

**ISC 2009, June 23-26
Hamburg, Germany**

Scaling out EGEE sites on Amazon EC2 with OpenNebula

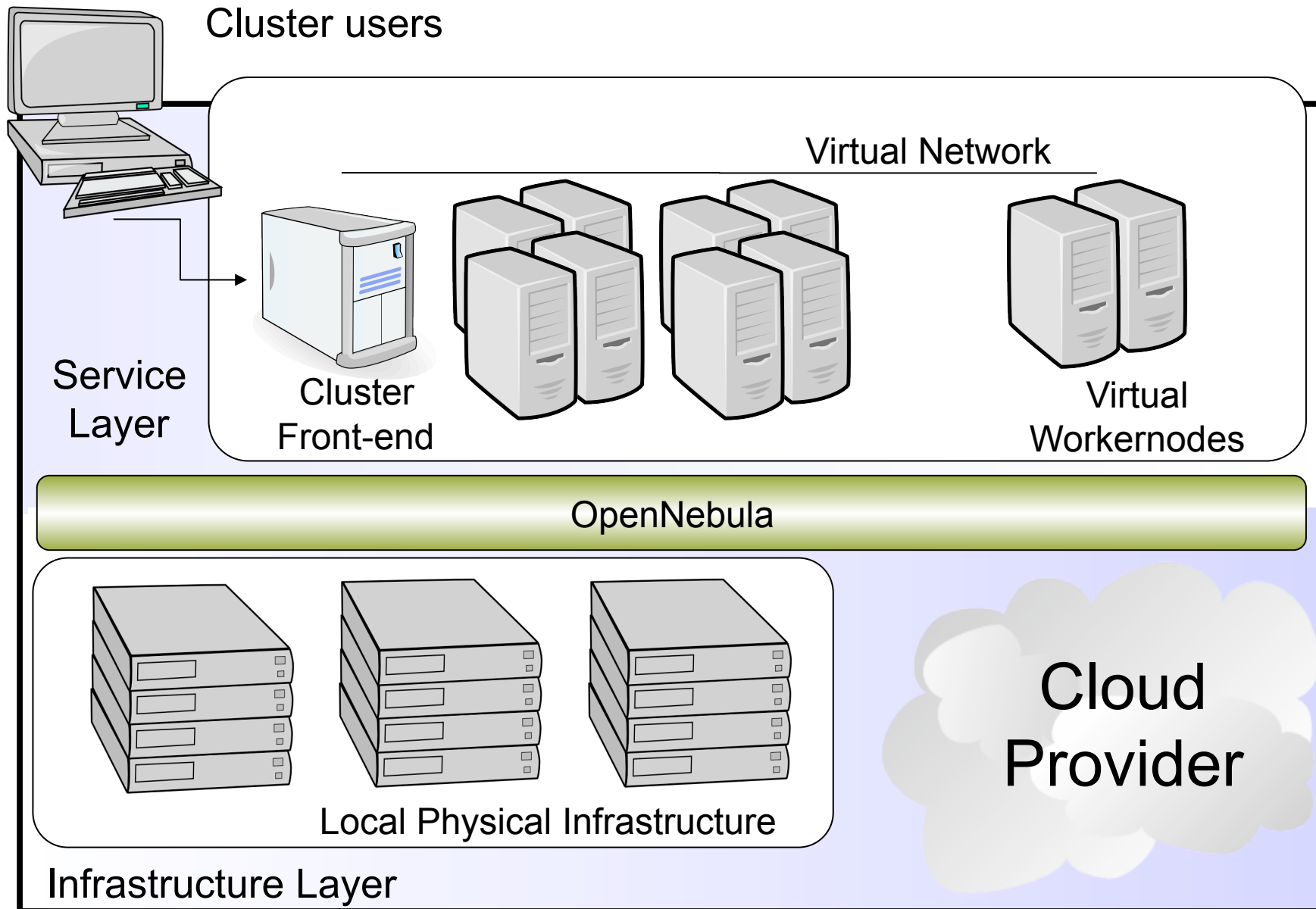
dsa-research.org

