redhat.

Red Hat Gluster Storage Administration

RH236

RH236-RHGS3.1.2-en-1-20160627

Welcome

Course Objectives and Structure

Schedule

DAY ONE	DAY TWO	DAY THREE
Intro to Red Hat Gluster Storage	Extending Volumes	Managing Snapshots
Installing Red Hat Gluster Storage	Configuring IP Failover	Installing Red Hat Storage Console
Configuring Red Hat Gluster Storage	Configuring Georeplication	Managing Tiering
Creating Volumes	Troubleshooting	Monitoring Red Hat Gluster Storage
Configuring Clients		Configuring Network Encryption
Configuring ACLs and Quotas		

Orientation to Classroom Network

Internationalization

Chapter 1: Introduction to Red Hat Gluster Storage

Goal:

- Overview of Red Hat Gluster Storage.

Objective:

- Describe Red Hat Gluster Storage features and architecture.

Red Hat Gluster Storage Features

Quiz: Red Hat Gluster Storage Features

Red Hat Gluster Storage Use Cases

Quiz: Red Hat Gluster Storage Use Cases

Red Hat Gluster Storage Concepts and Terminology

Quiz: Red Hat Gluster Storage Concepts & Terminology

Red Hat Gluster Storage Hardware Requirements

Quiz: Red Hat Gluster Storage Hardware Requirements

Summary

Chapter 2: Installing Red Hat Gluster Storage

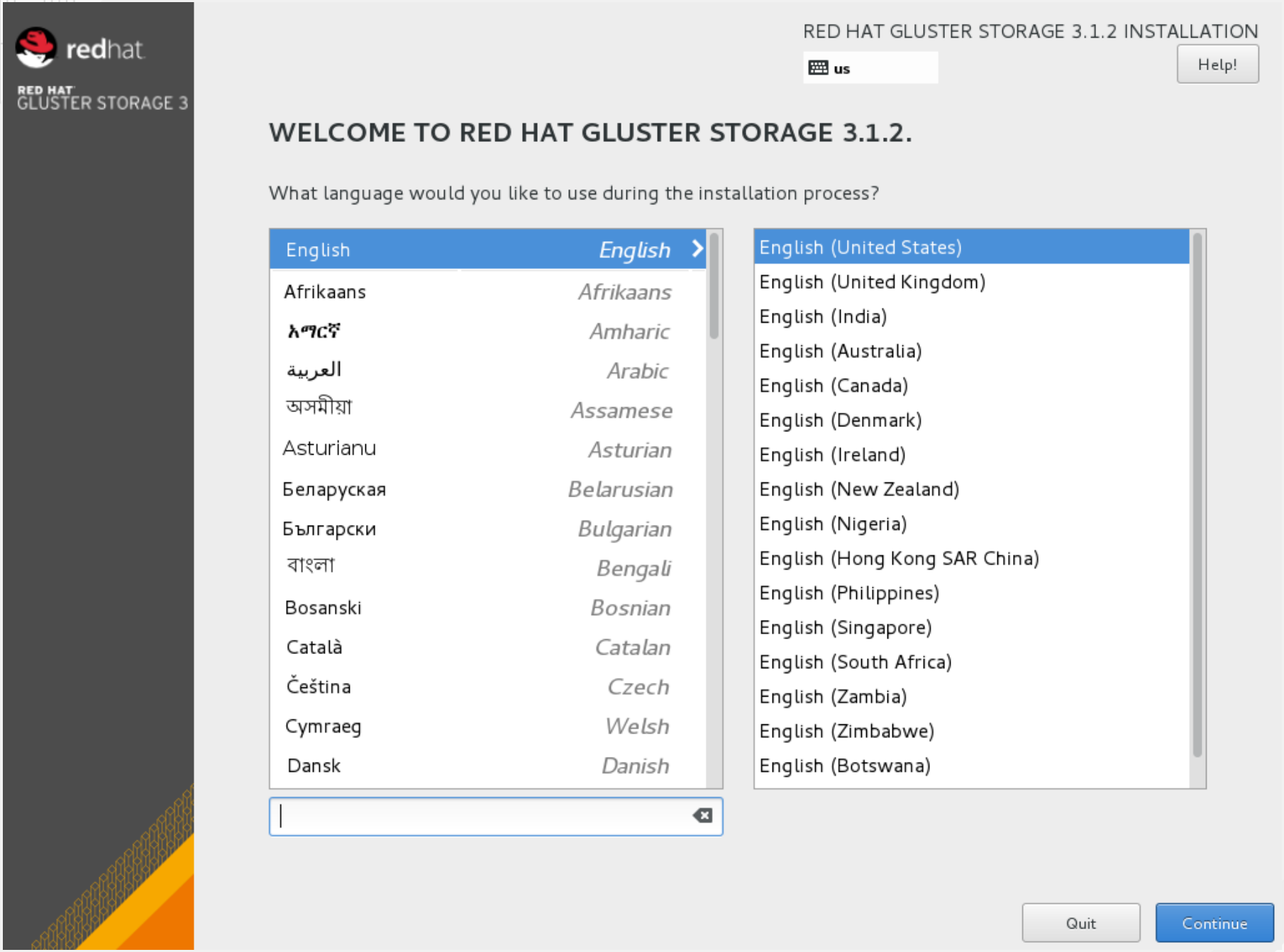
Goal:

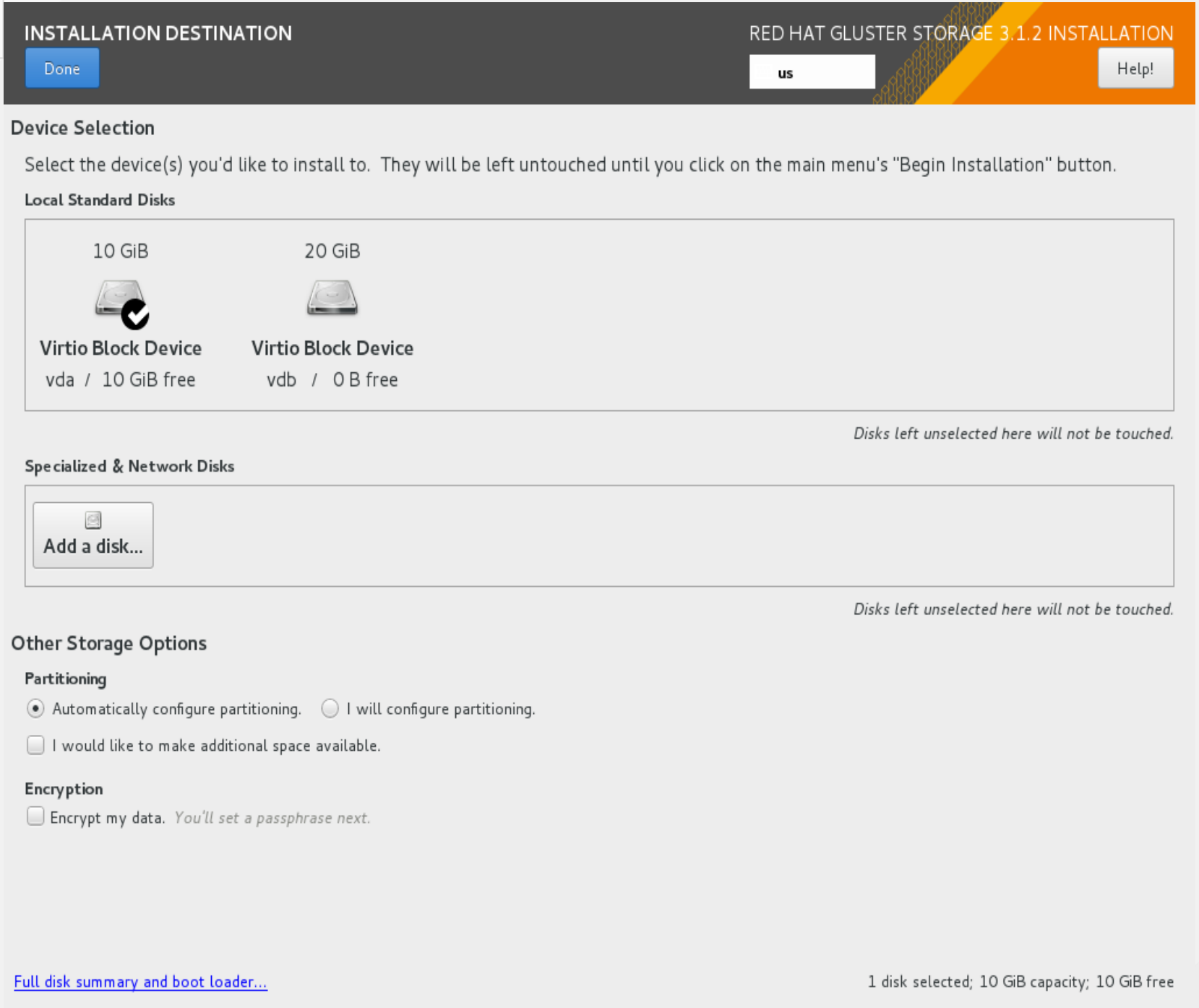
- Install Red Hat Gluster Storage.

