

EGEE 4th User Forum/OGF25 & OGF-Europe's 2nd International Event
Catania, Italy
2nd-6th March 2009

**Scaling out EGEE sites on Amazon EC2
with OpenNebula**

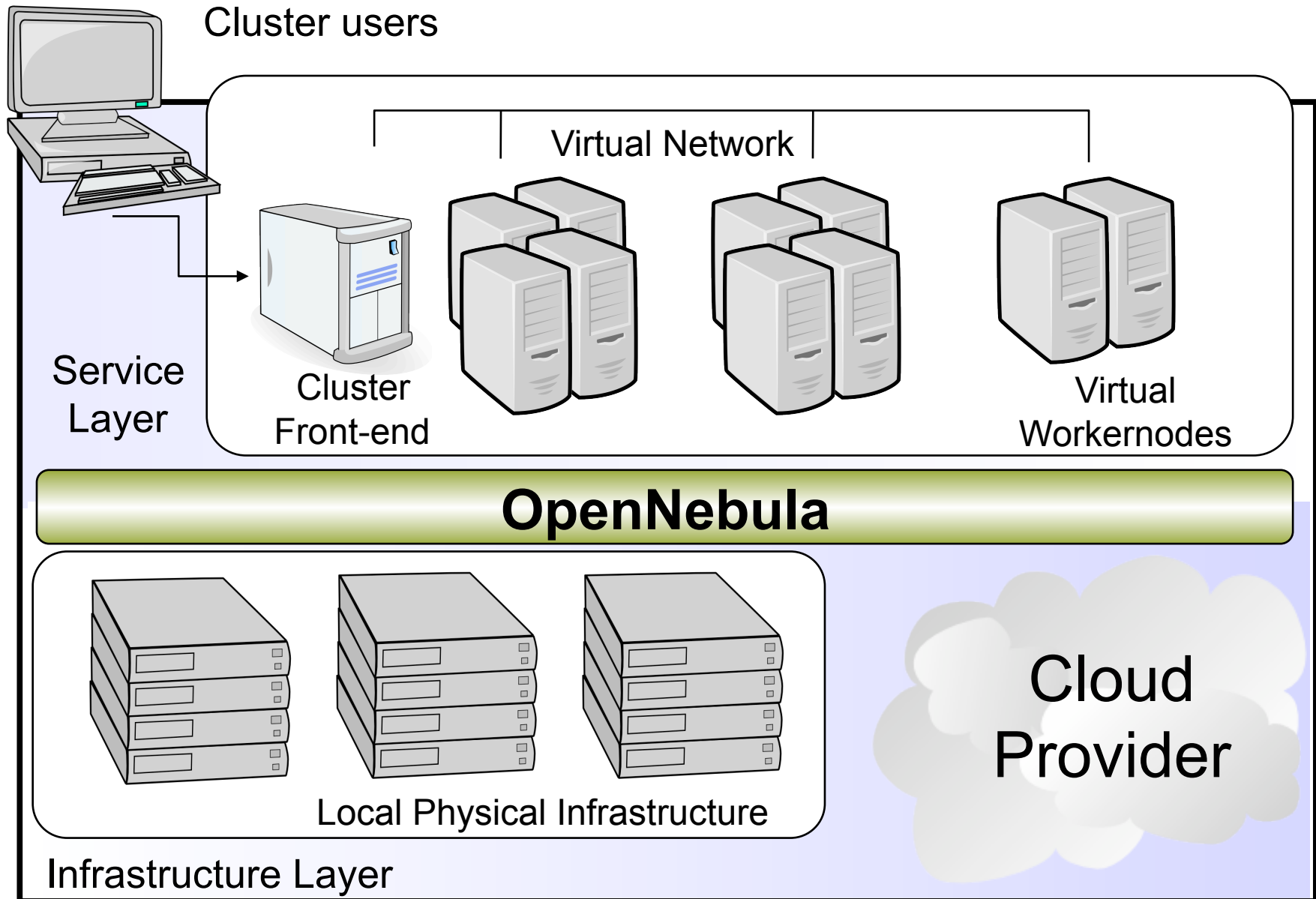
dsa-research.org

Distributed Systems Architecture Research Group
Universidad Complutense de Madrid



