



Waterford Institute of Technology



openstack®

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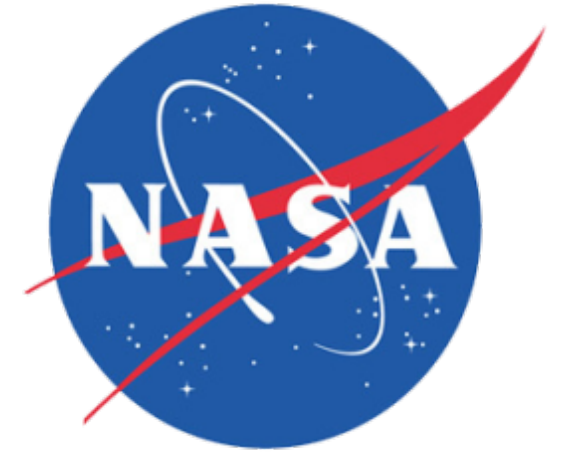
WHAT IS OPENSTACK ?

“OpenStack is a collection of open source technologies delivering a massively scalable cloud operating system” - openstack.org

OPENSTACK OVERVIEW



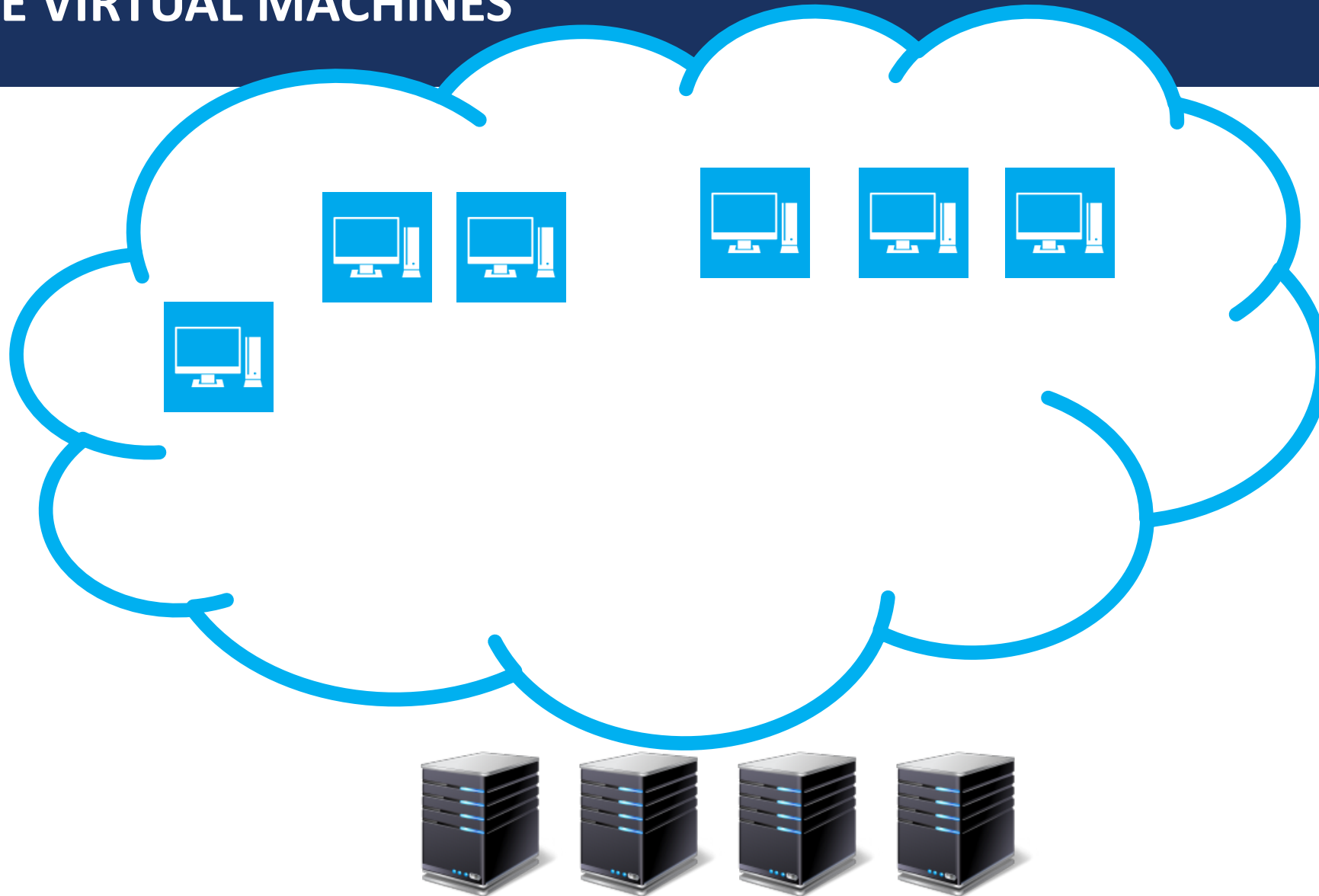
- Cloud OS developed by Rackspace and NASA
- Infrastructure as a Service
- Support Private Cloud and Public Cloud
- Open Source (Apache 2.0 license)
- OpenStack Foundation
- Popular and widely supported



