

Open World Forum 2011

Open Cloud in Europe: When Interoperability Matters

Paris, France, September 22nd, 2011

OpenNebula Interoperability and Portability

Ignacio M. Llorente

Project Director

OpenNebula.org

Acknowledgments



The research leading to these results has received funding from the *Ministerio de Ciencia e Innovación* of Spain through research grant TIN2009-07146.

OpenNebula Interoperability and Portability

- What is the OpenNebula Toolkit?
- What is the OpenNebula Project?
- Who Use OpenNebula?
- Challenges for Portability and Interoperability?
- Our Approach for Interoperability and Portability
- Interoperability Points

What is the OpenNebula Toolkit?

IaaS Cloud Computing Tool for Managing a Data Center's Virtual Infrastructure

Adaptable

- Customizable and Extensible

Proven

- Many Massive Scale Production Deployments

Powerful and Innovative

- Advanced Enterprise-class Functionality

No Lock-in

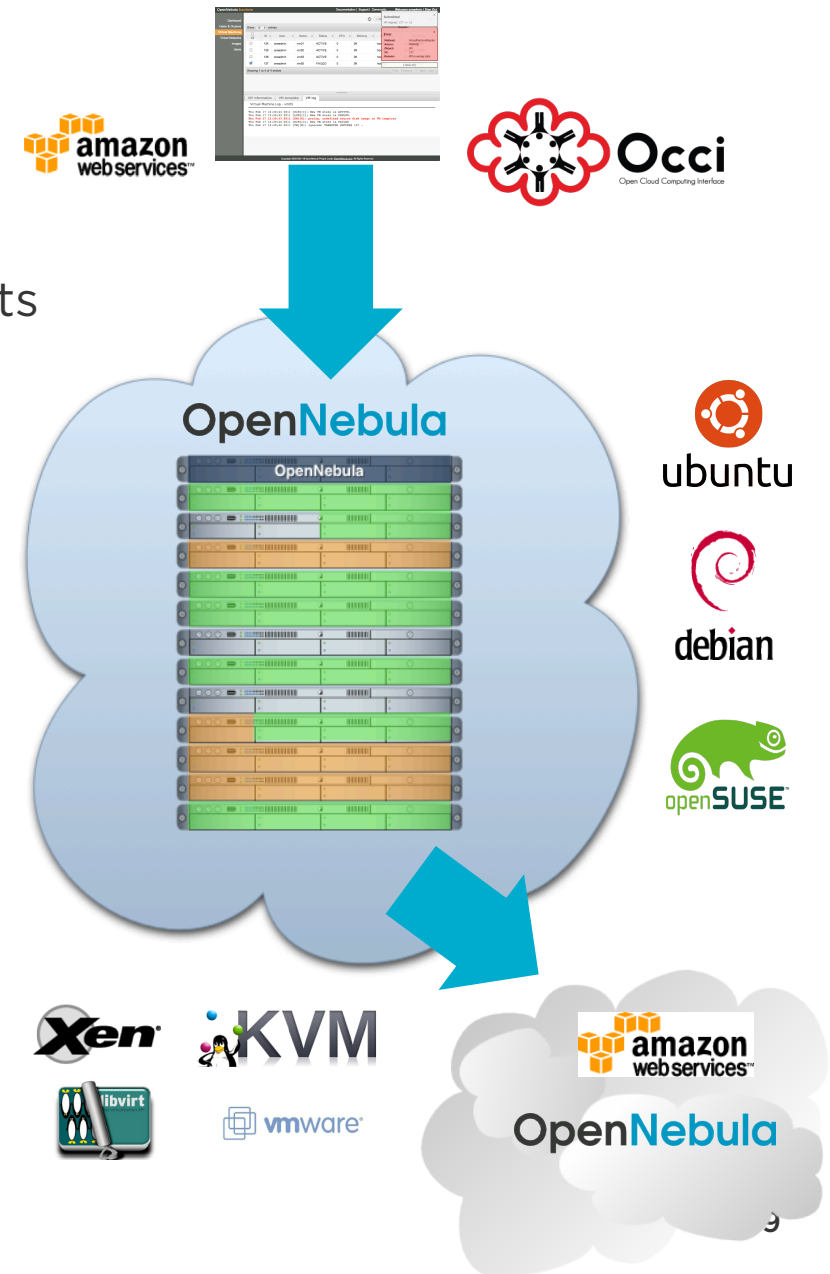
- Platform Independent and Interoperable

