Comprehensive, hands-on training that solves real-world problems

Red Hat Enterprise Virtualization

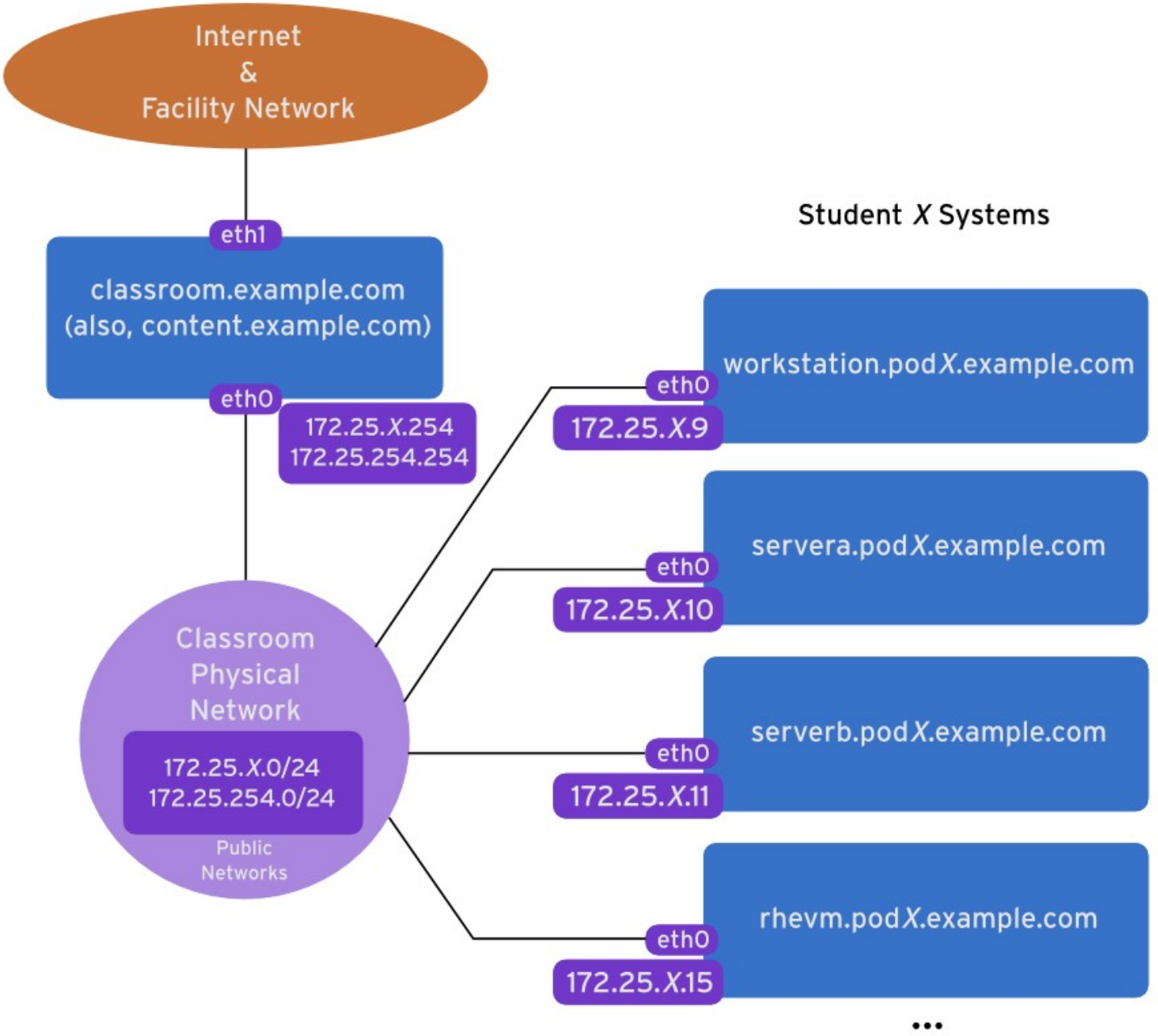
DAY ONE	DAY TWO	DAY THREE	DAY FOUR
RHEV Overview	Creating RHEV Data Centers and Clusters	Managing VM Snapshots and Images	Advanced RHEV Topics (part 2)
Installing RHEV Manager	Creating RHEV Storage	Automating VM Deployment	Installing and Configuring RHEL Hosts
Installing RHEV Hypervisor Hosts	Creating RHEV Logical Networks	Monitoring and Reporting RHEV	Migrating VMs and Configuring High Availability
	Deploying RHEV Virtual Machines	Advanced RHEV Topics (part 1)	Comprehensive Review

Course Objectives and Structure

redhat.

Orientation to Classroom Network

redhat.



Internationalization

redhat.

DAY ONE

Overview

Installing RHEV Manager

Installing RHEV Hypervisor Hosts

Chapter 1: Red Hat Enterprise Virtualization Overview

- Virtualization in Linux
- RHEV Architecture

redhat.

Goal:

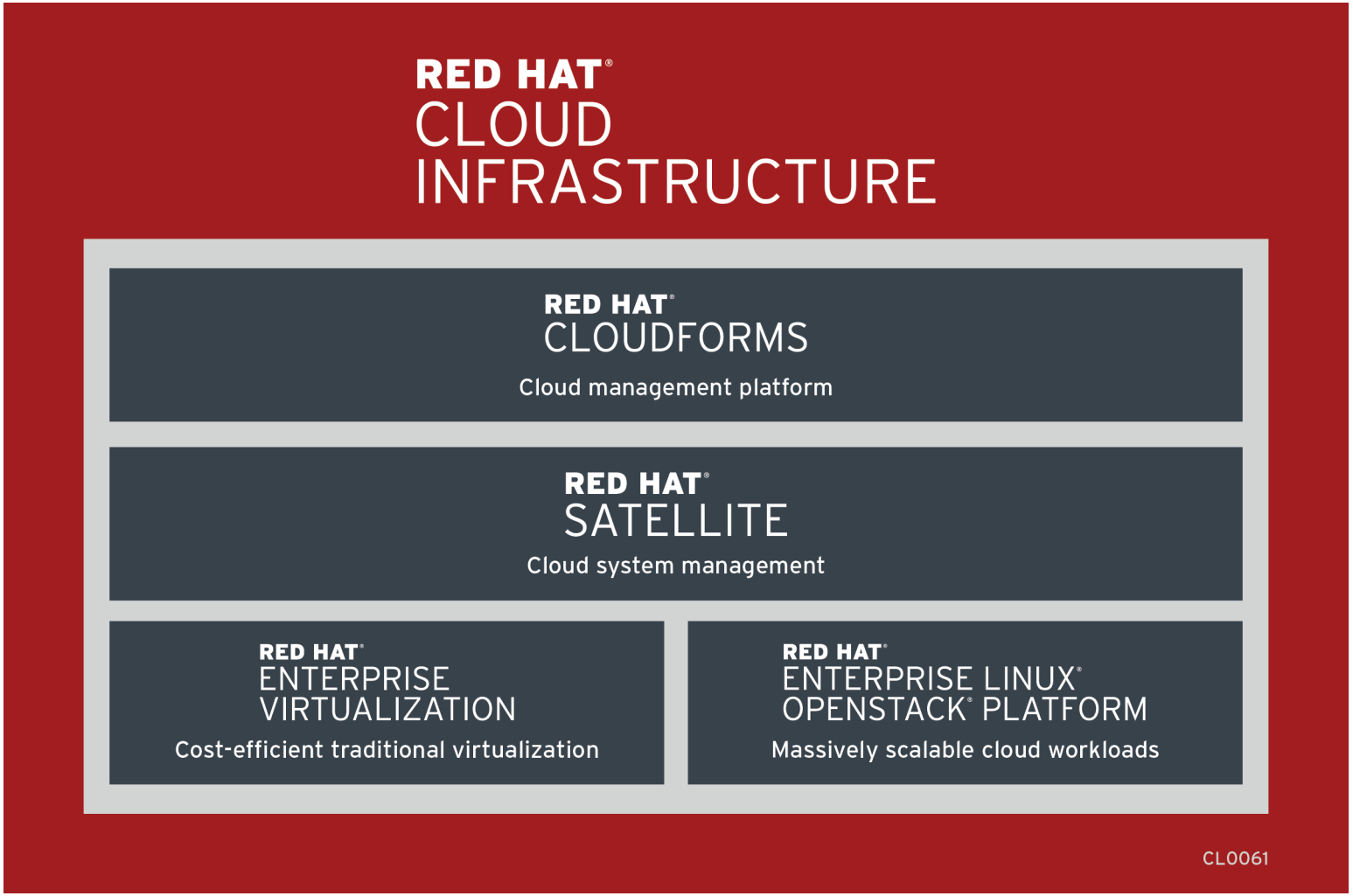
Describe virtualization in Linux and the architecture of the Red Hat Enterprise Virtualization platform.

Objectives:

- Define and discuss general virtualization, Kernel-based Virtual Machine (KVM), and Red Hat virtualization product concepts.
- Describe the Red Hat Enterprise Virtualization platform.

Virtualization in Linux

redhat.



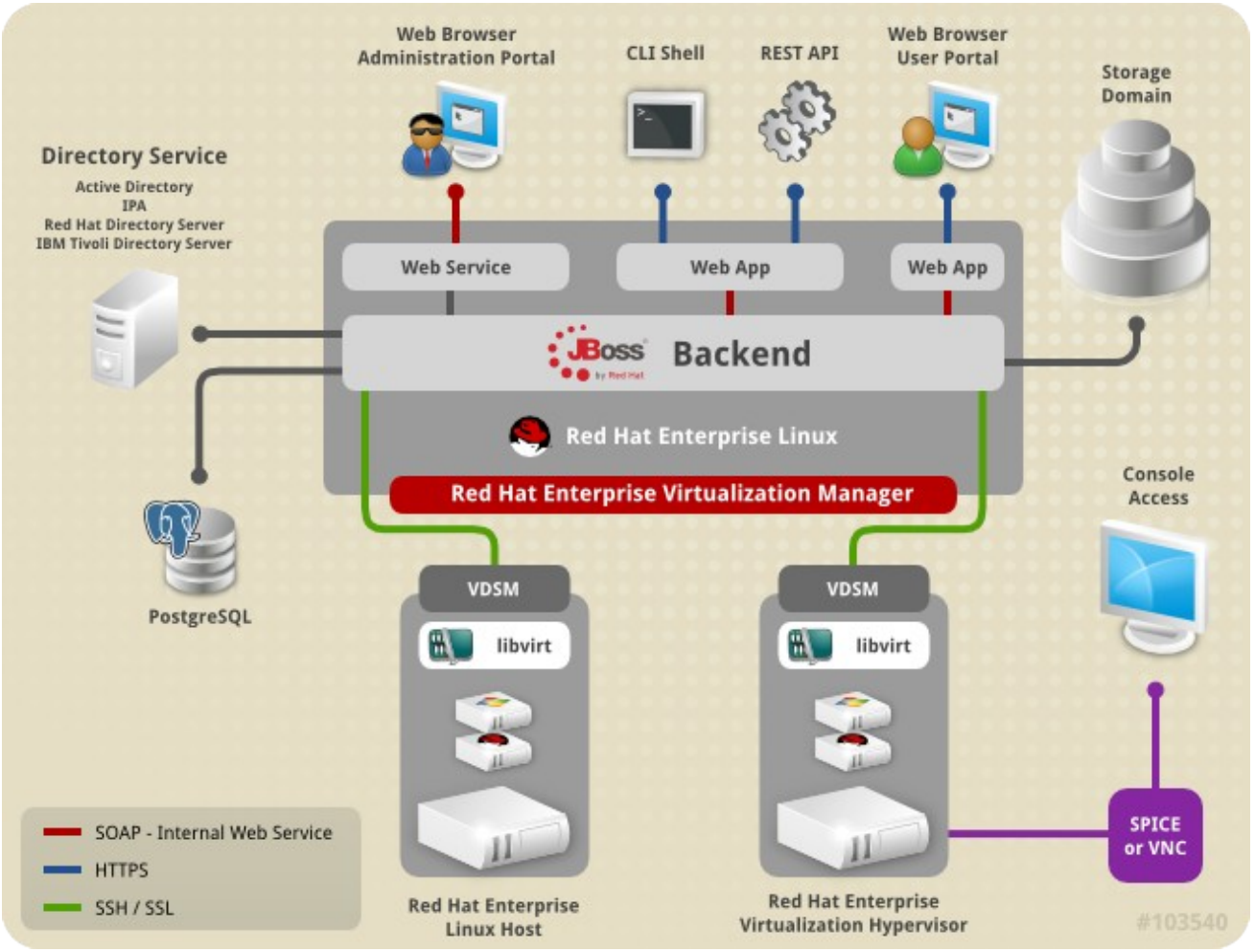
redhat.

Quiz: Virtualization in Linux

redhat.

RHEV Architecture

redhat.



Quiz: RHEV Architecture

redhat.

Lab: Preparing the Classroom Environment

redhat.

Summary

DAY ONE

Overview

Installing RHEV Manager

Installing RHEV Hypervisor Hosts

Chapter 2: Installing, Configuring, and Testing RHEV Manager

- Installing and Testing RHEV Manager
- Managing Users, Roles, and Permissions
- Troubleshooting RHEV Manager

redhat.

Goal:

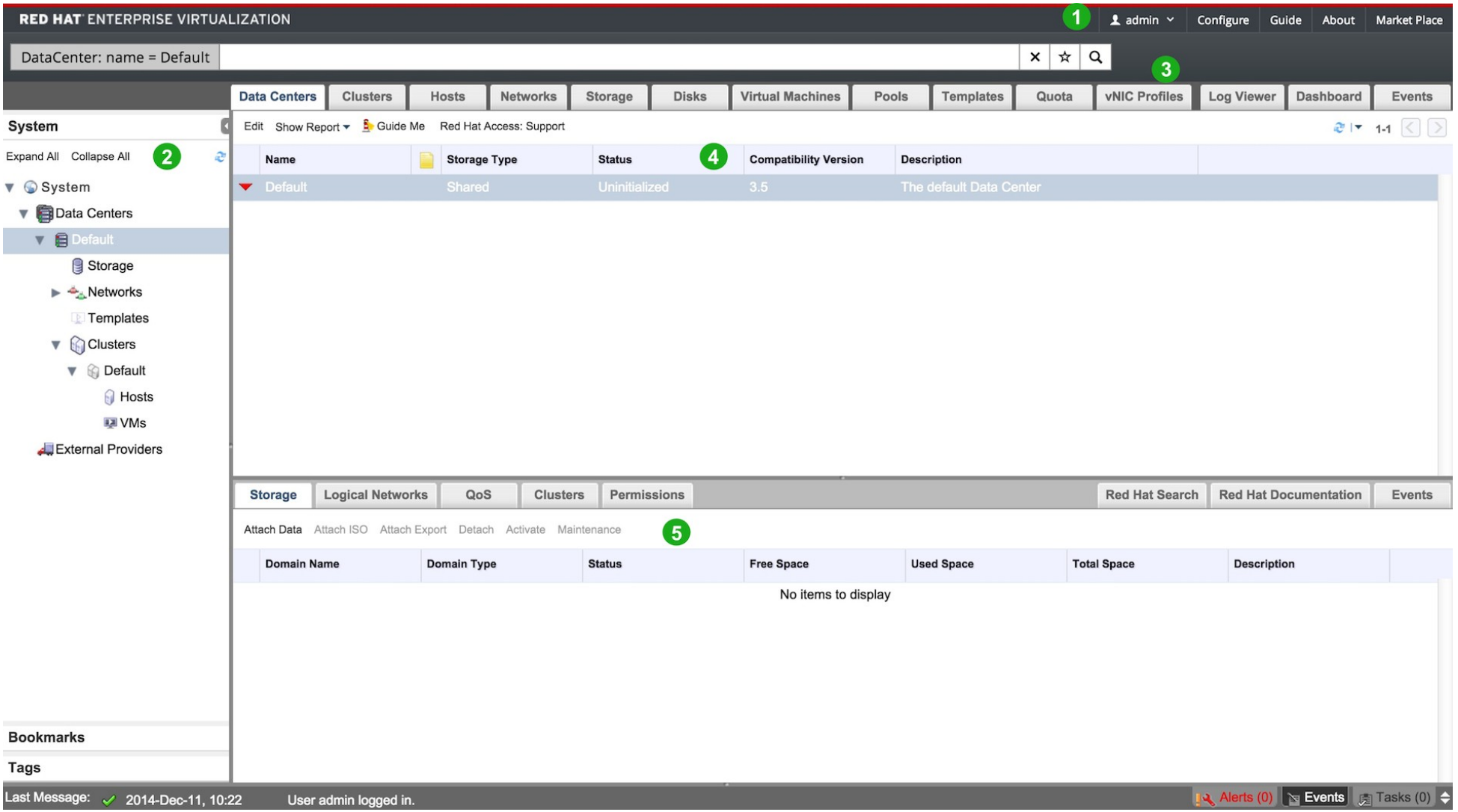
Install, configure, secure, and troubleshoot RHEV Manager.

Objectives:

- Install and initially configure RHEV Manager, then test and confirm operation.
- Secure RHEV Manager with users, roles, and permissions.
- Troubleshoot RHEV Manager installation and runtime issues.

Installing and Testing RHEV Manager

redhat.

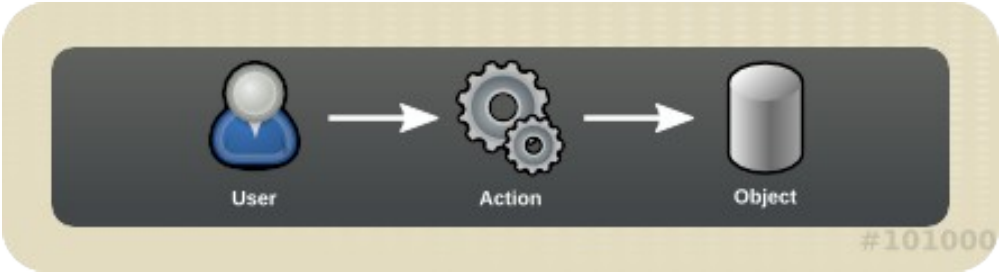


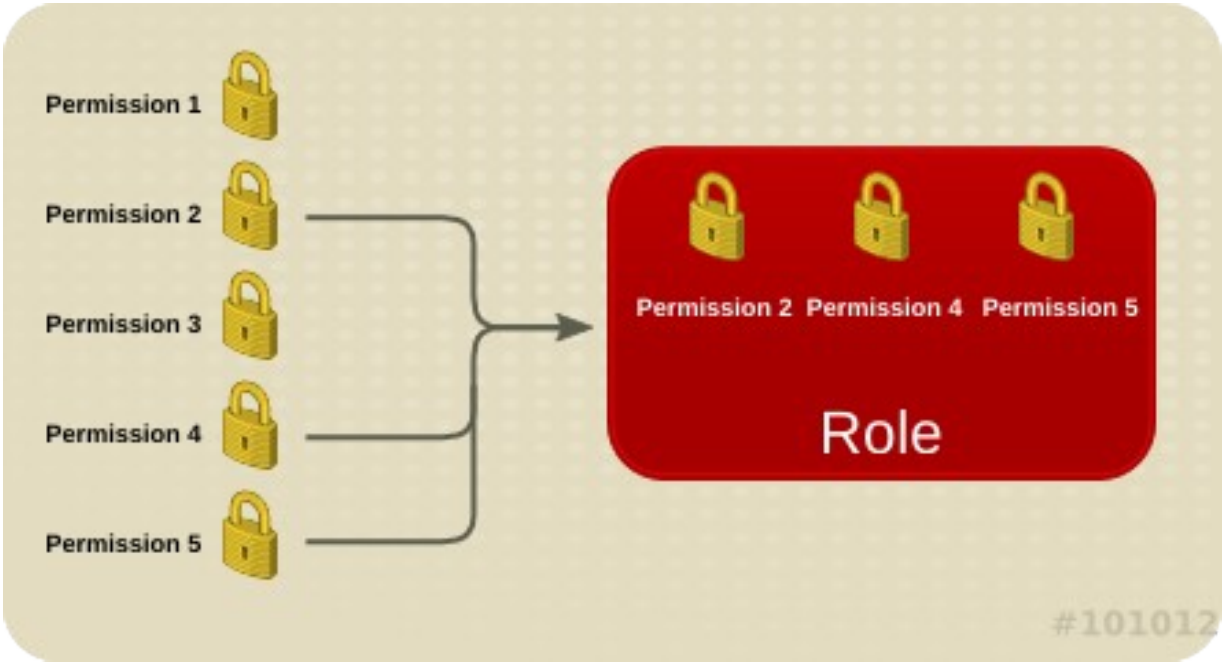
Practice: Installing and Configuring RHEV Manager

