redhat.

AUTOMATION WITH ANSIBLE

DO407

DO407-A2.3-en-2-20170725

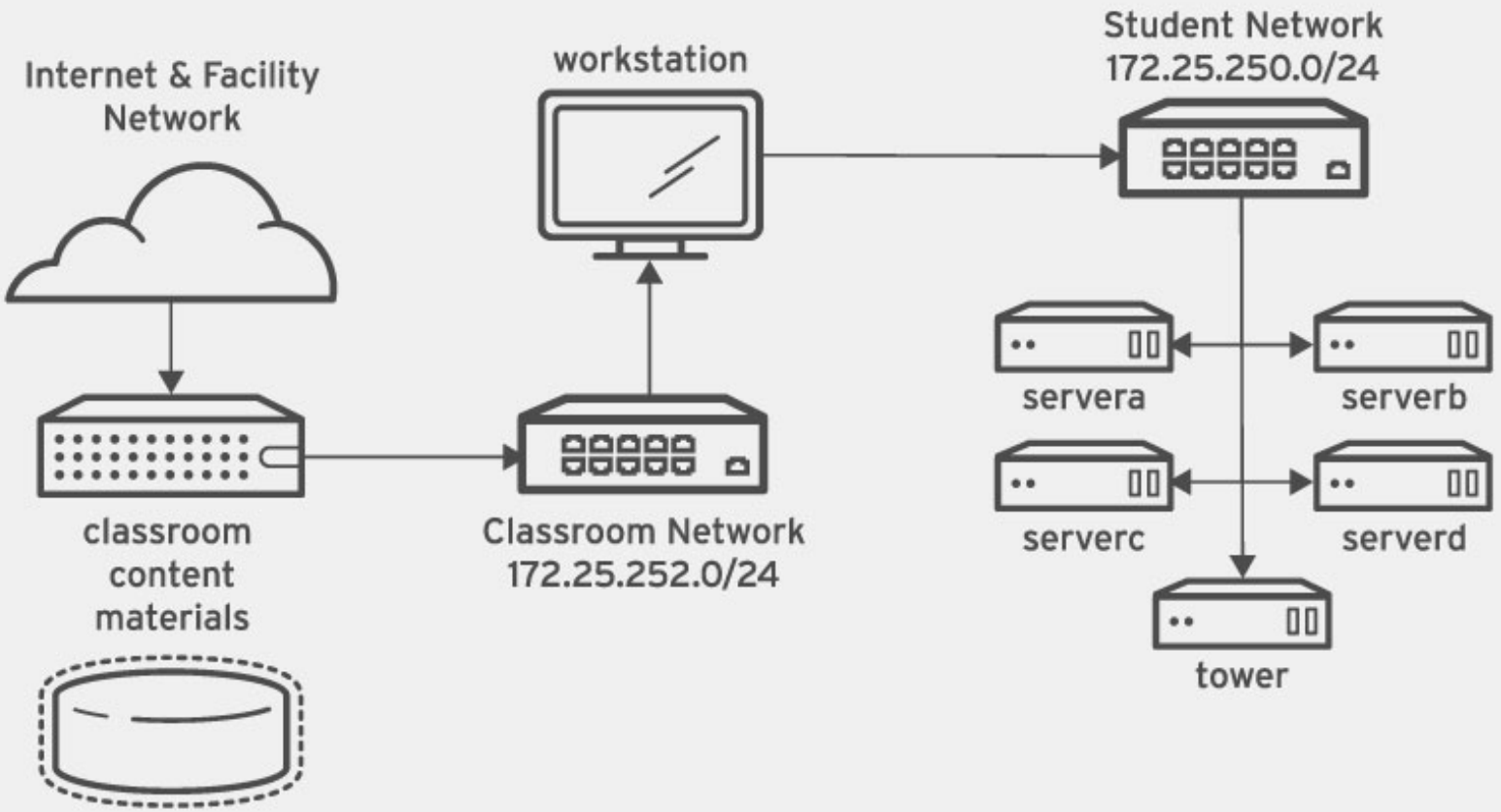
Welcome

Course Objectives and Structure

Schedule

DAY ONE	DAY TWO	DAY THREE	DAY FOUR
Introducing Ansible	Managing Variables and Inclusions (continued)	Implementing Roles (continued)	Implementing Ansible Tower
Deploying Ansible	Implementing Task Control	Optimizing Ansible	Implementing Ansible in a DevOps Environment
Implementing Playbooks	Implementing Jinja2 Templates	Implementing Ansible Vault	Comprehensive Review: Automation with Ansible
Managing Variables and Inclusions	Implementing Roles	Troubleshooting Ansible	

Orientation to the Classroom Network



Internationalization

Chapter 1: Introducing Ansible

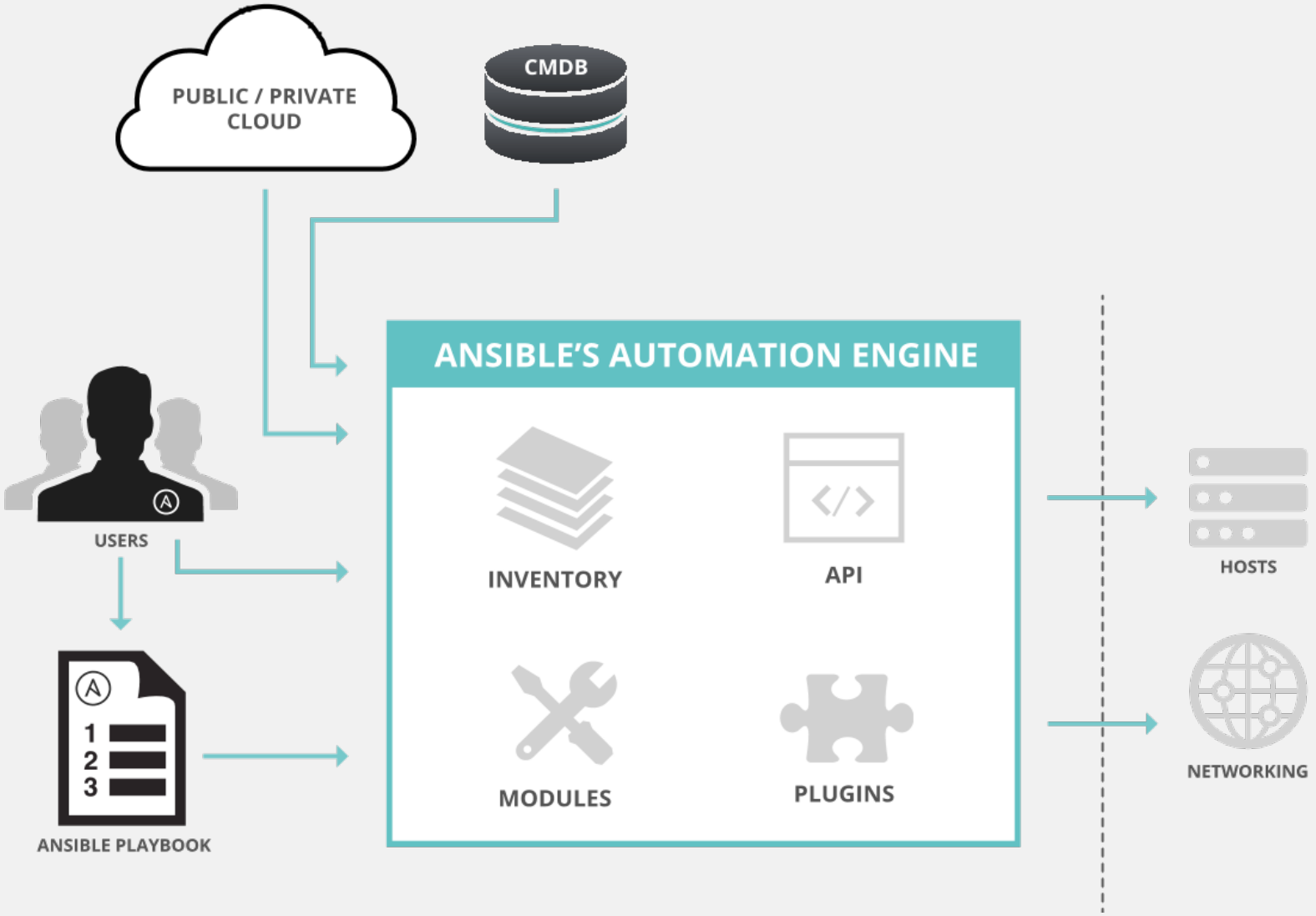
Goal:

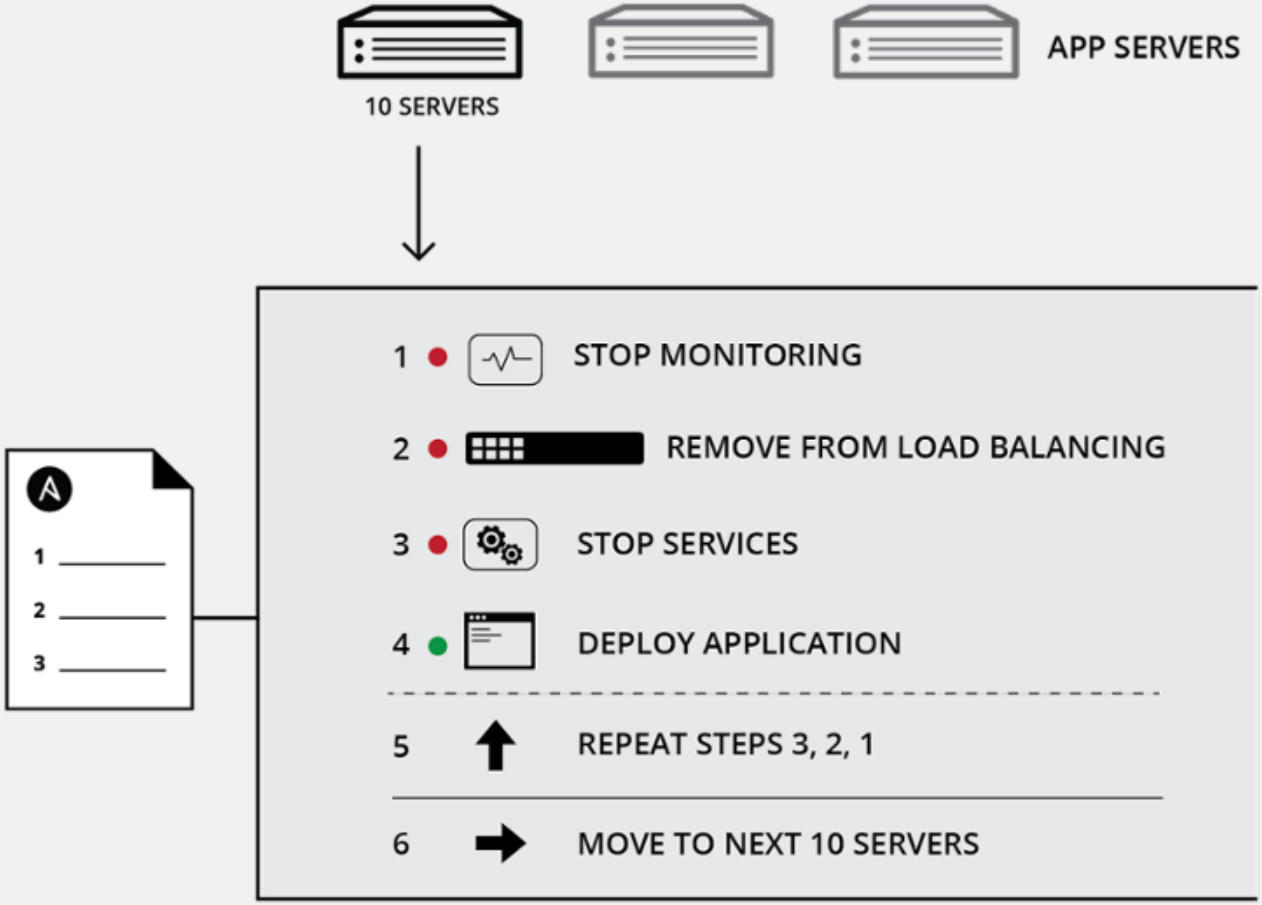
- Describe the terminology and architecture of Ansible.

Objectives:

- Describe Ansible concepts, reference architecture, and use cases.
- Install Ansible.

Overview of Ansible Architecture





Quiz: Ansible Architecture

Installing Ansible

Guided Exercise: Installing Ansible

Summary

Chapter 2: Deploying Ansible

Goal:

- Configure Ansible and run ad hoc commands.

Objectives:

- Describe Ansible inventory concepts and build a static inventory.
- Manage Ansible configuration files.
- Run Ansible ad hoc commands.
- Manage dynamic inventory.

Building an Ansible Inventory

Quiz: Building an Ansible Inventory

Managing Ansible Configuration Files

Guided Exercise: Managing Ansible Configuration Files

Running Ad Hoc Commands

Guided Exercise: Running Ad Hoc Commands

Managing Dynamic Inventories

Guided Exercise: Managing Dynamic Inventories

Lab: Deploying Ansible

Summary

Chapter 3: Implementing Playbooks

Goal:

- Write Ansible plays and execute a playbook.