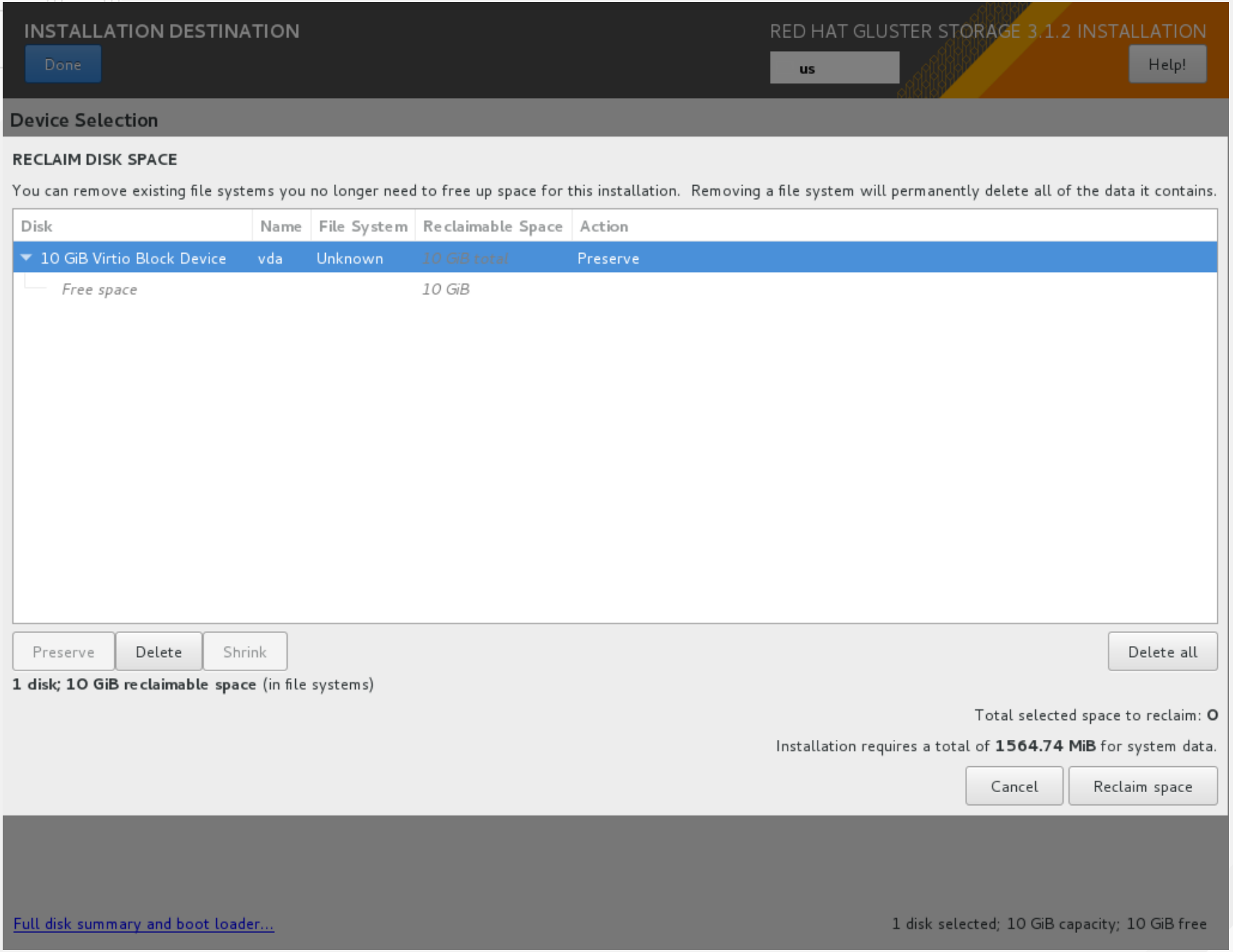
Objective:

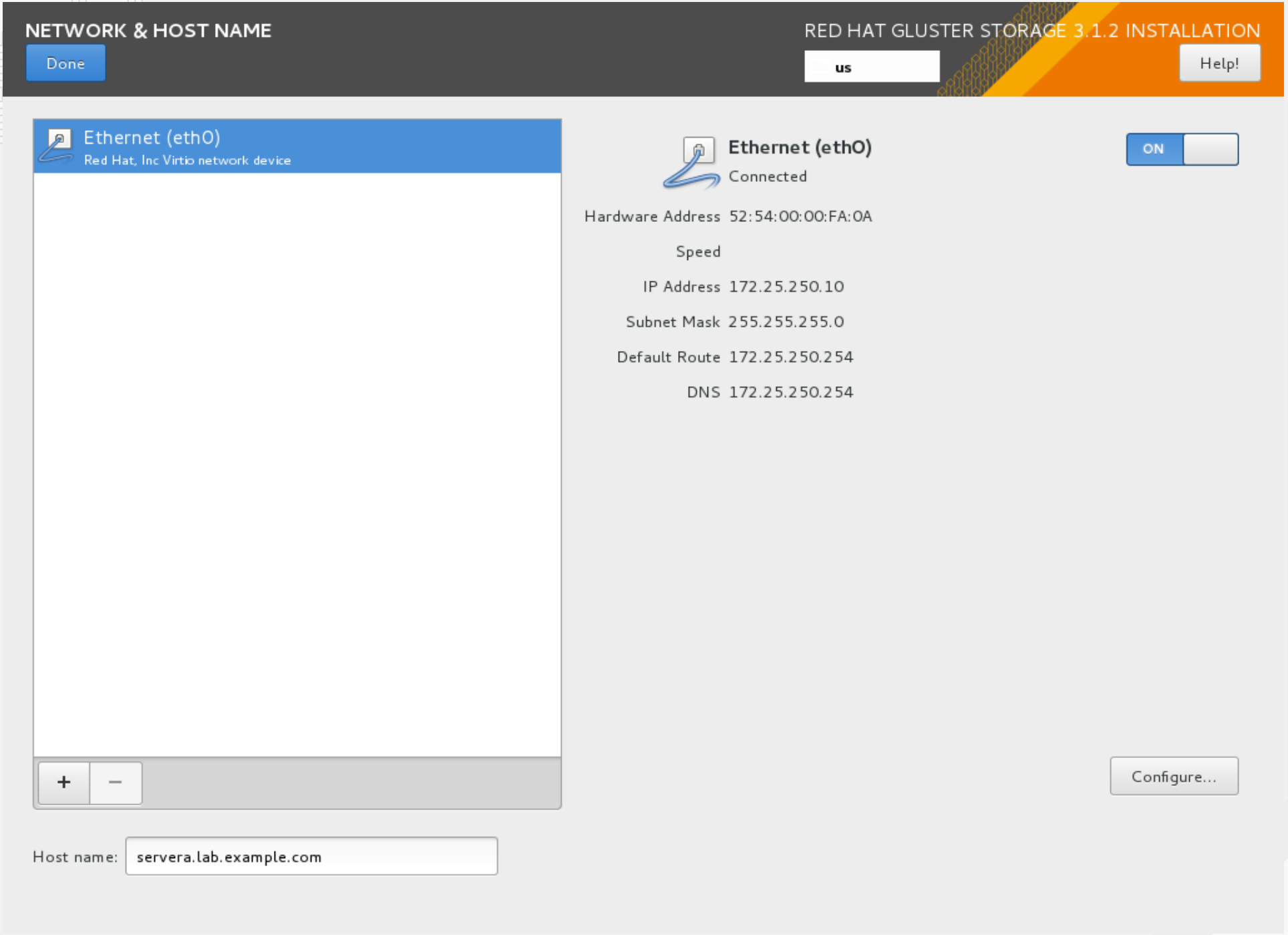
- Install Red Hat Gluster Storage.

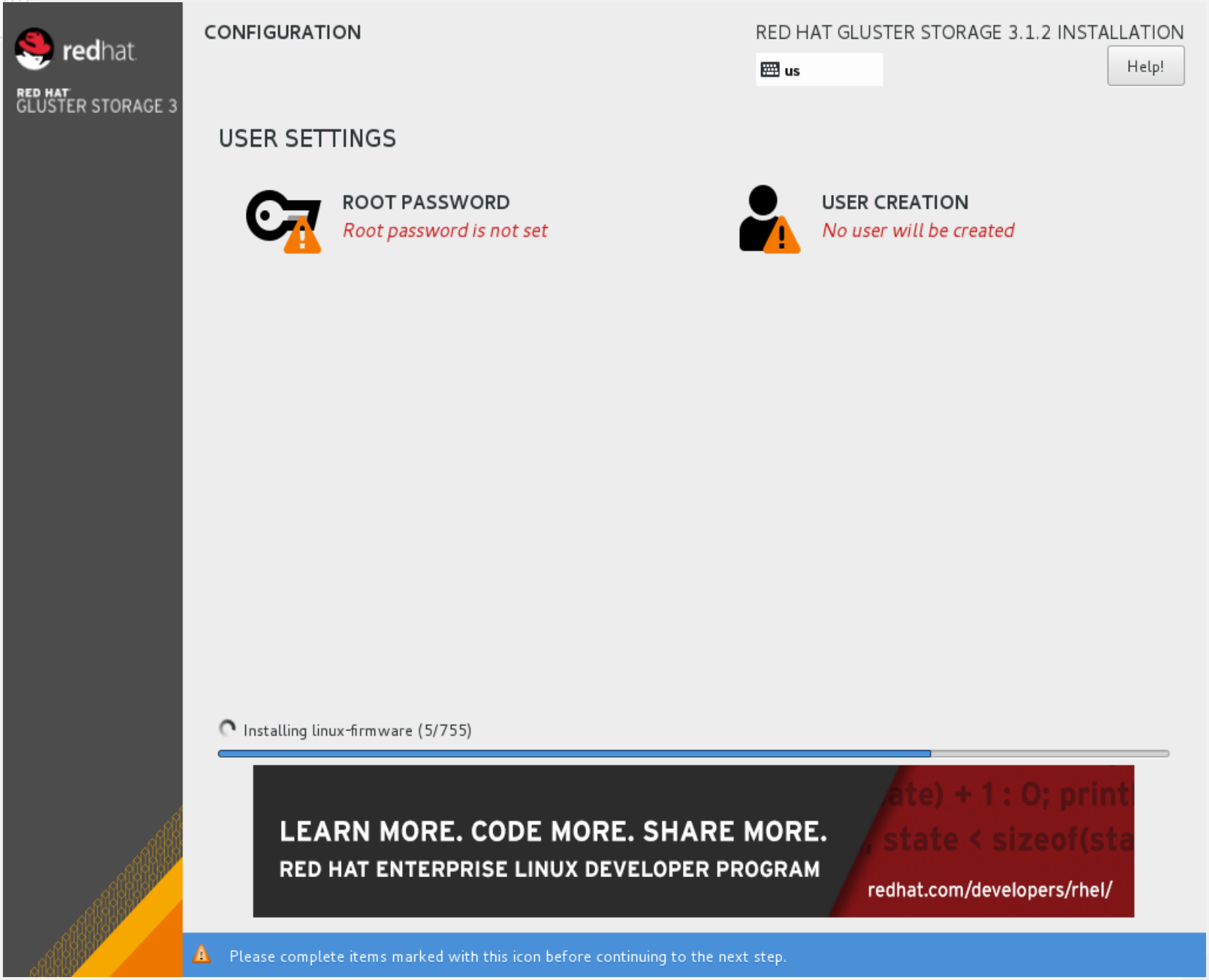
Installing Red Hat Storage Server On-premise