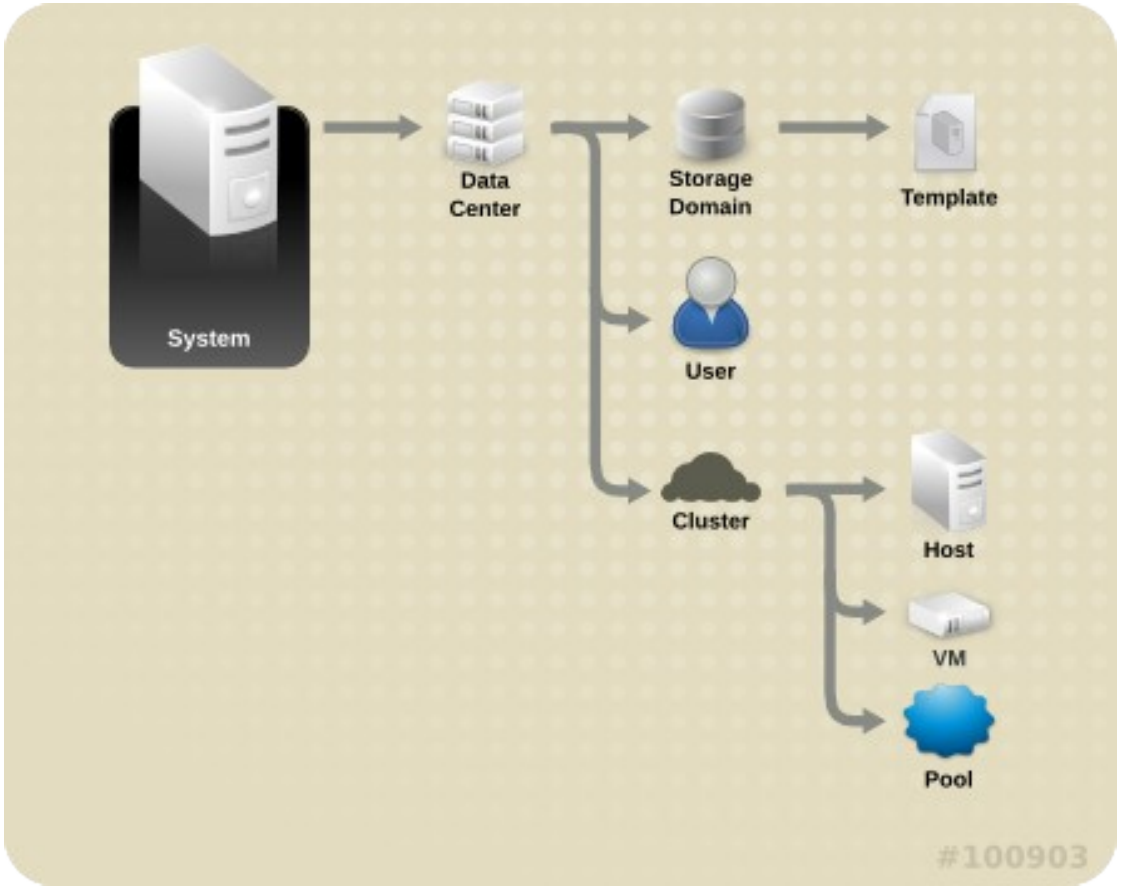
redhat.

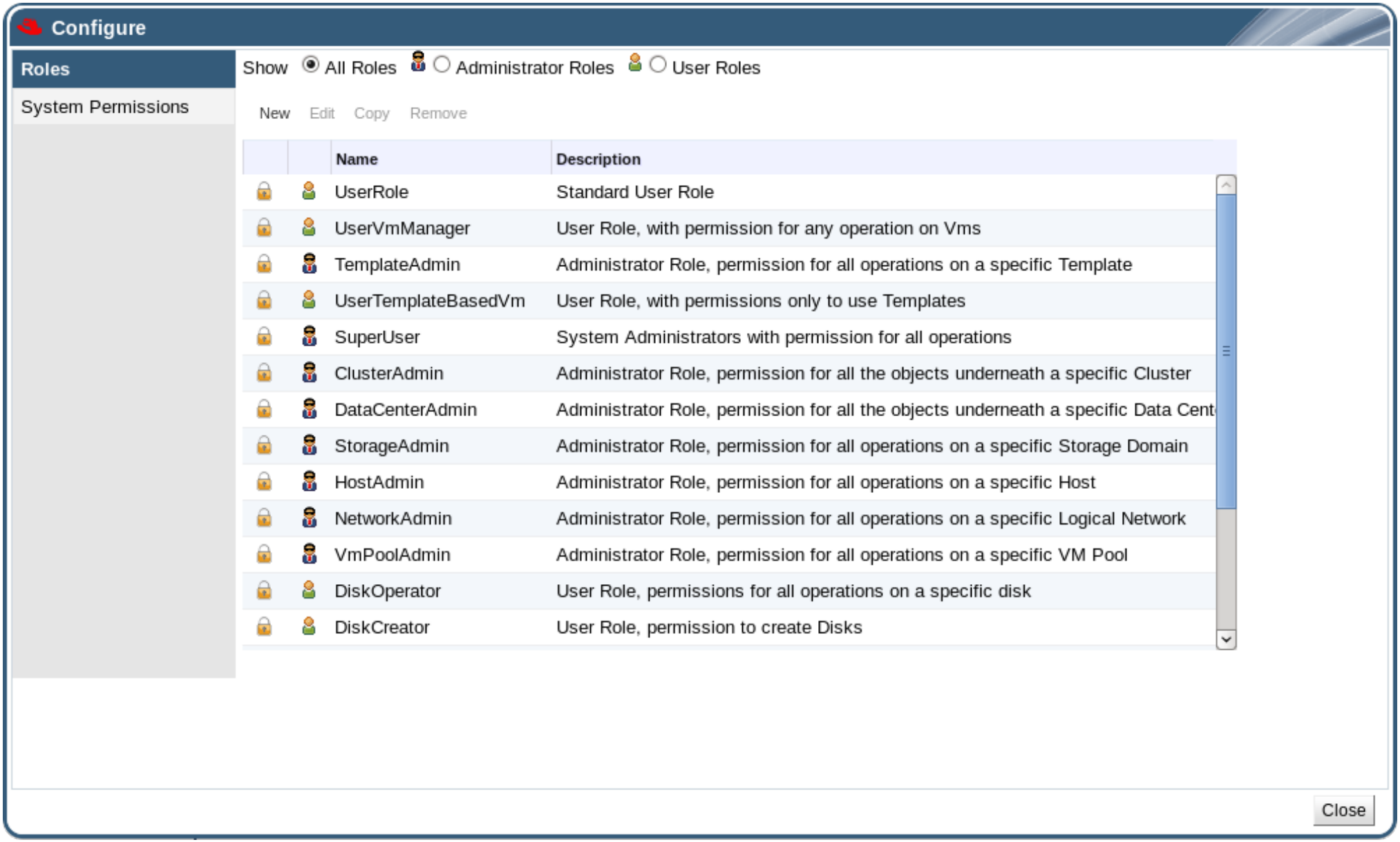
Managing Users, Roles, and Permissions

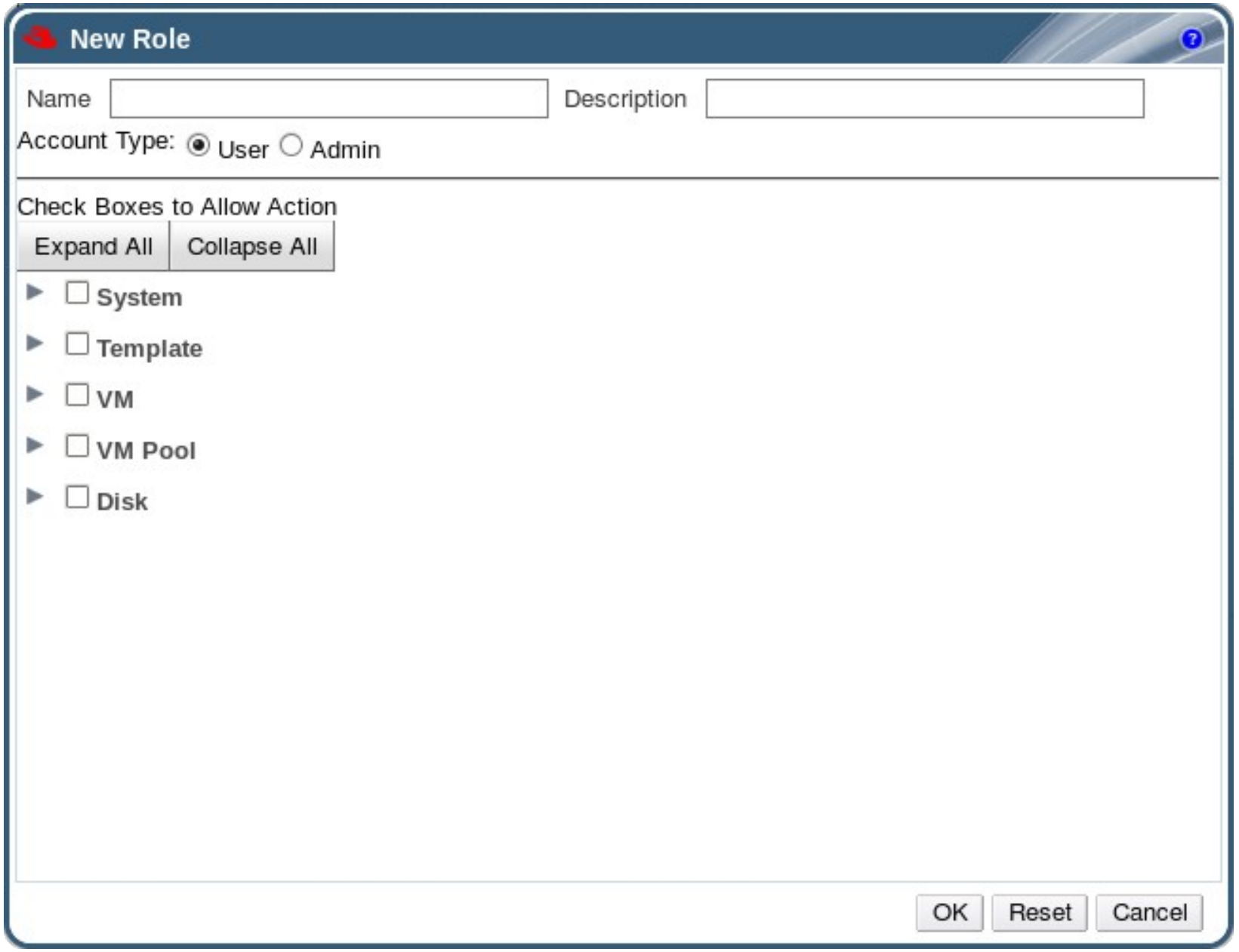
redhat.

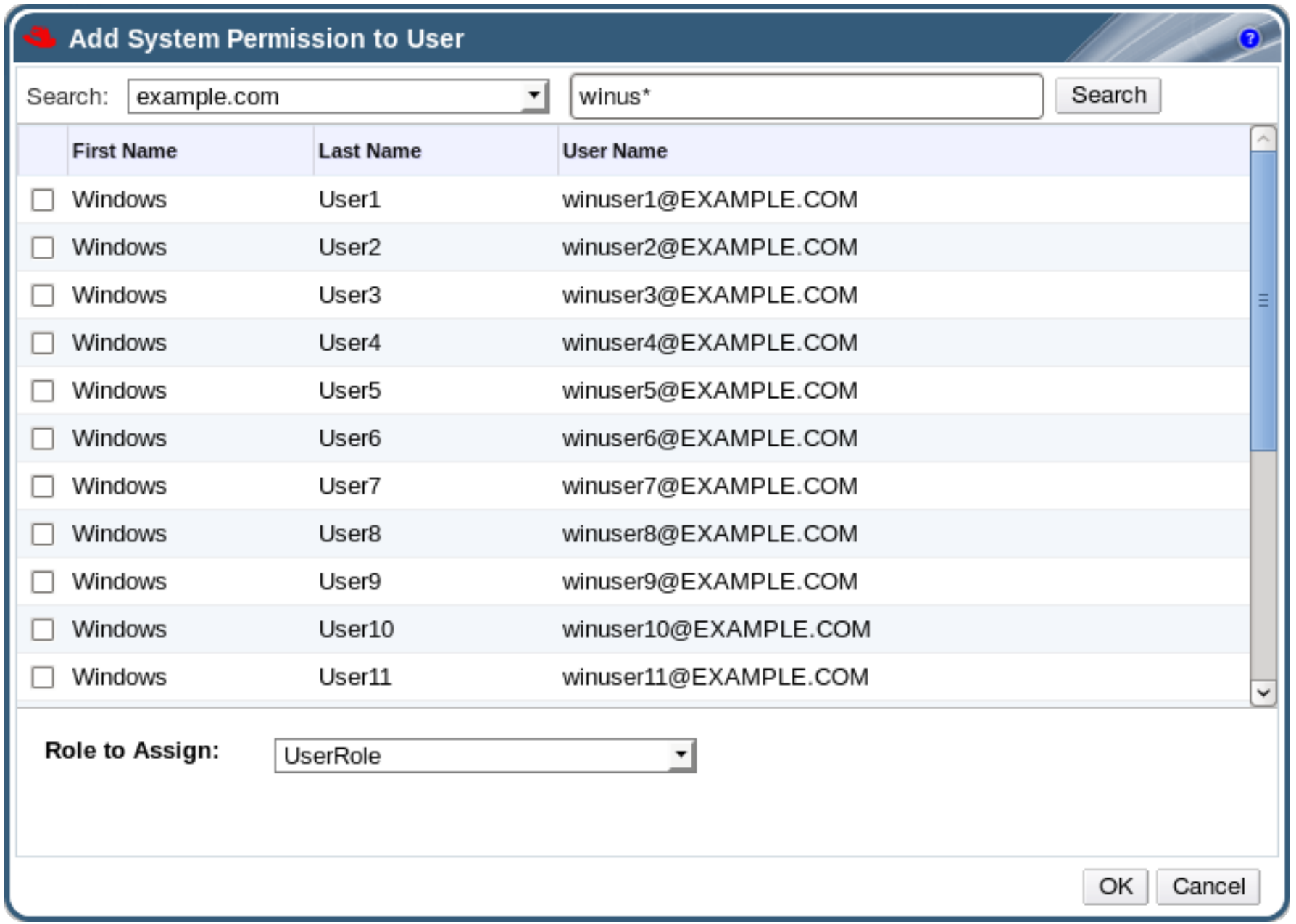


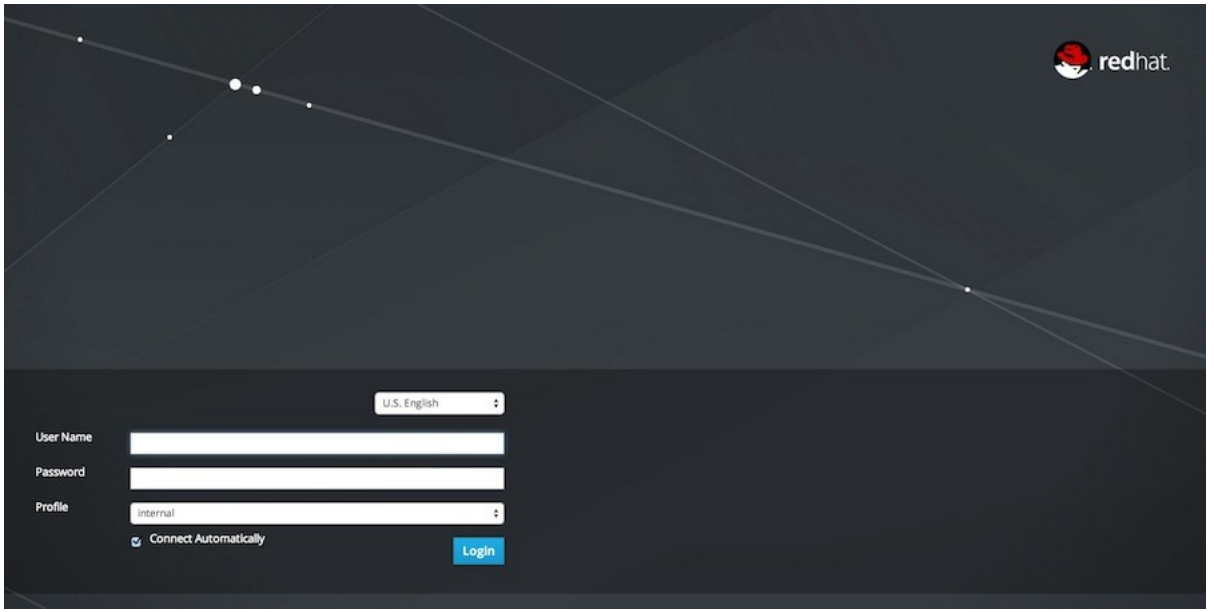












Practice: Managing Users, Roles, and Permissions

redhat.

Troubleshooting RHEV Manager

redhat.

Practice: Updating RHEV Configuration Values with RHEV Configuration Tool

redhat.

Lab: Installing, Configuring, and Testing RHEV Manager

redhat.

Summary

DAY ONE

Overview

Installing RHEV Manager

Installing RHEV Hypervisor Hosts

Chapter 3: Installing and Configuring RHEV Hypervisor Hosts

- Installing RHEV Hypervisor
- Automating RHEV Hypervisor Installation
- Upgrading RHEV Hypervisor
- Troubleshooting RHEV Hypervisor

redhat.

Goal:

Install, configure, upgrade, and troubleshoot RHEV Hypervisor Hosts.

Objectives:

- Install, configure, and approve RHEV Hypervisor.
- Automate RHEV Hypervisor installation and configuration.
- Upgrade RHEV Hypervisor software from a RHEV Manager Server.
- Troubleshoot RHEV Hypervisor installation and runtime problems.

Installing RHEV Hypervisor

redhat.

Practice: Installing RHEV Hypervisor

redhat.

Automating RHEV Hypervisor Installation

redhat.

Quiz: Automating RHEV Hypervisor Installation

redhat.

Upgrading RHEV Hypervisor

redhat.

Practice: Upgrading RHEV Hypervisor

redhat.

Troubleshooting RHEV Hypervisor

redhat.

Practice: Troubleshooting RHEV Hypervisor

redhat.

Lab: Installing and Configuring RHEL Hypervisor Hosts

redhat.

Summary

DAY TWO

Creating RHEV Data Centers and Clusters

Creating RHEV Storage

Creating RHEV Logical Networks

Deploying RHEV Virtual Machines

Chapter 4: Creating RHEV Data Centers and Clusters

- RHEV Resources
- Creating Data Centers
- Creating Clusters

redhat.