**Distributed Systems Architecture Research Group
Universidad Complutense de Madrid**



Overview

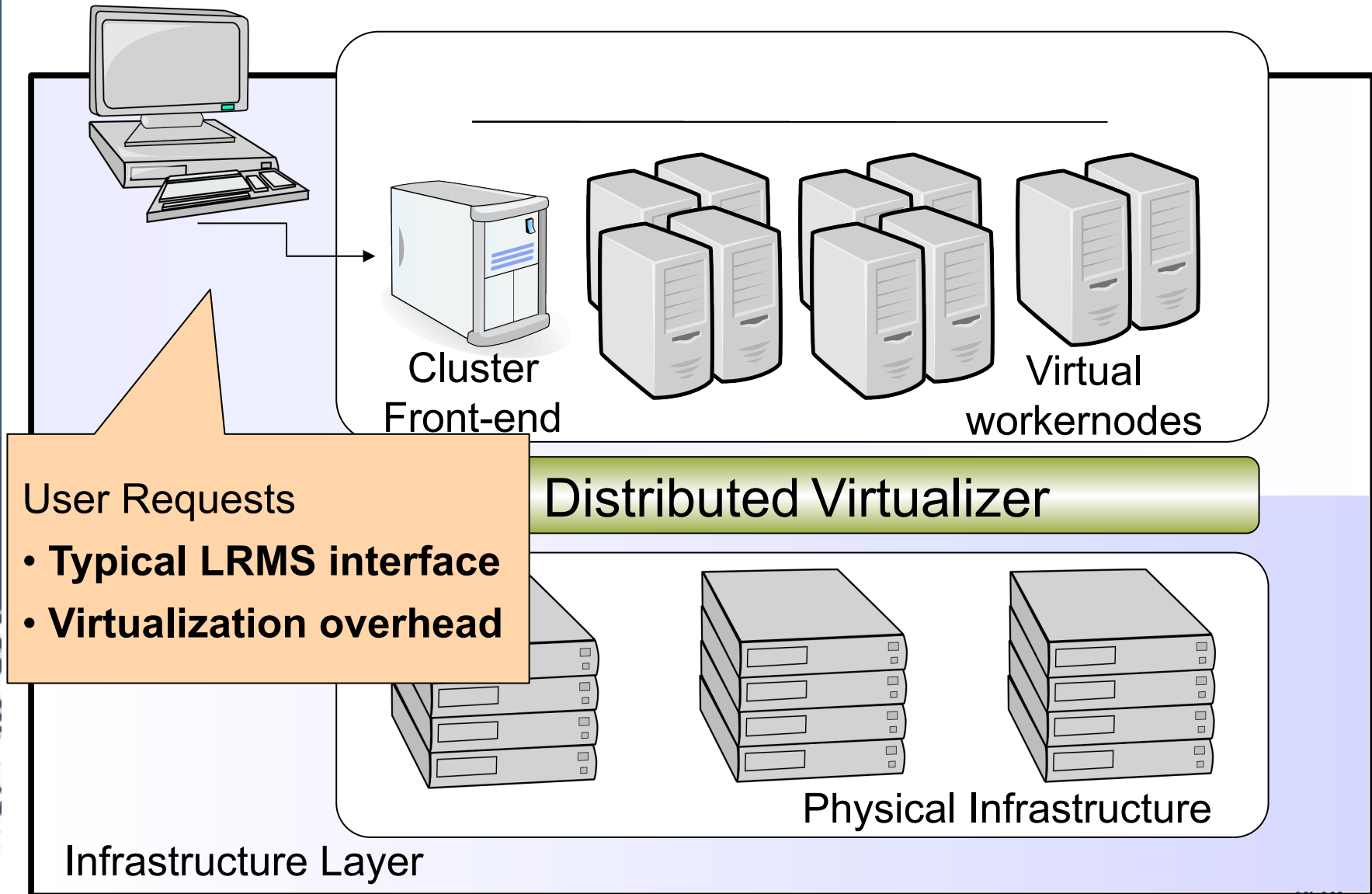
Cloud and Virtualization to Support Grid Infrastructures