Overview

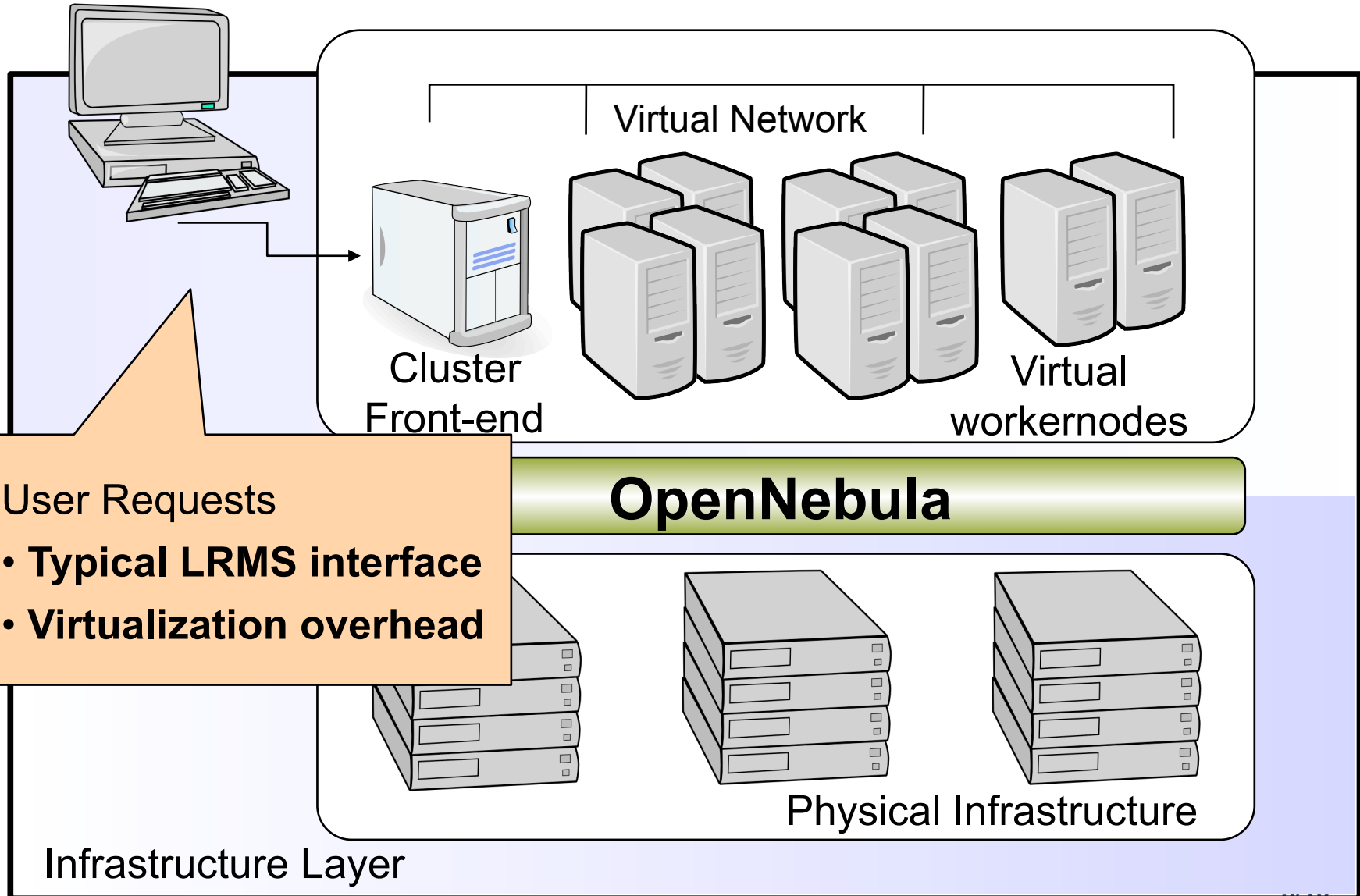
Scaling out EGEE sites on Amazon EC2 with OpenNebula