Goal:

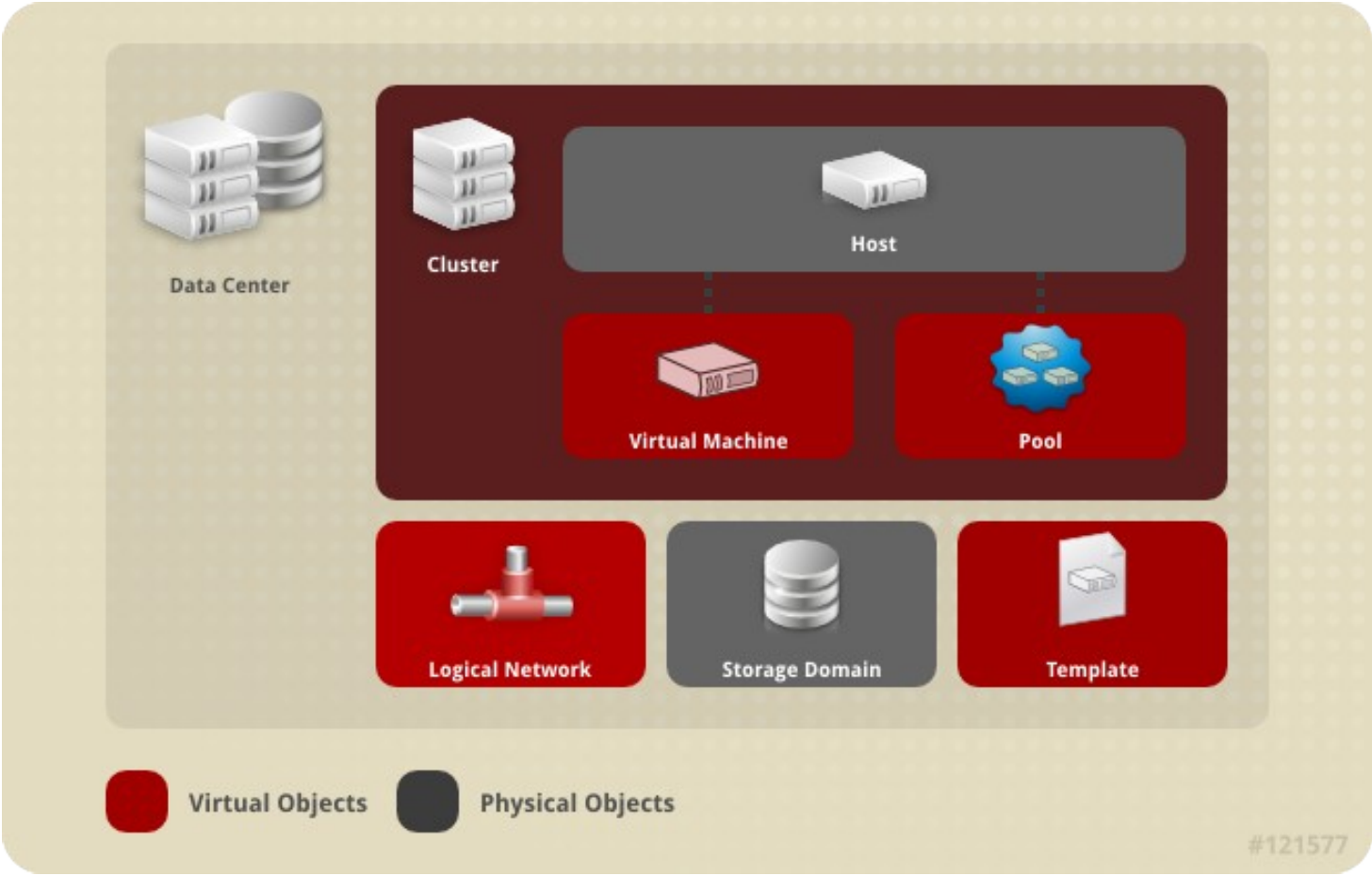
Create RHEV Data Centers and Clusters in the RHEV Manager interface.

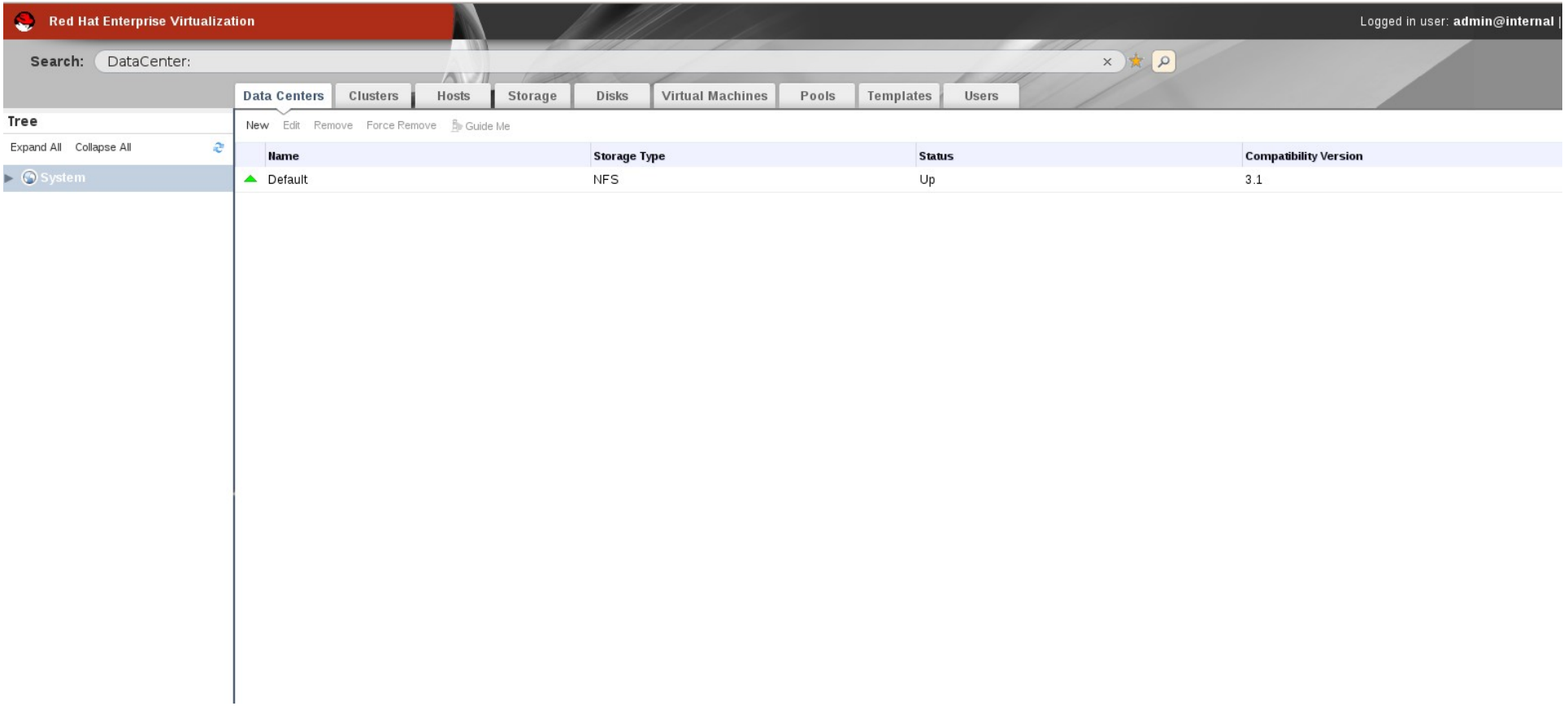
Objectives:

- Describe essential resources in RHEV.
- Create RHEV Data Center.
- Create RHEV Cluster.

RHEV Resources

redhat.



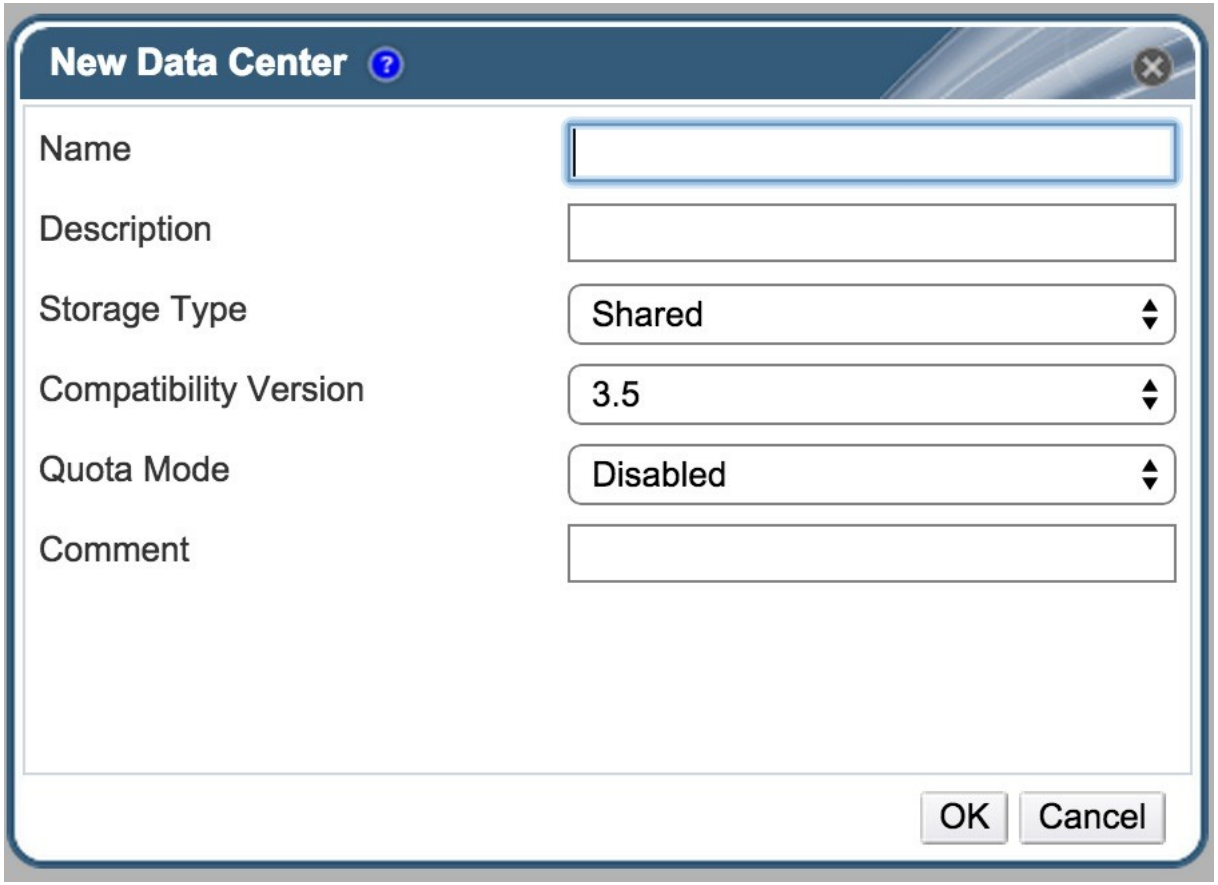


Quiz: RHEV Resources

redhat.

Creating Datacenters

redhat.

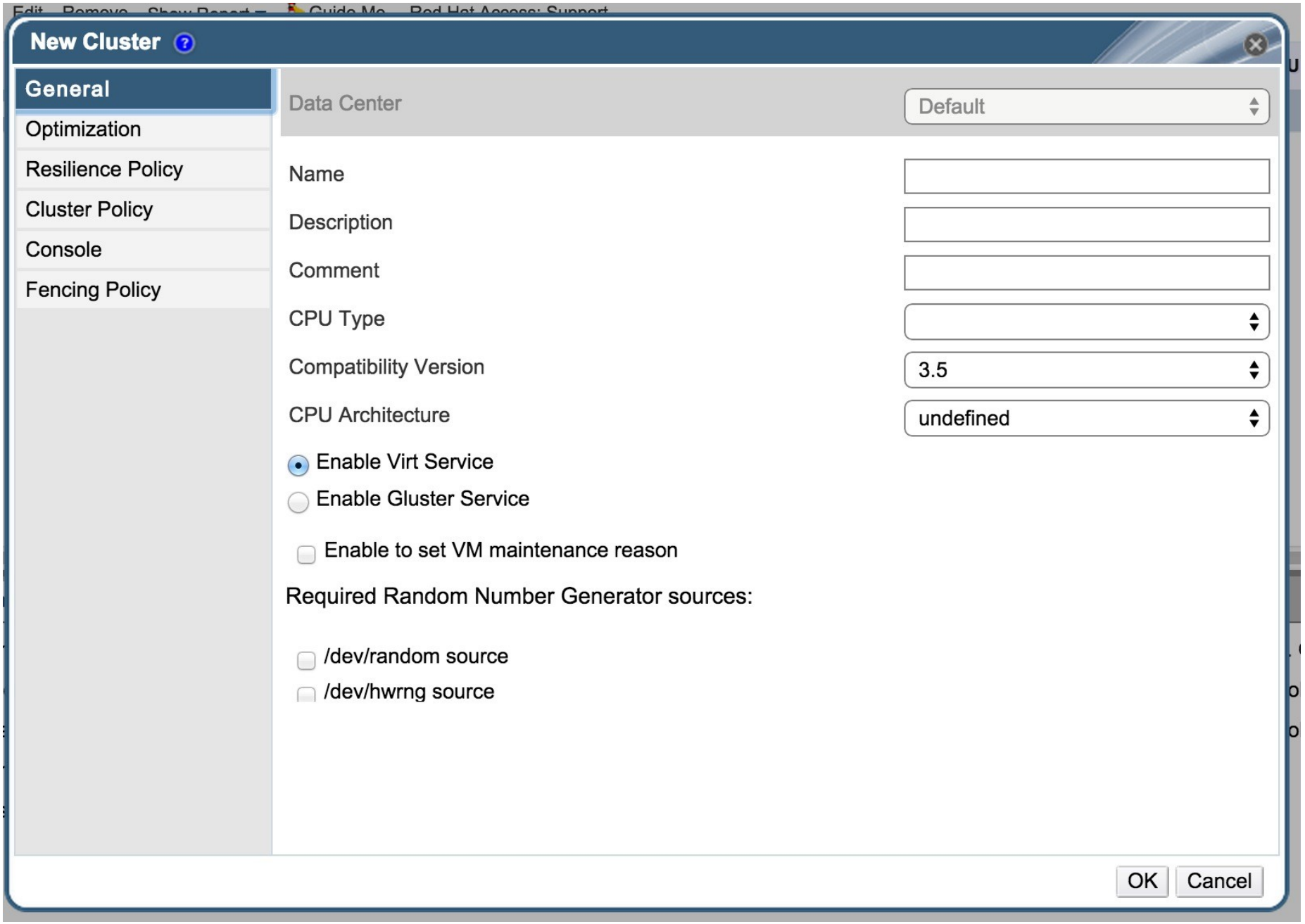


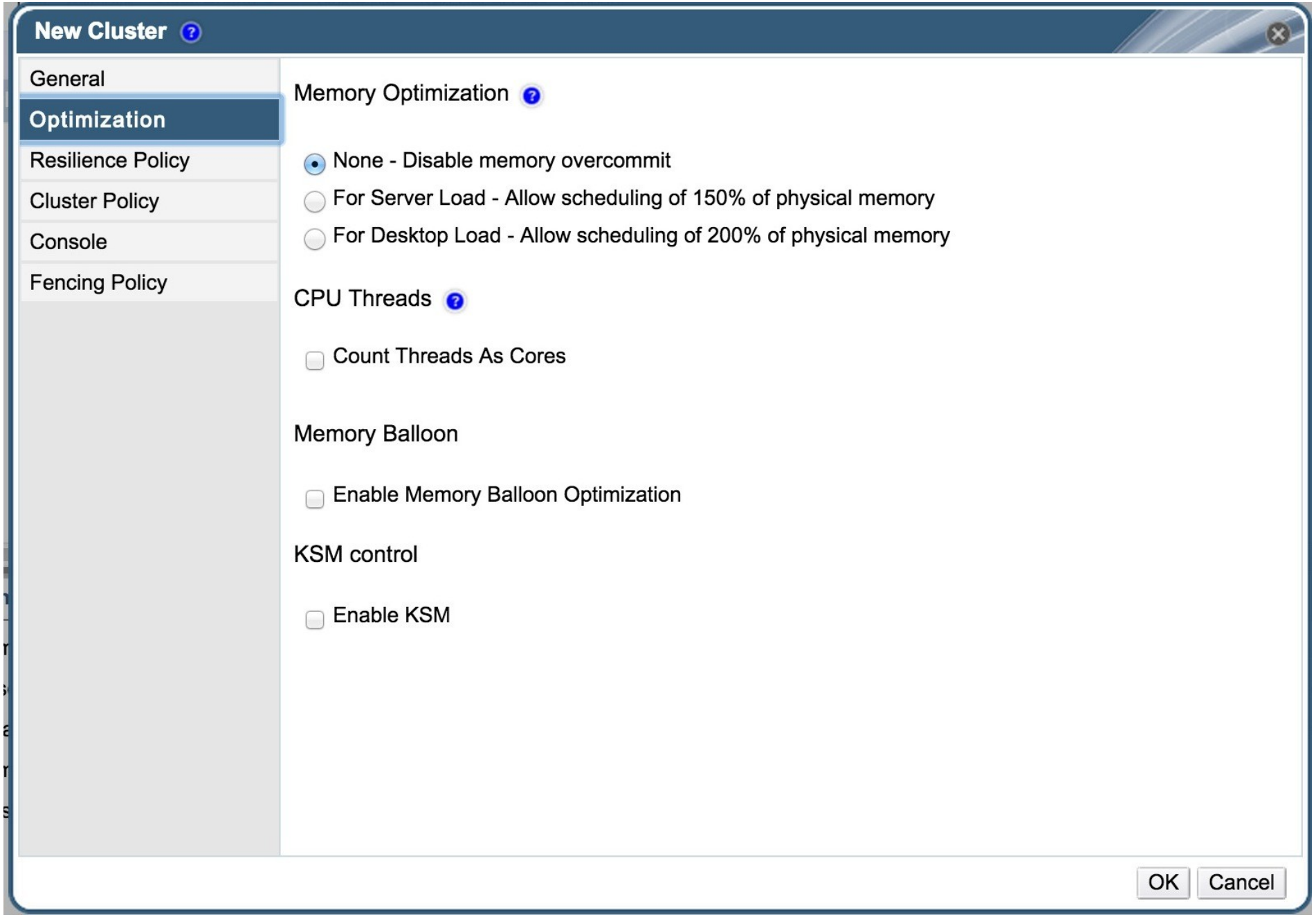
Practice: Creating Datacenters

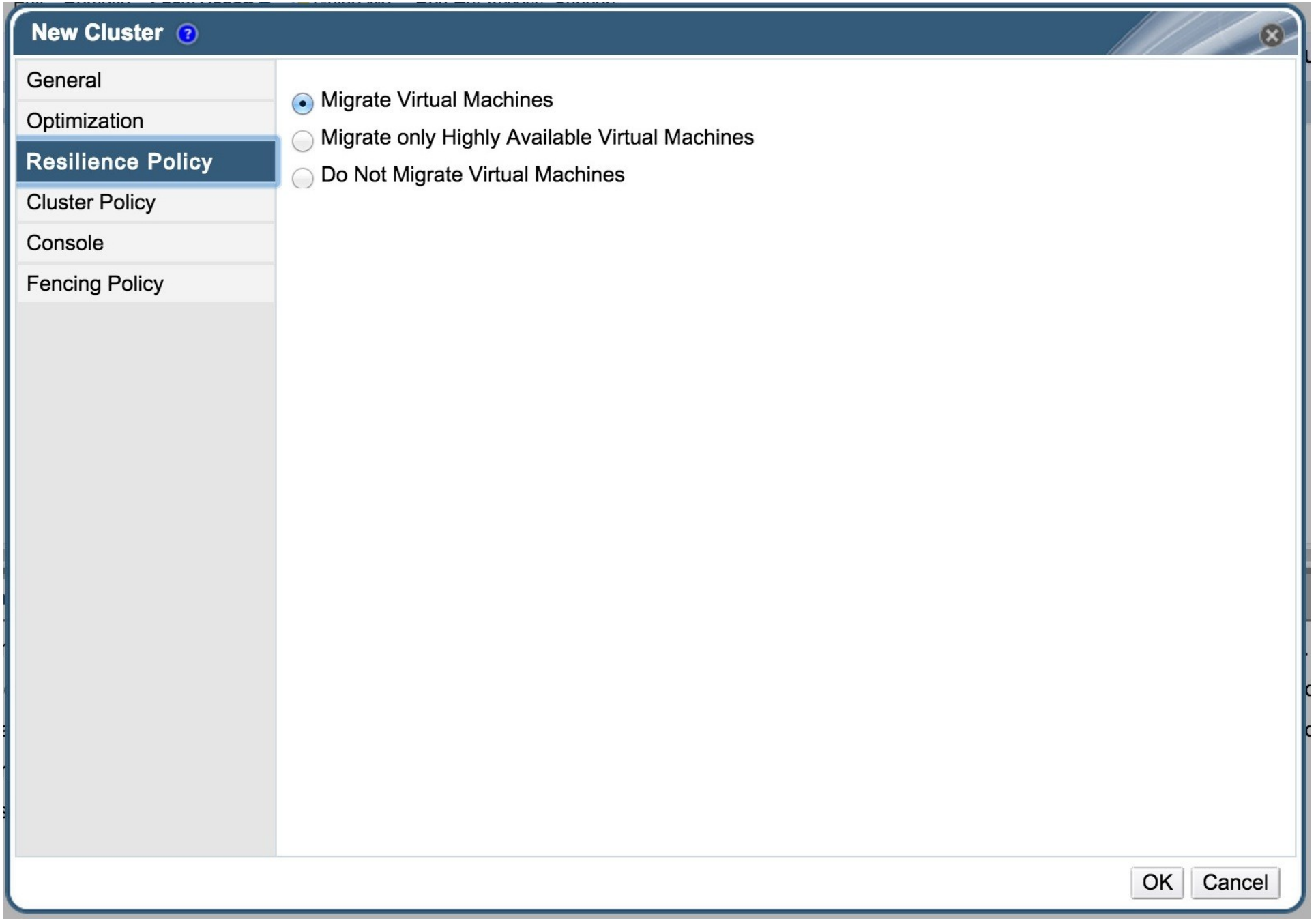
redhat.