Interoperable

- Popular cloud APIs and standard based

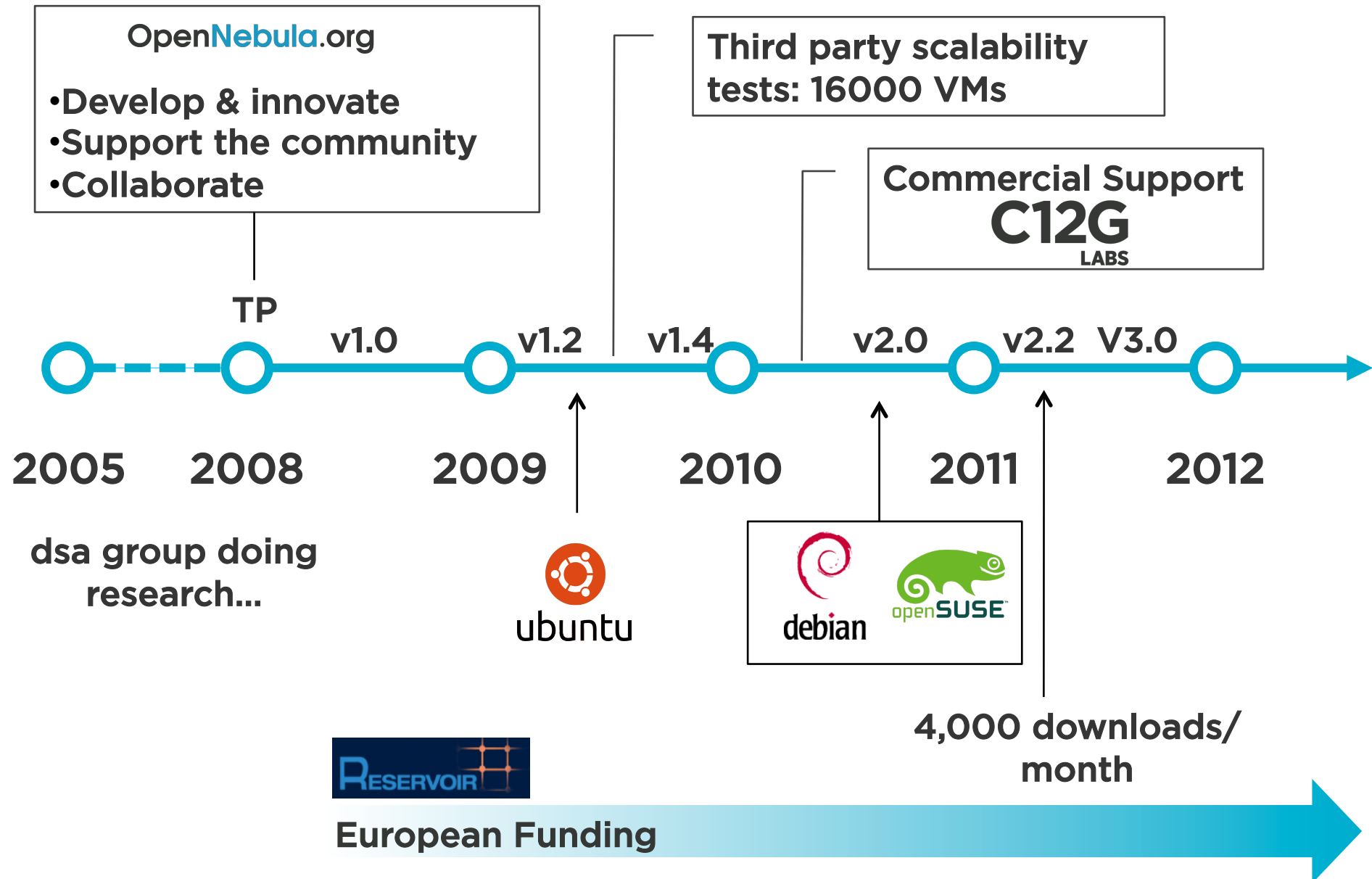
Openness

- Fully open-source
- Apache license



What is the OpenNebula Project?