Objectives:

- Write a basic Ansible Playbook and run it using the ansible-playbook command.
- Write and run a more sophisticated Ansible Playbook using multiple plays and privilege escalation.

Writing and Running Playbooks

Guided Exercise: Writing and Running Playbooks

Implementing Multiple Plays

Guided Exercise: Implementing Multiple Plays

Lab: Implementing Playbooks

Summary

Chapter 4: Managing Variables and Inclusions

Goal:

- To describe variable scope and precedence, manage variables and facts in a play, and manage inclusions.

Objectives:

- Manage variables in Ansible projects
- Manage Facts in Playbooks
- Include variables and tasks from external files into a playbook

Managing Variables

Guided Exercise: Managing Variables

Managing Facts

Guided Exercise: Managing Facts

Managing Inclusions

Guided Exercise: Managing Inclusions

Lab: Managing Variables and Inclusions

Summary

Chapter 5: Implementing Task Control

Goal:

- Manage task control, handlers, and tags in Ansible playbooks.

Objectives:

- Construct conditionals and loops in a playbook
- Implement handlers in a playbook
- Implement tags in a playbook
- Resolve errors in a playbook

Constructing Flow Control

Guided Exercise: Constructing Flow Control

Implementing Handlers

Guided Exercise: Implementing Handlers

Implementing Tags

Guided Exercise: Implementing Tags

Handling Errors

Guided Exercise: Handling Errors

Lab: Implementing Task Control

Summary

Chapter 6: Implementing Jinja2 Templates

Goal:

- Implement a Jinja2 template.

Objectives:

- Describe Jinja2 templates.
- Implement Jinja2 templates.

Describing Jinja2 Templates

Quiz: Describing Jinja2 Templates

Implementing Jinja2 Templates

Guided Exercise: Implementing Jinja2 Templates

Lab: Implementing Jinja2 Templates

Summary

Chapter 7: Implementing Roles

Goal:

- Create and manage roles.

Objectives:

- Describe the structure and behavior of a role.
- Create a role.
- Deploy roles with Ansible Galaxy.

