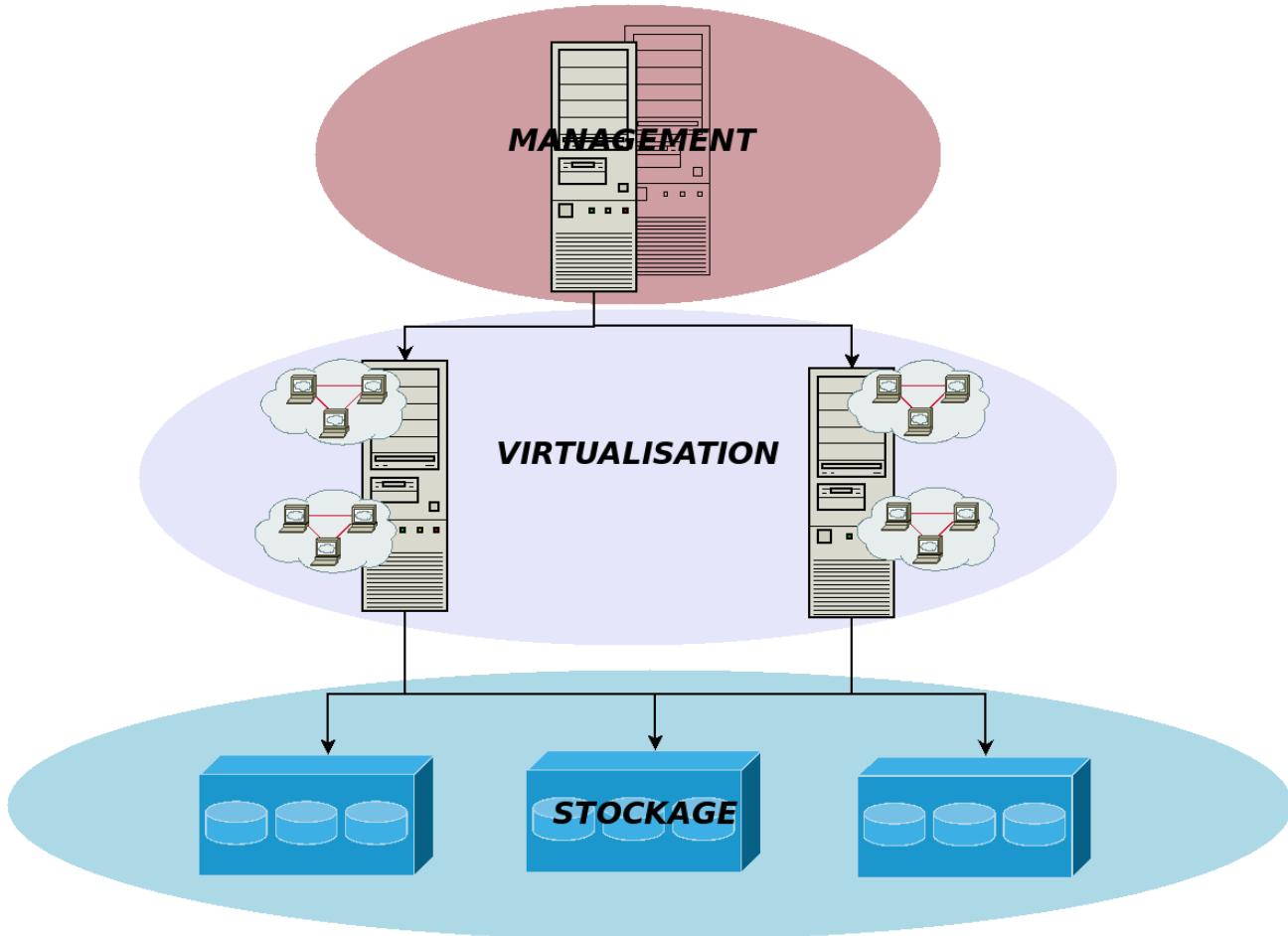
- Platform Independent
- Flexible Architecture
- Easily integrated with existing tools