Benefits of Running a Virtual Computing Cluster

Scaling out EGEE sites on Amazon EC2 with OpenNebula

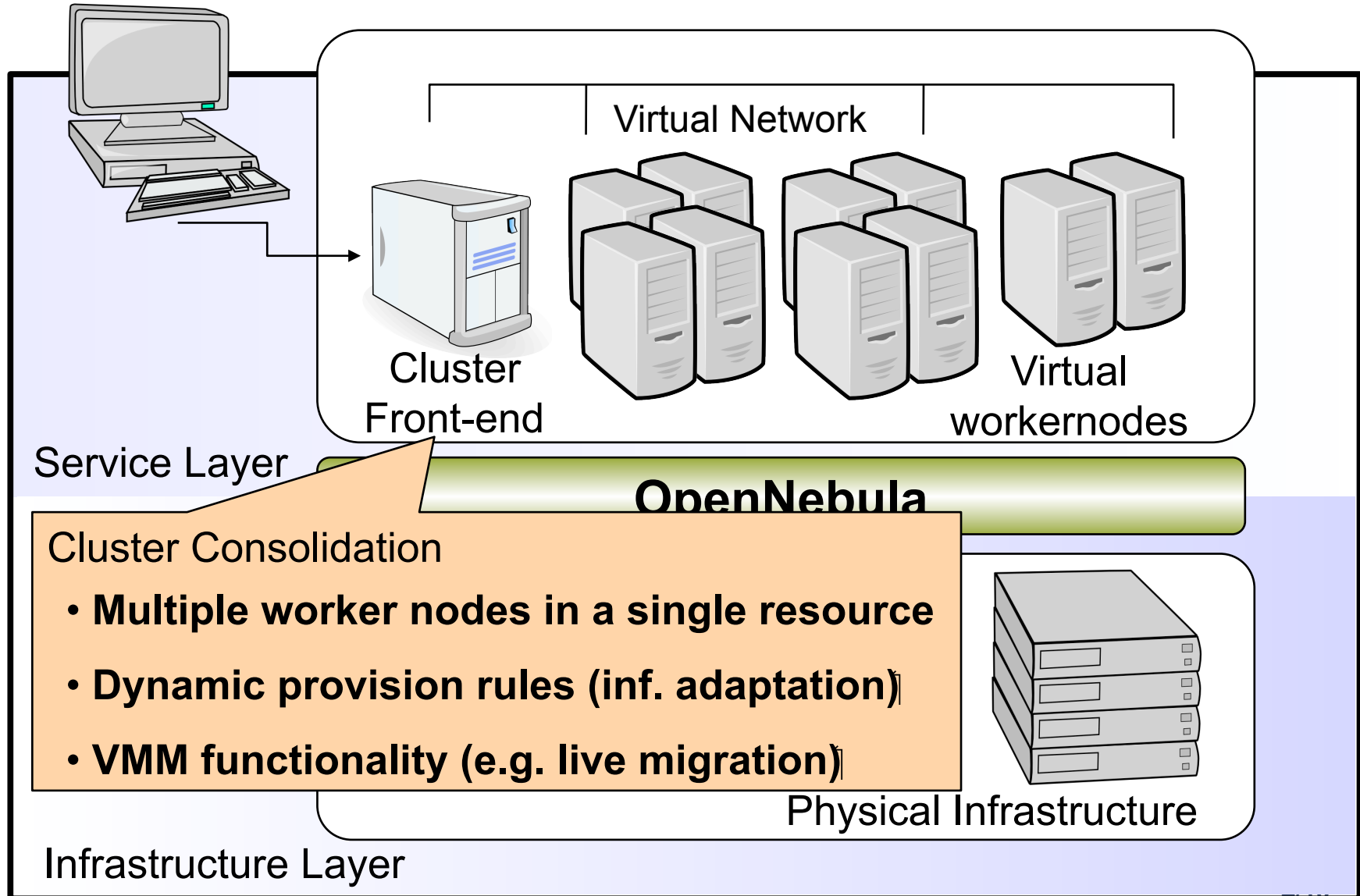