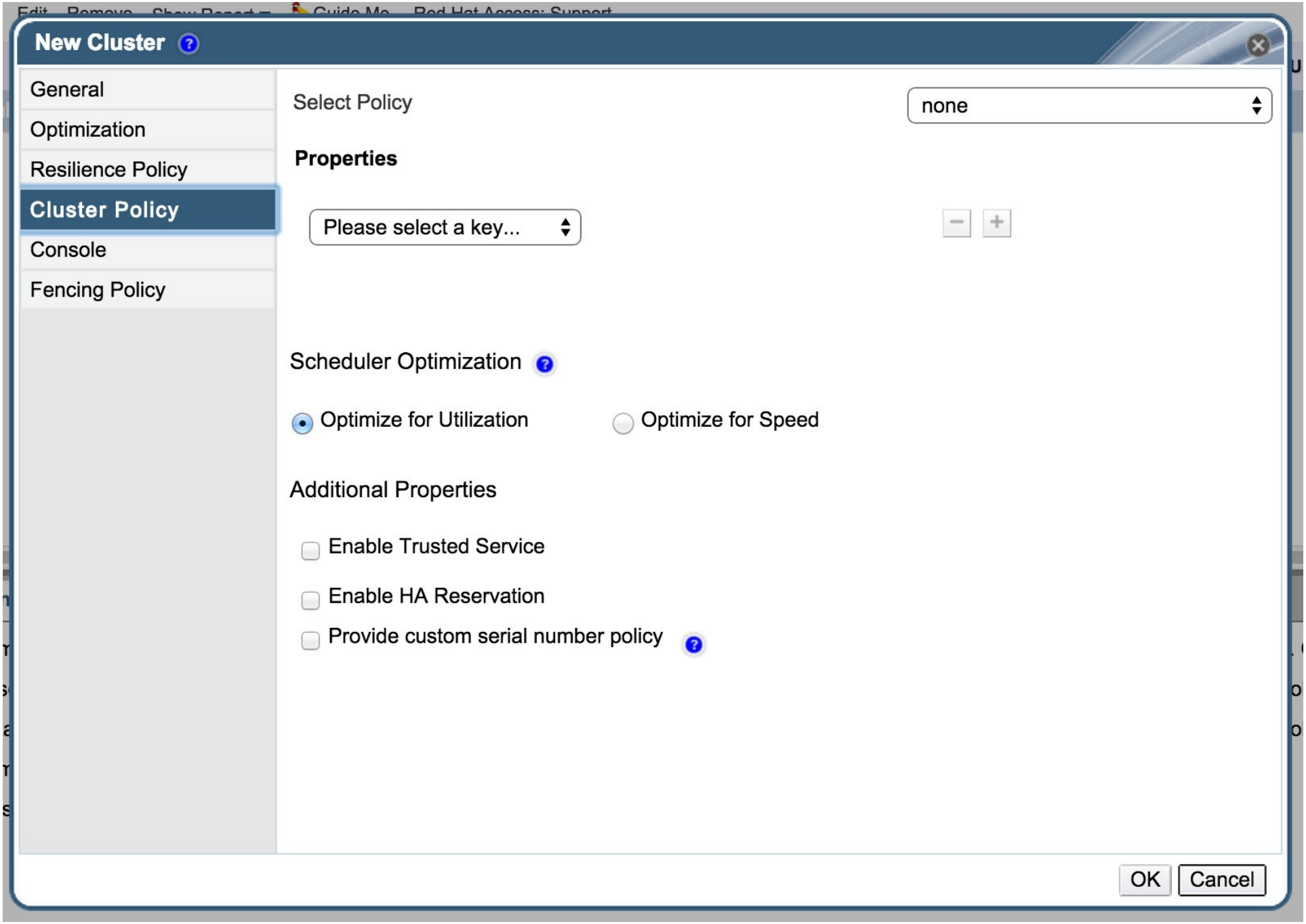
Creating Clusters

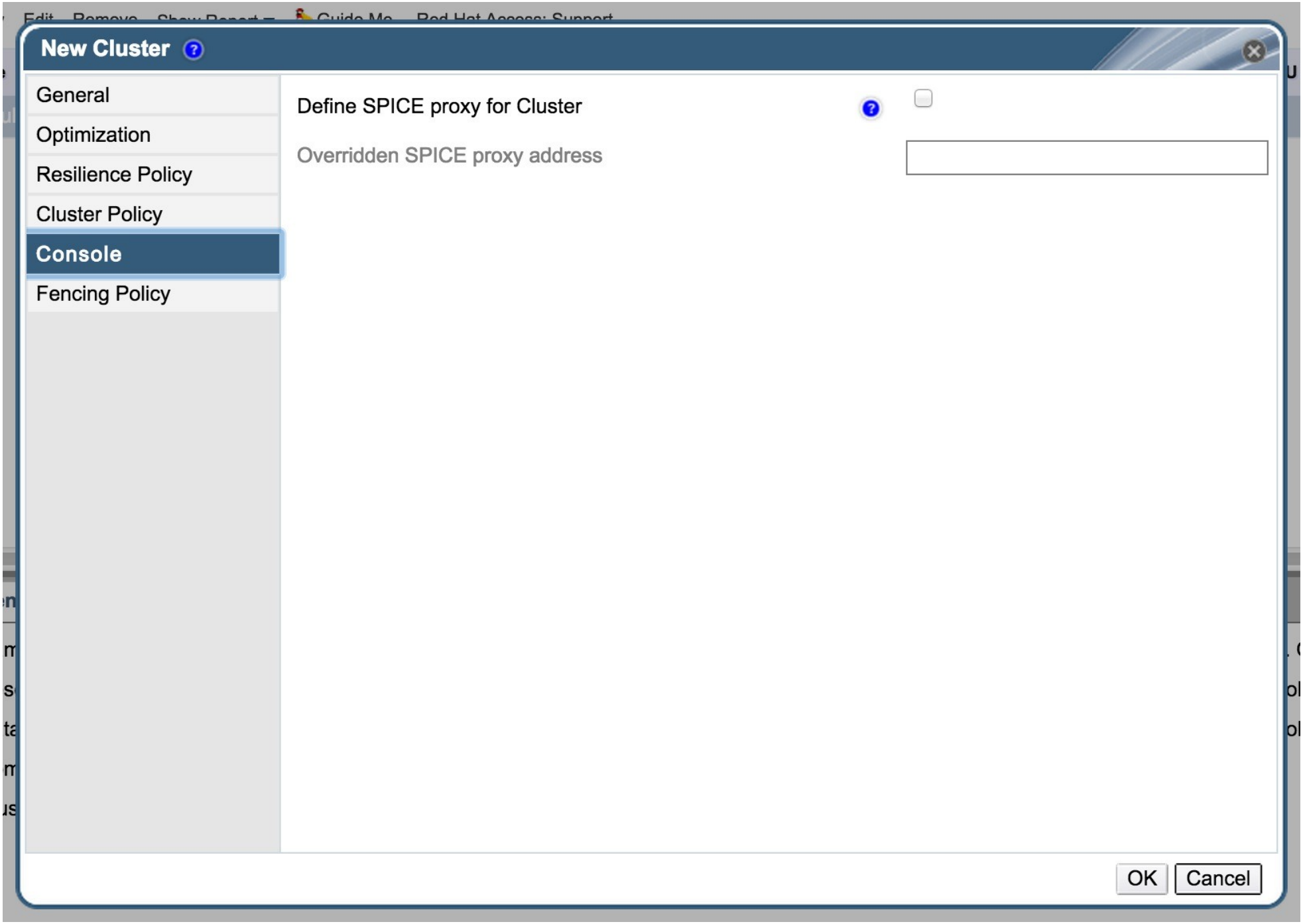
redhat.

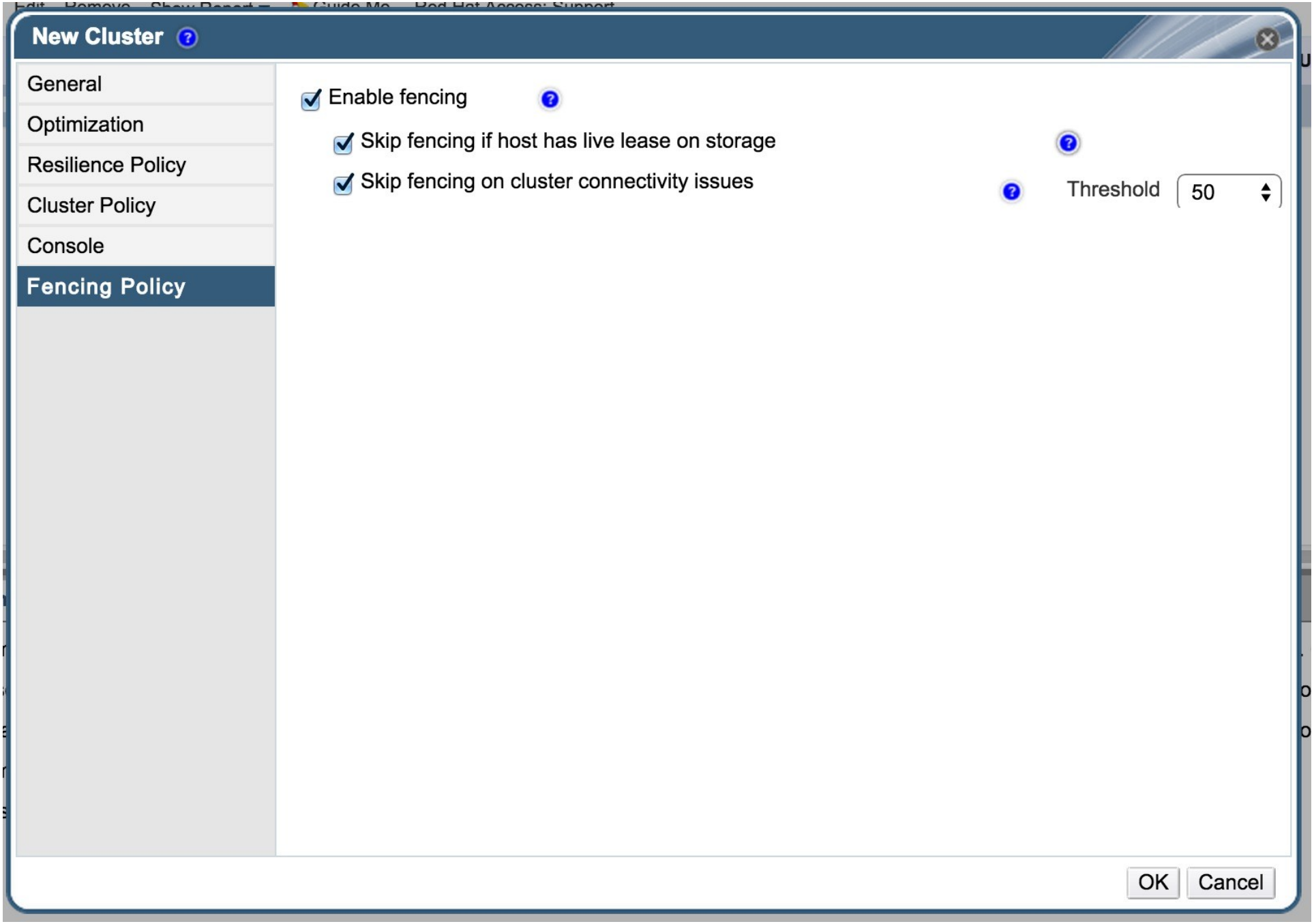












Practice: Creating Clusters

redhat.

Lab: Creating RHEV Datacenters and Clusters

redhat.

Summary

DAY TWO

Creating RHEV Data Centers and Clusters

Creating RHEV Storage

Creating RHEV Logical Networks

Deploying RHEV Virtual Machines

Chapter 5:
Creating and Maintaining RHEV Storage

- Creating Storage Domains
- Integrating Storage with OpenStack

redhat.

Goal:

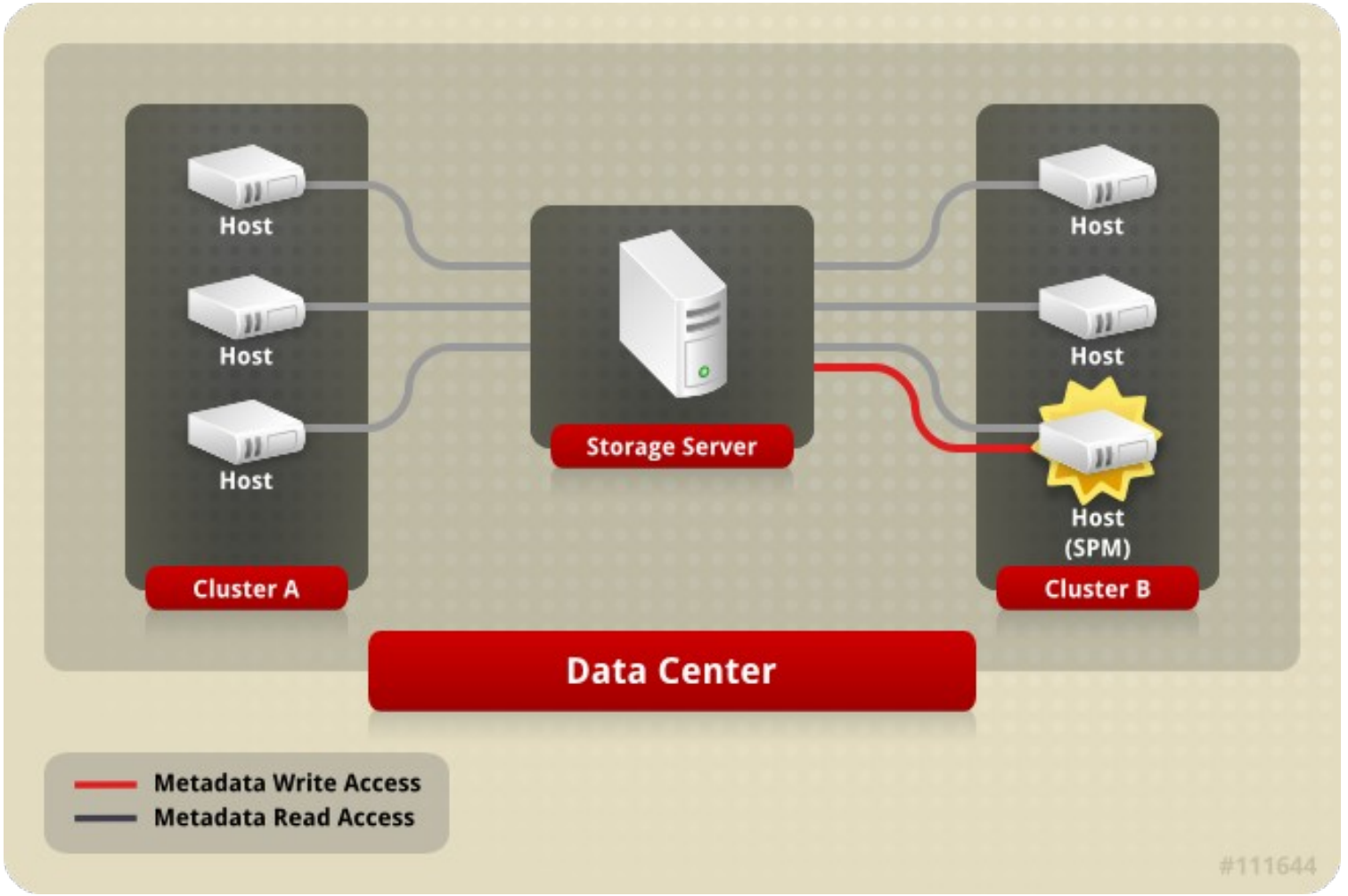
Create and administer data, iso, and export storage domains.

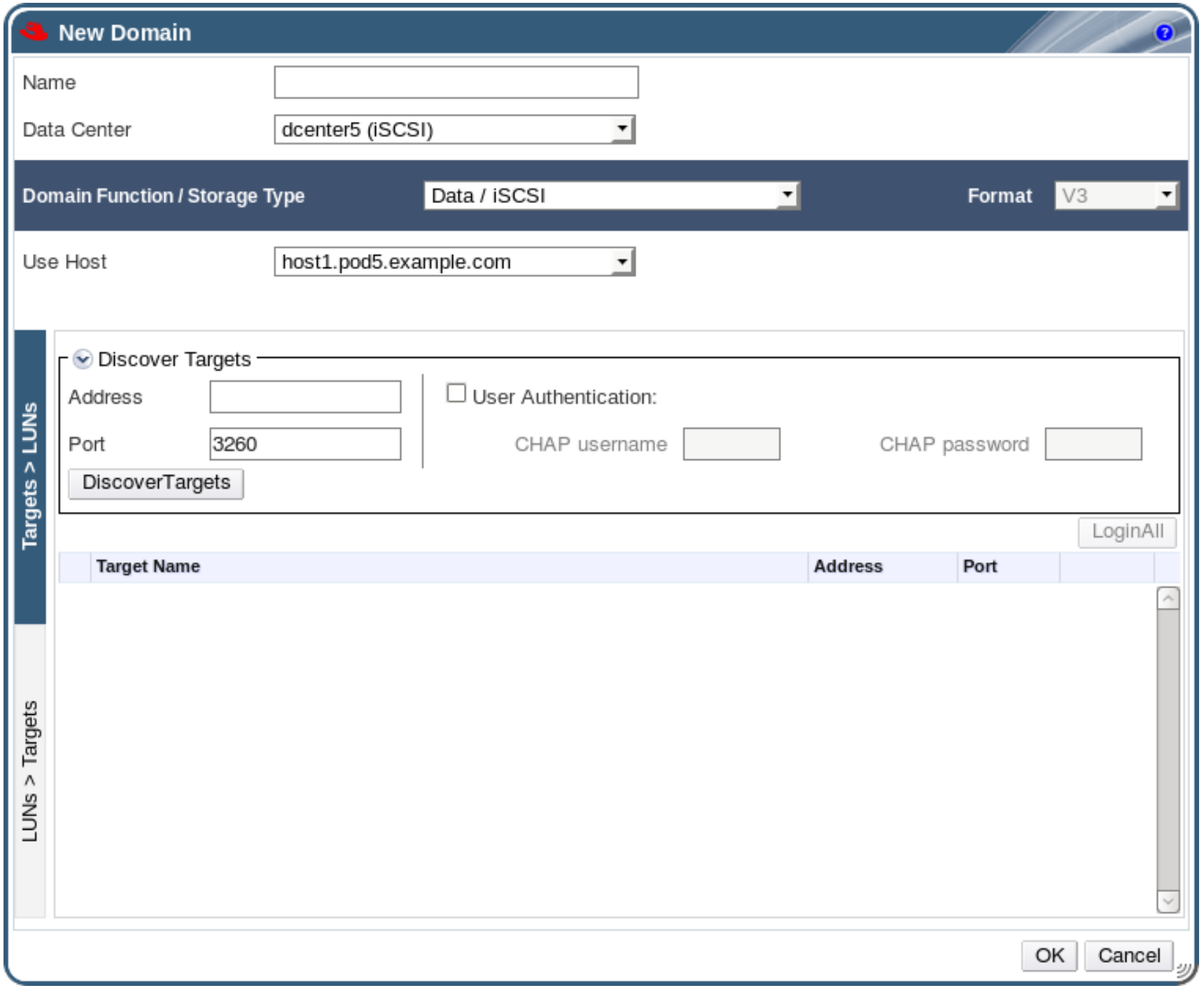
Objectives:

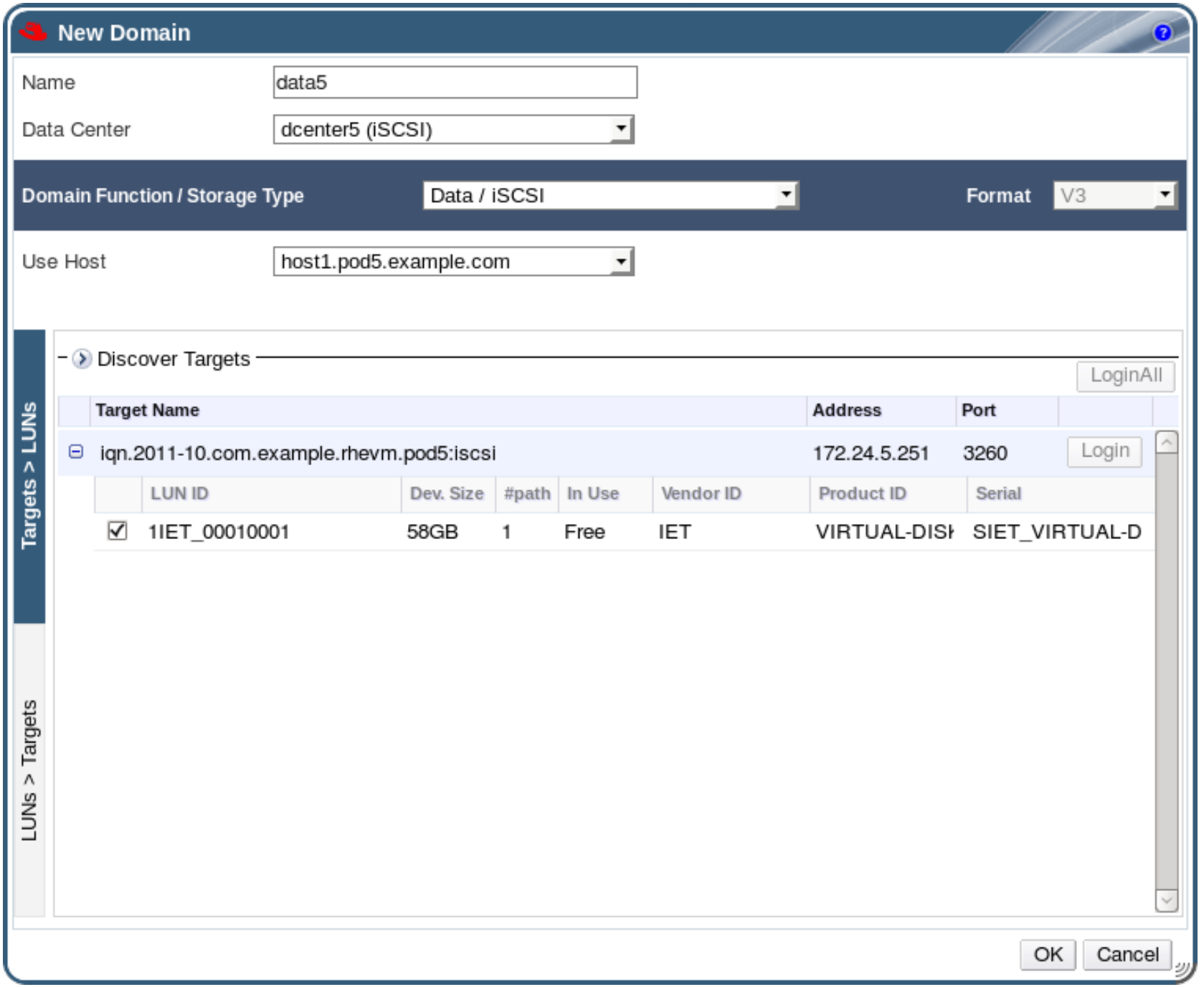
- List the three types of storage domains and supported underlying storage technologies.
- Identify the role of the storage pool manager.
- Prepare, create and populate RHEV storage domains.
- List the storage integration options with Red Hat Enterprise Linux OpenStack Platform.

Creating Storage Domains

redhat.





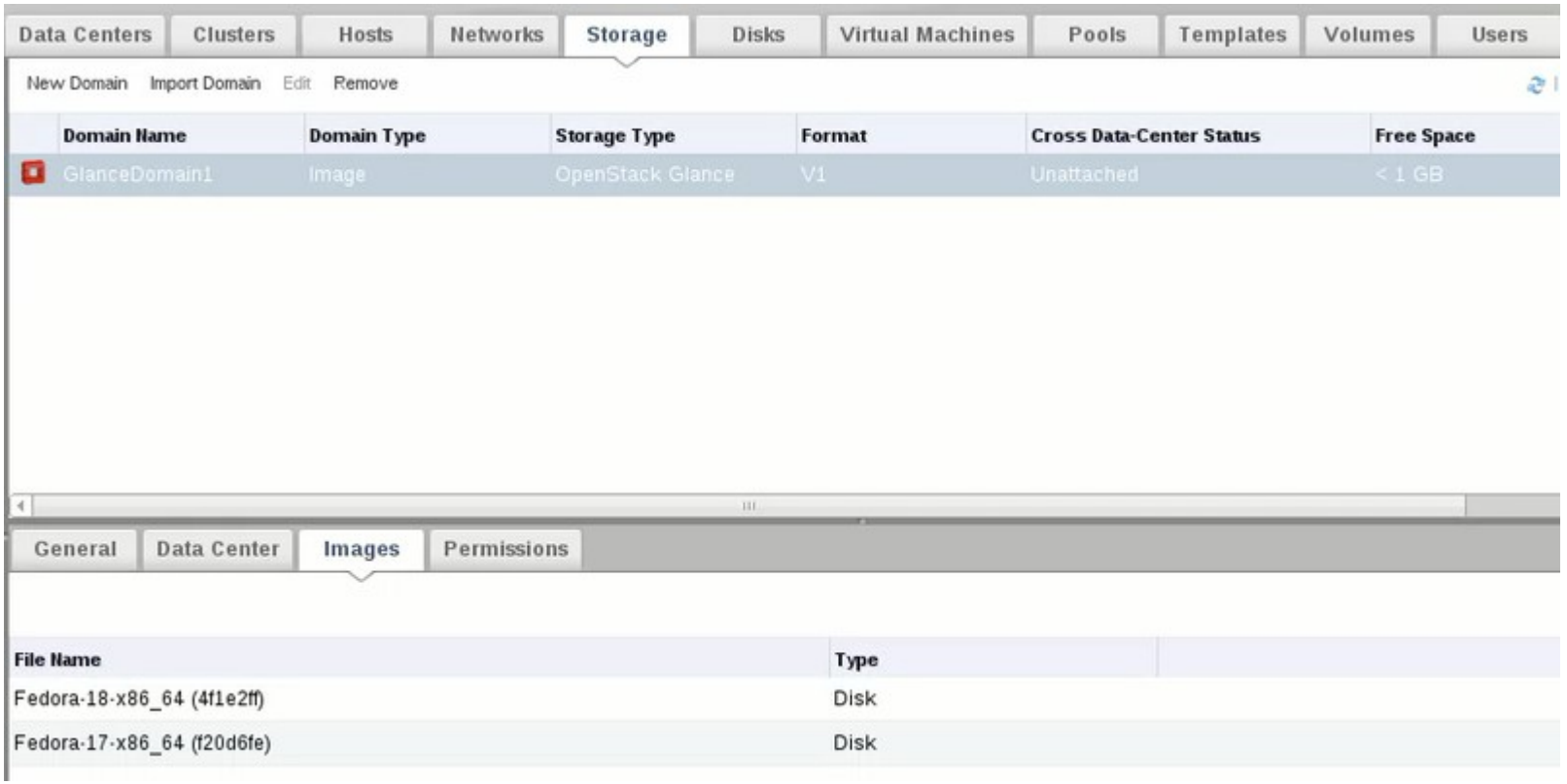


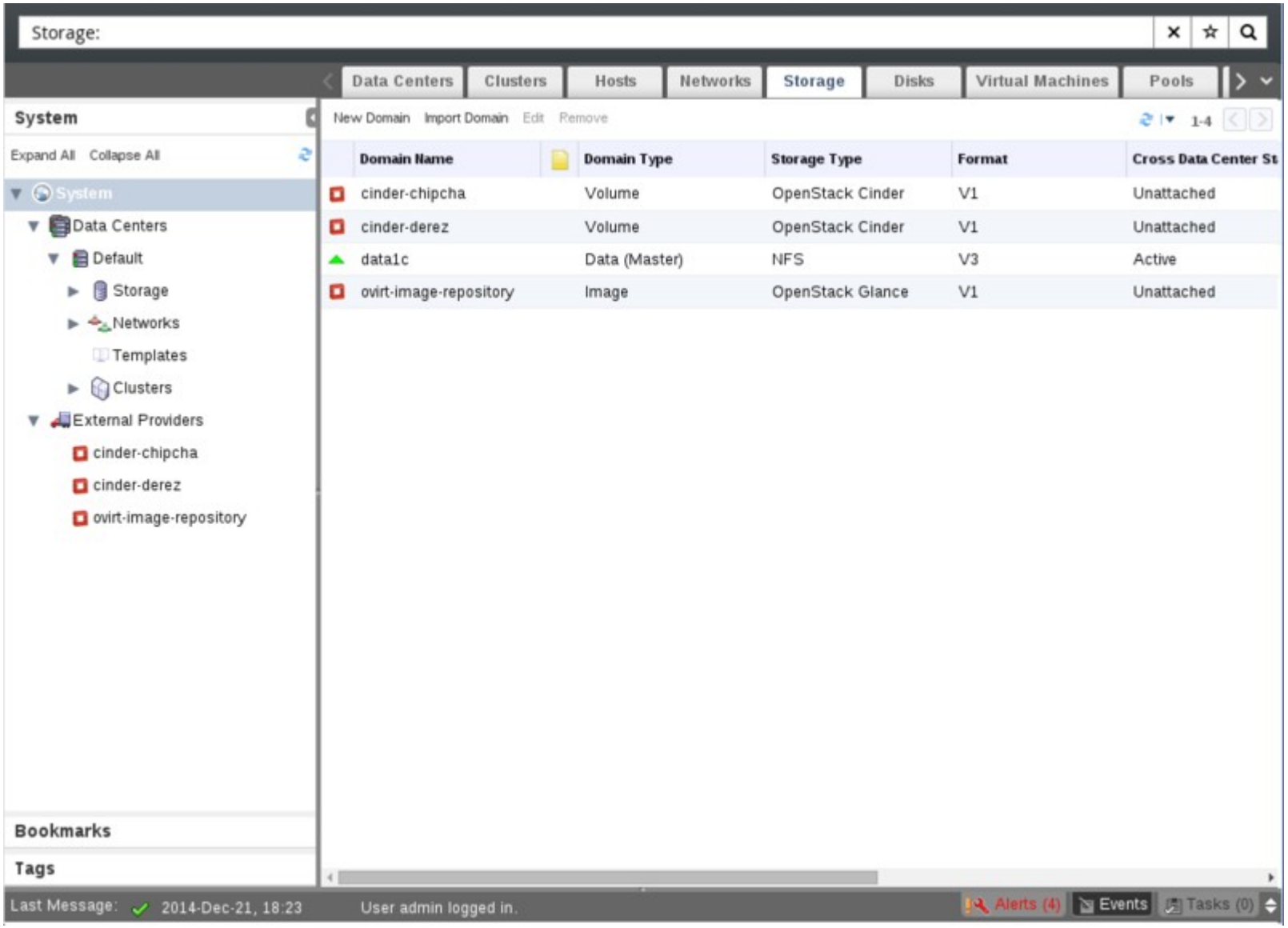
Practice: Creating a Data Storage Domain

redhat.

Integrating Storage with OpenStack

redhat.





Quiz: Integrating Storage with OpenStack

redhat.

Lab: Creating and Maintaining RHEV Storage

redhat.

Summary

DAY TWO

Creating RHEV Data Centers and Clusters

Creating RHEV Storage

Creating RHEV Logical Networks

Deploying RHEV Virtual Machines

Chapter 6: Creating RHEV Logical Networks

- Creating Logical Networks
- Integrating Networking with Openstack

redhat.

Goal:

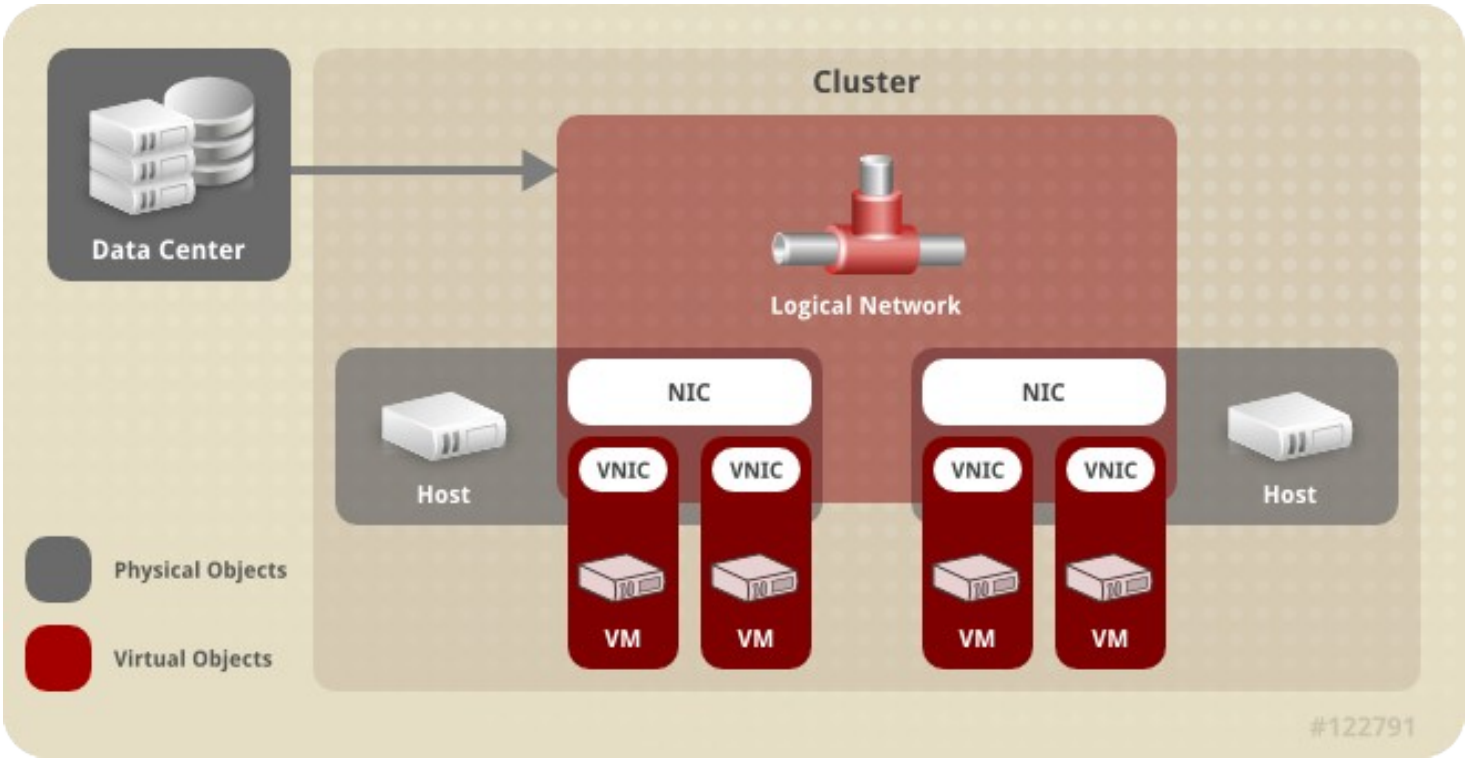
Create RHEV Logical Networks in the RHEV Manager interface.

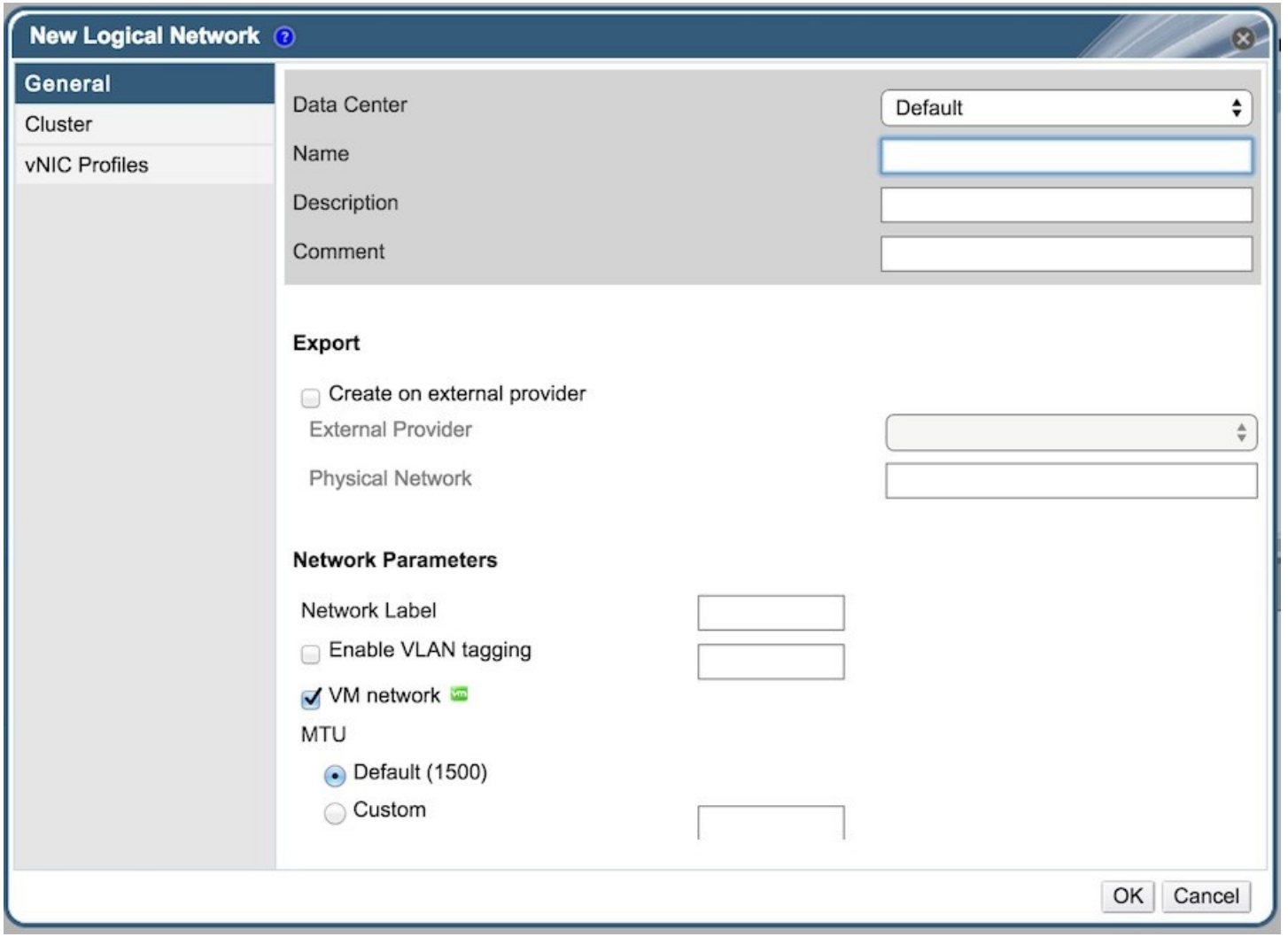
Objectives:

- Plan for and create RHEV logical networks.
- Discuss network integration options and usage with Red Hat Enterprise Linux OpenStack Platform.

Creating Logical Networks

redhat.



