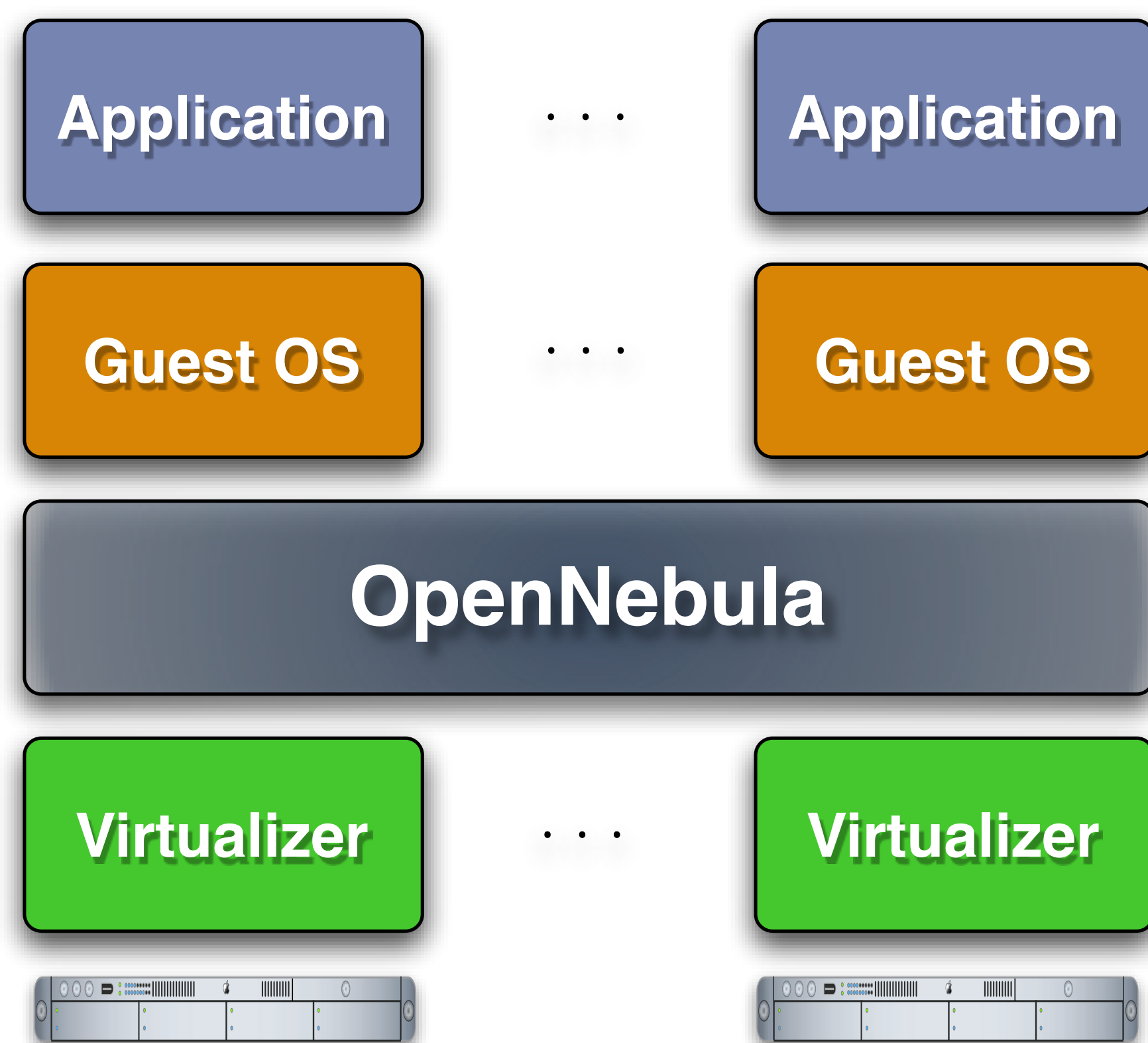


# OpenNebula.org

## The Open Source Virtual Machine Manager for Cluster and Grid Computing

### The Engine for Data Center Virtualization & Cloud Solutions

OpenNebula is a virtual infrastructure engine that enables the dynamic allocation of virtual machines on a pool of physical resources. **The OpenNebula engine extends the benefits of virtualization platforms from a single physical resource to a pool of resources, decoupling the server not only from the physical infrastructure but also from the physical location.** OpenNebula transforms a physical cluster into a flexible virtual infrastructure which dynamically adapts to the changing demands of a service workload. OpenNebula leverages existing virtualization platforms to create a new virtualization layer between the service and the physical infrastructure.