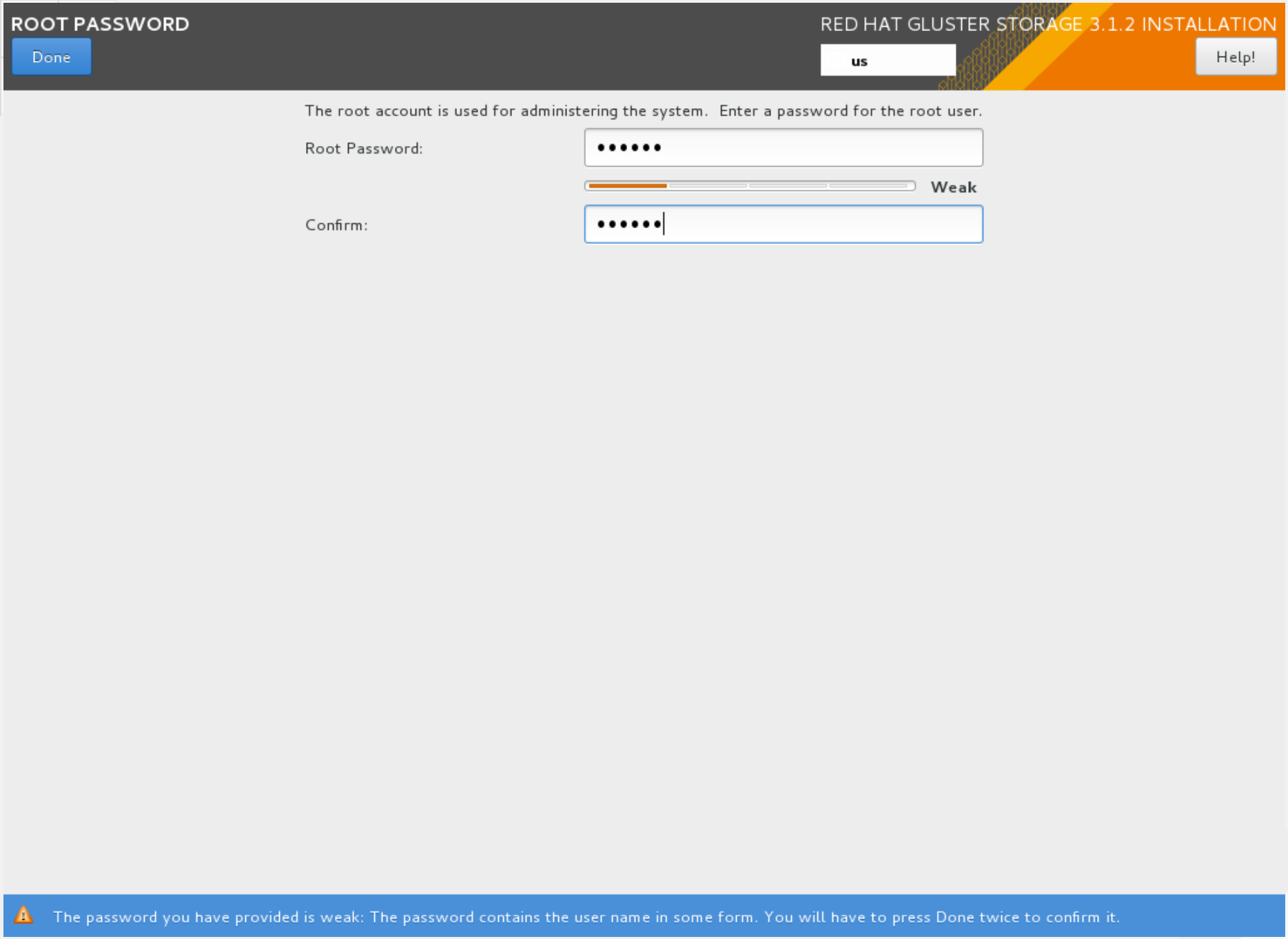


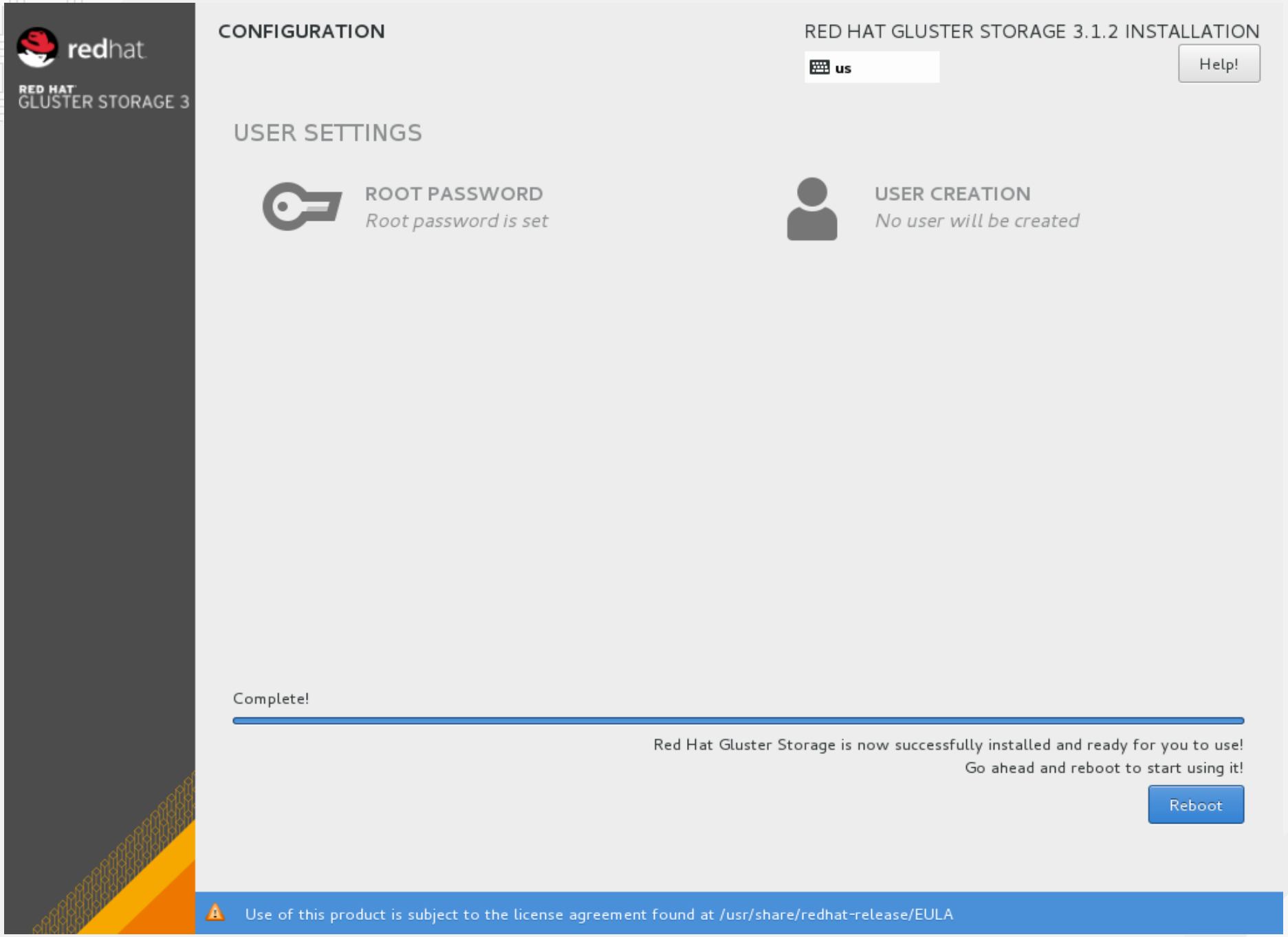












Quiz: Installing Red Hat Storage Server On-premise

Installing Red Hat Storage Server on a Public Cloud

Quiz: Installing Red Hat Storage Server on Public Cloud

Lab: Installing Red Hat Gluster Storage

Summary

Chapter 3: Configuring Red Hat Gluster Storage

Goal:

- Build a Red Hat Gluster Storage Volume.

Objectives:

- Configure a trusted storage pool.
- Create bricks on top of thinly provisioned logical volumes.
- Create a distributed volume.

Building a Trusted Storage Pool

Guided Exercise: Building a Trusted Storage Pool

Creating Bricks

Guided Exercise: Creating Bricks

Building a Volume

Guided Exercise: Building a Volume

Lab: Configuring Red Hat Gluster Storage

Summary

Chapter 4: Creating Volumes

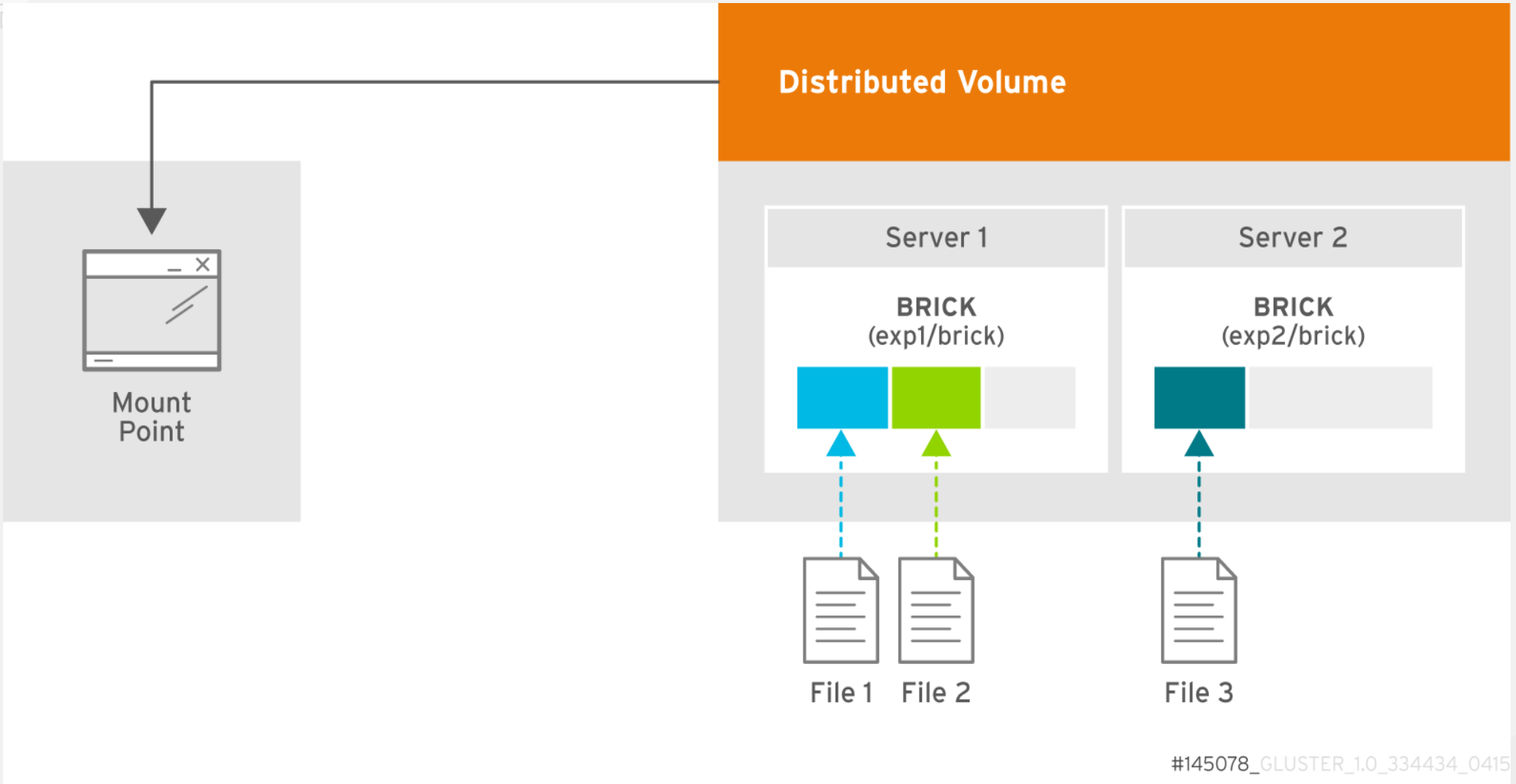
Goal:

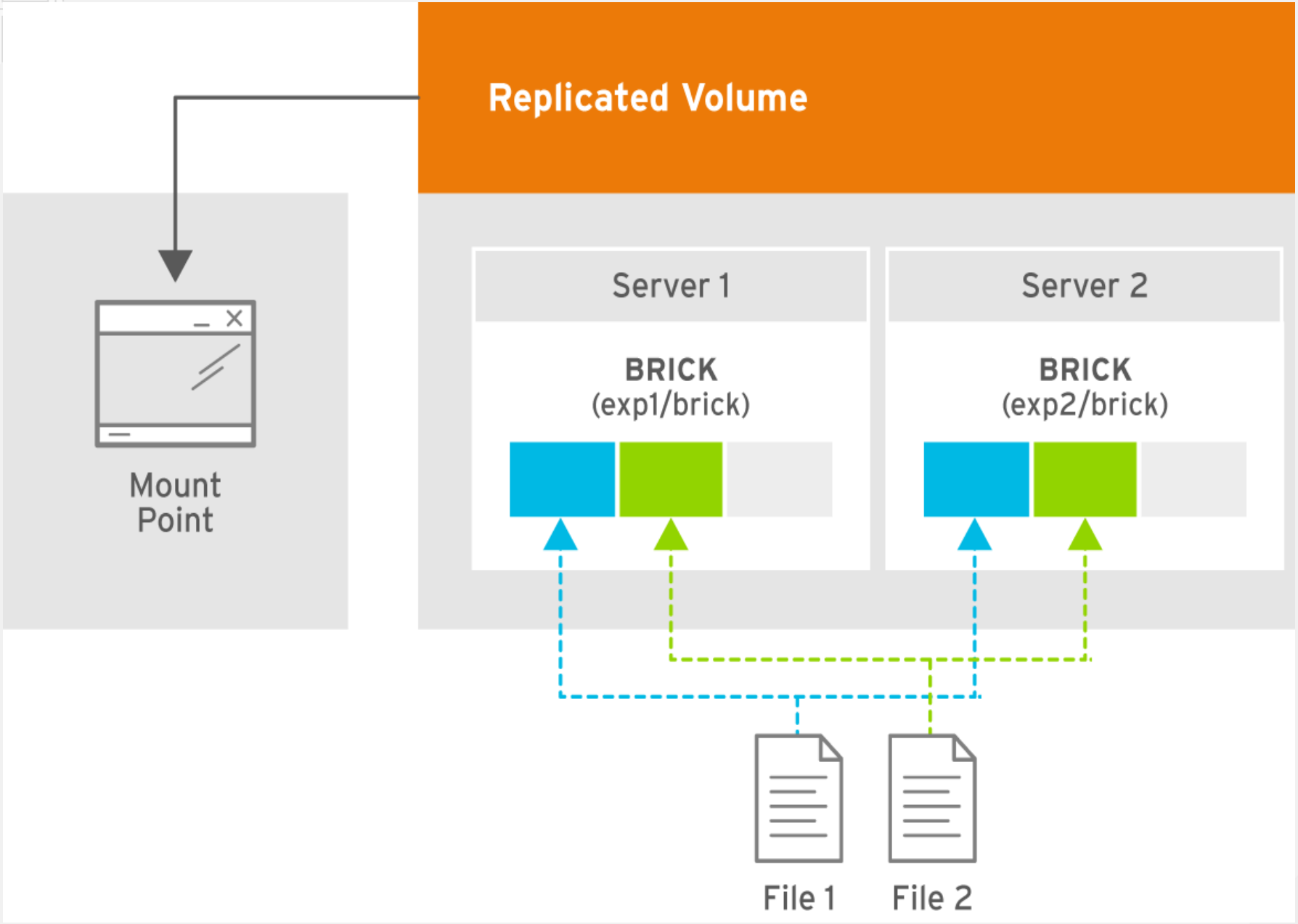
- Create different volume types.

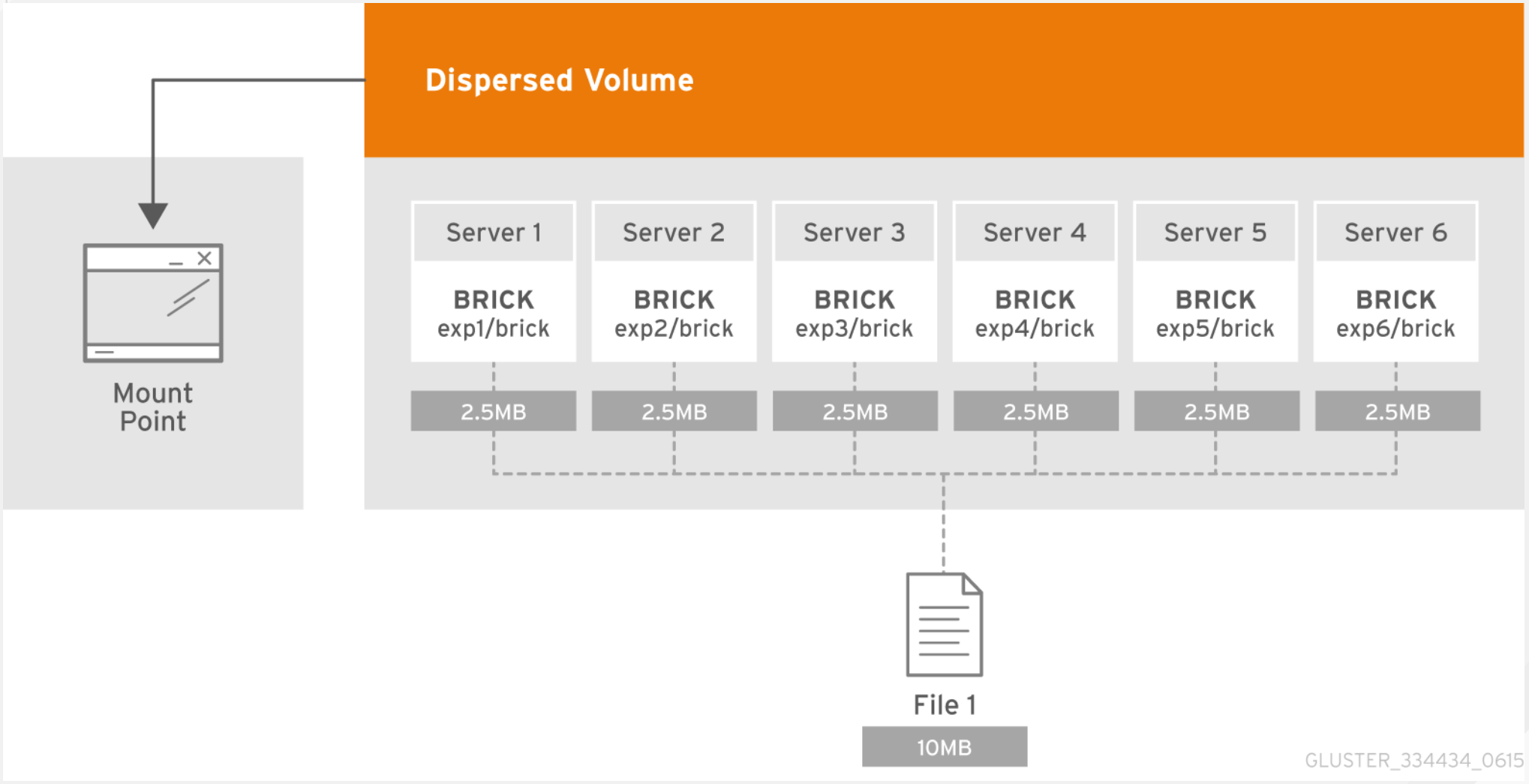
Objective:

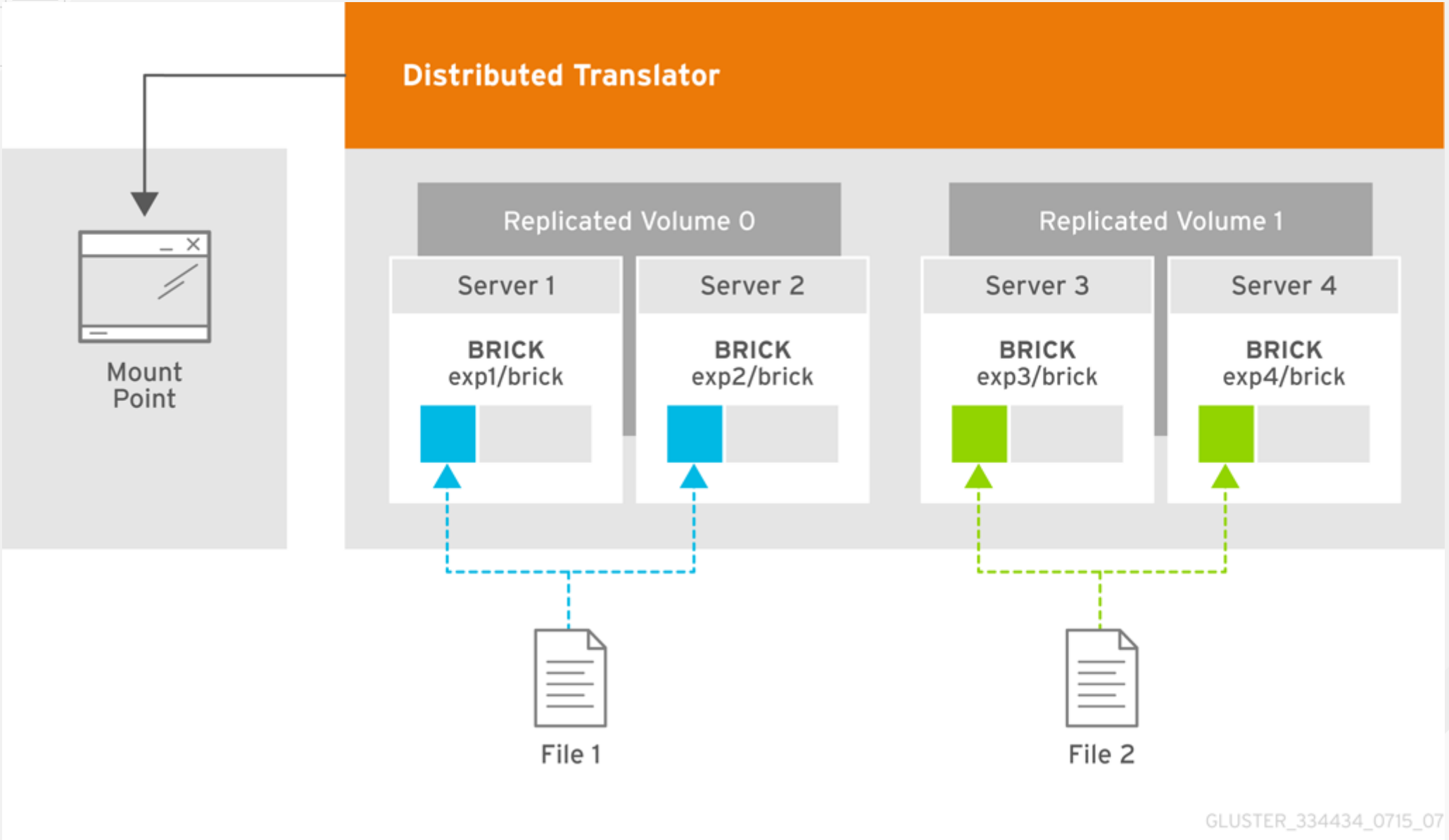
- Describe and configure different volume types.

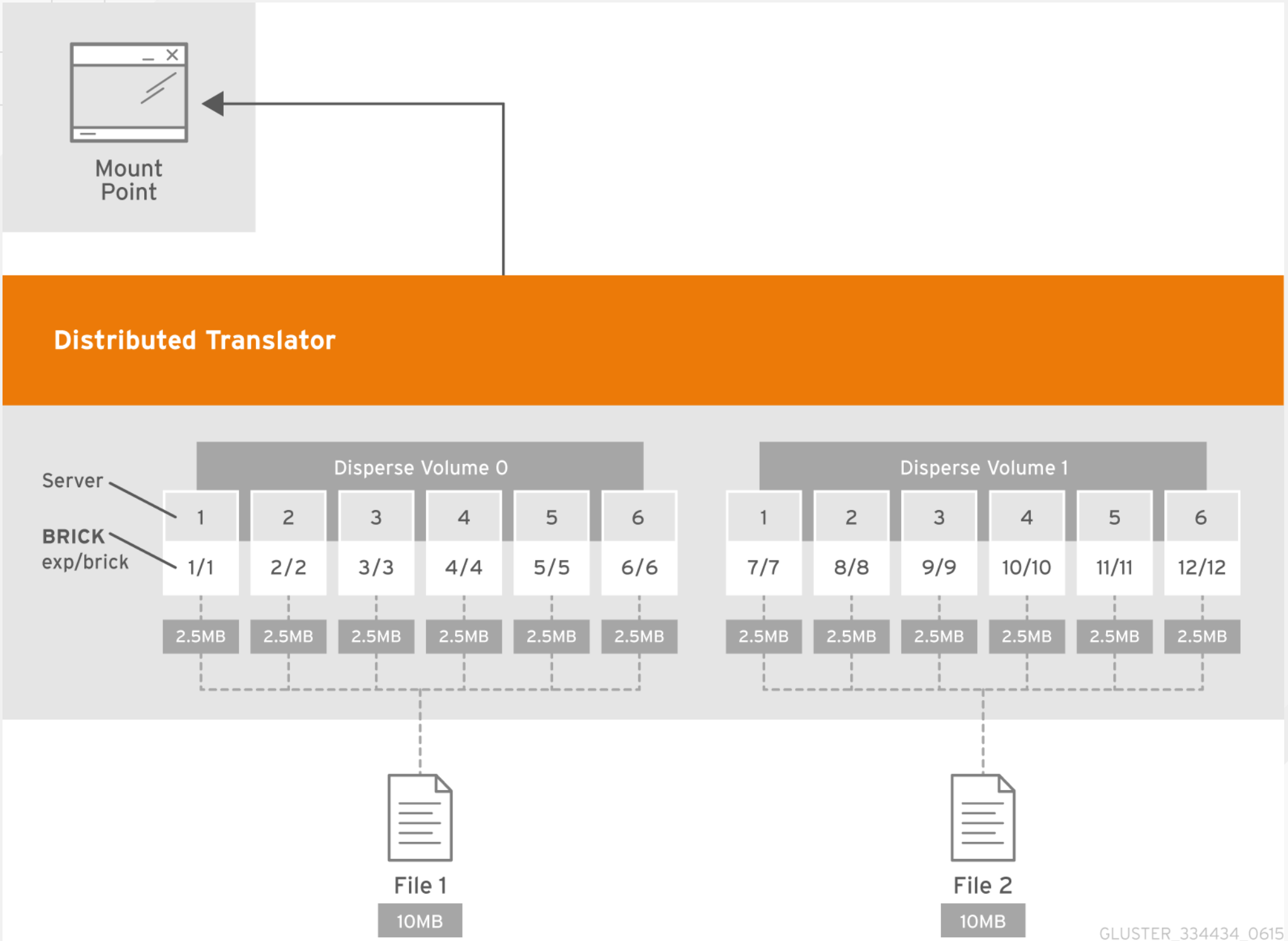
Creating Different Volume Types










Mount Point
Distributed Translator
Server
BRICK
exp/brick
Disperse Volume 0
1
2
3
4
5
6
1/1
2/2
3/3
4/4
5/5
6/6
2.5MB
Disperse Volume 1
7/7
8/8
9/9
10/10
11/11
12/12
File 1
10MB
File 2
10MB

Guided Exercise: Creating Volumes

Lab: Creating Volumes

Summary

Chapter 5: Configuring Clients

Goal:

- Access data on Red Hat Storage volumes through the use of clients.

Objective:

- Configure different clients to access Red Hat Gluster Storage volumes.

Mounting Volumes Using the Native Client

Guided Exercise: Mounting Volumes Using the Native Client

Mounting Volumes Using NFS Clients

Guided Exercise: Mounting Volumes Using NFS Clients

Mounting Volumes Using CIFS Exports

Guided Exercise: Mounting Volumes Using CIFS Exports

Setting Volume Options

Guided Exercise: Setting Volume Options

Lab: Configuring Clients

Summary

Chapter 6: Configuring ACLs and Quotas

Goal:

- Implement POSIX ACLs and quotas.

Objectives:

- Configure POSIX ACLs.
- Configure directory quotas.

Setting POSIX ACLs

Guided Exercise: Setting POSIX ACLs

Setting Quotas

Guided Exercise: Setting Quotas

Lab: Configuring ACLs and Quotas

Summary

Chapter 7: Extending Volumes

Goal:

- Grow and shrink storage volumes online.

Objectives:

- Extend storage volumes.
- Shrink storage volumes.

Growing Volumes

Guided Exercise: Growing Volumes

Shrinking Volumes

Guided Exercise: Shrinking Volumes

Lab: Extending Volumes

Summary

Chapter 8: Configuring IP Failover

Goal:

- Configure IP failover.

Objectives:

- Configure CTDB for automatic IP failover for Samba volumes.
- Configure NFS-Ganesha to export volumes using highly-available NFS.

IP Failover with CTDB

Guided Exercise: IP Failover with CTDB

Configuring NFS Ganesha

Guided Exercise: Configuring NFS Ganesha

Lab: IP Failover with CTDB

Summary

Chapter 9: Configuring Georeplication

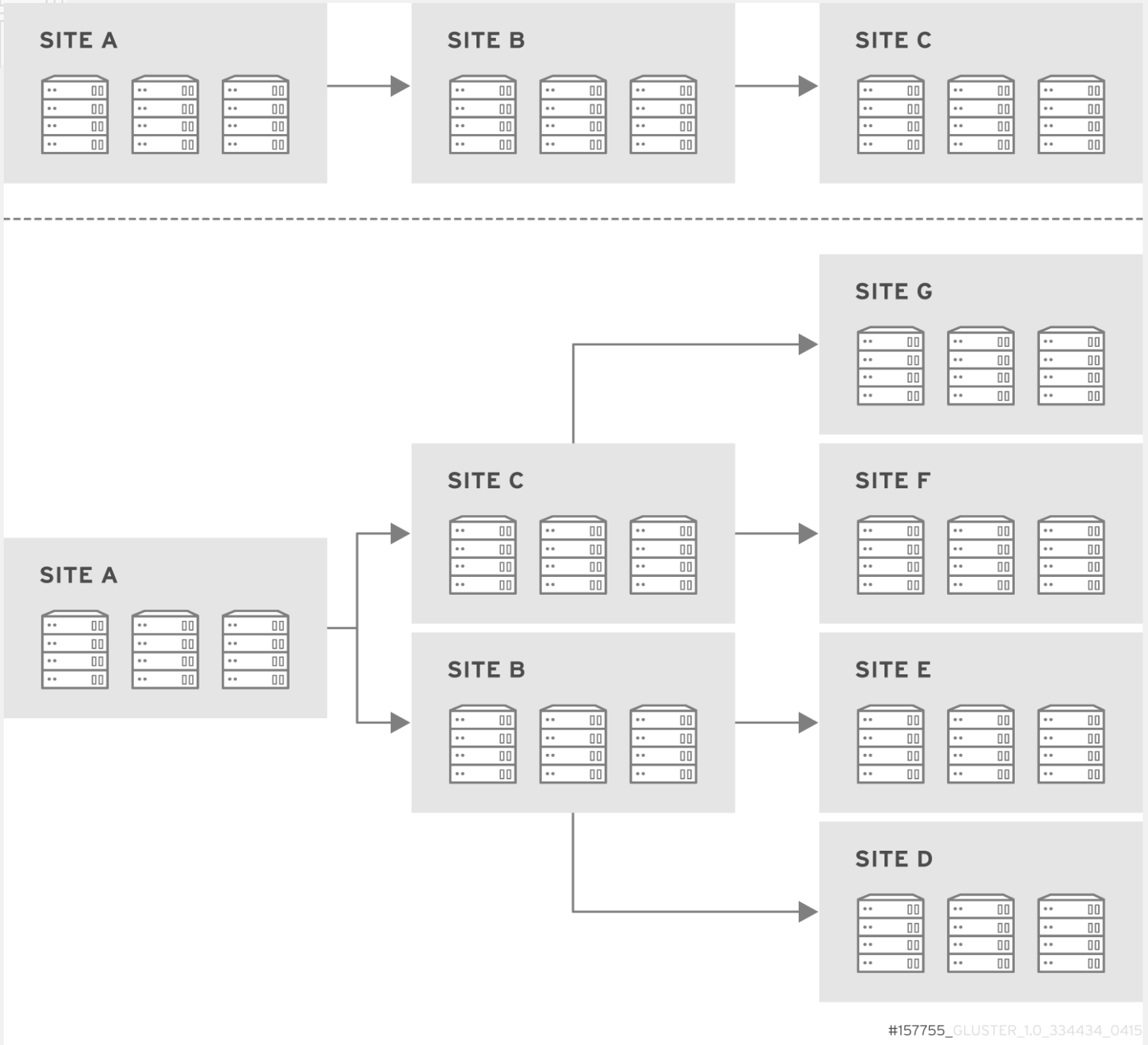
Goal:

- Configure georeplication for disaster recovery.

Objectives:

- Configure georeplication
- Manage an existing georeplication pair.

Configuring Georeplication



Guided Exercise: Configuring Geo-replication

Managing Georeplication

Guided Exercise: Managing Georeplication

Lab: Configuring Georeplication

Summary

Chapter 10: Troubleshooting

Goal:

- Perform basic troubleshooting tasks.

Objectives:

- Manage defective bricks.
- Configure BitRot detection.

Managing Defective Bricks

Guided Exercise: Managing Defective Bricks

Configuring BitRot Detection

Guided Exercise: Configuring BitRot Detection

Lab: Troubleshooting

Summary

Chapter 11: Managing Snapshots

Goal:

- Manage volume snapshots.

Objectives:

- Create and manage Red Hat Gluster Storage volume snapshots.
- Schedule Red Hat Gluster Storage volume snapshots.

Managing Snapshots

Guided Exercise: Managing Snapshots

Scheduling Snapshots

Guided Exercise: Scheduling Snapshots

Lab: Managing Snapshots

Summary

Chapter 12: Installing Red Hat Storage Console

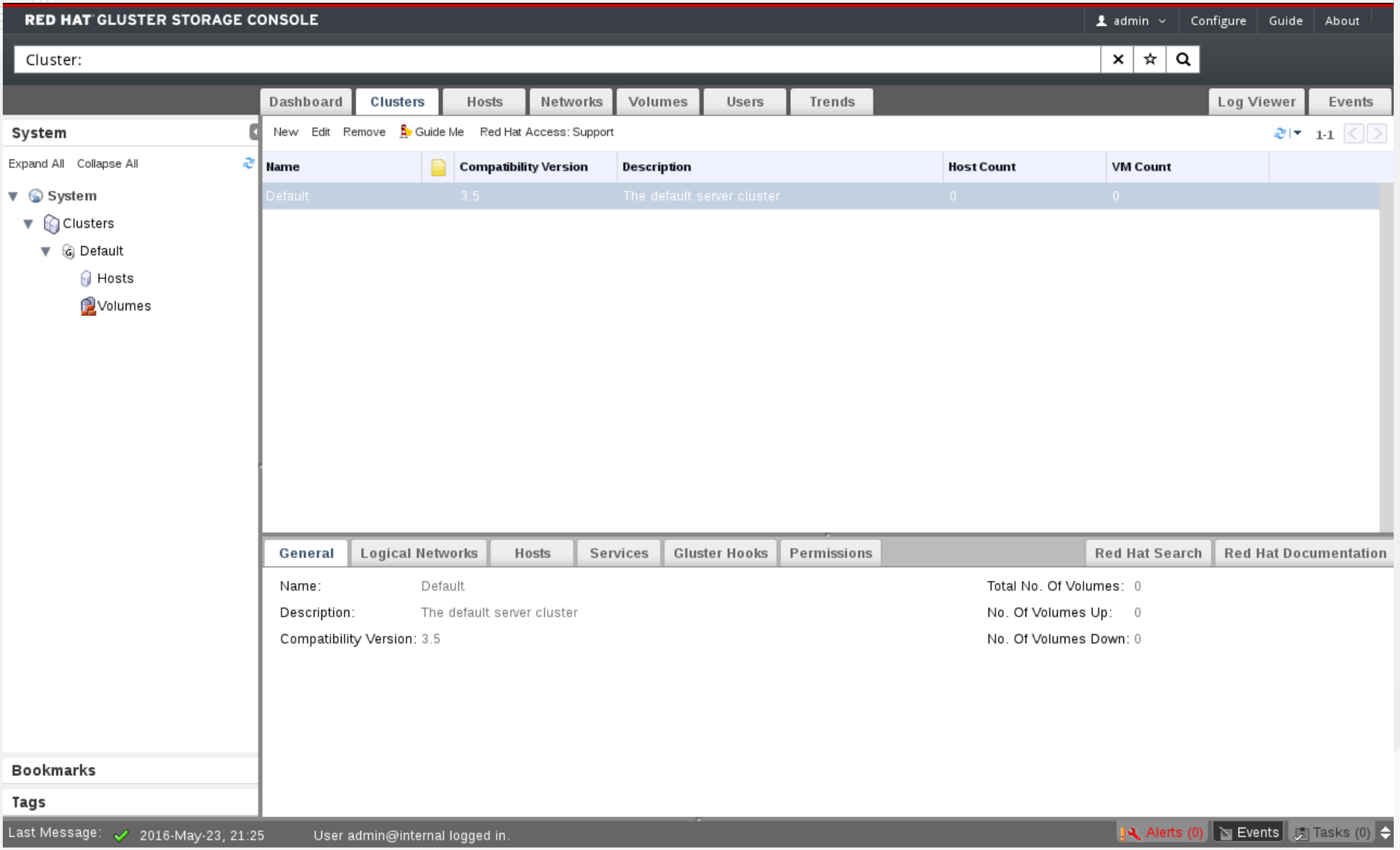
Goal:

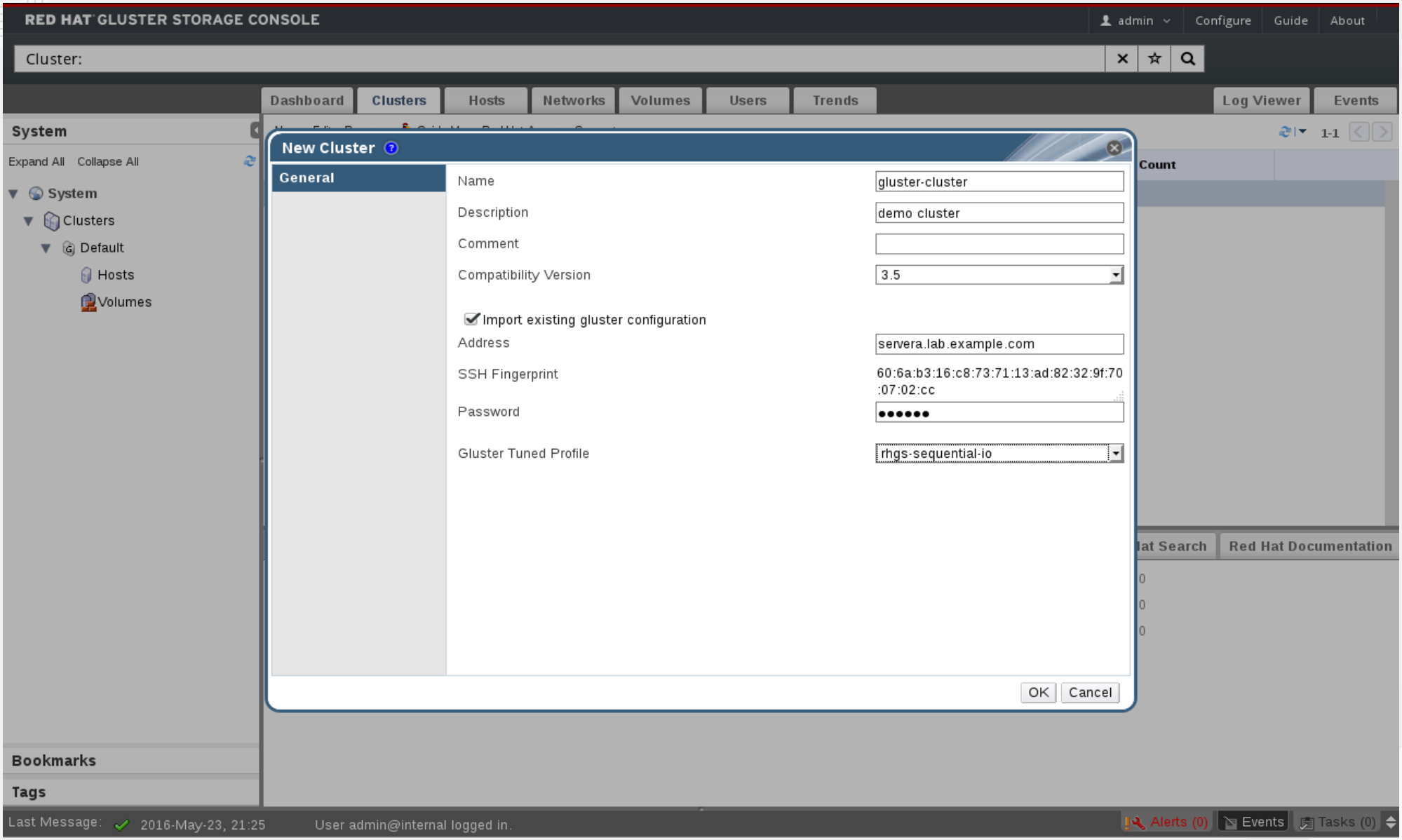
- Install Red Hat Storage Console.