Benefits of Running a Virtual Computing Cluster

Cloud and Virtualization to Support Grid Infrastructures

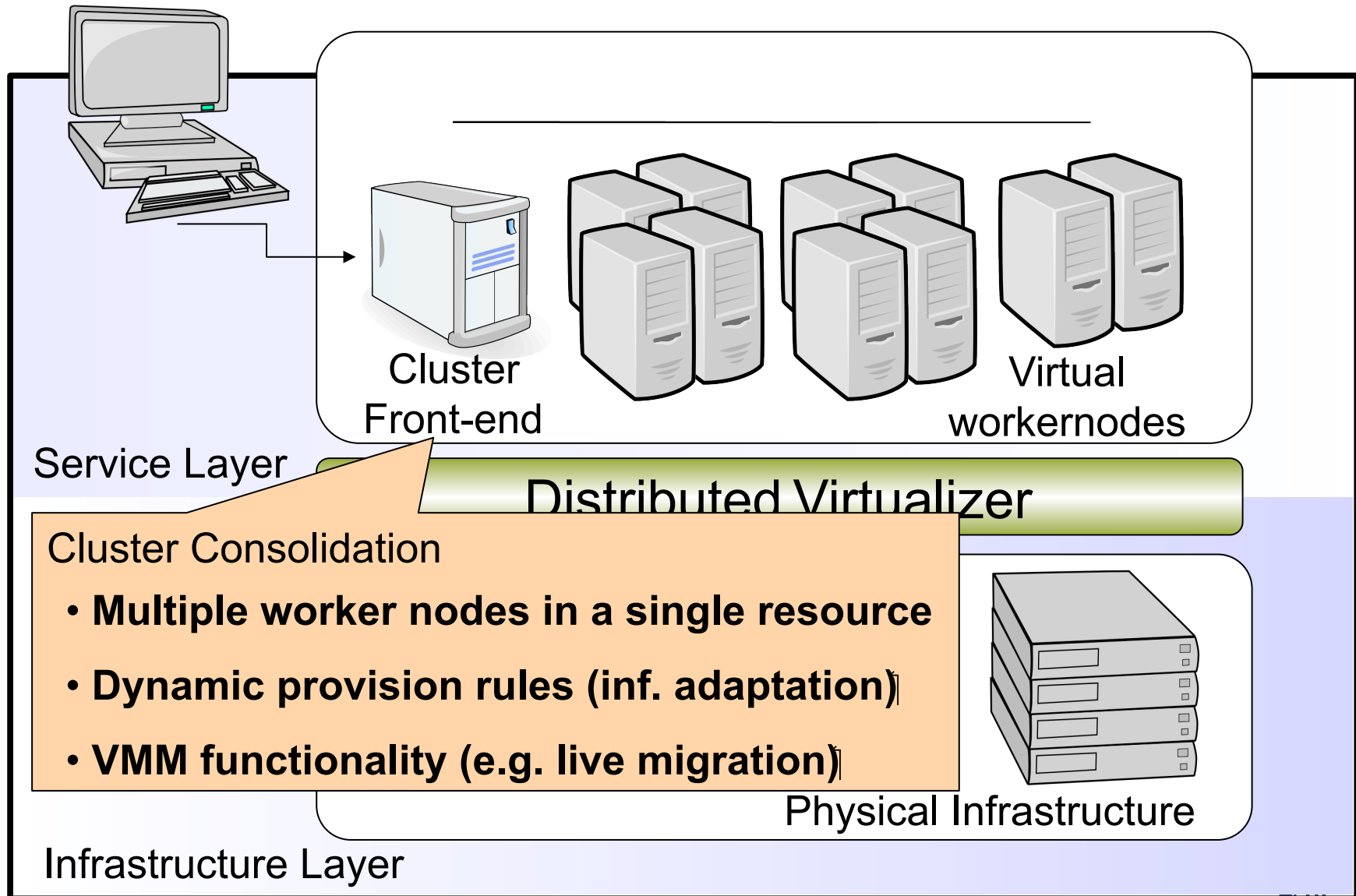
Cluster users