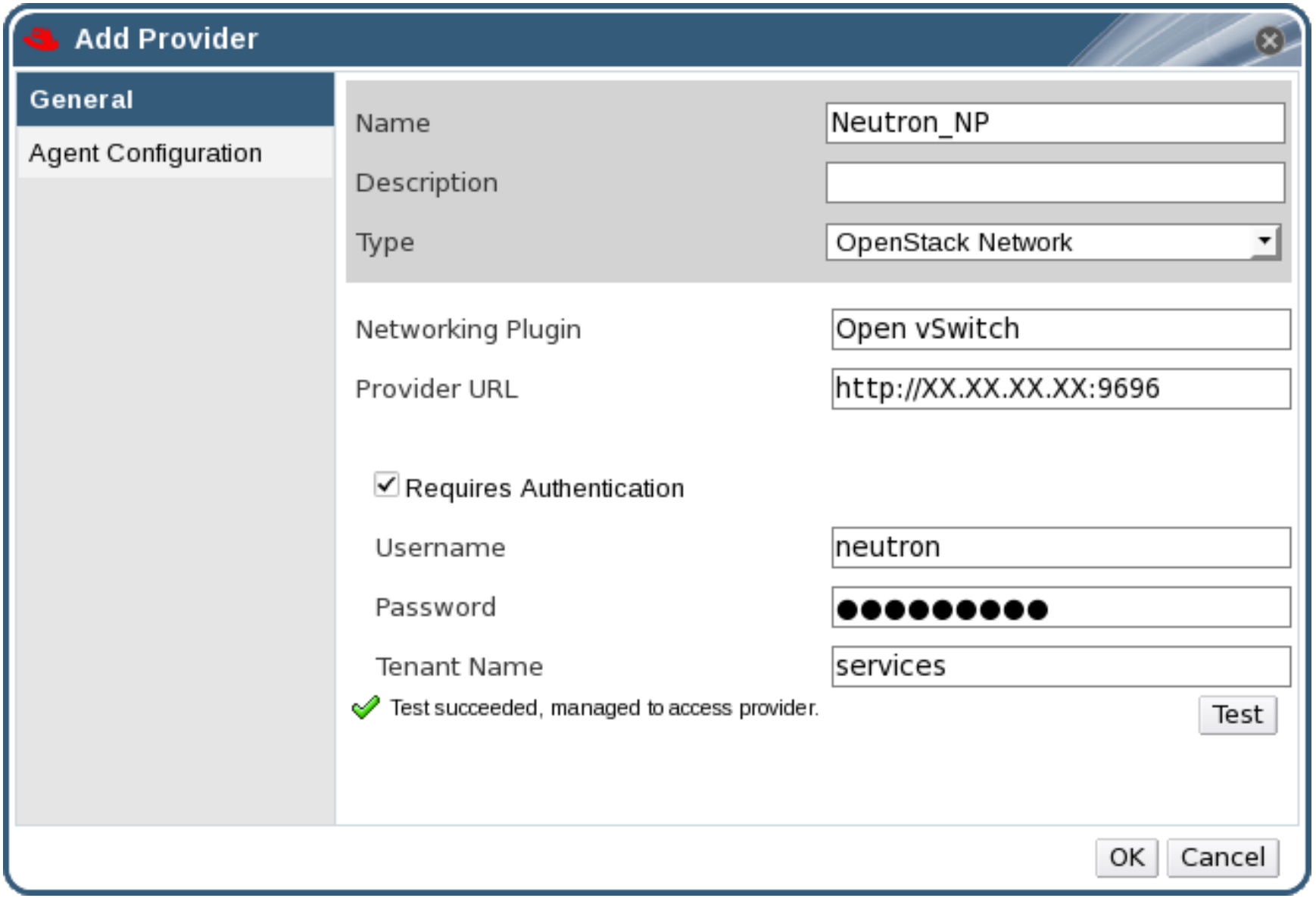


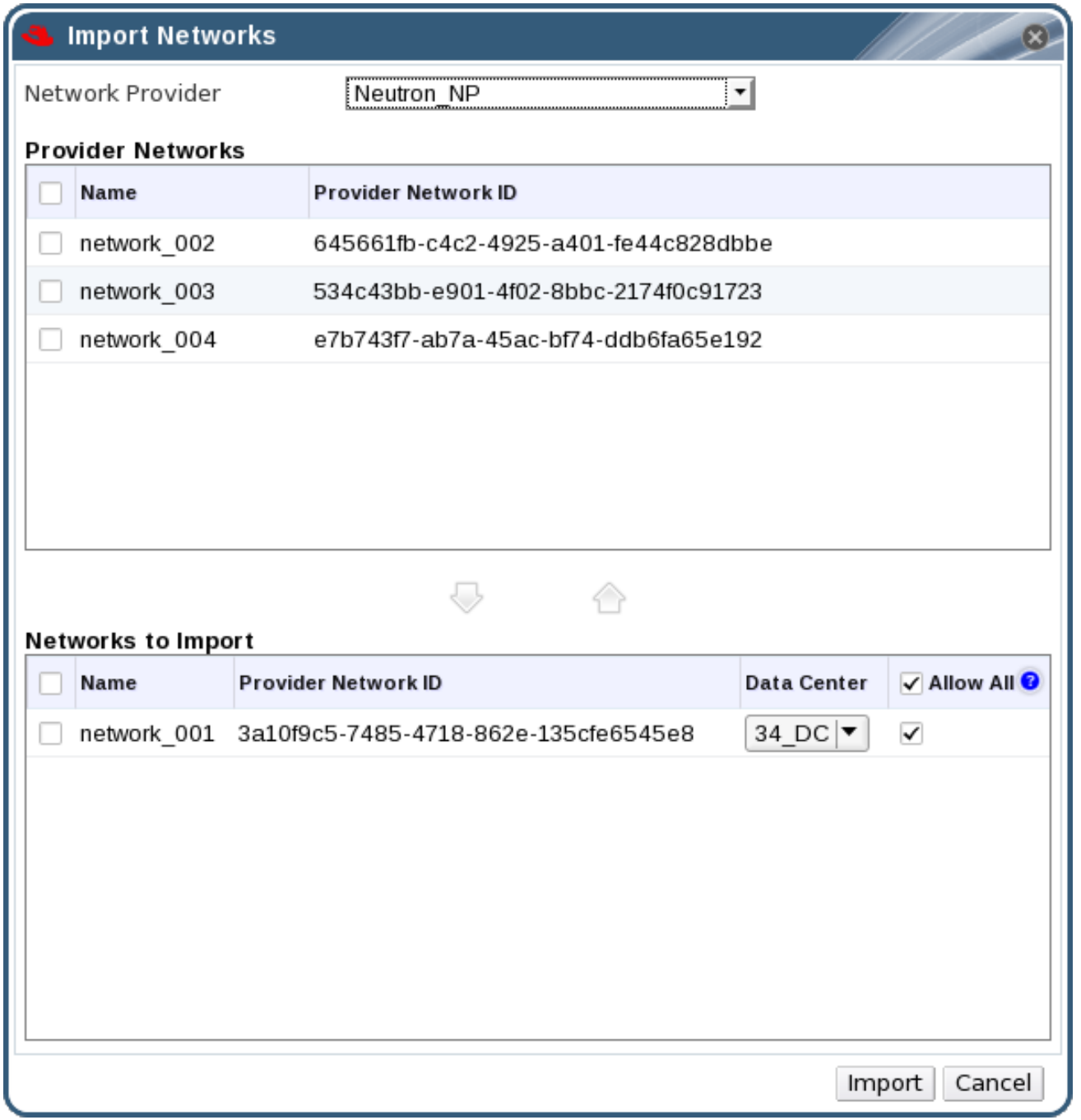
Practice: Creating Logical Networks

redhat.

Integrating Networking with OpenStack

redhat.





Quiz: Integrating Networking with OpenStack

redhat.

Lab: Creating Logical Networks

redhat.

Summary

DAY TWO

Creating RHEV Data Centers and Clusters

Creating RHEV Storage

Creating RHEV Logical Networks

Deploying RHEV Virtual Machines

Chapter 7: Deploying RHEV Virtual Machines

- Installing a New Virtual Server
- Managing Virtual Machines
- Installing Para-virtualized Drivers and Guest Agents

redhat.

Goal:

Install and manage virtual machines with appropriate drivers and agents.

Objectives:

- Install a new RHEL virtual machine.
- Start, stop, edit, and remove virtual machines.
- Install paravirtualized drivers and guest agents.

Installing a New Virtual Server

redhat.

Practice: Installing a Red Hat Enterprise Linux Guest

redhat.

Managing Virtual Machines

redhat.

Practice: Managing Virtual Machines

redhat.

Installing Paravirtualized Drivers and Guest Agents

redhat.

Quiz: Installing Paravirtualized Drivers and Guest Agents

Lab: Deploying RHEV Virtual Machines

redhat.

Summary

DAY THREE

Managing VM Snapshots and Images

Automating VM Deployment

Monitoring and Reporting of RHEV

Advanced RHEV Topics (part one)

Chapter 8: Managing VM Snapshots and Images

- Creating and Using Image Snapshots
- Sharing and Editing Images

redhat.

Goal:

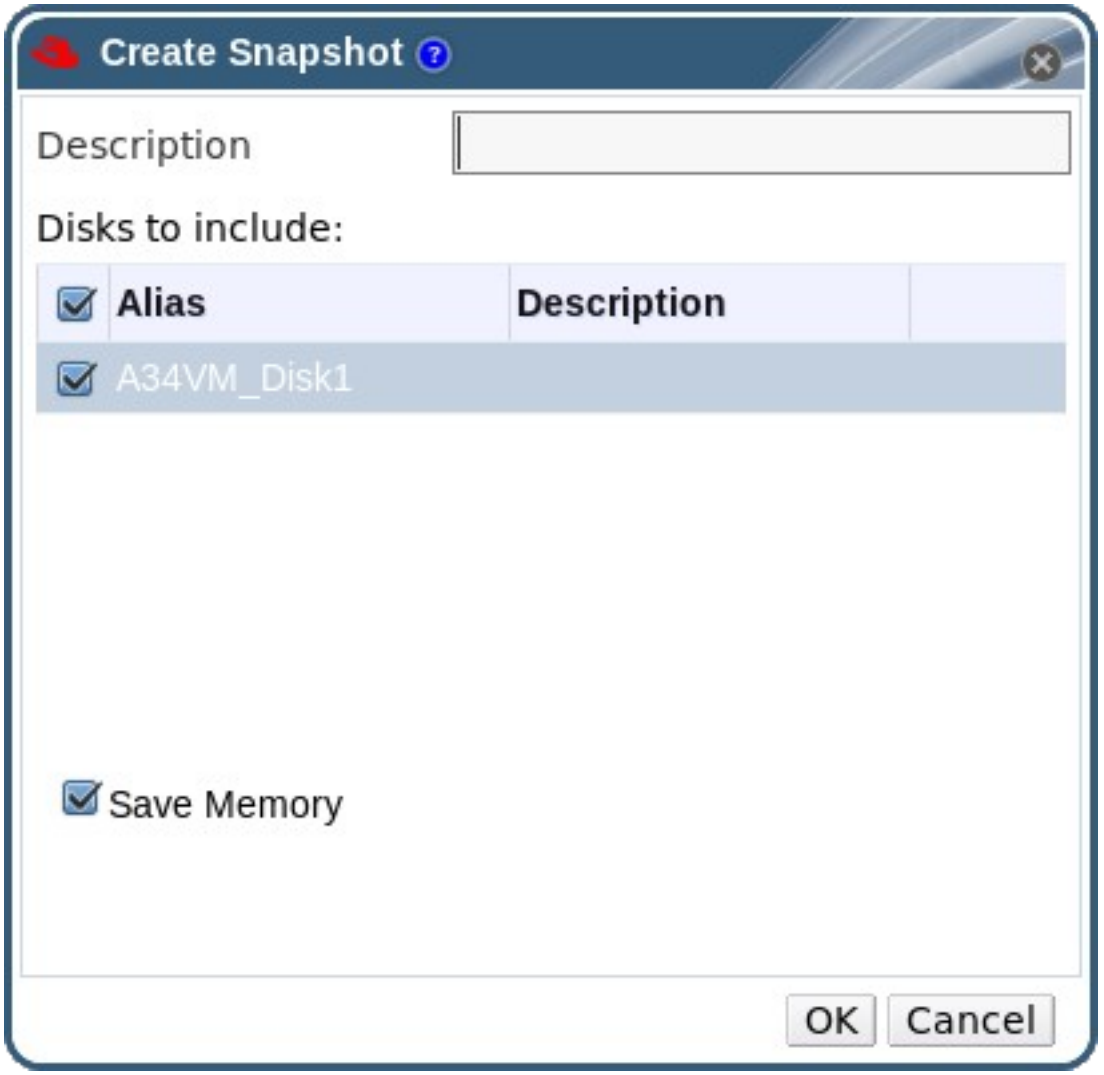
Manage VMs with snapshots and share images.

Objectives:

- Create, restore, and delete virtual machine snapshots.
- Export and import virtual machine images.

Creating and Using Image Snapshots

redhat.

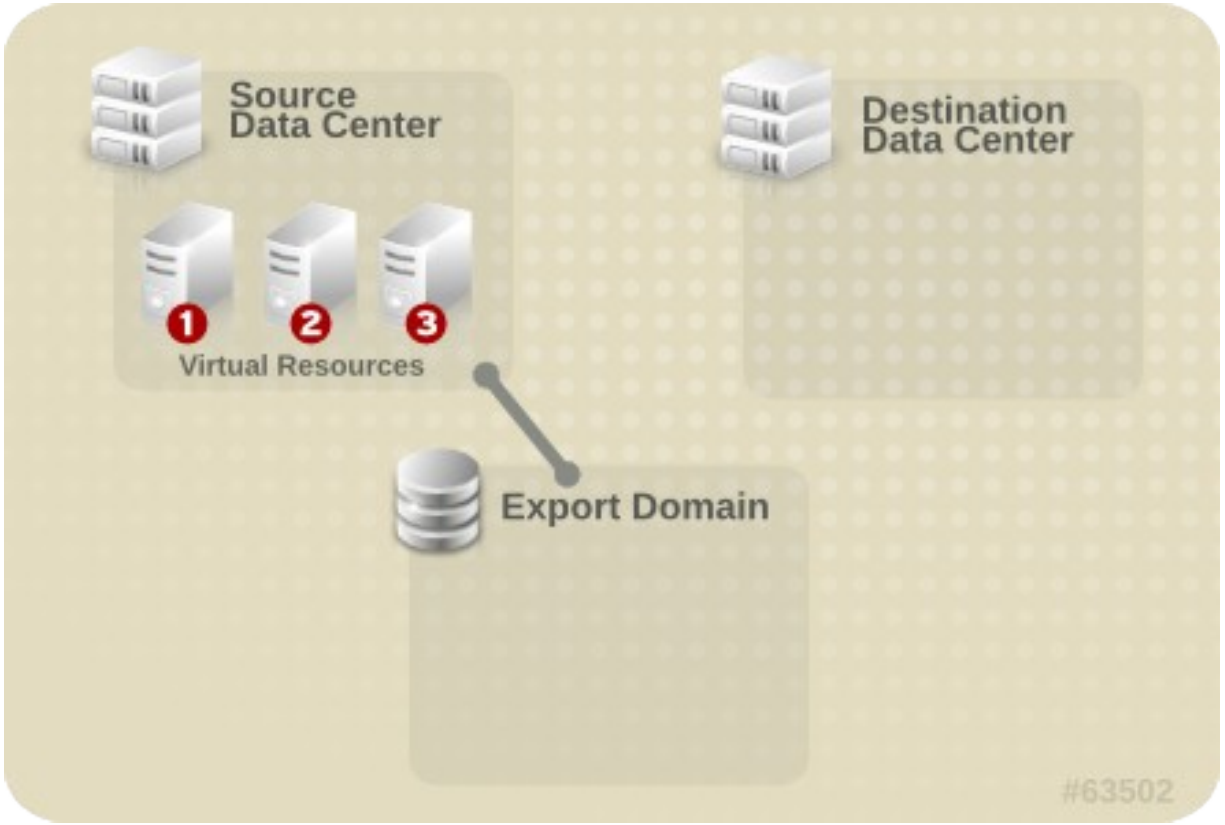


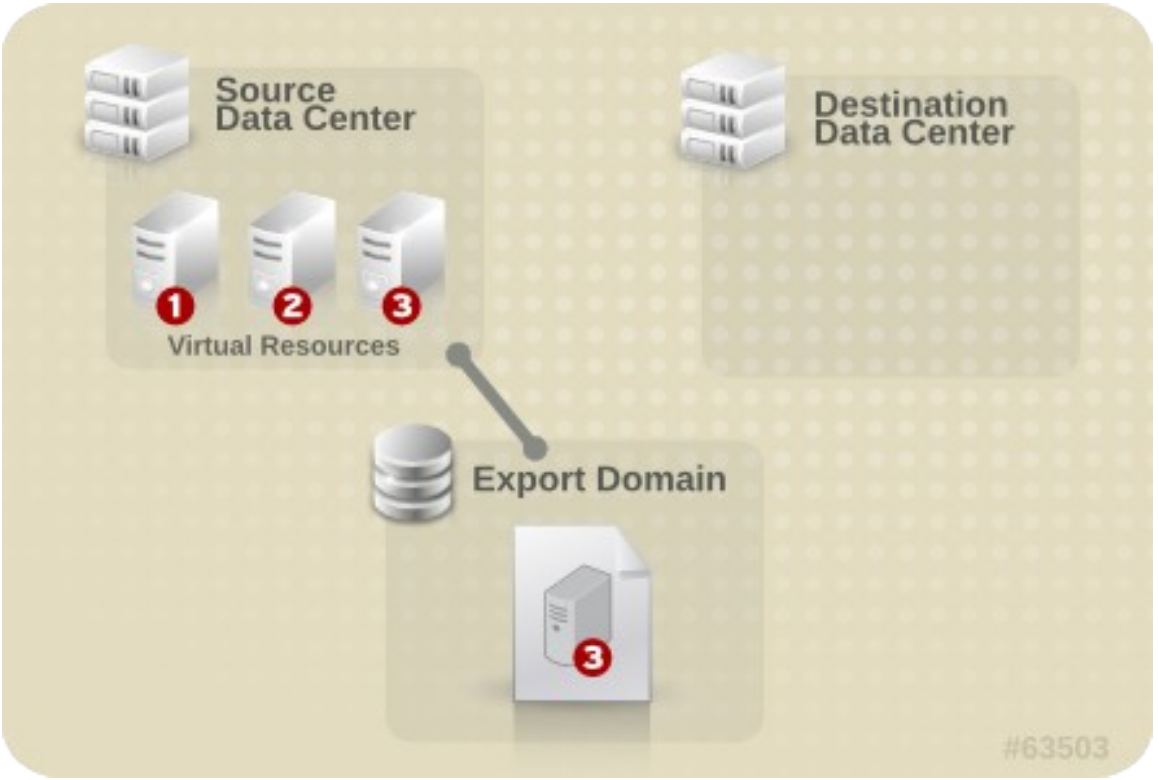
Practice: Creating and Using Image Snapshots

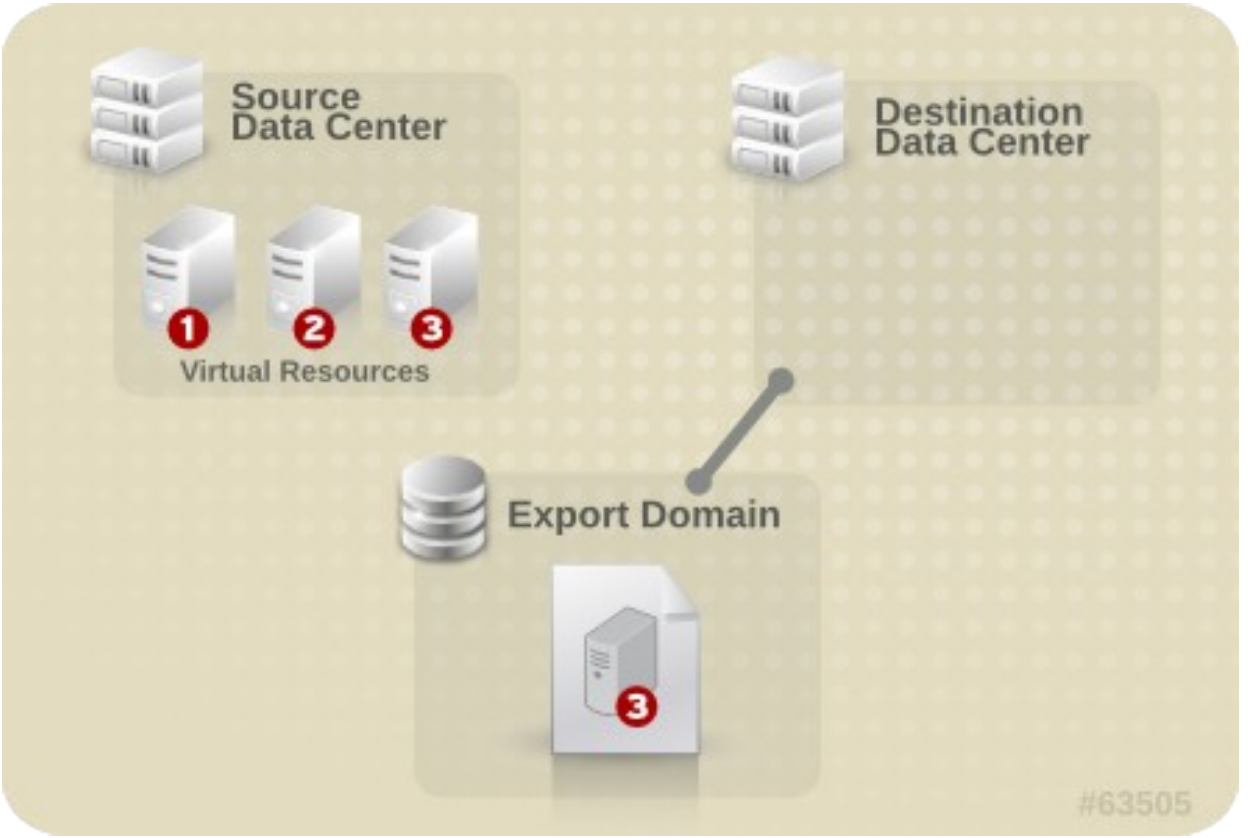
redhat.