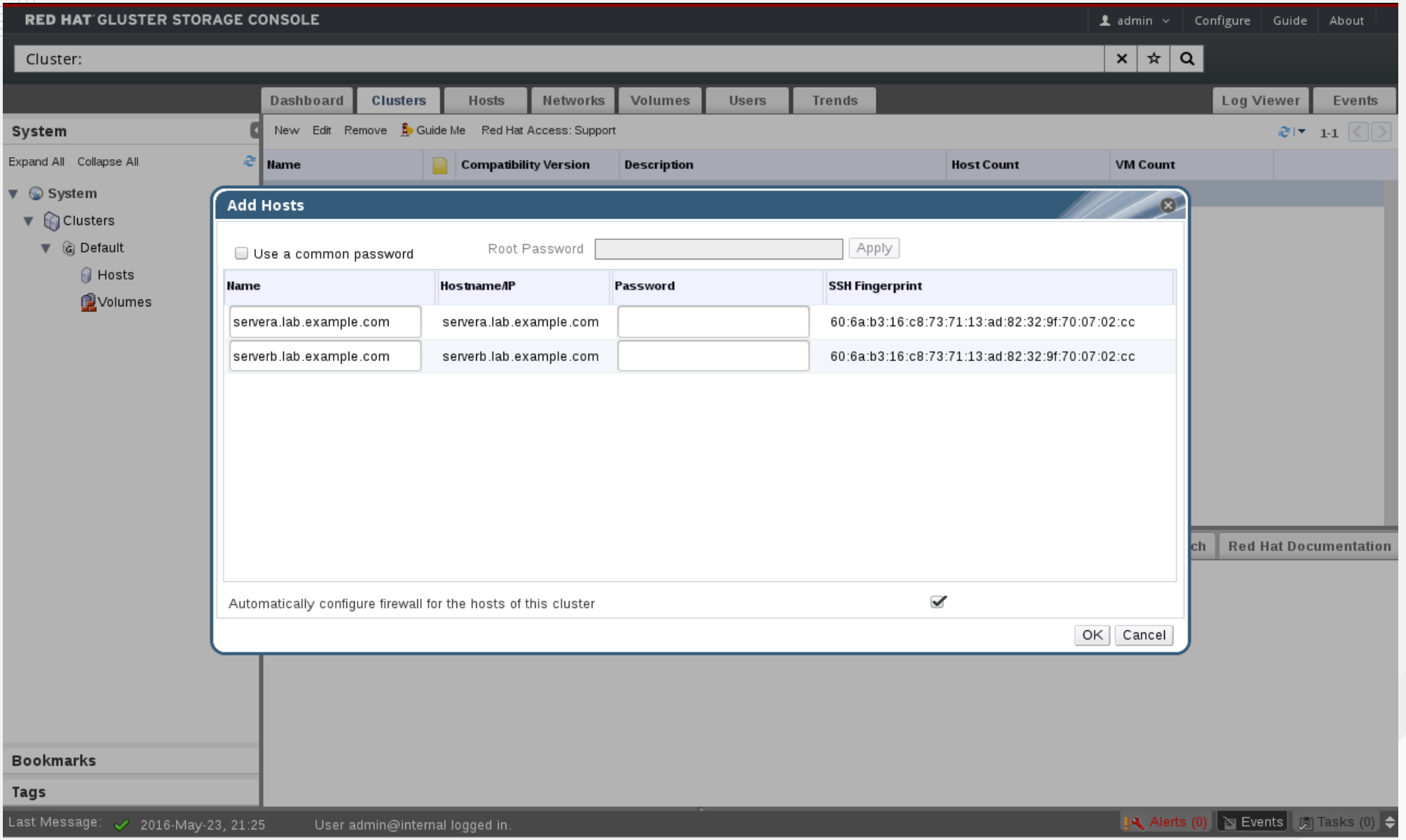
Objectives:

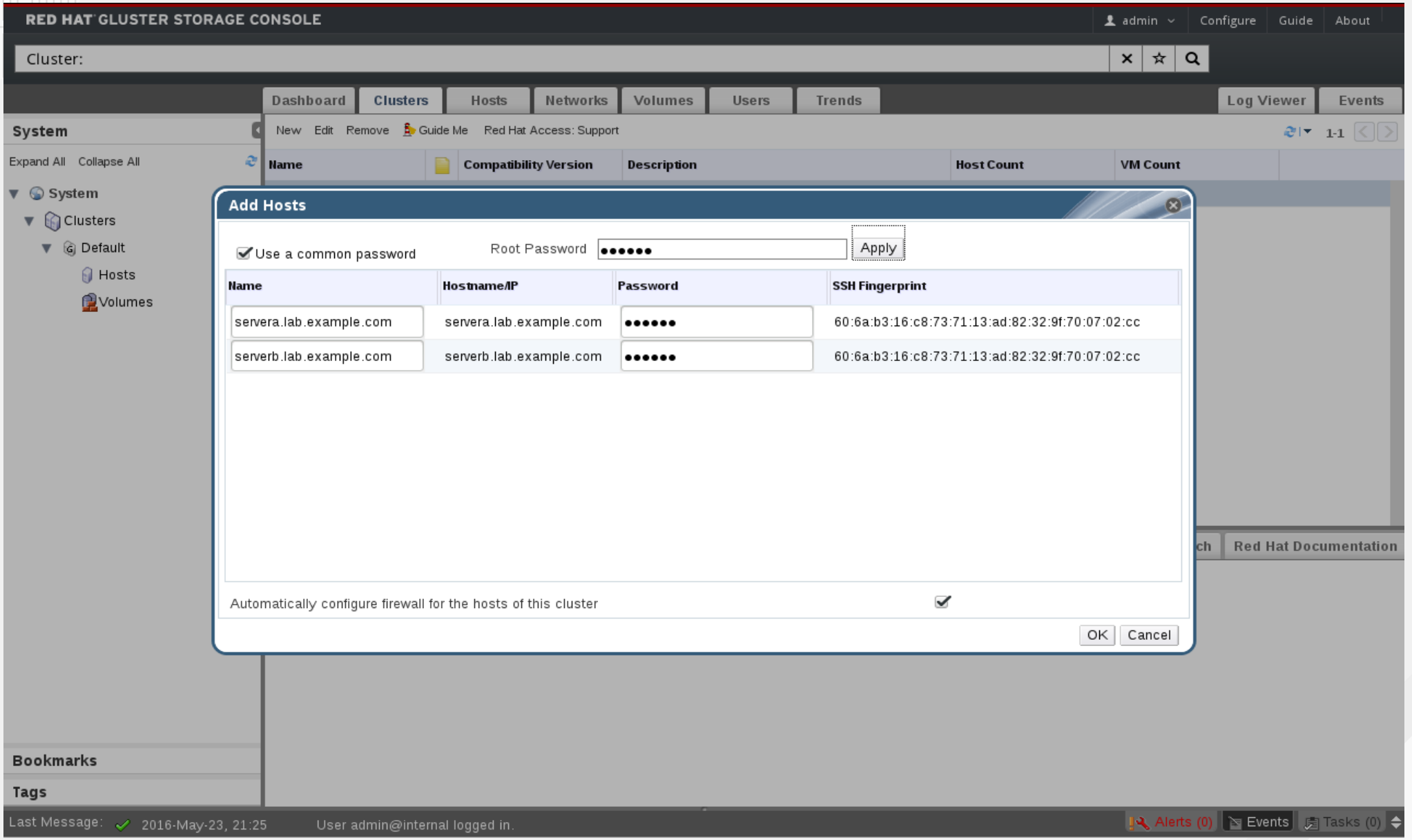
- Install and configure Red Hat Gluster Storage Console.
- Configure Red Hat Gluster Storage to be managed by Red Hat Gluster Storage Console.

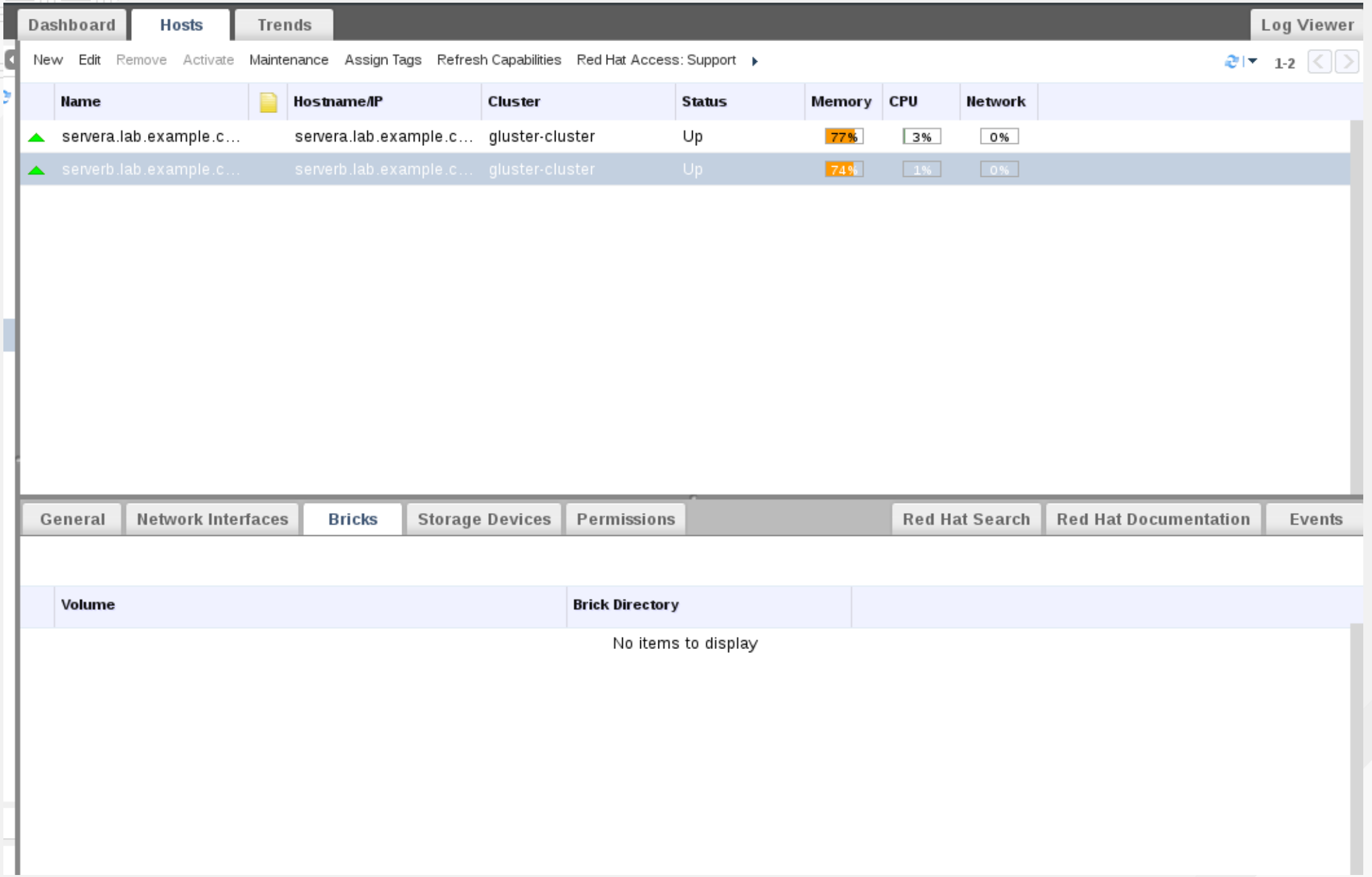
Installing Red Hat Gluster Storage Console