Building the Industry Standard Open Source Cloud Computing Tool



Organizations Building Clouds and Innovative Projects

Organizations Building Clouds for Development, Testing and Production



Projects Building an Open Cloud Ecosystem Around OpenNebula



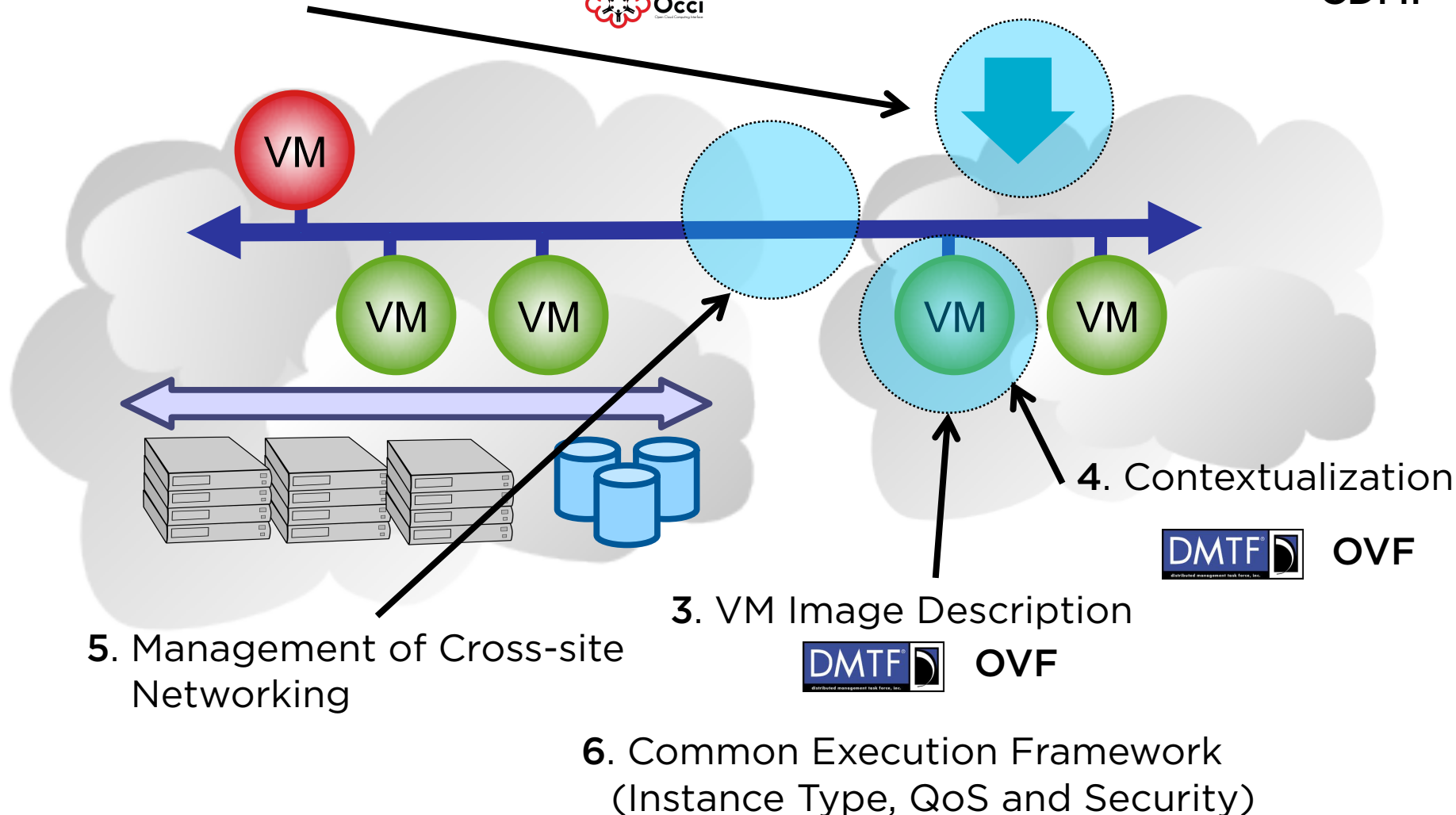
The Challenges

Transparent Combination of Local Resources with Cloud Resources with No Changes

1. Management Interfaces for Virtual Workloads



2. Management Interfaces for Data Elements



Leveraging Existing Standards and Implementing Interoperation

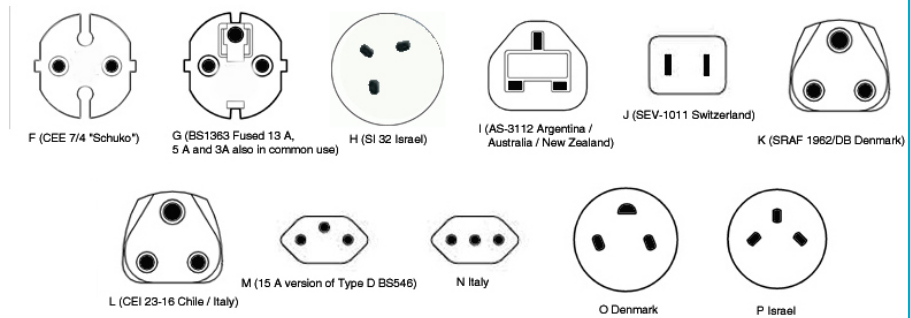
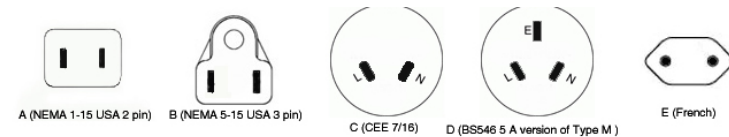
Standardization

- Implement standards
- Integrate with standards



Which Standard?

- Different *de jure* standards
- Several *de facto* standards

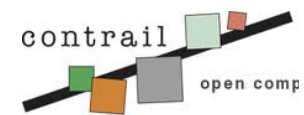


Interoperation

- Implement adaptors
- Use transformers



A Quickly Growing Ecosystem for Interoperability and Portability



New OpenNebula Working Group!

OpenNebula Interoperability and Portability

We Will Be Happy to Answer Any Question

 CloudPlan.org

 [@imllorente](https://twitter.com/imllorente)



The research leading to these results has received funding from the *Ministerio de Ciencia e Innovación* of Spain through research grant TIN2009-07146.