Cluster users



Benefits of Running a Virtual Computing Cluster

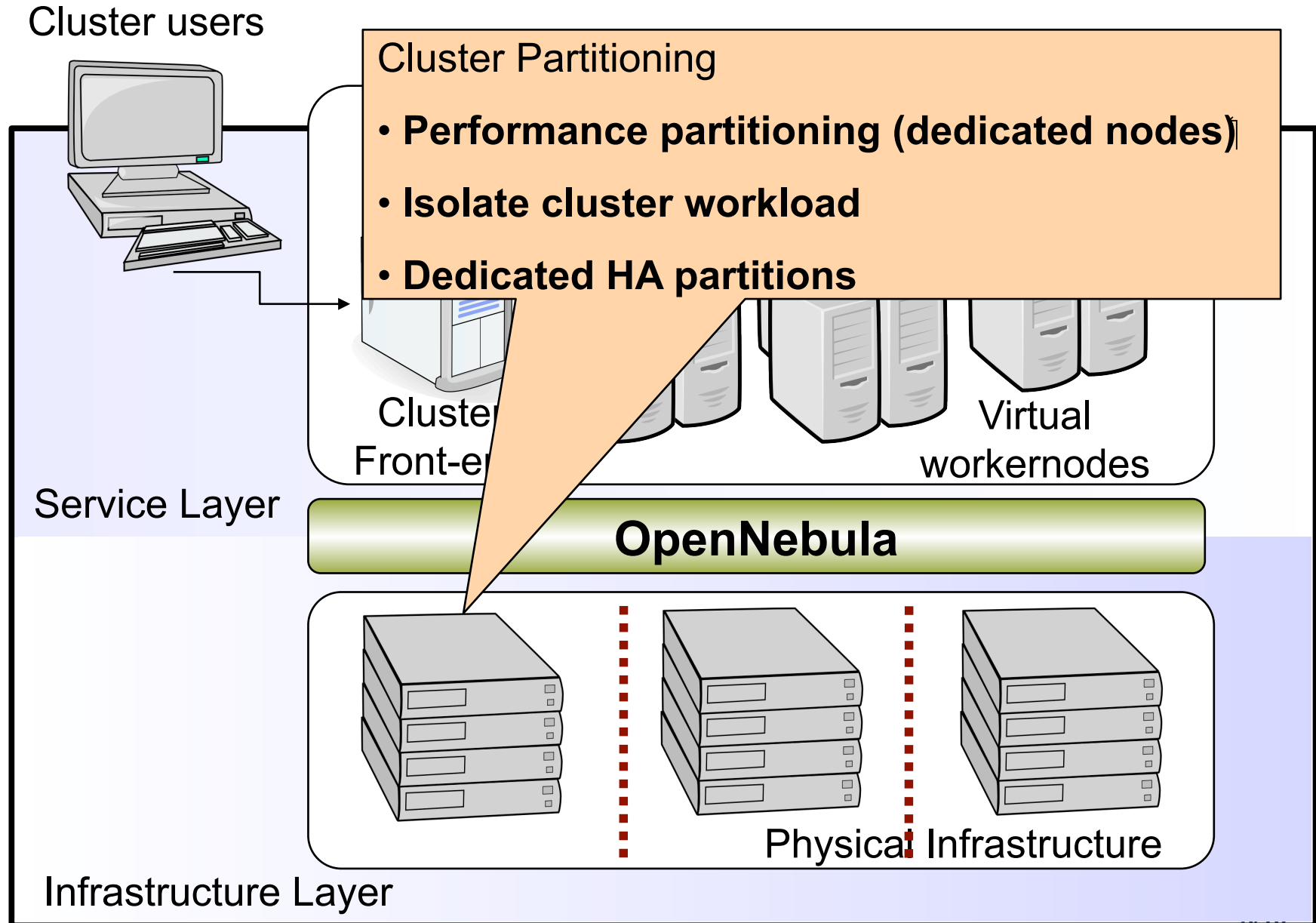
Scaling out EGEE sites on Amazon EC2 with OpenNebula