Quiz: Installing Red Hat Storage Console

Lab: Installing Red Hat Gluster Console

Summary

Chapter 13: Managing Tiering

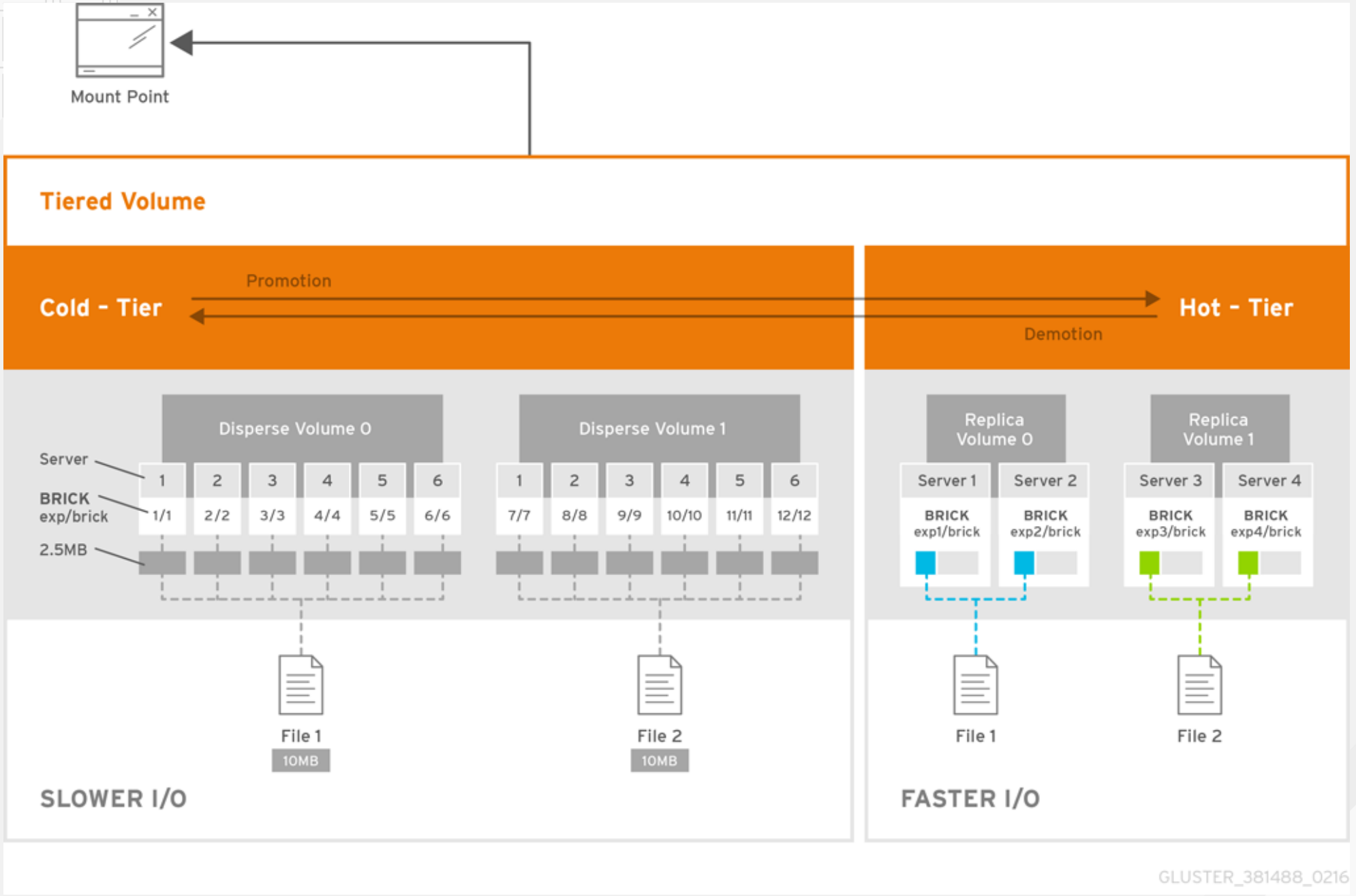
Goal:

- Manage tiering configuration on a volume.

Objectives:

- Describe tiering architecture and terminology.
- Configure tiering on a volume.
- Extend and shrink tiered volumes.

Tiering Concepts and Terminology



Quiz: Tiering Concepts and Terminology

Managing Tiering

Guided Exercise: Managing Tiering

Extending Tiered Volumes

Guided Exercise: Extending Tiered Volumes

Lab: Managing Tiering

Summary

Chapter 14: Monitoring Red Hat Gluster Storage

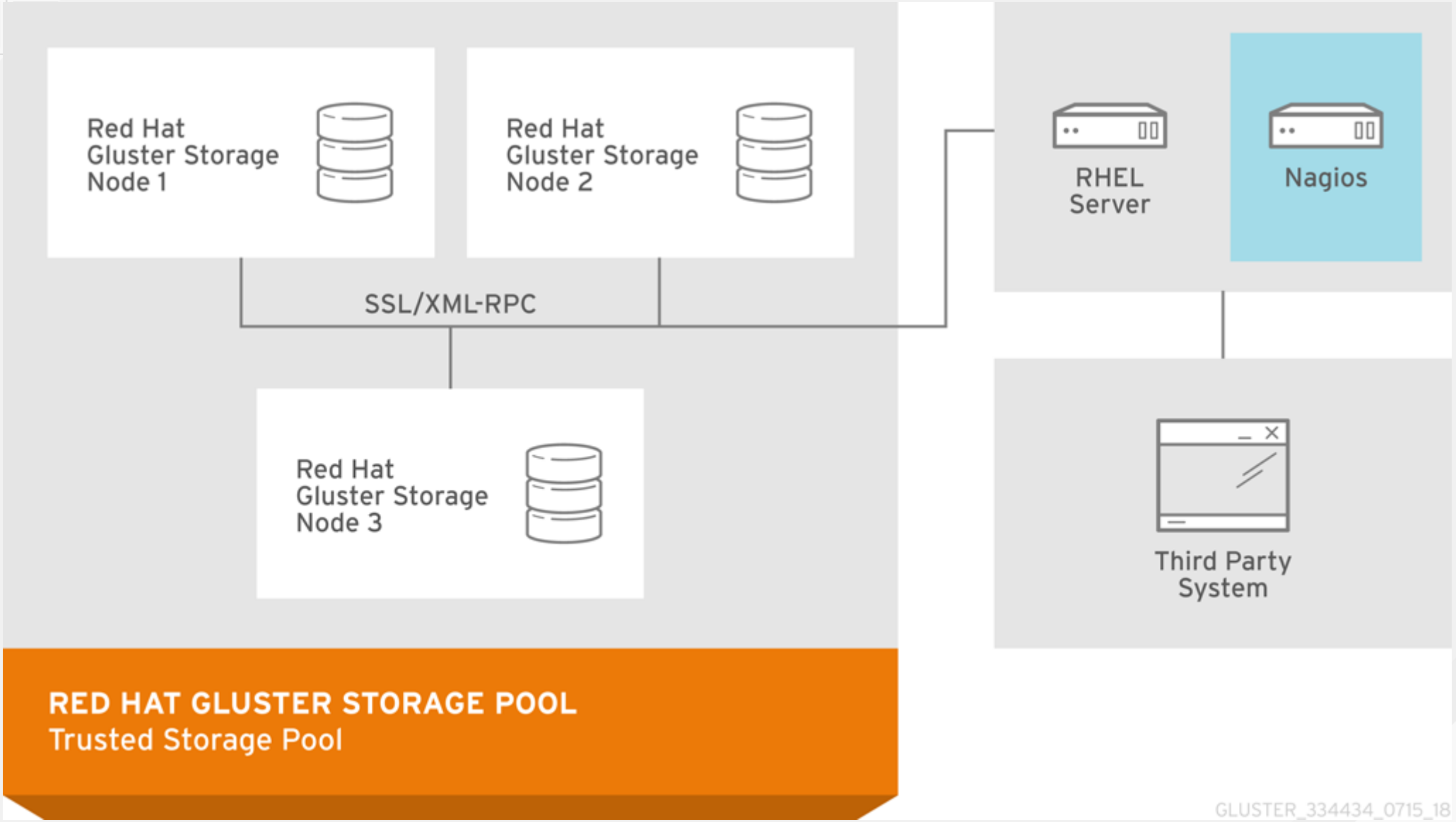
Goal:

- Overview of monitoring tools for Red Hat Gluster Storage.

Objectives:

- Monitor RHGS nodes and trusted storage pool.
- Profile the volumes and trusted storage pool workloads.

Monitoring Red Hat Gluster Storage with Nagios



Guided Exercise: Monitoring Red Hat Gluster Storage with Nagios

Monitoring Red Hat Gluster Storage Workload

Guided Exercise: Monitoring Red Hat Gluster Storage Workload

Lab: Monitoring Red Hat Gluster Storage

Summary

Chapter 15 - Configuring Network Encryption

Chapter 15: Configuring Network Encryption

Goal:

- Configure network encryption for Red Hat Gluster Storage.

Objectives:

- Enable management encryption.
- Enable I/O encryption for a volume.
- Configure encryption for a new node.
- Authorize a new client.

Enabling Management and I/O Encryption

Guided Exercise:Enabling I/O encryption for a volume

Adding a Server to the Storage Pool Using Encryption

Guided Exercise: Adding a New Node

Authorizing a New Client

Guided Exercise: Authorizing a New Client

Lab: Configure Network Encryption

Summary

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THANK YOU!