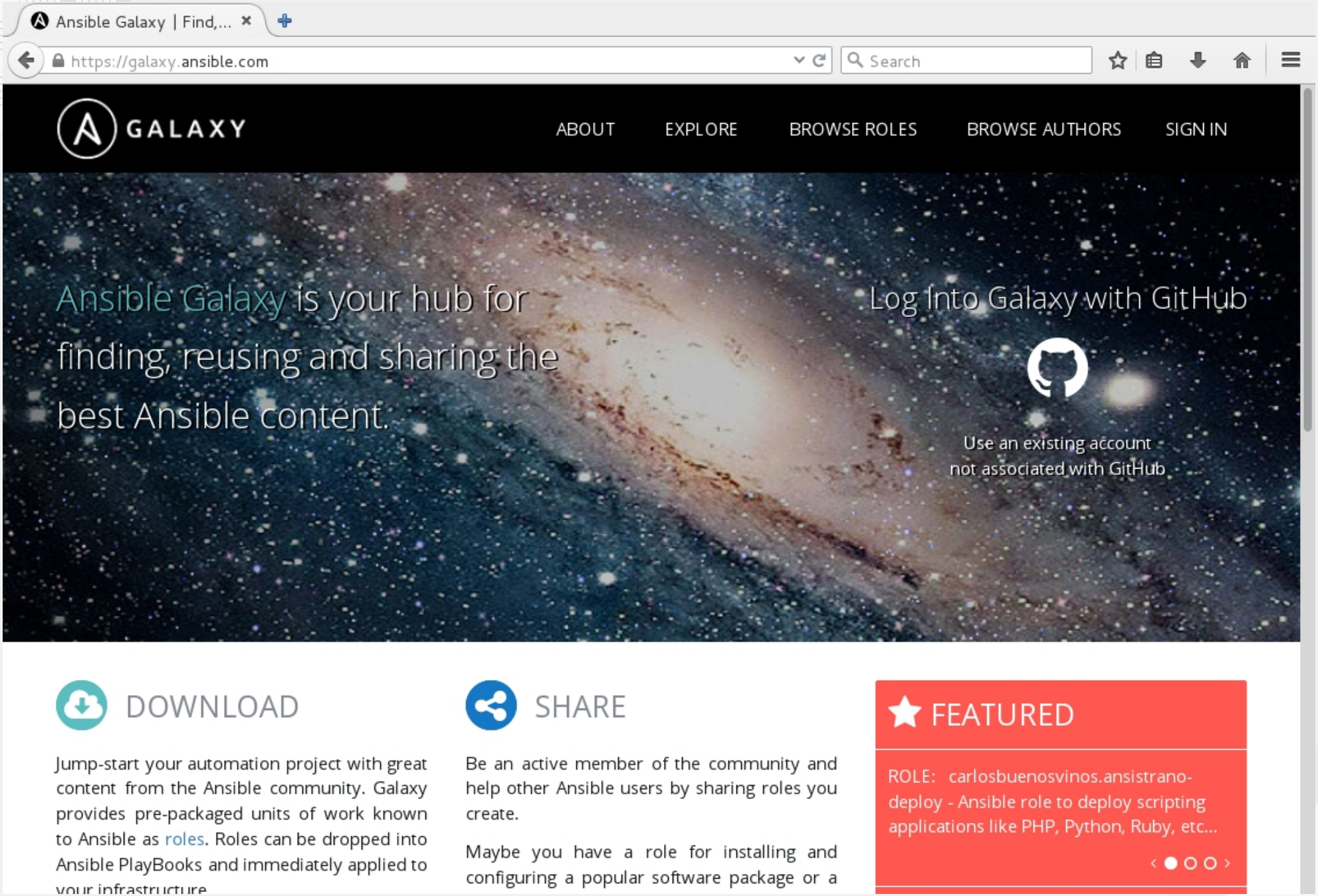
Describing Role Structure

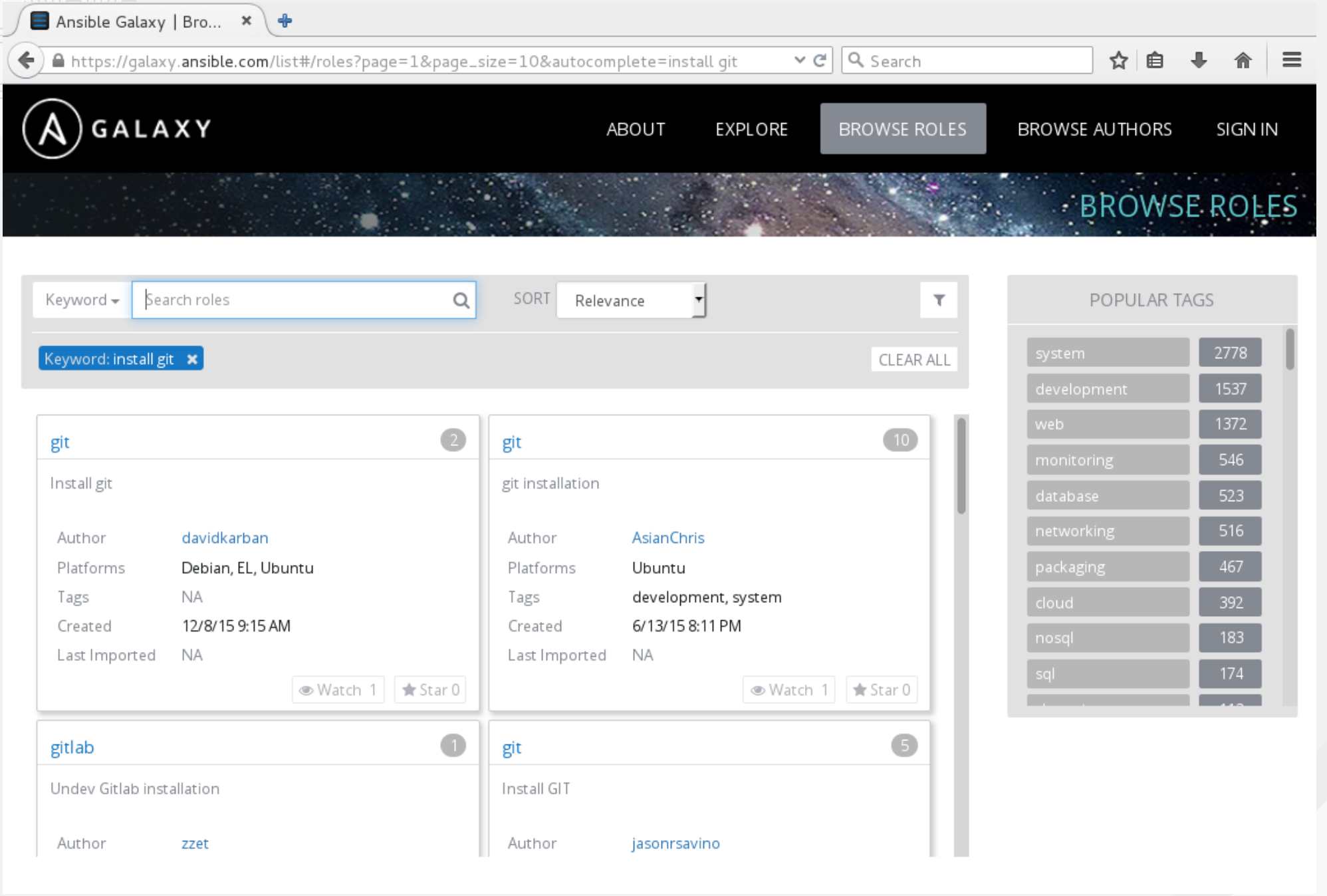
Quiz: Describing Role Structure

Creating Roles

Guided Exercise: Creating Roles

Deploying Roles with Ansible Galaxy





Guided Exercise: Deploying Roles with Ansible Galaxy

Lab: Implementing Roles

Summary

Chapter 8: Optimizing Ansible

Goal:

- Tune how Ansible executes plays and tasks using host patterns, delegation, and parallelism

Objectives:

- Specify managed hosts for plays and ad hoc commands using host patterns
- Configure delegation in a playbook
- Configure parallelism in Ansible

Selecting Hosts with Host Patterns

Guided Exercise: Selecting Hosts with Host Patterns

Configuring Delegation

Guided Exercise: Configuring Delegation

Configuring Parallelism

Guided Exercise: Configuring Parallelism

Lab: Optimizing Ansible

Summary

Chapter 9: Implementing Ansible Vault

Goal:

- Manage encryption with Ansible Vault.

Objectives:

- Create, edit, rekey, encrypt, and decrypt files.
- Run a playbook with Ansible Vault.

Configuring Ansible Vault

Guided Exercise: Configuring Ansible Vault

Executing with Ansible Vault

Guided Exercise: Executing with Ansible Vault

Lab: Implementing Ansible Vault

Summary

Chapter 10: Troubleshooting Ansible

Goal:

- Troubleshoot playbooks and managed hosts.

Objectives:

- Troubleshooting playbooks.
- Troubleshooting managed hosts.