SUNSTONE WEB API (MULTI-VIEWS)

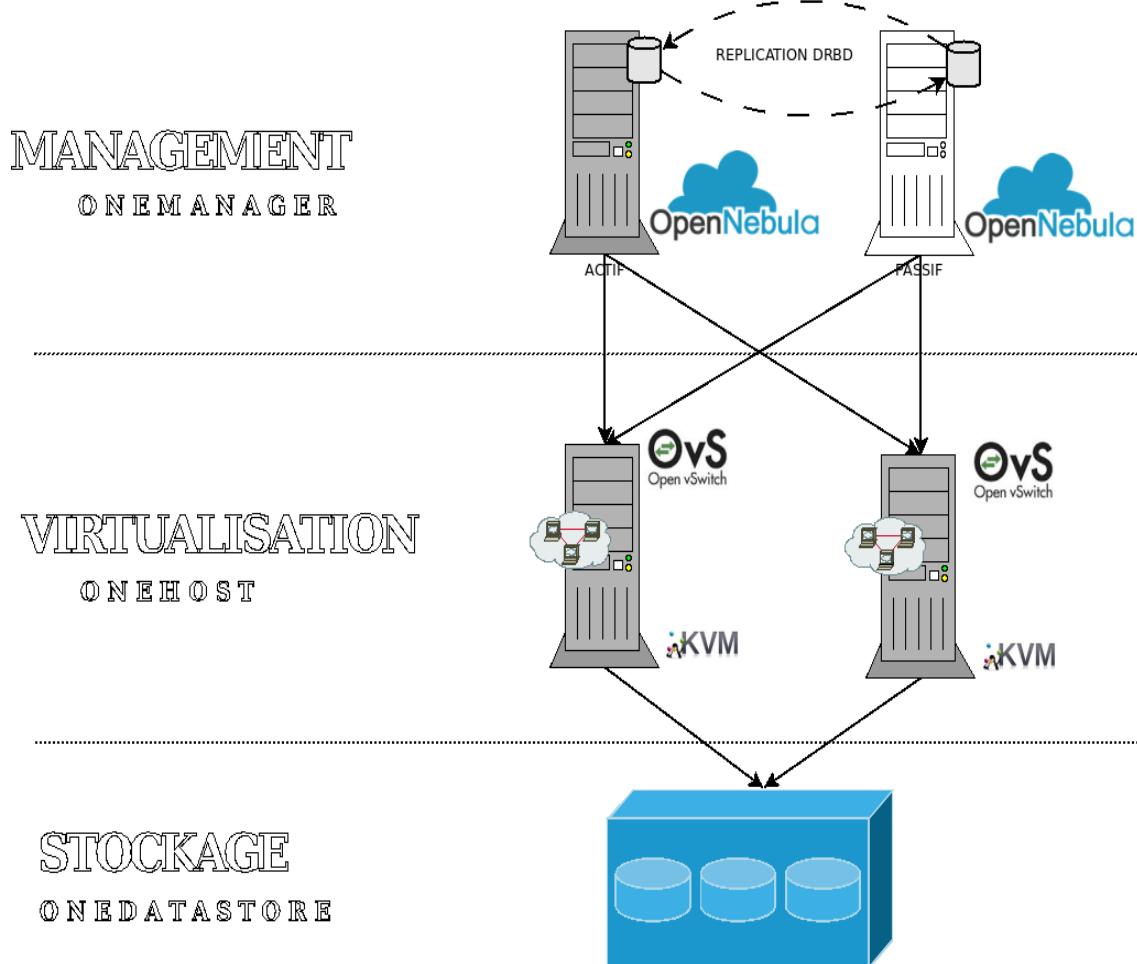
The screenshot displays the Sunstone web interface, which provides a multi-view dashboard for managing OpenNebula resources. The main dashboard includes sections for Virtual Machines (showing 15 total, 13 active, 0 pending, 0 failed, and 34% real CPU usage), Hosts (showing 100% utilization), and VDC Accounting and Quotas. A modal window for "Create Virtual Machine" is open, prompting for a "Virtual Machine Name".

