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Benefits of Standard Cloud Interfaces for OpenNebula

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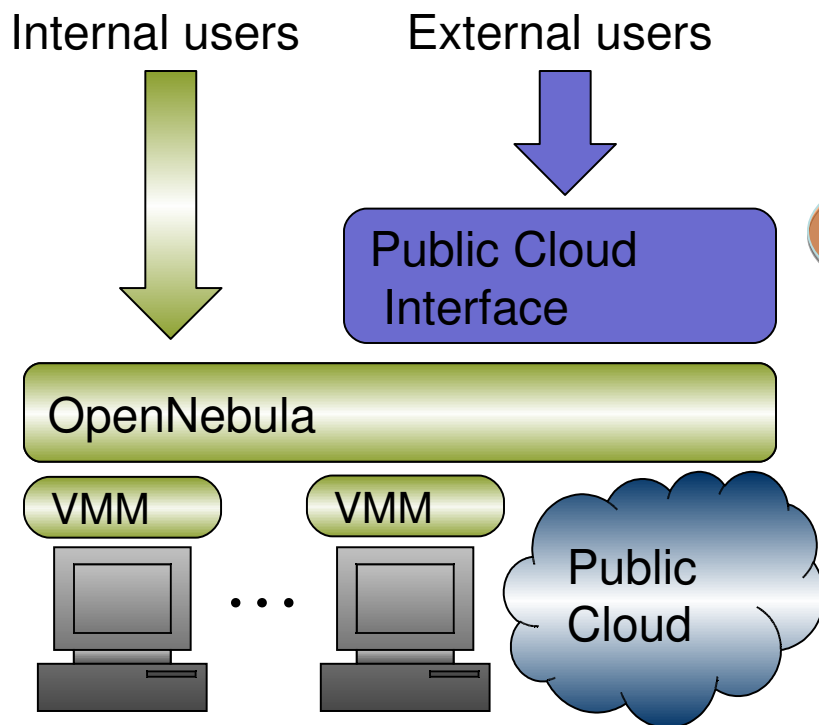


What is OpenNebula?

Benefits of Standard Cloud Interfaces for OpenNebula

Extending the Benefits of Virtualization to “Distributed Infrastructures”

- Dynamic deployment and re-placement of virtual machines on a pool of physical resources
- Transform a rigid distributed physical infrastructure into a flexible and agile virtual infrastructure