Troubleshooting Playbooks

Guided Exercise: Troubleshooting Playbooks

Troubleshooting Ansible Managed Hosts

Guided Exercise: Troubleshooting Ansible Managed Hosts

Lab: Troubleshooting Ansible

Summary

Chapter 11: Implementing Ansible Tower

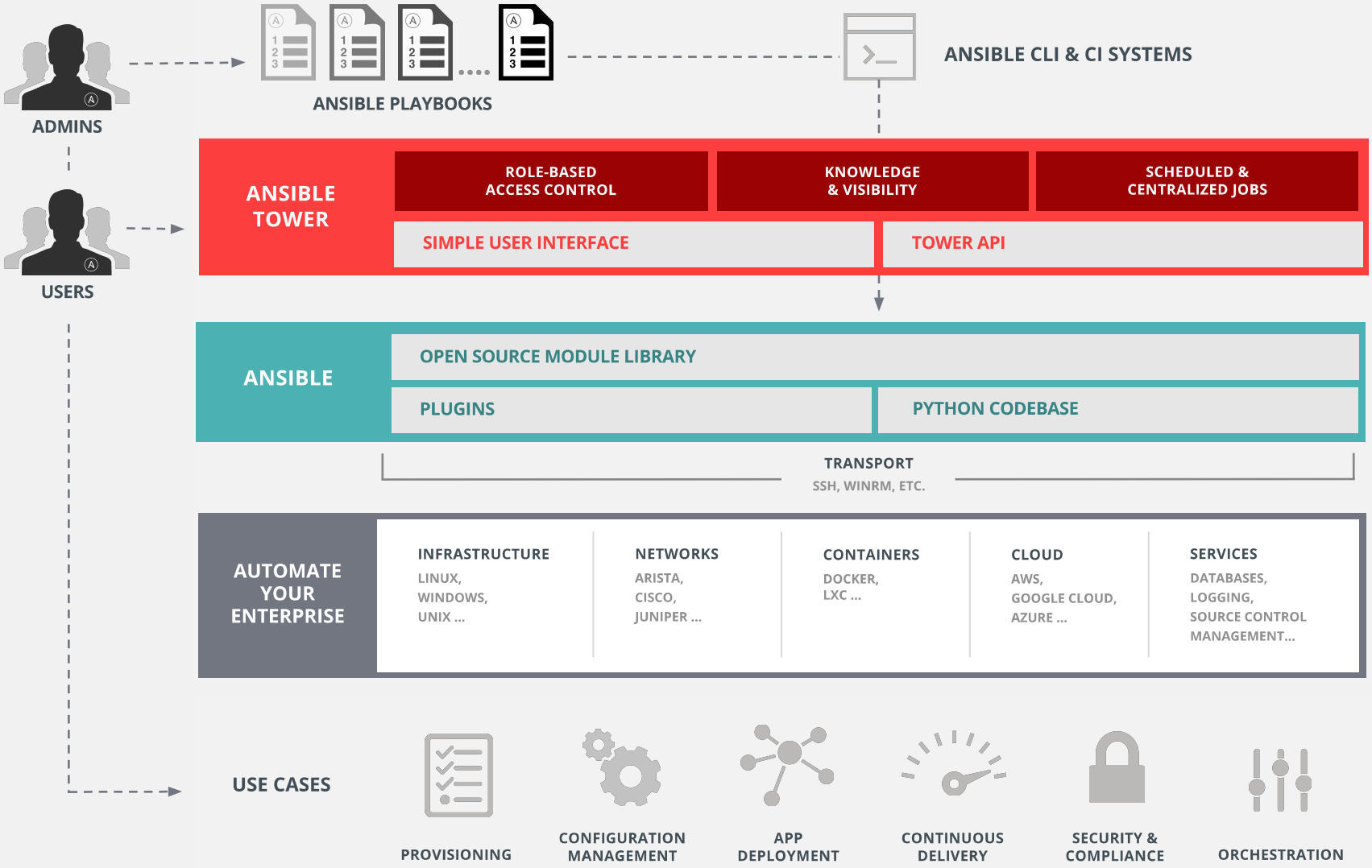
Goal:

- Implement Ansible Tower.

Objectives:

- Describe the architecture, use cases, and installation requirements of Ansible Tower.
- Install a new Ansible Tower on a single node using the setup.sh script.
- Navigate and describe the Ansible Tower web user interface, and successfully launch a job using the demo job template, project, credential, and inventory.