### Features

- Efficient Resource Management
- Powerful Interface
- 3rd Party Software Integration
- Failure Tolerance
- Open and Flexible Architecture
- On-demand Scale out of Service Workloads
- Ease of Installation and Administration
- Open Source Software
- OpenNebula is an Active Project

### Benefits

#### For the Infrastructure Owner (System Manager)

- Centralized management
- Balance of workload
- Server consolidation
- Dynamic resizing of the physical infrastructure
- Dynamic cluster partitioning
- Support for heterogeneous workloads

#### For the User (Service Manager)

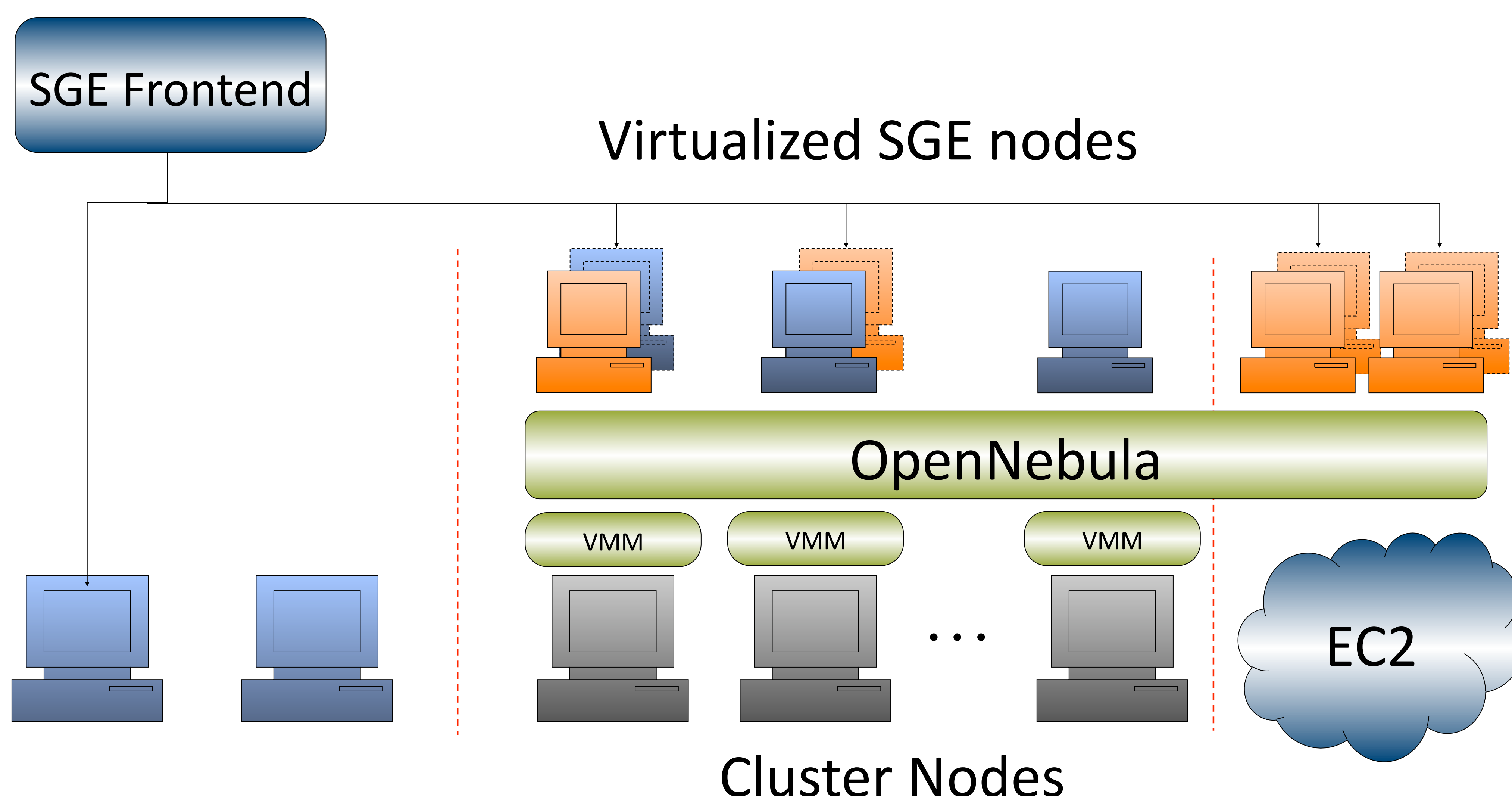
- On-demand provision of VMs

### Benefits for EGEE

- Dynamic balance of resources between VO's
- Fault tolerance for key infrastructure components
- Easier testing of new middleware versions
- Cheap development nodes
- Simplified training machines deployment

- Enables the possibility to distribute already deployed and configured components
- Isolate local workload from Grid jobs
- Set the amount of resources you want to contribute to the Grid

### Virtualized Cluster Architecture



OpenNebula is being developed by the Distributed Systems Architecture Group at Universidad Complutense de Madrid.

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