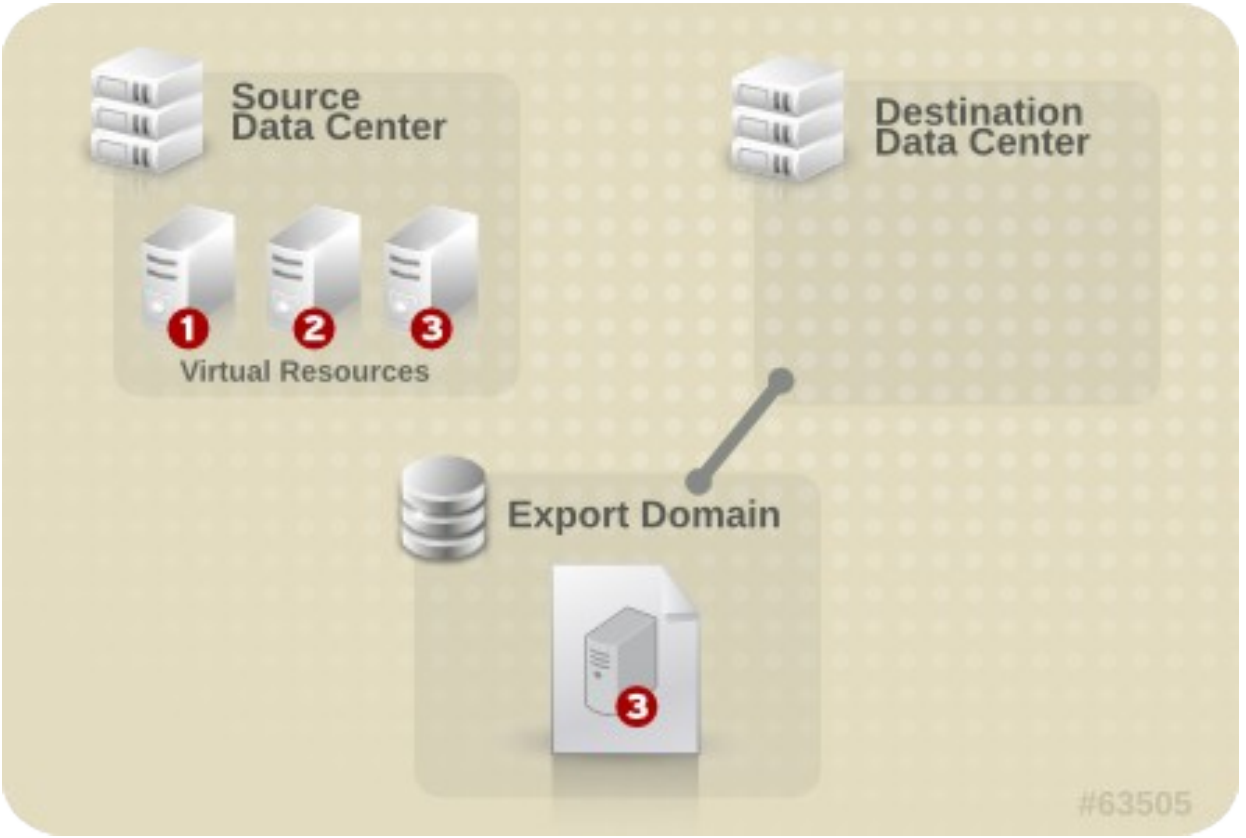
Sharing and Editing Images

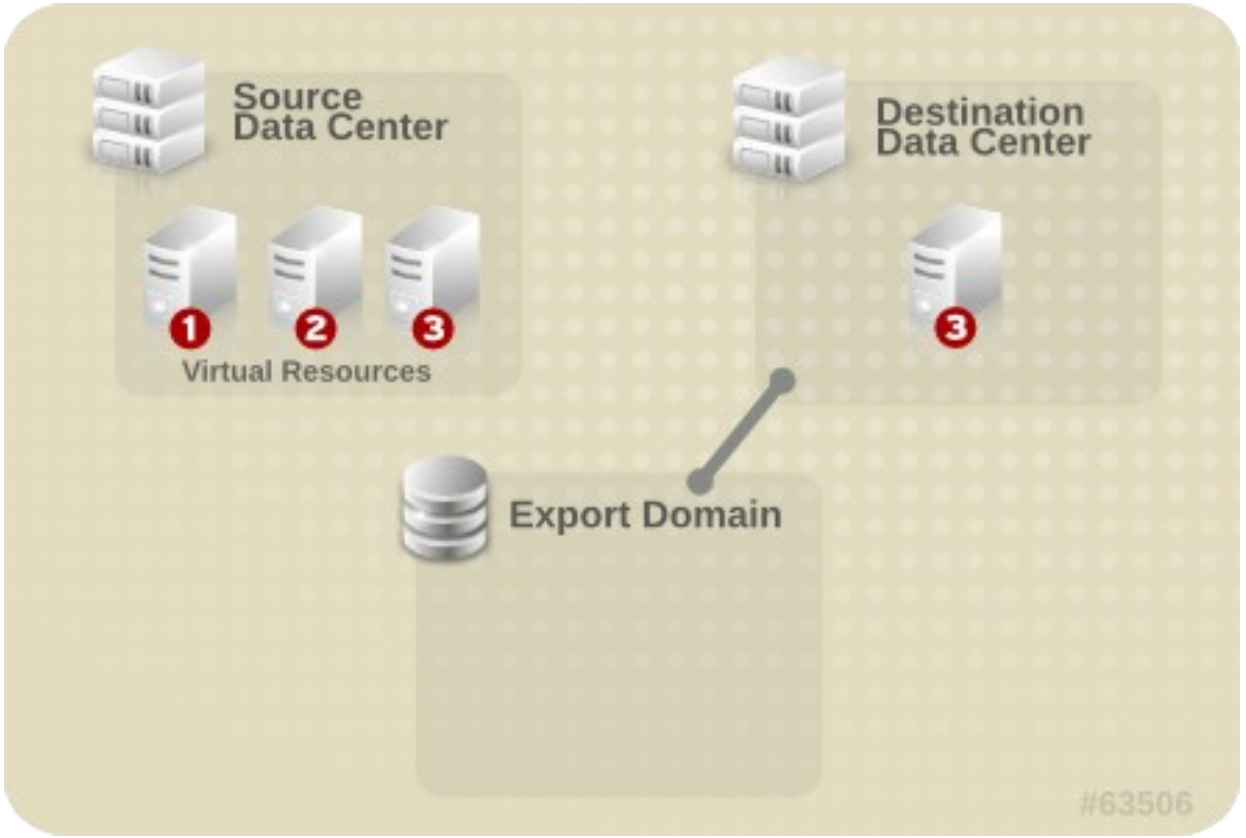
redhat.











Practice: Sharing and Editing Images

redhat.

Quiz: Managing VM Snapshots and Images

redhat.

Summary

DAY THREE

Managing VM Snapshots and Images

Automating VM Deployment

Monitoring and Reporting of RHEV

Advanced RHEV Topics (part one)

Chapter 9: Automating VM Deployment

- Templating Process
- Creating RHEL VMs with Template Images
- Windows VMs with Template Images
- Creating and Managing Pools
- Automating RHEL Deployment with cloud-init

redhat.

Goal:

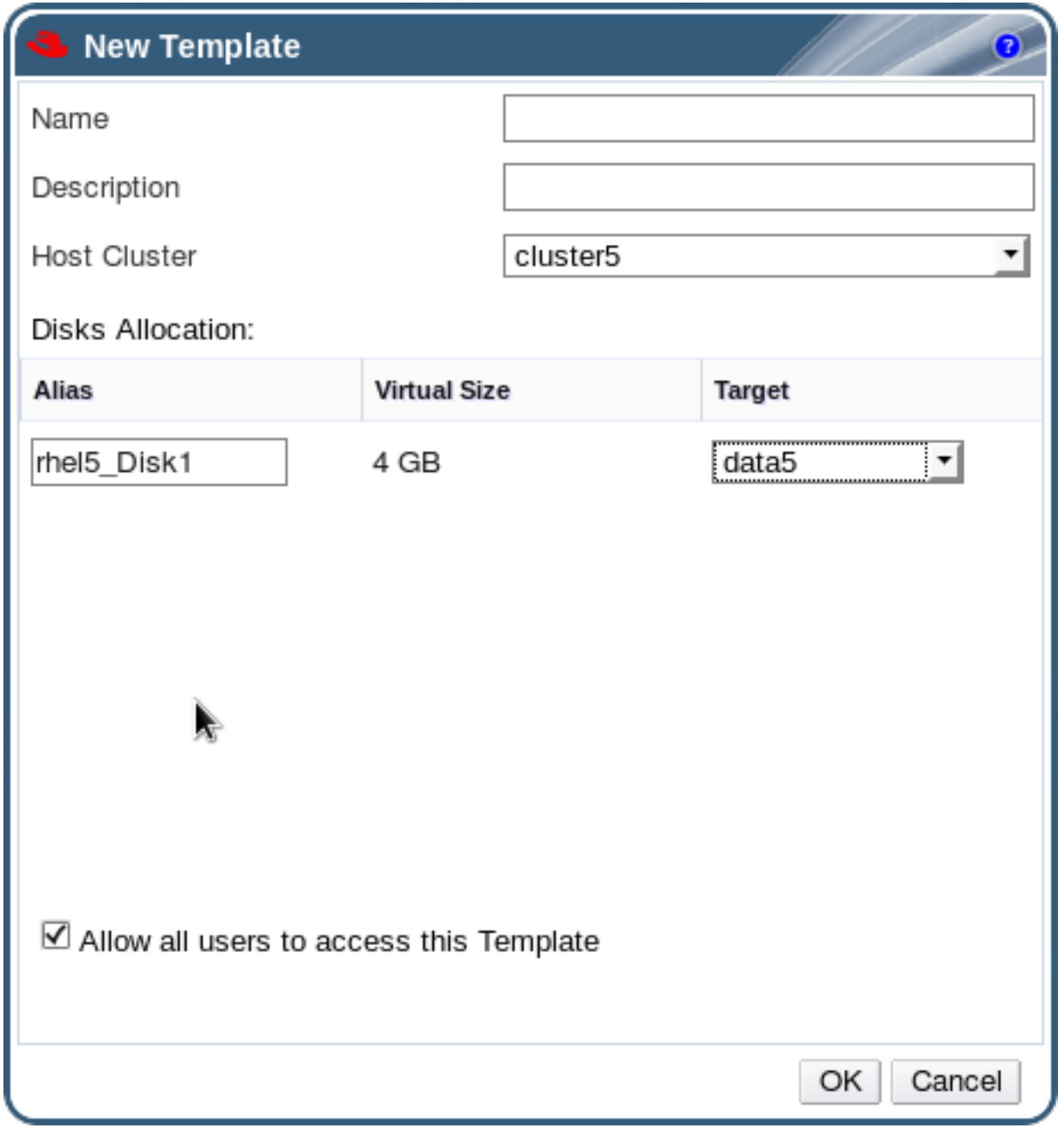
Use templates, pools and cloud-init to automate deployment of VMs.

Objectives:

- Describe the templating process.
- Seal a RHEL VM for template creation.
- Seal a Windows VM for template creation.
- Create and manage RHEL pools.
- Automate RHEL deployment with cloud-init.

Templating Process

redhat.

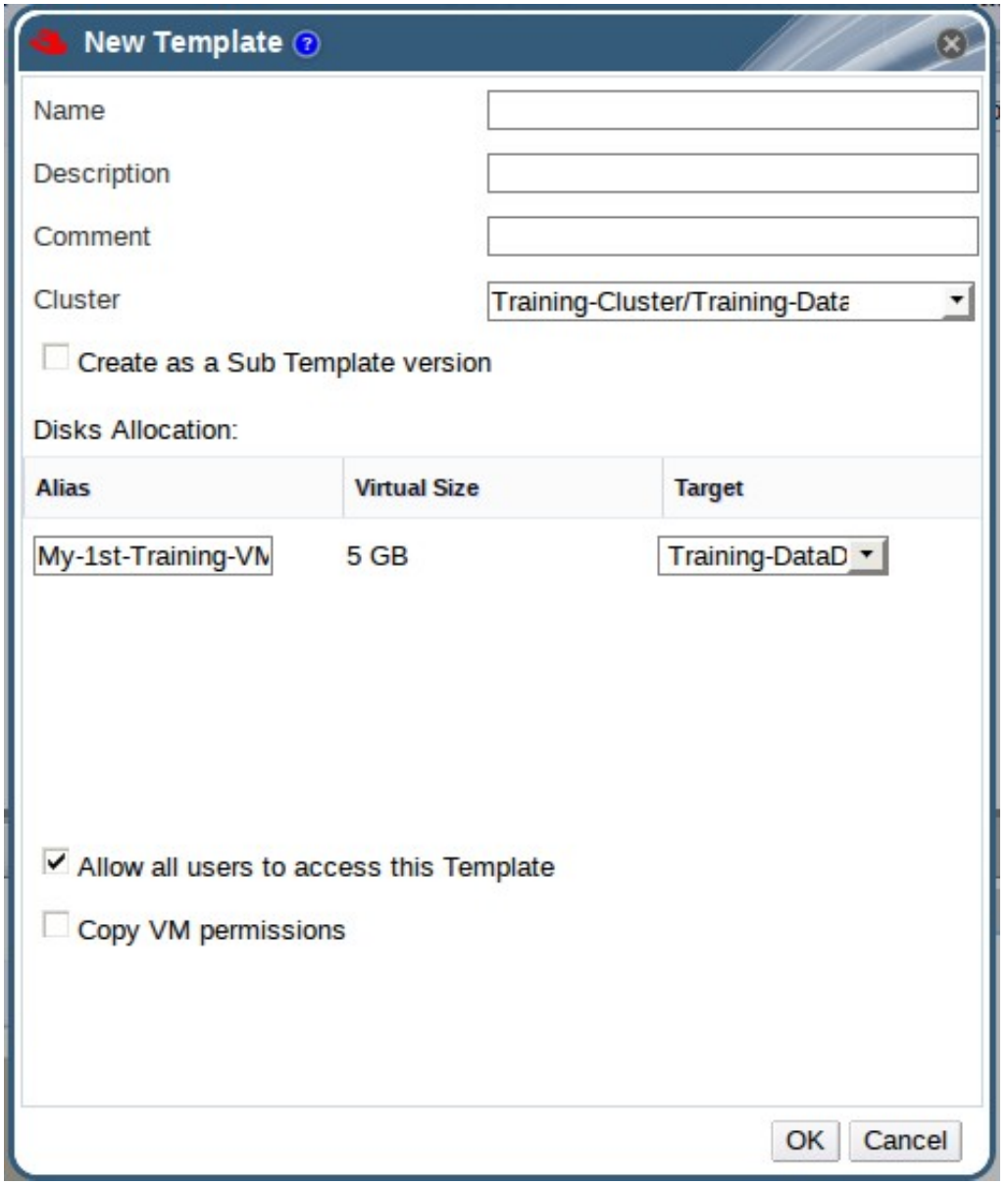


Quiz: Templating Process

redhat.

Creating RHEL VMs with Template Images

redhat.

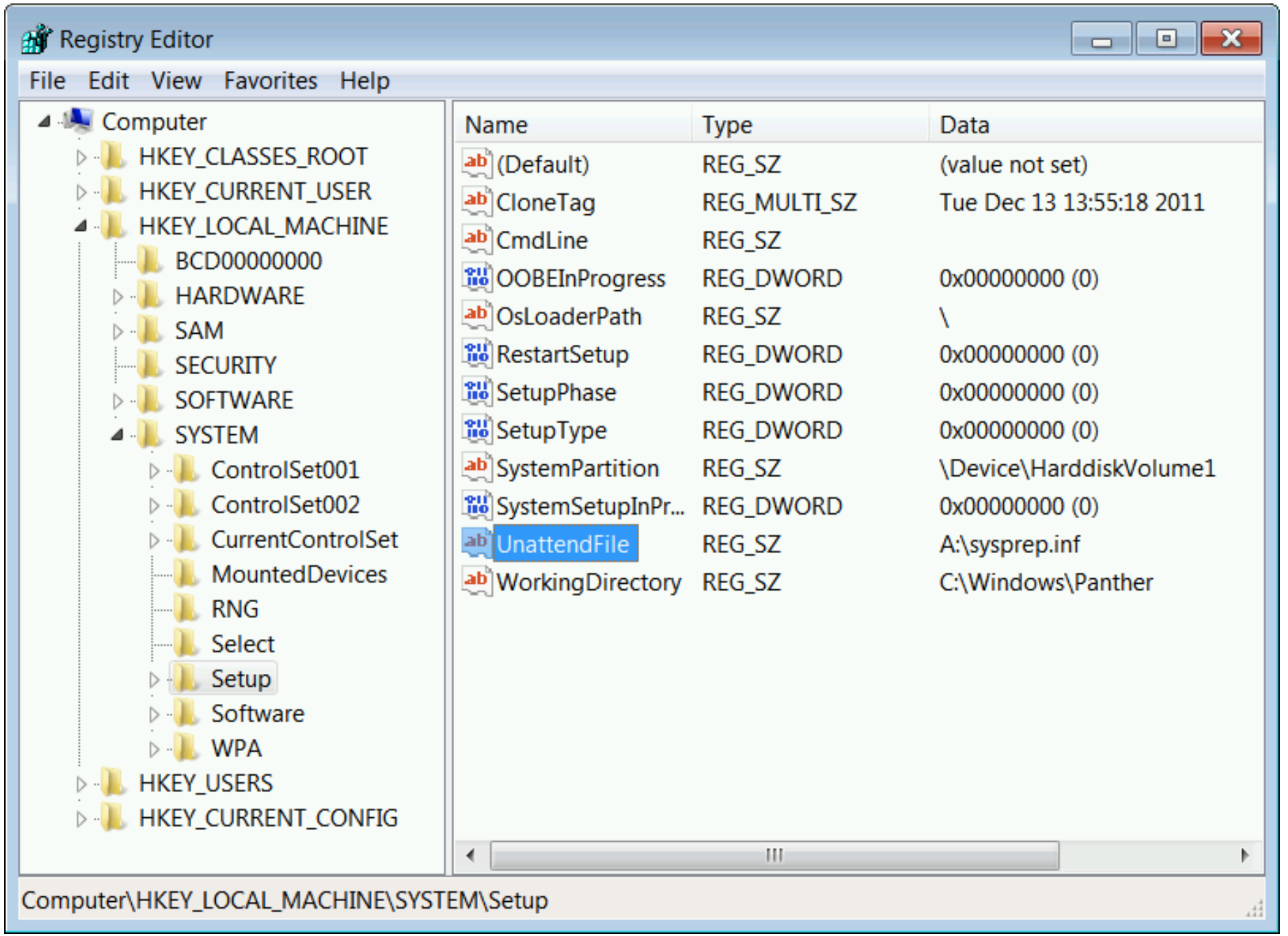


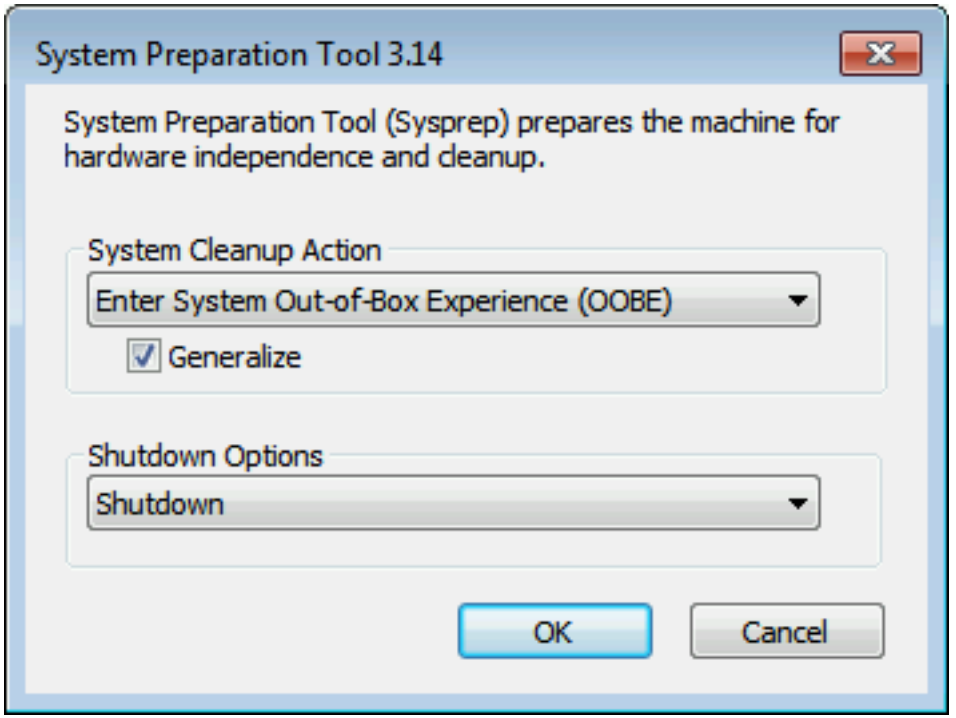
Practice: Creating RHEL VMs with Template Images

redhat.