Introduction to Ansible Tower

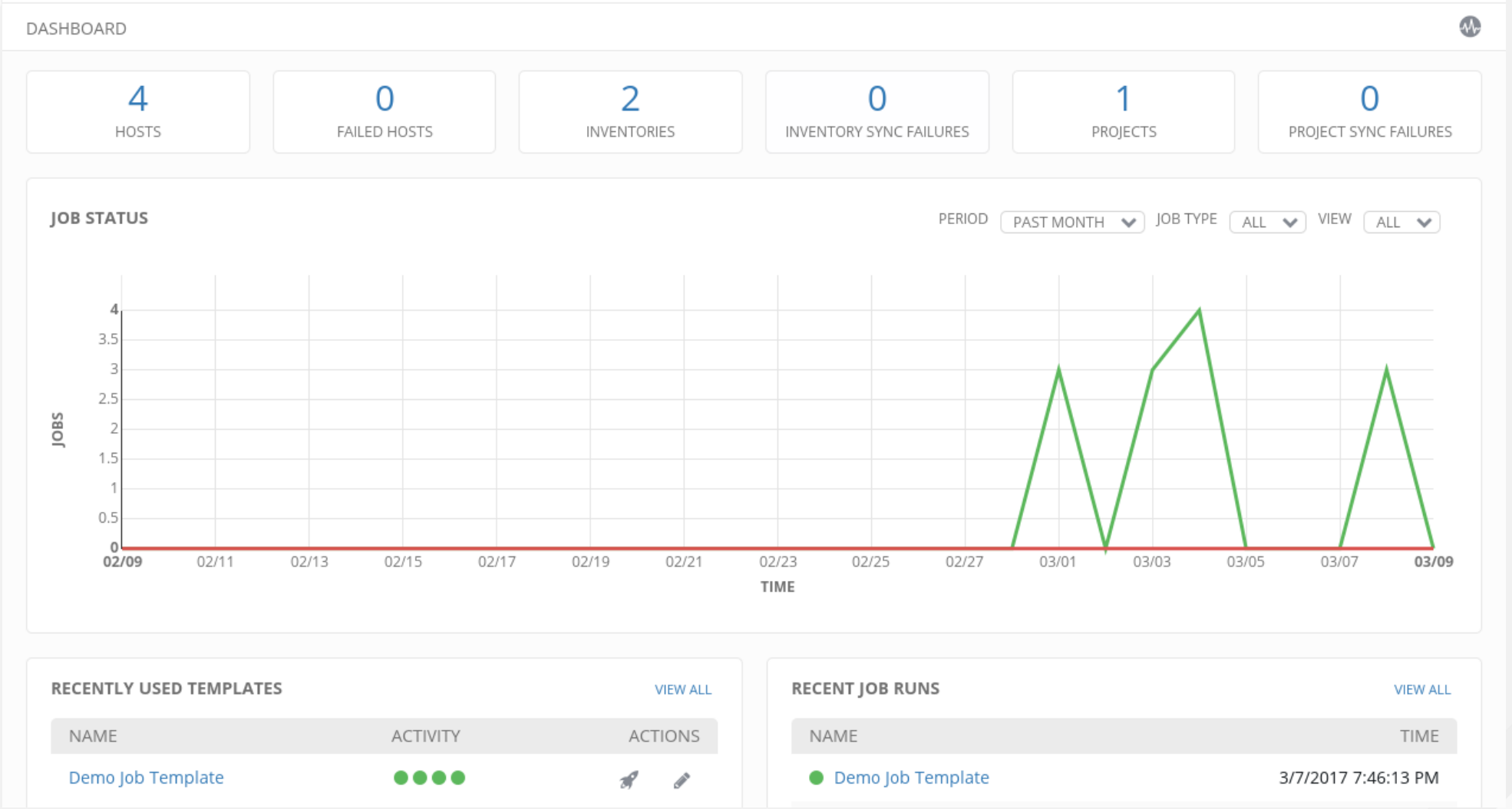


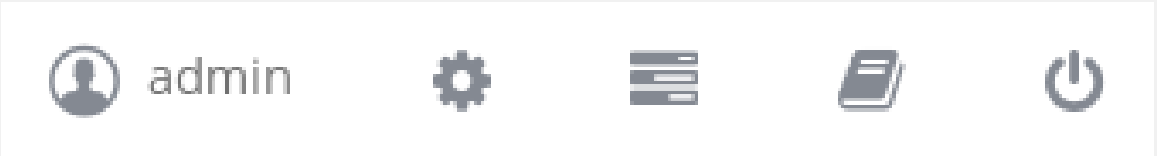
Quiz: Introduction to Ansible Tower

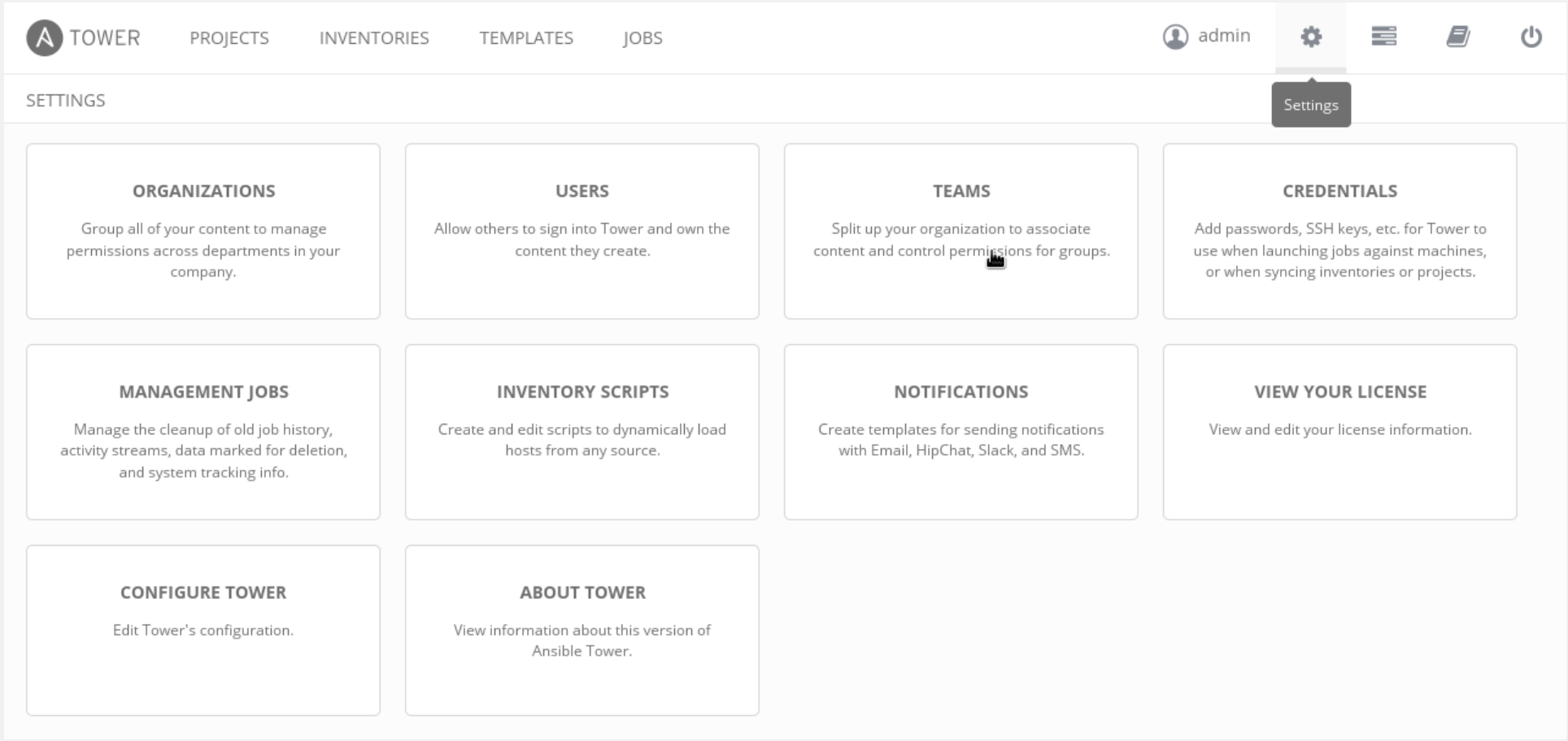
Installing Ansible Tower

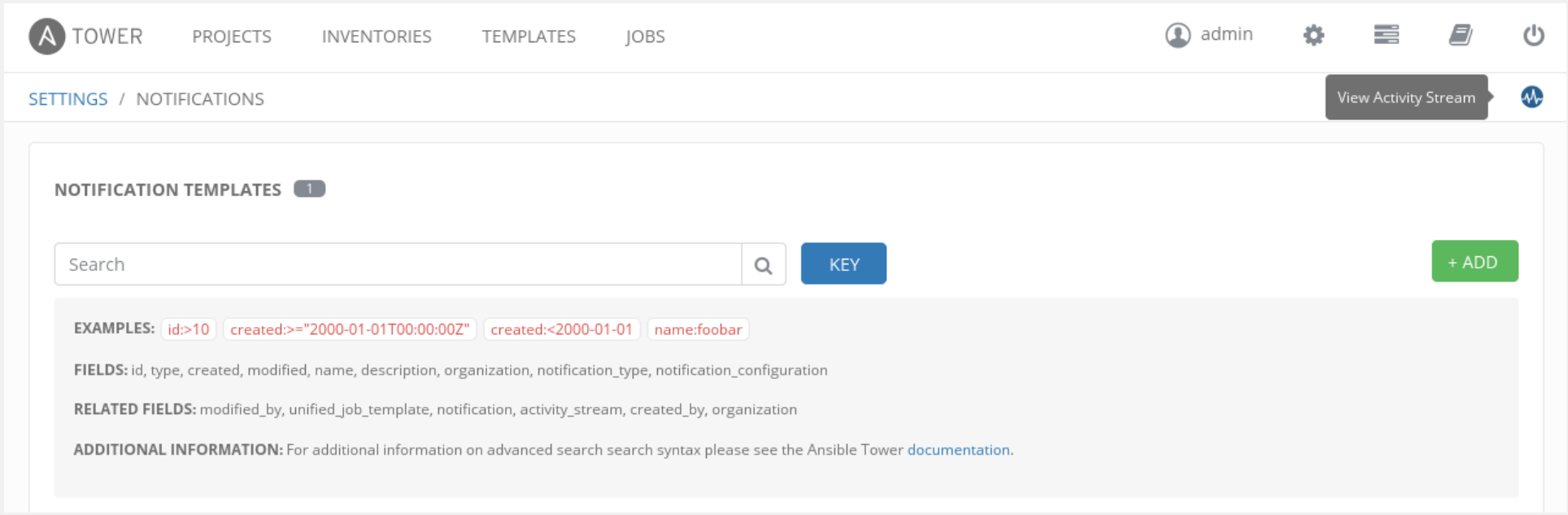
Guided Exercise: Installing Ansible Tower