Benefits of Running a Virtual Computing Cluster

Cloud and Virtualization to Support Grid Infrastructures

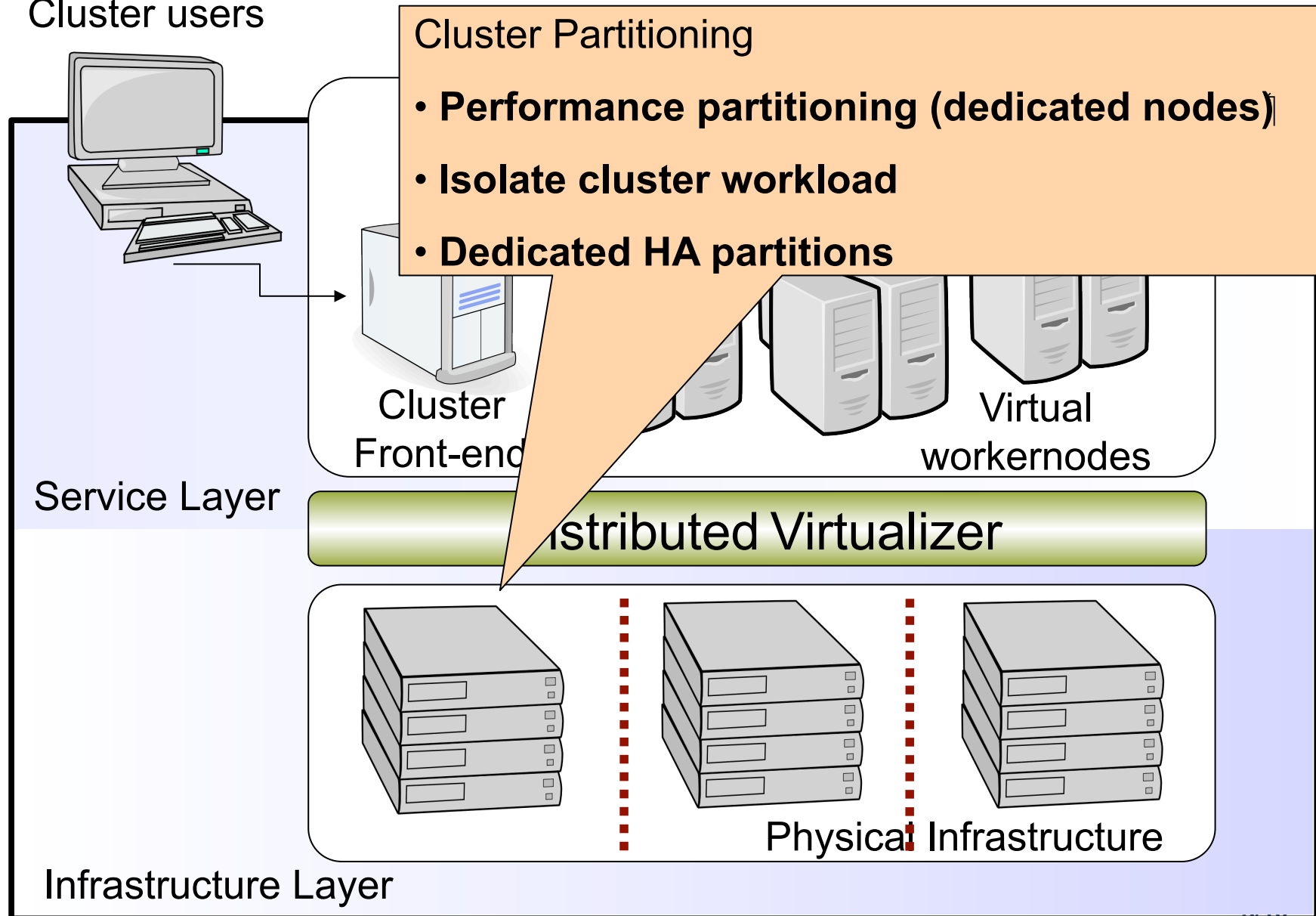