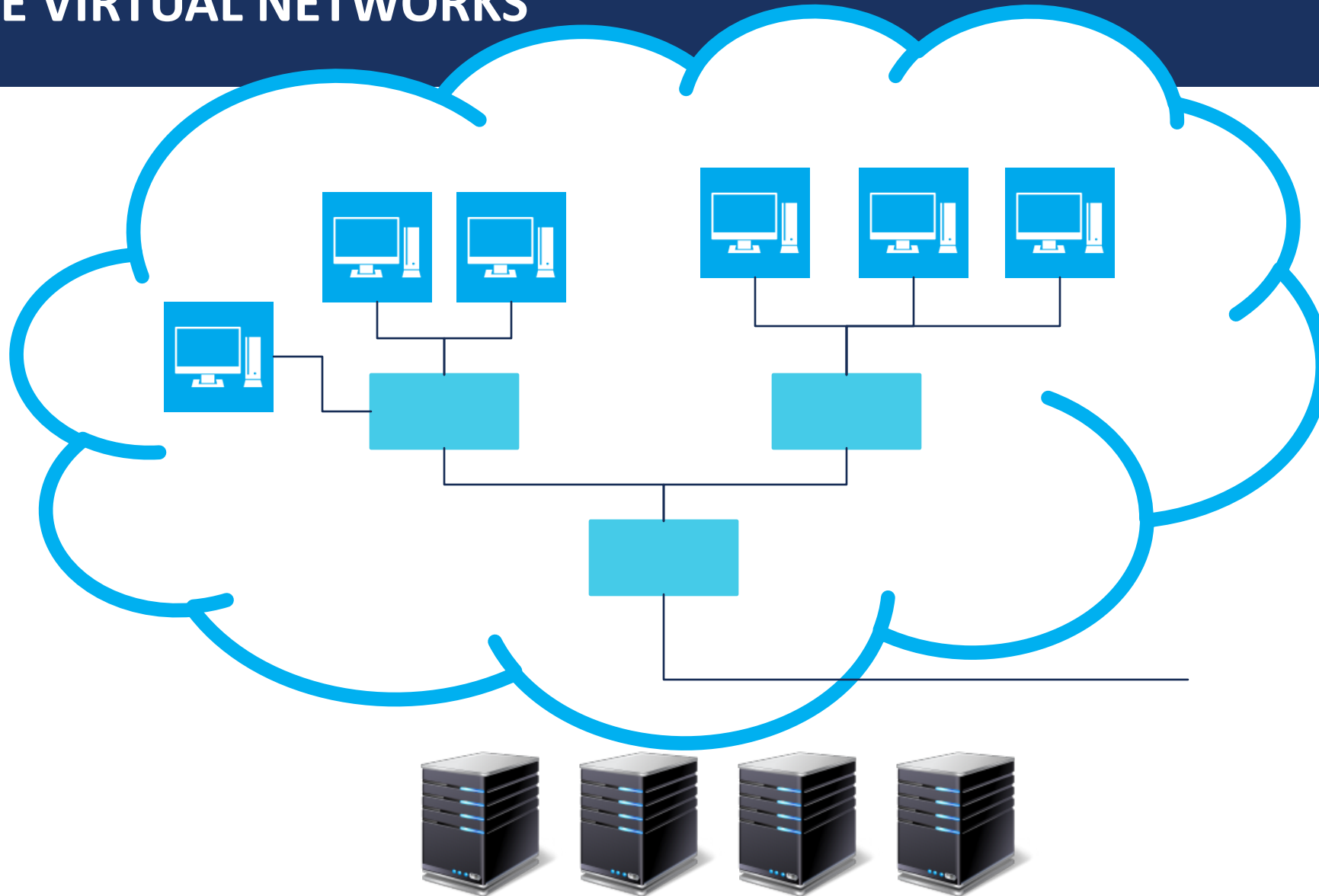
CLOUD OPERATING SYSTEMS



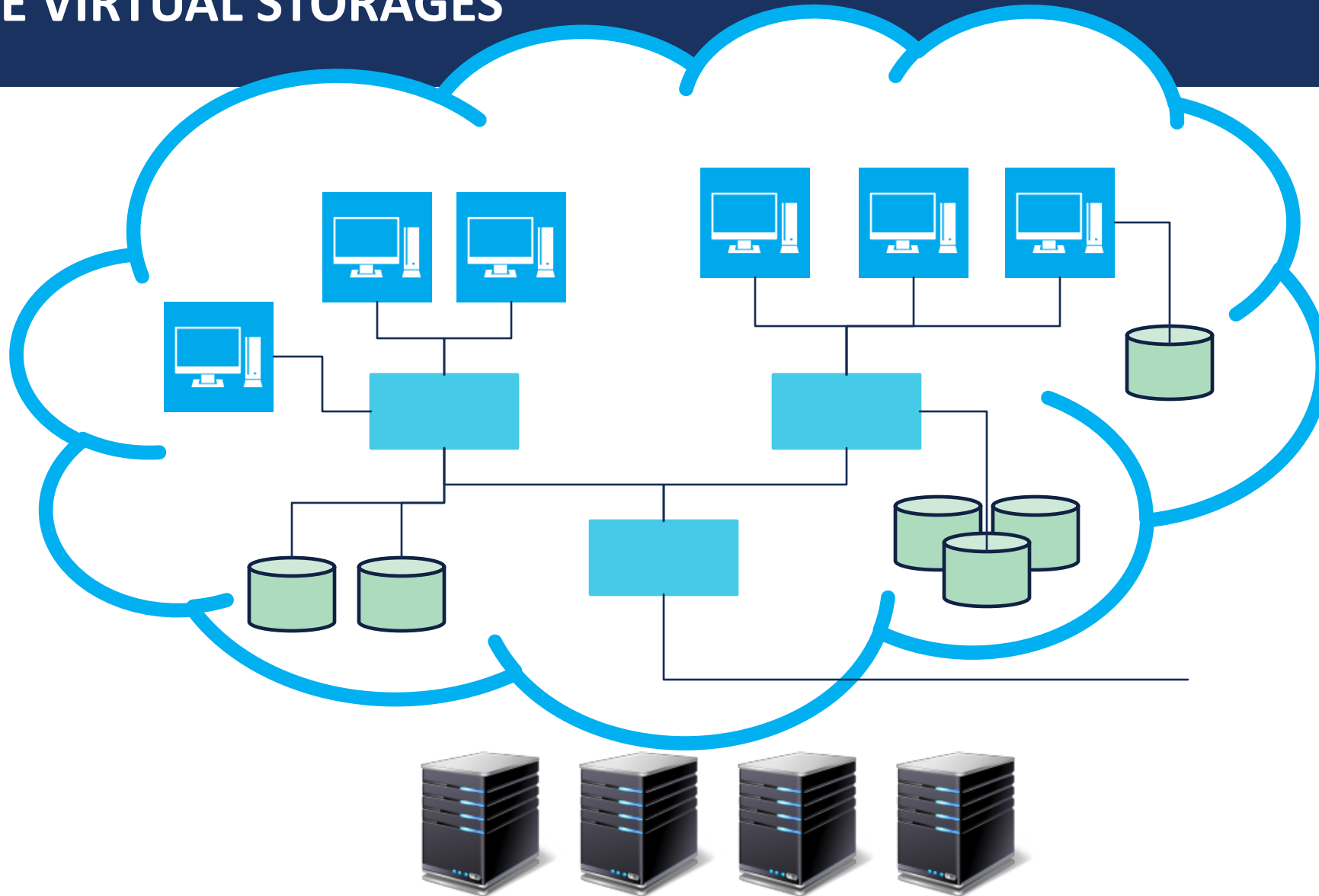
MANAGE VIRTUAL MACHINES



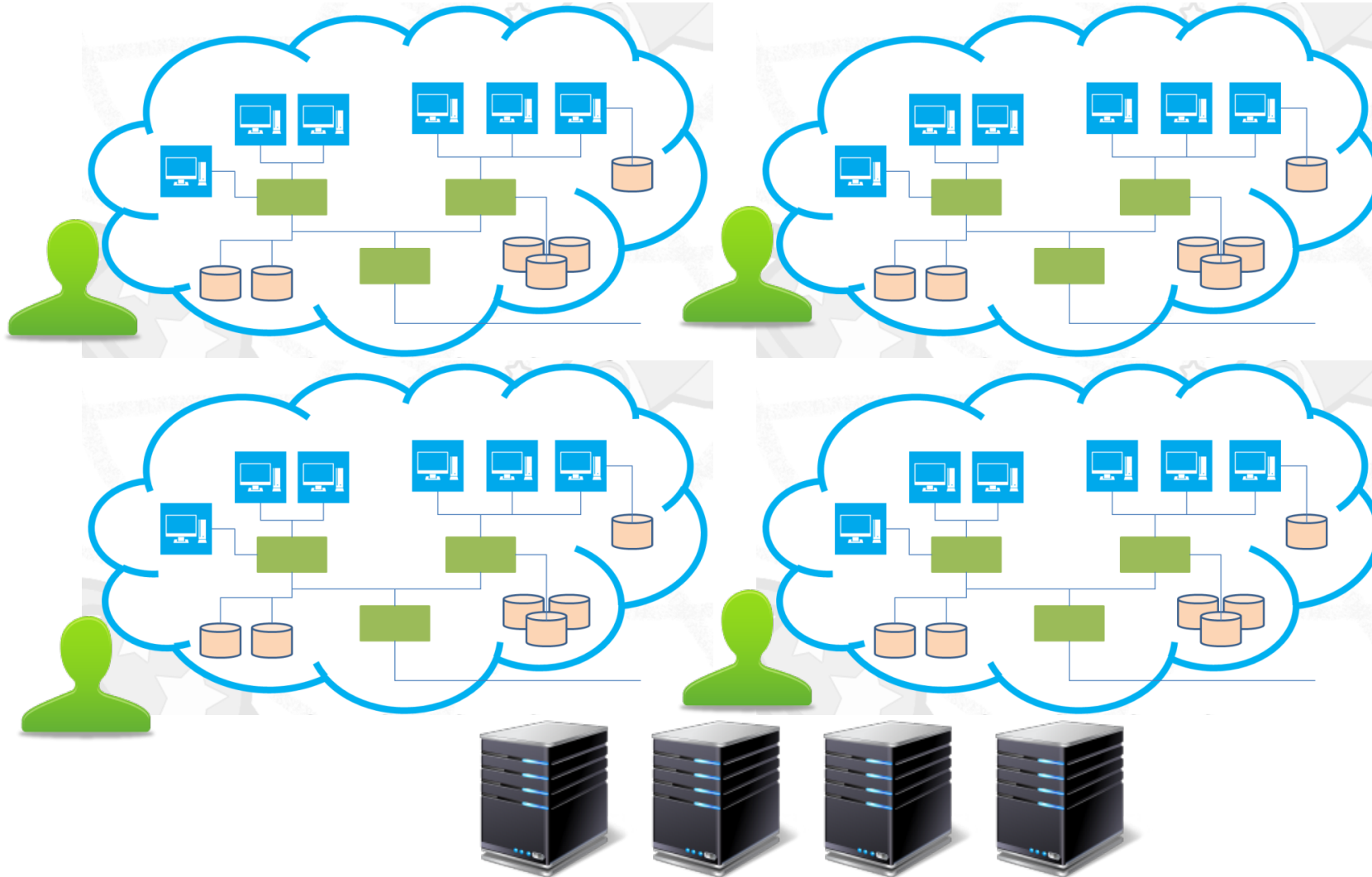
MANAGE VIRTUAL NETWORKS



MANAGE VIRTUAL STORAGES



MULTI-TENENTS



DEPLOYMENT MODELS

- On-premises distribution
- OpenStack-based public cloud
- Hosted OpenStack private cloud
- OpenStack-as-a-service
- Appliance based OpenStack

ON-PREMISES DISTRIBUTION

- Install all the OpenStack services on your own to create that cloud infrastructure
- Resides in your internal network

OPENSTACK-BASED PUBLIC CLOUD

- A service provider provides a public cloud computing system based on the OpenStack.
- Cloud provider who is responsible for creating the cloud infrastructure and lay out all the services.
- Services and all the data are stored in provider's servers.

HOSTED OPENSTACK PRIVATE CLOUD

- A service provider hosts an OpenStack-based private cloud including the underlying hardware and the OpenStack software.



OPENSTACK-AS-A-SERVICE

- Vendor hosts OpenStack management software as a service and customer uses that software service.



APPLIANCE BASED OPENSTACK

- Set of hardware with the required software in it.
- No need of installing operating systems or other software again.
- This can be considered as a pluggable service.



OPENSTACK VS PUBLIC CLOUD

Pros and Cons of public cloud

- Proper documentations
- Autonomy for developers
- Tools and Ecosystems
- Proprietary APIs
- Environment differences
- Data security

CONS OF OPENSTACK



VENDER NEUTRAL



ON-PREMISES
INFRASTRUCTURE



DEV-PROD-TEST

VIRTUALIZATION