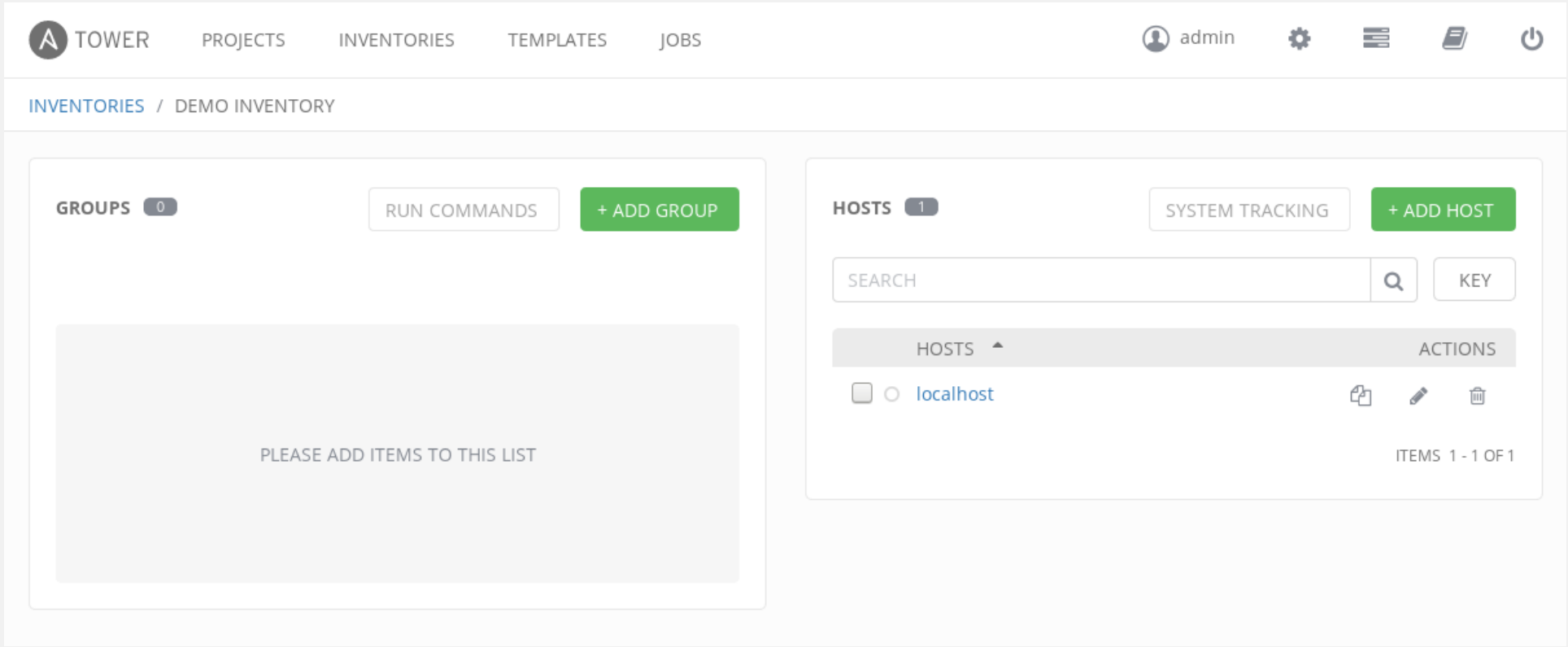
Navigating the Ansible Tower Web Interface