Cluster users



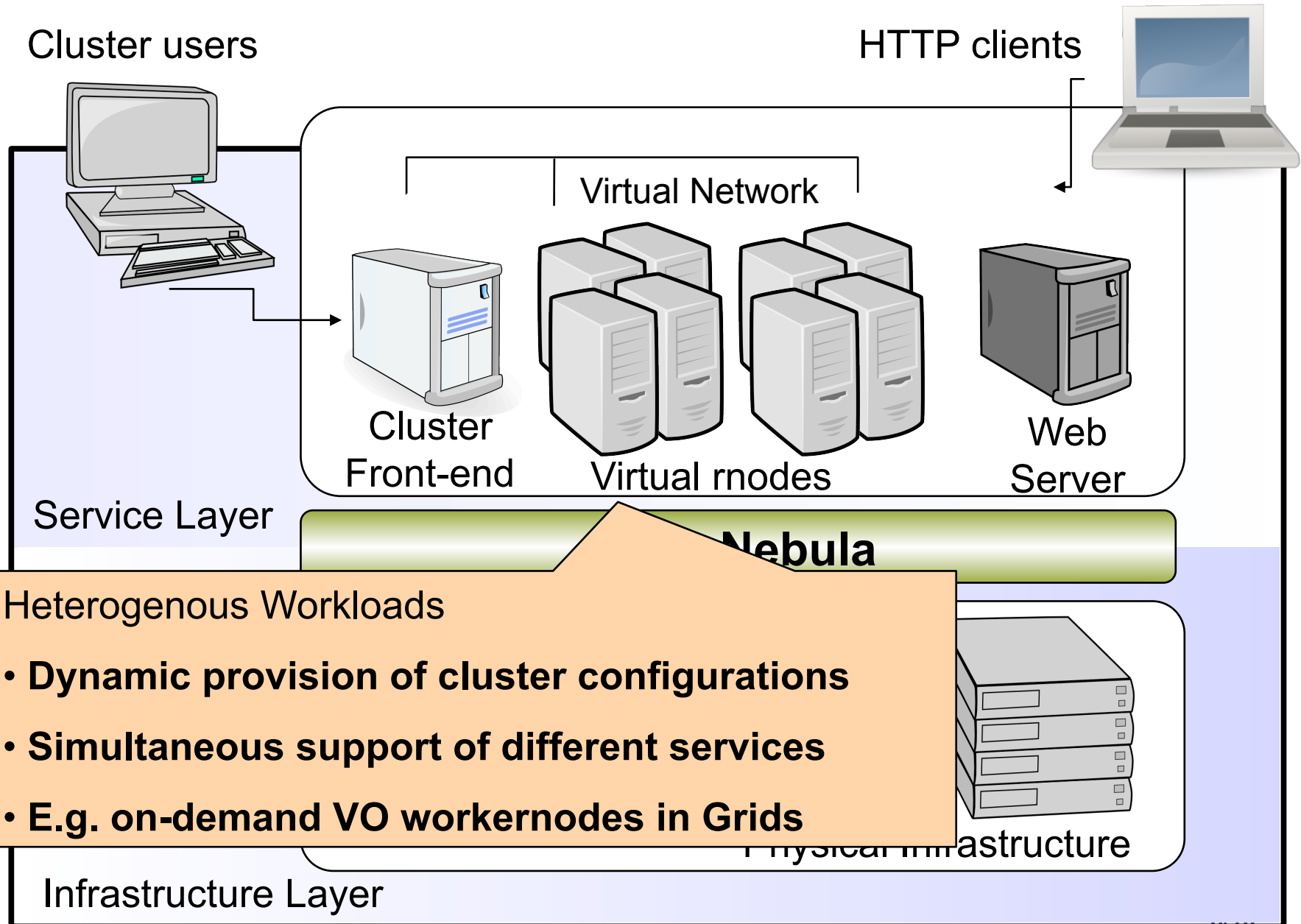
Benefits of Running a Virtual Computing Cluster