- Dashboard:** Shows an overview of 15 total VMs (13 active, 0 pending, 0 failed) and 34% real CPU usage.
- Hosts:** Shows 100% utilization across hosts.
- VDC Accounting:** Allows users to group accounting by User or Group and get accounting details for the period from 2015-06-01 to 2015-07-06.
- VDC Quotas:** Displays current usage for VMs, CPU, Memory, and Volatile disks against their respective quotas.
- Create Virtual Machine:** A modal window for creating a new VM, requiring a "Virtual Machine Name".

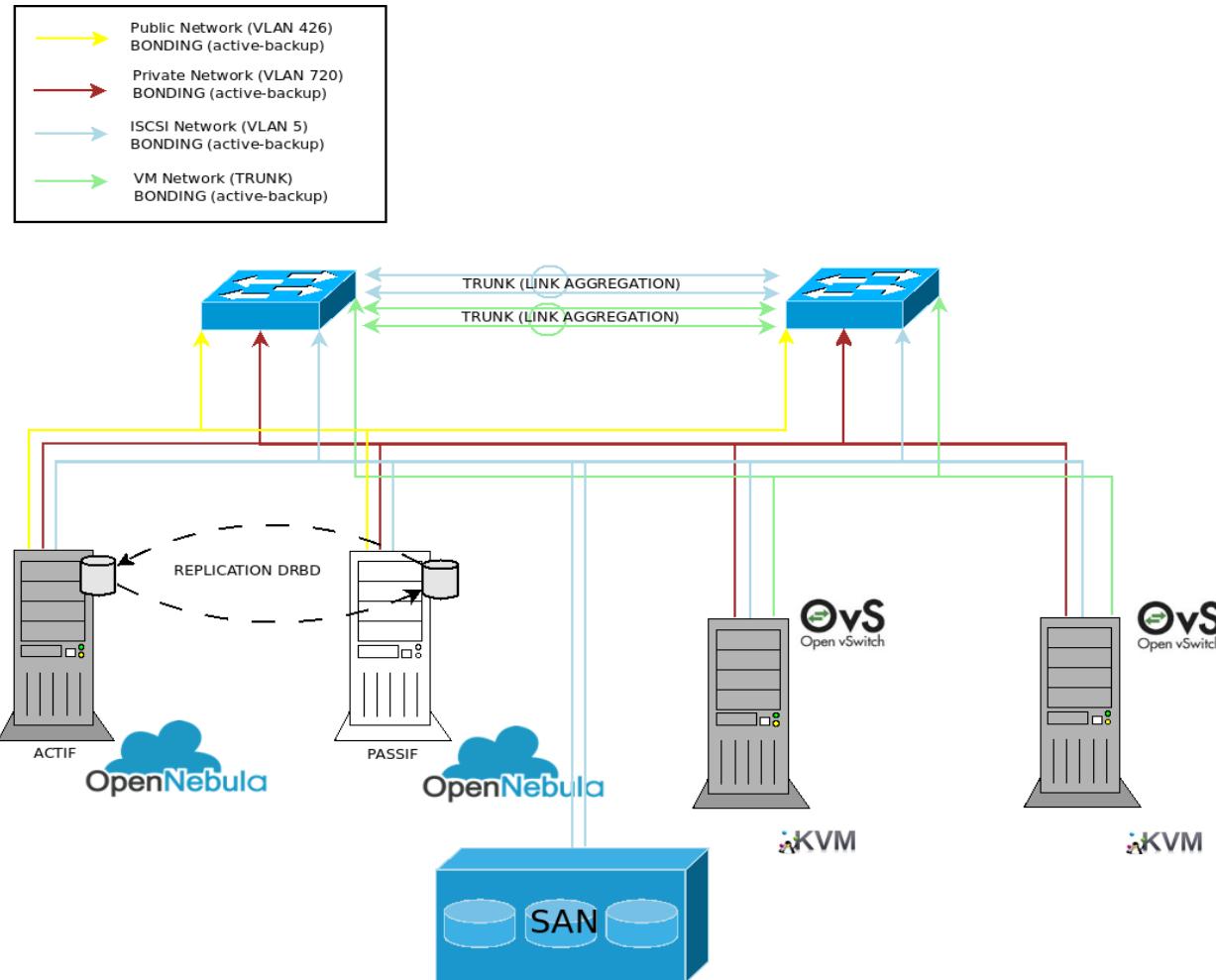
ONE PHYSICAL ARCHITECTURE



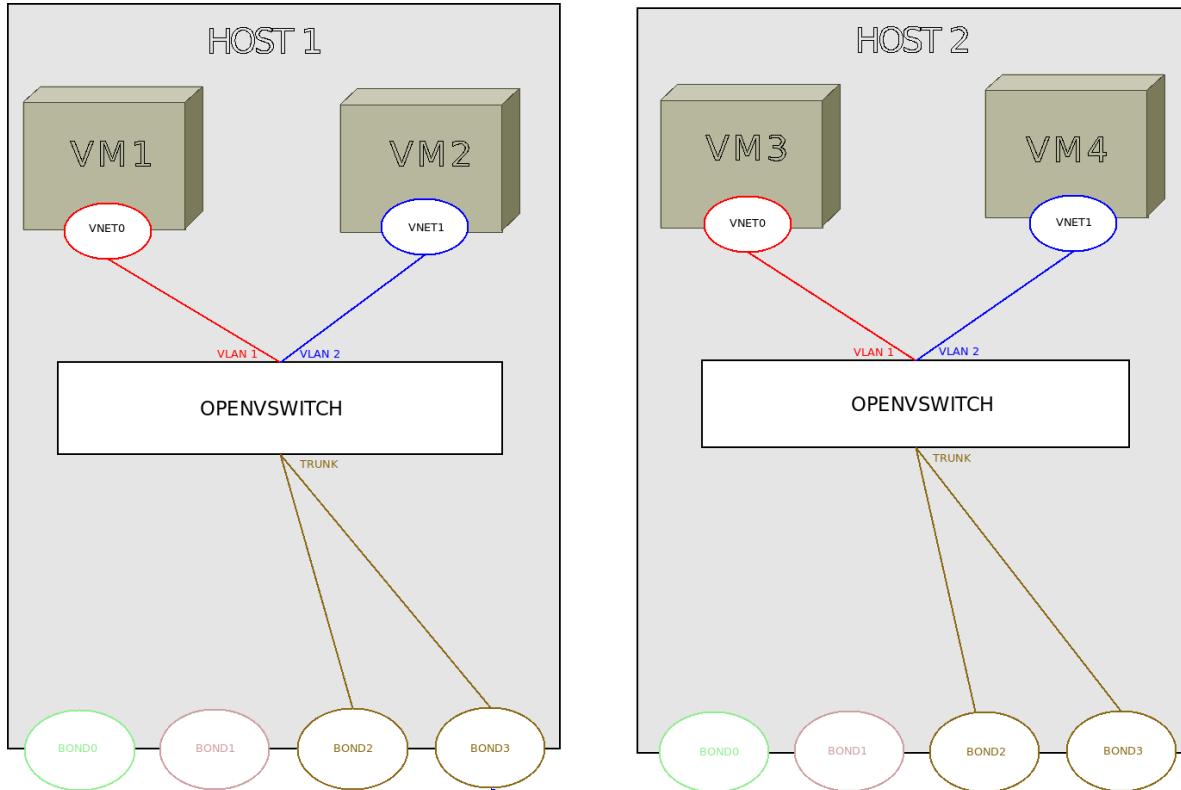
TAS PHYSICAL ARCHITECTURE



TAS NETWORK ARCHITECTURE



OPENVSWITCH VIRTUAL NETWORK



PERSPECTIVES OF EVOLUTION



OpenNebula

Q & A



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