Cluster users



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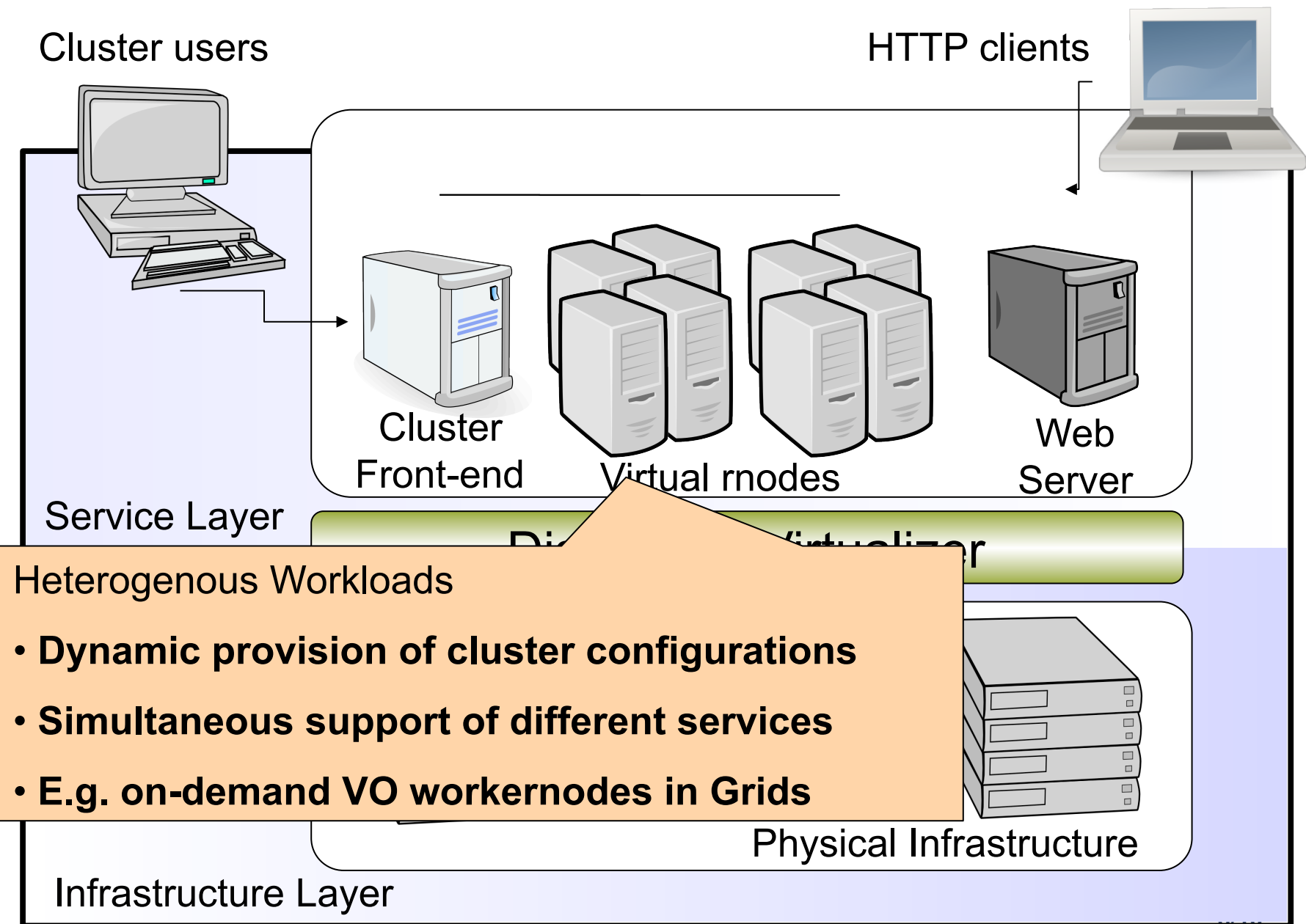
Cloud and Virtualization to Support Grid Infrastructures