Scaling out EGEE sites on Amazon EC2 with OpenNebula



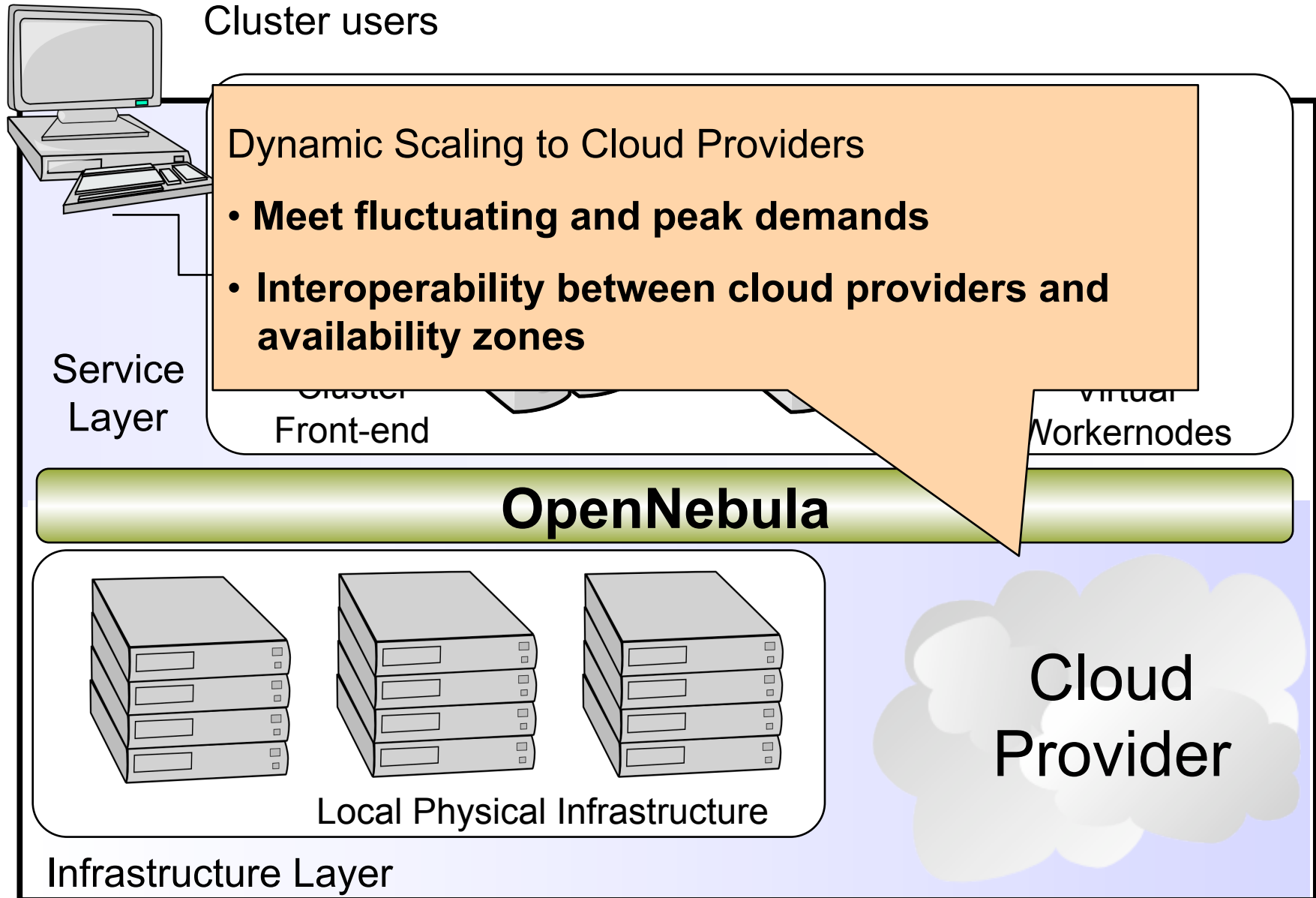
Benefits of Running a Virtual Computing Cluster