Windows VMs with Template Images

redhat.



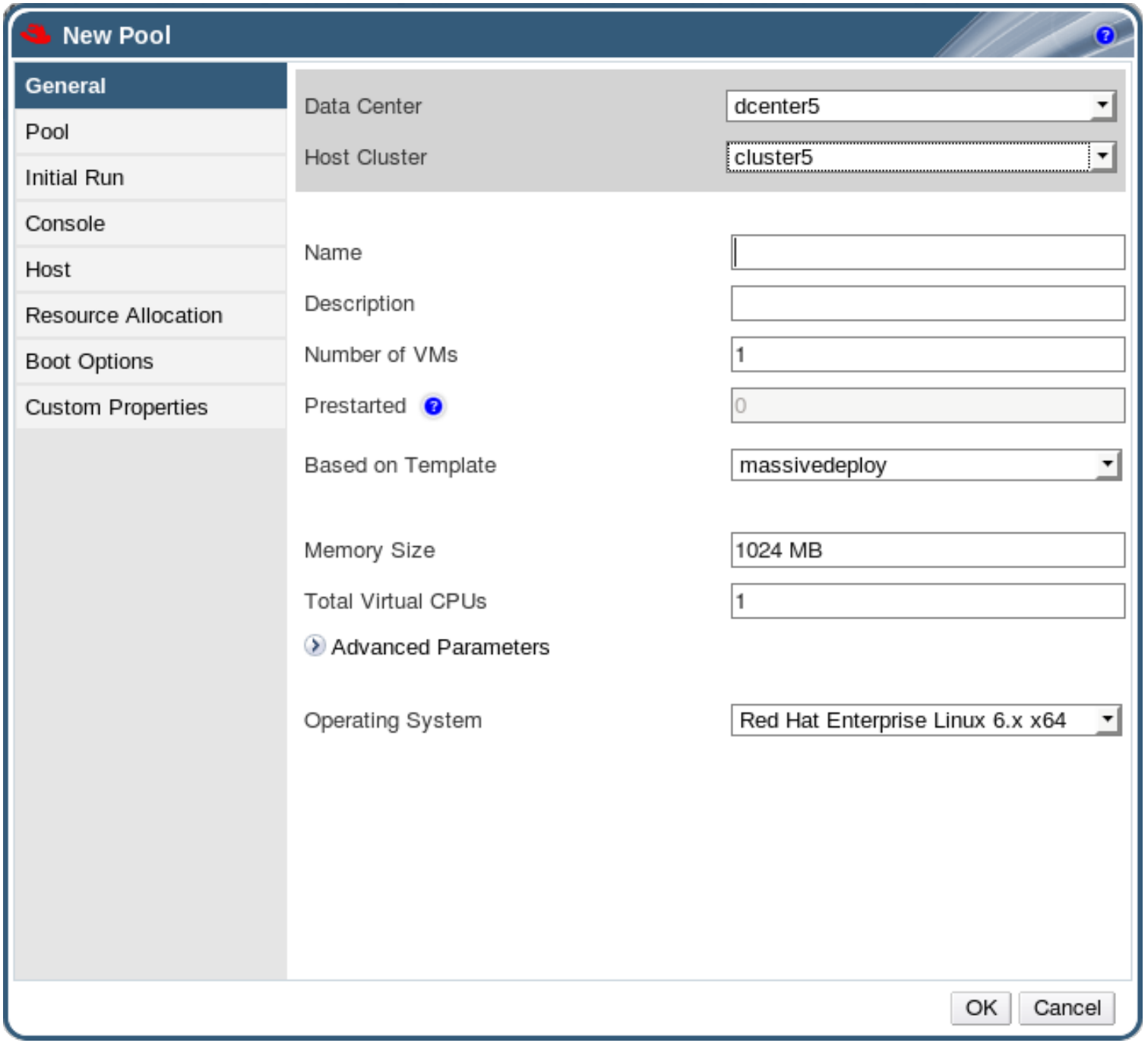


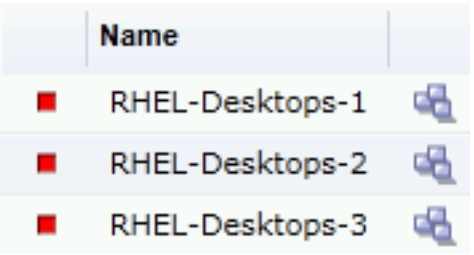
Quiz: Windows VMs with Template Images

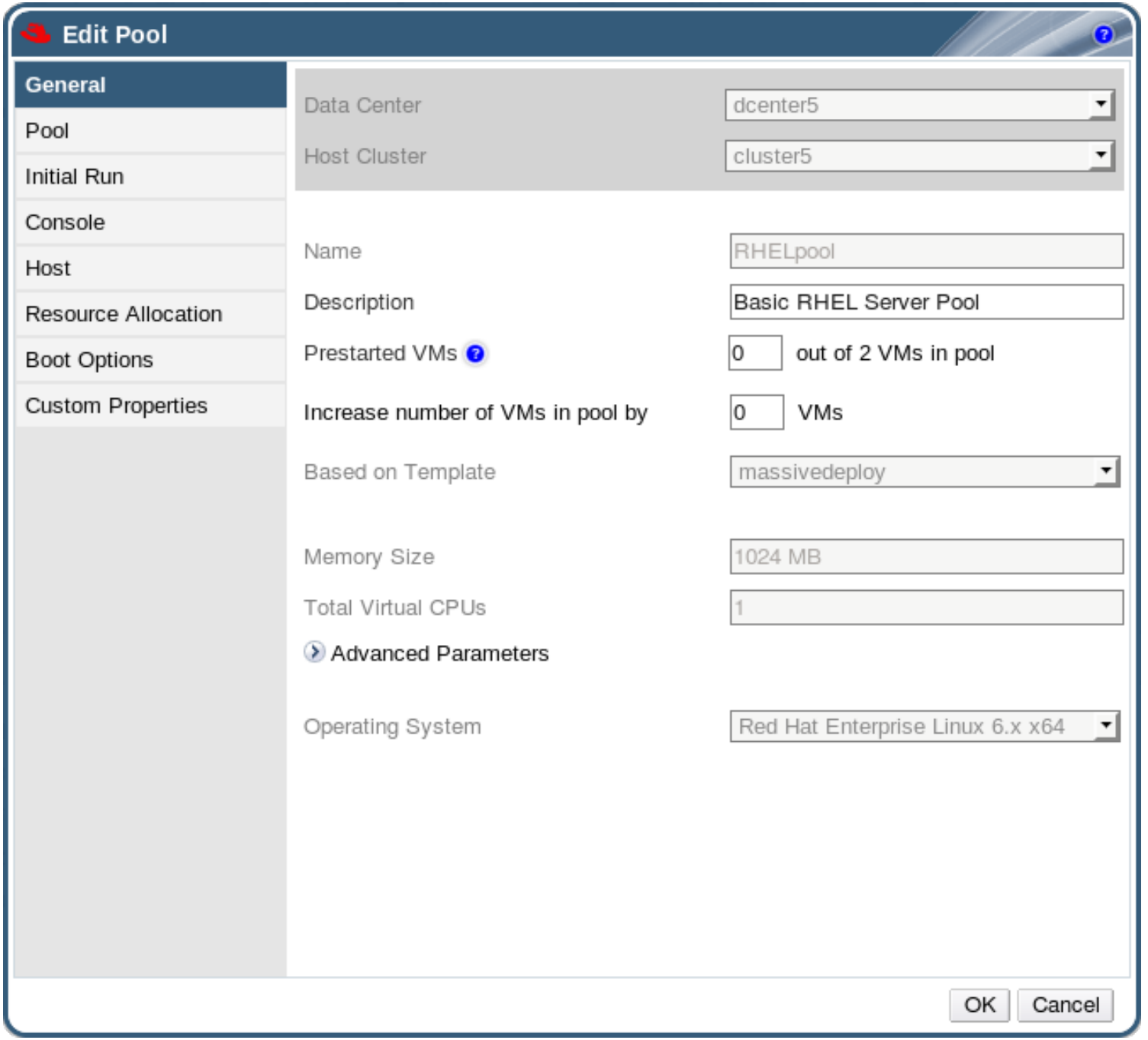
redhat.

Creating and Managing Pools

redhat.







Practice: Creating and Managing Pools

redhat.

Automating RHEL Deployment with cloud-init

redhat.

Practice: Automating RHEL Deployment with cloud-init

redhat.

Summary

DAY THREE

Managing VM Snapshots and Images

Automating VM Deployment

Monitoring and Reporting of RHEV

Advanced RHEV Topics (part one)

Chapter 10: Monitoring and Reporting of RHEV

- Monitoring RHEV
- Generating Reports

redhat.

Goal:

Locate information in the RHEV Administration Portal and generate reports of the RHEV environment.

Objectives:

- Use the search bar and tags to query RHEV.
- Generate reports on RHEV with pre-built reports.

Monitoring RHEV

redhat.

Practice: Monitoring RHEV with the Search Bar and Tags

redhat.

Generating Reports

redhat.

Practice: Generating Reports (Prebuilt)

redhat.

Lab: Monitoring and Reporting of RHEV with Ad Hoc Reports

redhat.

Summary

DAY THREE

Managing VM Snapshots and Images

Automating VM Deployment

Monitoring and Reporting of RHEV

Advanced RHEV Topics (part one)

Chapter 11:
Advanced RHEV Topics

- Backing up and Restoring RHEV
- Creating a Highly Available RHEV Manager
- Exploring Application Programming Interfaces

redhat.

Goal:

Describe backing up and restoring RHEV, making RHEV highly available, and using command line and application programming interfaces.

Objectives:

- Back up and restore RHEV databases and configuration.
- Configure RHEV manager for high availability.
- Access RHEV by utilizing various application programming interfaces.

Backing up and Restoring RHEV

redhat.

Practice: Backing up and Restoring RHEV

redhat.

DAY FOUR

Advanced RHEV Topics (part two)

Installing RHEL Hosts

Migrating VMs and Configuring High Av.

Comprehensive Review

Chapter 11:
Advanced RHEV Topics

- Backing up and Restoring RHEV
- Creating a Highly Available RHEV Manager
- Exploring Application Programming Interfaces

redhat.

Creating a Highly Available RHEV Manager

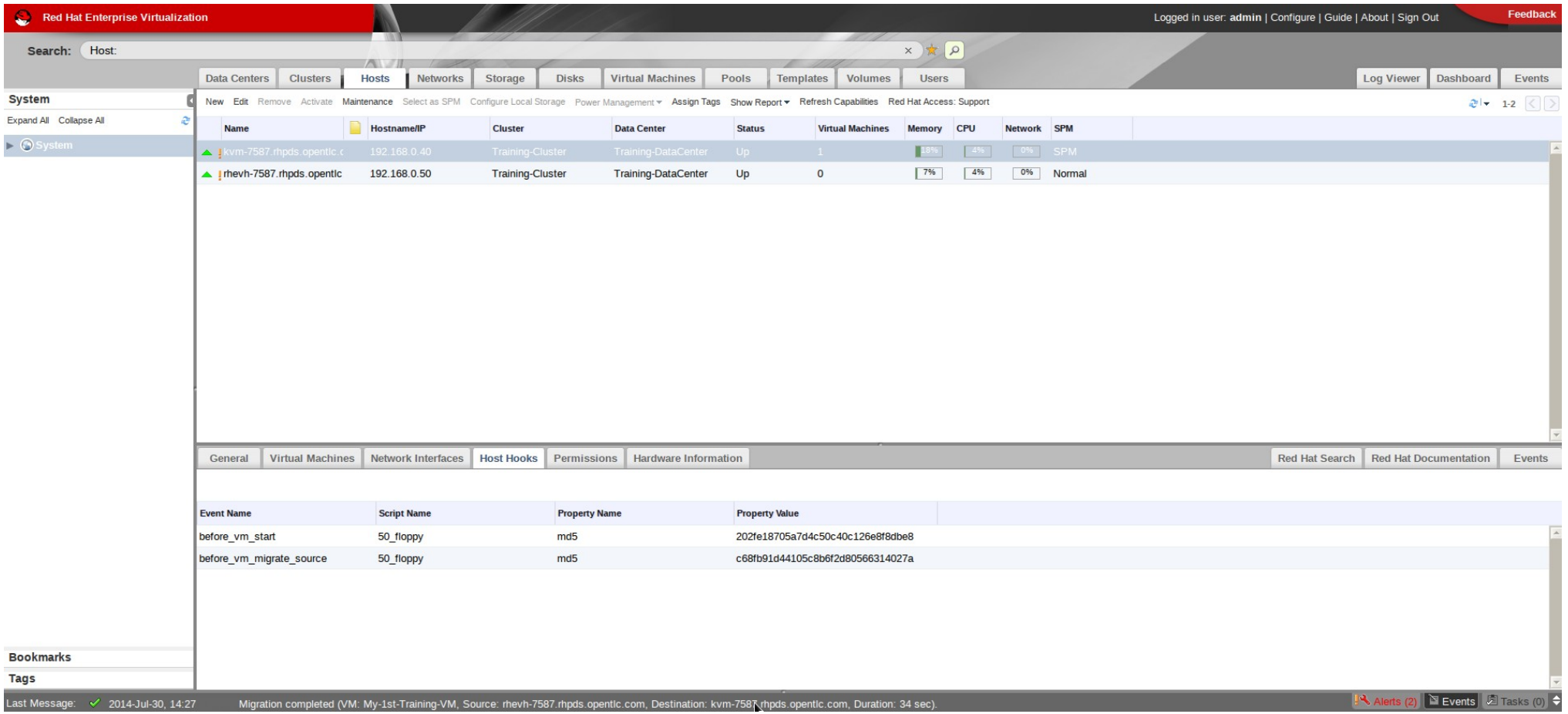
redhat.

Quiz: Creating a Highly Available RHEV Manager

redhat.

Exploring Application Programming Interfaces

redhat.



Quiz: Exploring Application Programming Interfaces

redhat.

Quiz: Exploring Application Programming Interfaces

redhat.

Summary

DAY FOUR

Advanced RHEV Topics (part two)

Installing RHEL Hosts

Migrating VMs and Configuring High Av.

Comprehensive Review

Chapter 12: Installing and Configuring RHEL Hosts

- Converting RHEL to be a RHEV Host

redhat.

Converting RHEL to be a RHEV Host

redhat.

Practice: Converting RHEL to be a RHEV Host

redhat.

Quiz: Installing and Configuring RHEL Hosts

redhat.

Summary

DAY FOUR

Advanced RHEV Topics (part two)

Installing RHEL Hosts

Migrating Vms and Configuring High Av.

Comprehensive Review

Chapter 13: Migrating VMs and Configuring High Availability

- Migrating a Virtual Machine
- Automating Migration
- Configuring High Availability

Goal:

Migrate VMs manually and automatically and configure high availability with live migration.

Objectives:

- Manually migrate a virtual machine.
- Automate migration with cluster policy.
- Configure high availability and live migration.

Migrating a Virtual Machine

redhat.

Practice: Migrating a Virtual Machine

redhat.

Automating Migration

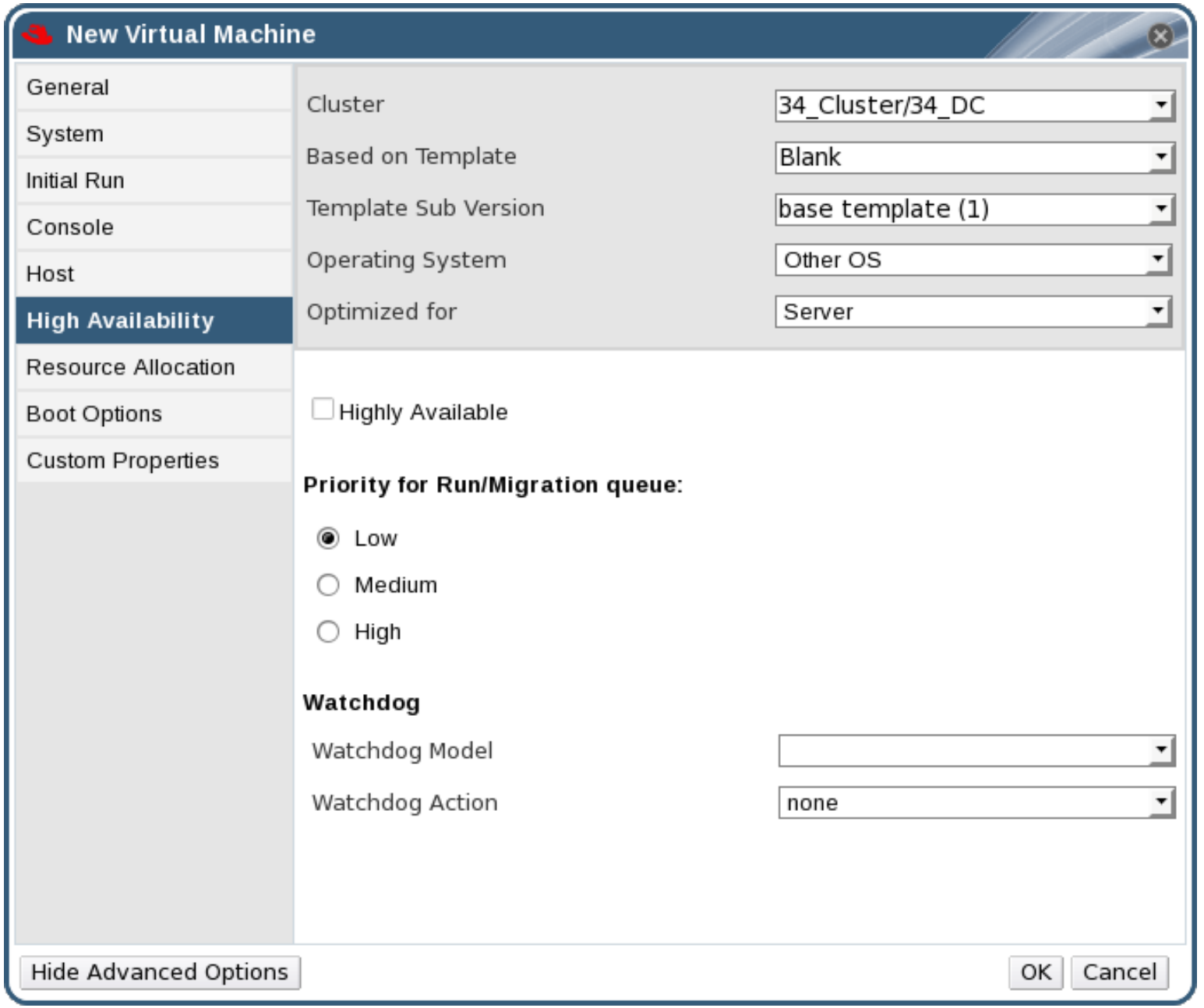
redhat.

Practice: Moving Host into Maintenance Mode

redhat.

Configuring High Availability

redhat.



Practice: Configuring High Availability

redhat.

Quiz: Migrating VMs and Configuring High Availability

redhat.

Summary

DAY FOUR

Advanced RHEV Topics (part two)

Advanced RHEV Topics

Migrating VMs and Configuring High Av.

Comprehensive Review

Chapter 14: Comprehensive Review

- Comprehensive Review
- Comprehensive Review: Installation
- Comprehensive Review: Troubleshooting
- Comprehensive Review: Management

redhat.

Goal:

Practice the skills attained throughout the course.

Objectives:

- Review the objectives from the course.

Comprehensive Review

redhat.

Comprehensive Review: Installation

Comprehensive Review: Troubleshooting

redhat.

Comprehensive Review: Management

redhat.

Summary