Cluster users



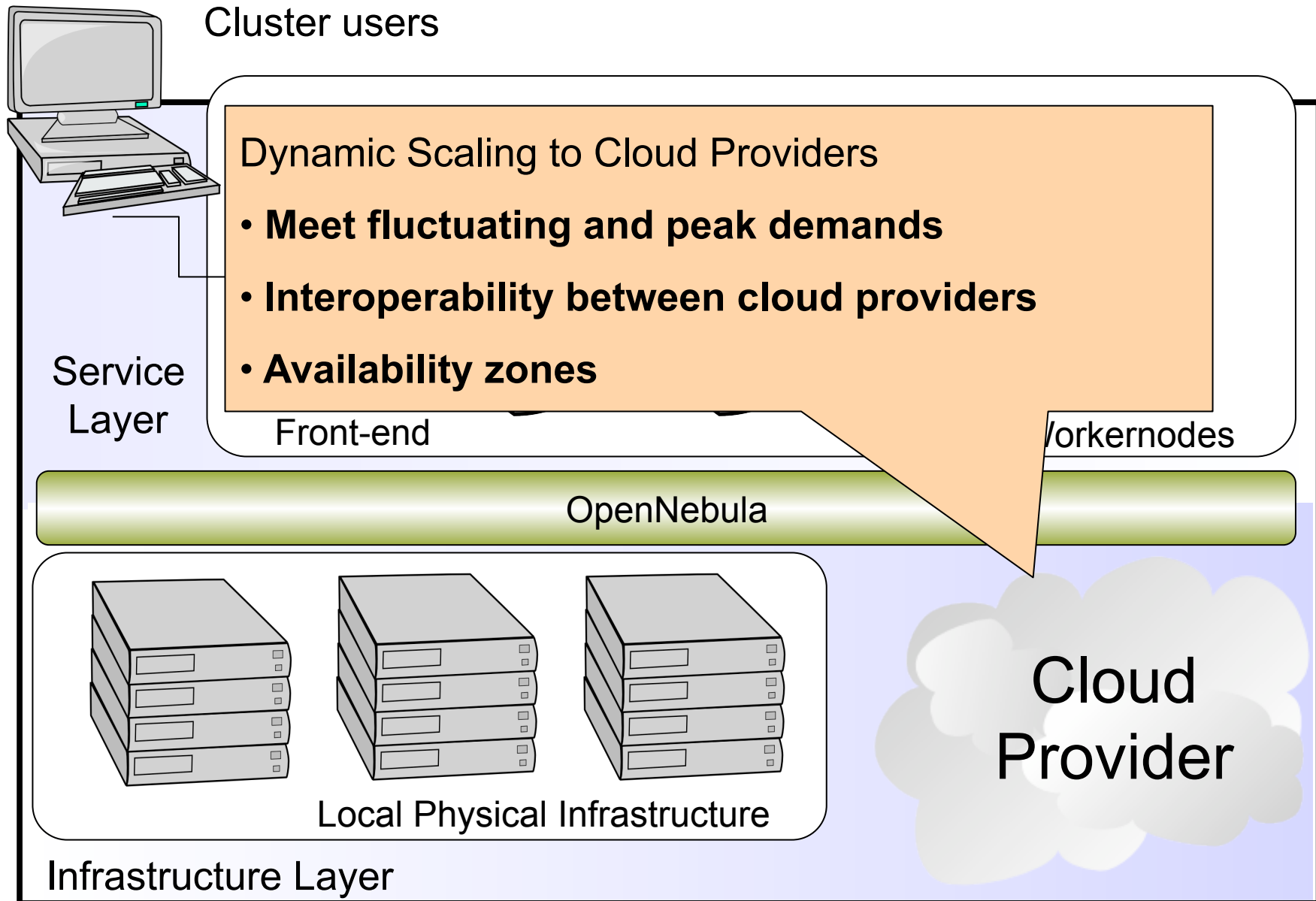
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Cloud and Virtualization to Support Grid Infrastructures



Benefits of Running a Virtual Computing Cluster

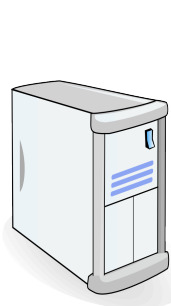
Cloud and Virtualization to Support Grid Infrastructures



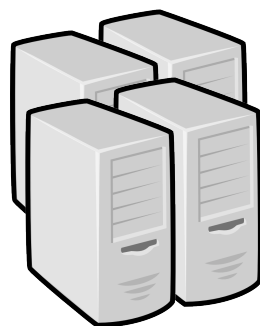
Benefits of Running a Virtual EGEE Site

Cloud and Virtualization to Support Grid Infrastructures

Virtual Network



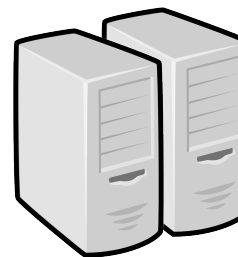
CREAM



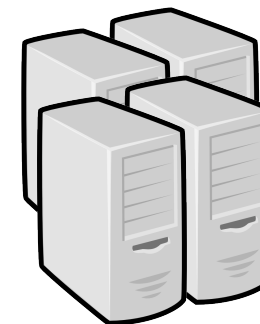
Workernodes



BDII

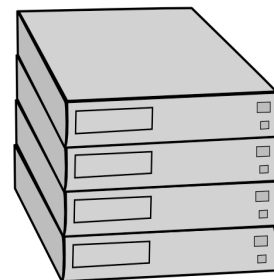
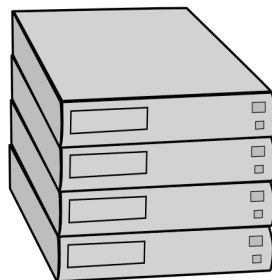
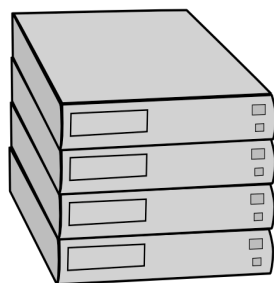


RLS



WMS

OpenNebula



Local Physical Infrastructure

Infrastructure Layer

Cloud
Provider

Benefits of Running a Virtual EGEE Site

Cloud and Virtualization to Support Grid Infrastructures

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 for 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