Scaling out EGEE sites on Amazon EC2 with OpenNebula



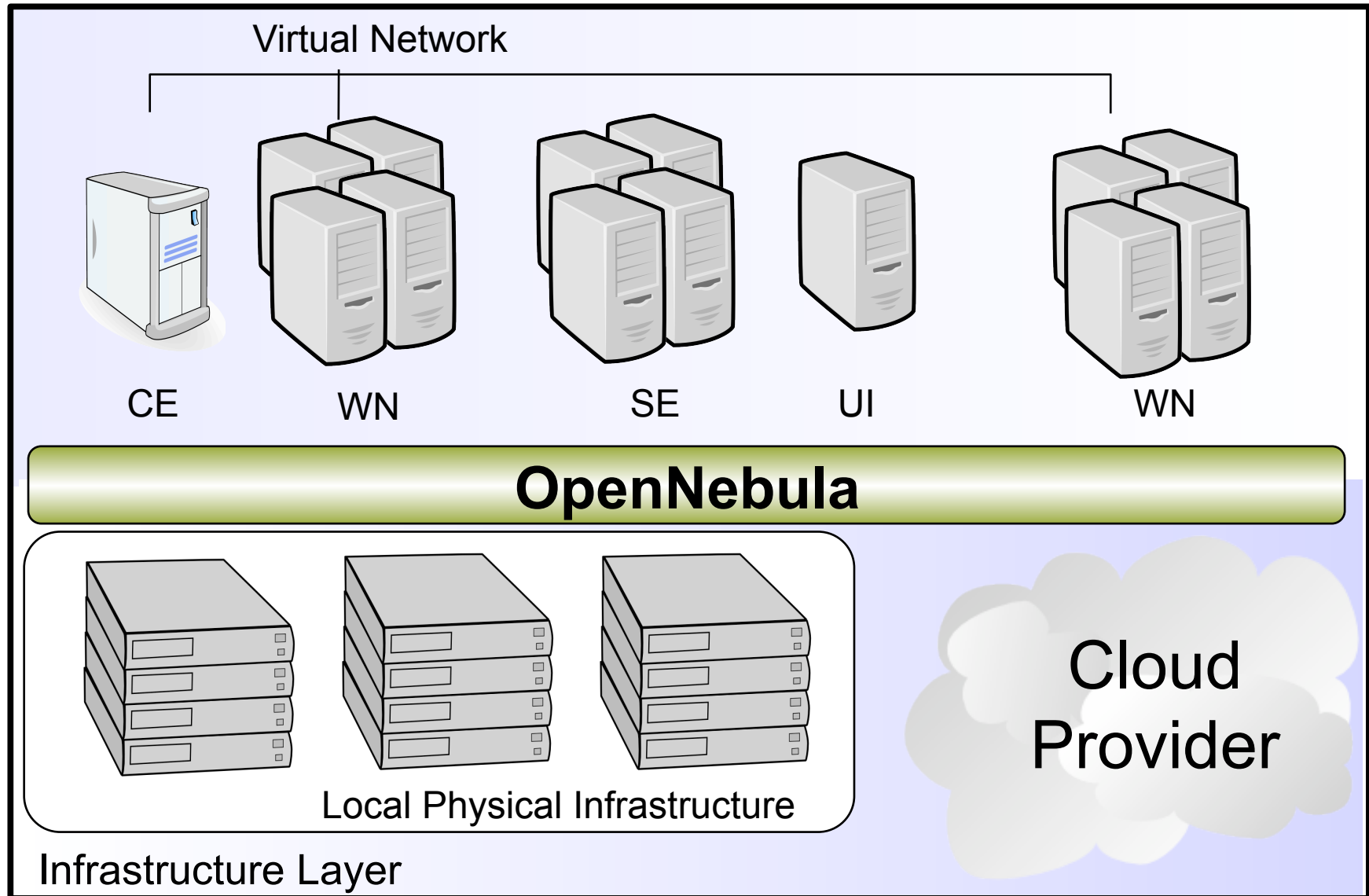
Benefits of Running a Virtual Computing Cluster

Scaling out EGEE sites on Amazon EC2 with OpenNebula



Benefits of Running a Virtual EGEE Site

Scaling out EGEE sites on Amazon EC2 with OpenNebula



Benefits of Running a Virtual EGEE Site

Scaling out EGEE sites on Amazon EC2 with OpenNebula

Benefits of Virtualization for Existing Grid Infrastructures

- The **virtualization of the local infrastructure** provides:
 - Easy support for VO-specific worker nodes
 - Reduce *gridification* cycles
 - Dynamic balance of resources between VO's
 - Fault tolerance of key infrastructure components
 - Easier deployment and testing of new middleware distributions
 - Distribution of pre-configured components
 - Cheaper development nodes
 - Simplified training machines deployment
 - Performance partitioning between local and grid services



Solve many of the obstacles to Grid adoption



THANK YOU FOR YOUR ATTENTION!!!
More info, downloads, mailing lists at
www.OpenNebula.org

OpenNebula is partially funded by the “RESERVOIR– Resources and Services Virtualization without Barriers” project
EU grant agreement 215605



www.reservoir-fp7.eu/

Acknowledgements

- Ignacio M. Llorente
- Tino Vazquez
- Rubén S. Montero
- Javier Fontán
- Rafael Moreno
- Raúl Sampedro