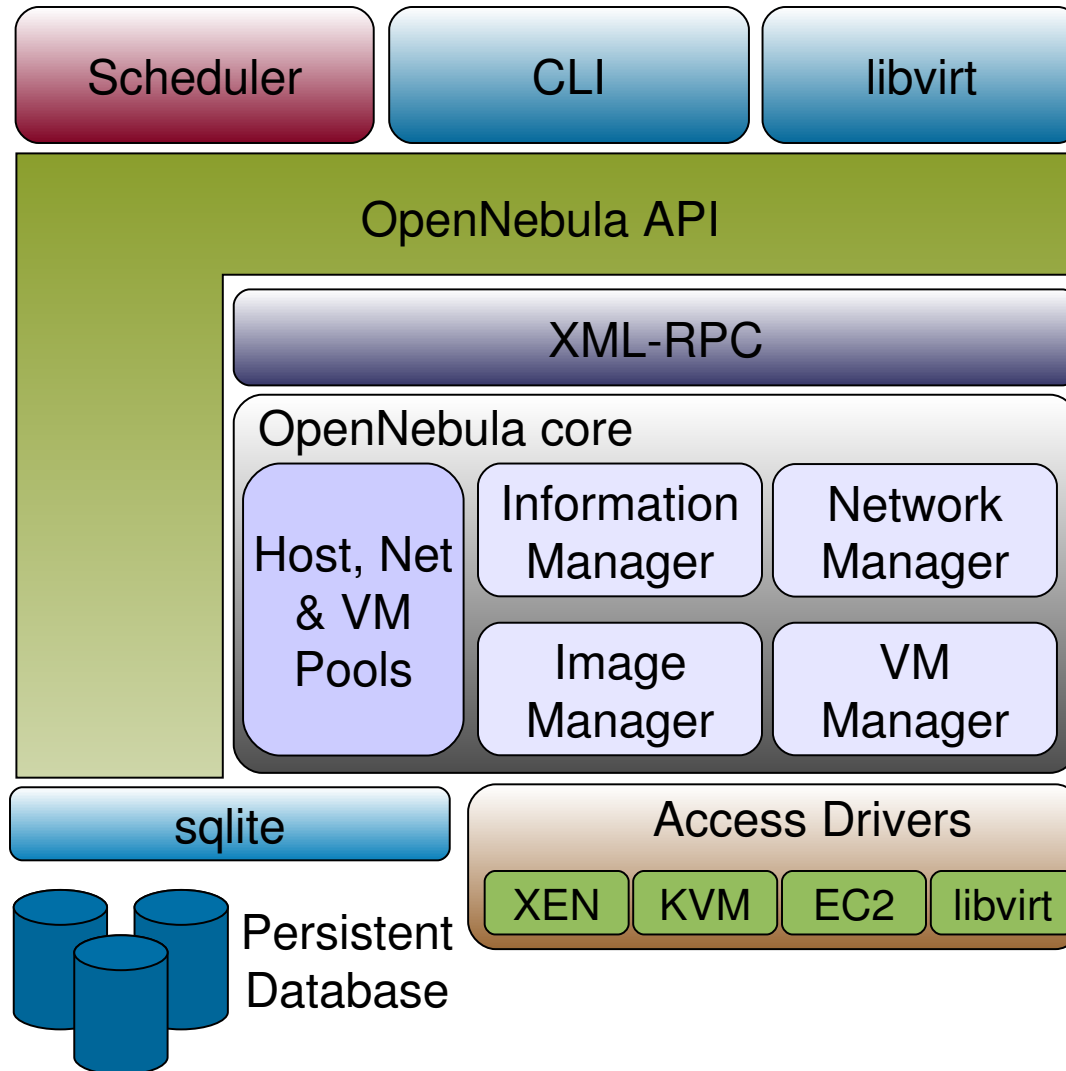
• Public Cloud: Remote interfaces to private clouds

• Private Cloud: Virtualization of cluster or data-center for internal users

• Hybrid Cloud: On-demand access to public clouds

Open and Flexible Architecture

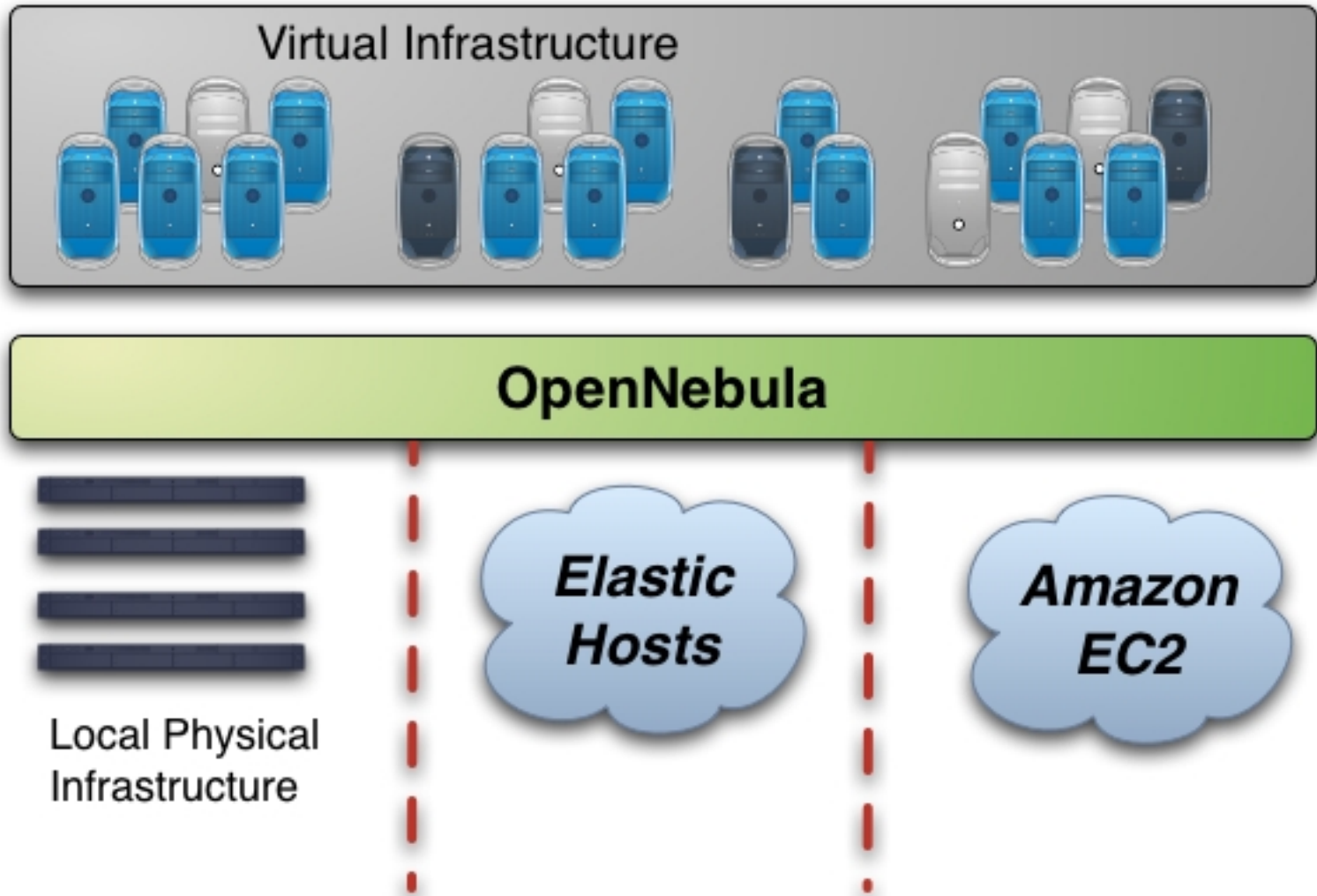
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Cloud Interoperation

Benefits of Standard Cloud Interfaces for OpenNebula

Service running on geographically distributed resources



How do we achieve Interoperation

Benefits of Standard Cloud Interfaces for OpenNebula

Common template

- Richer attributes for local deployment
- Specific section for each cloud provider with limited attributes

Image Management

- Need to preregister images in S3 / Drives API
- Checkpointing not allowed: no migration
- Different possibilities: EC2 1 image, EH multiple

Network Management

- Local VMs = total control
- EC2, EH = public IPs
 - SGE Use Case: Need to set up VPN

How do we achieve interoperability

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Mapping of VM life-cycle commands

OpenNebula	Amazon EC2	ElasticHosts Server API
create	ec2-run-instances	/servers/create
shutdown	ec2-terminate-instances	/servers/SERVER/shutdown
cancel	ec2-terminate-instances	/servers/SERVER/destroy
save	N/A	N/A
restore	N/A	N/A
migrate	N/A	N/A
poll	ec2-describe-instances	/servers/SERVER/info

Benefits of OCCI WG for OpenNebula

Public Cloud

- Integration with the emerging ecosystem that will be created around OCCI WG
- Reference implementation on top of OpenNebula (in the context of RESERVOIR)

Hybrid Clouds

- Single interface to access different providers
- Develop a plug-in to access OCCI
 - will provide access to all standard compliant clouds

THANK YOU FOR YOUR ATTENTION!!!

More info, downloads, mailing lists at
www.OpenNebula.org

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www.reservoir-fp7.eu/

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