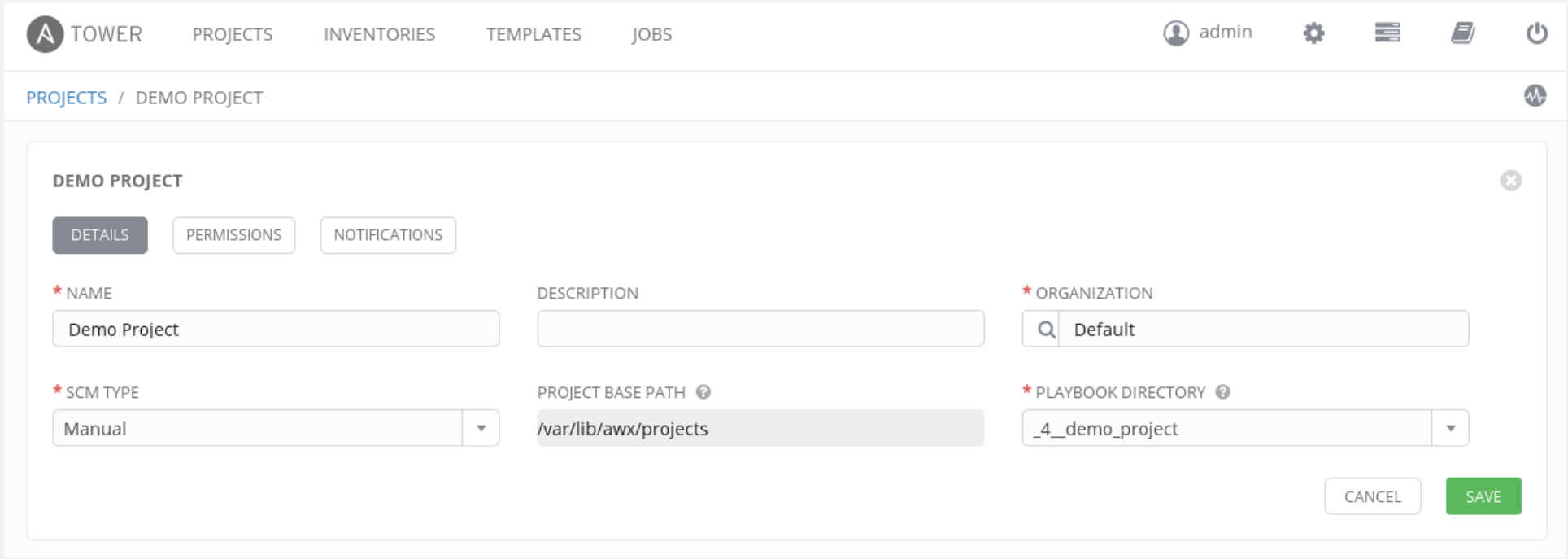


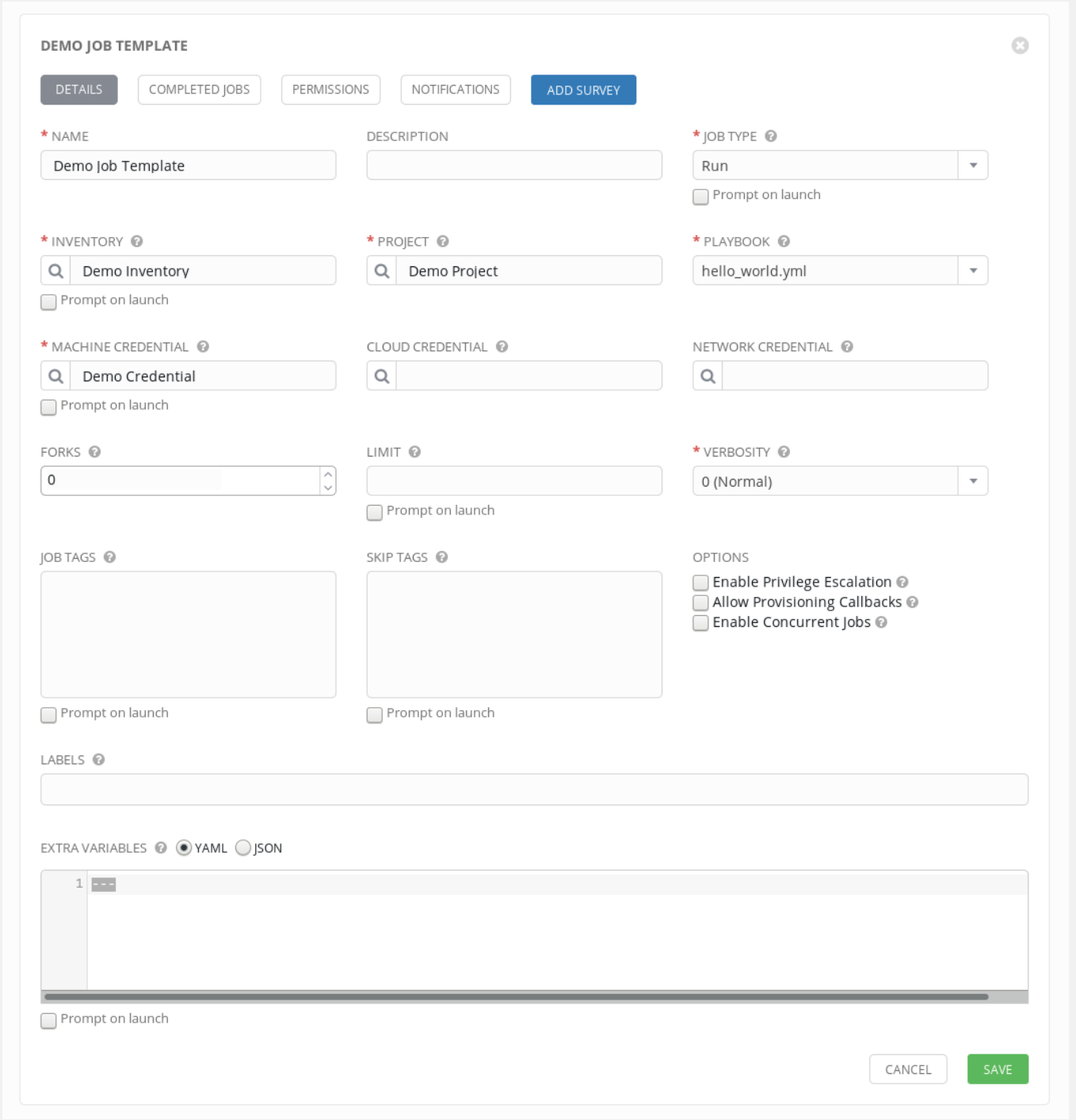


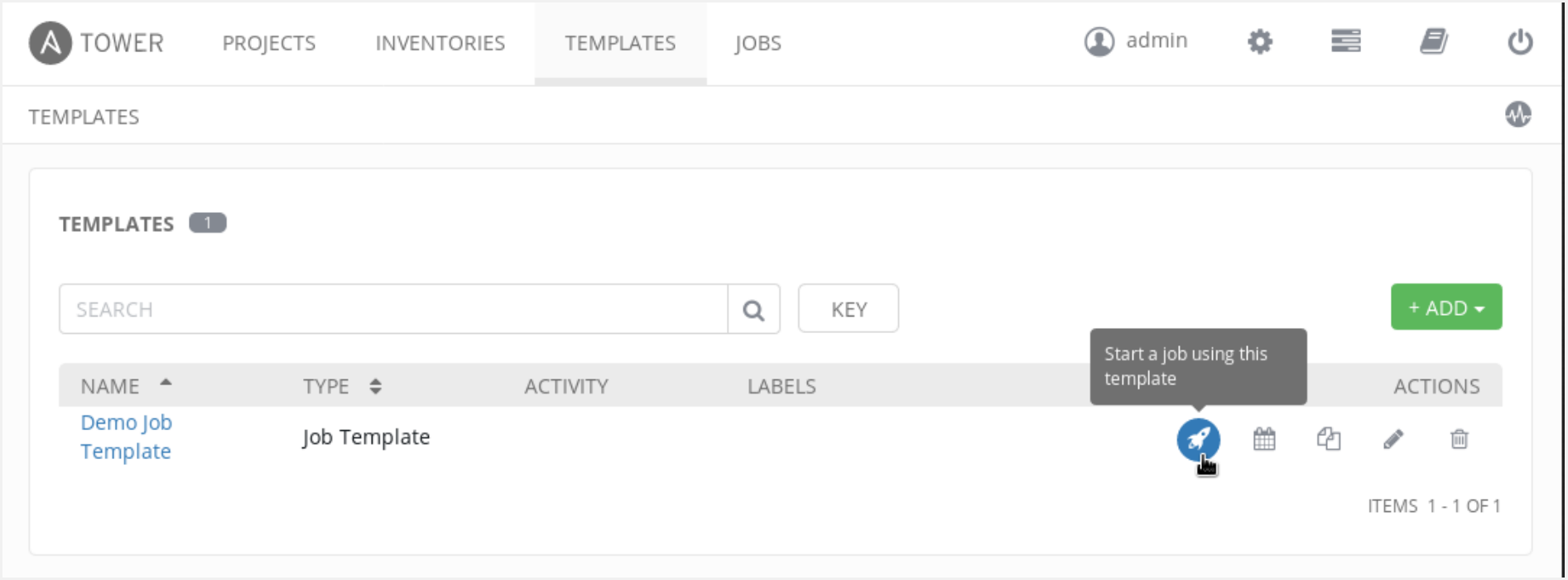


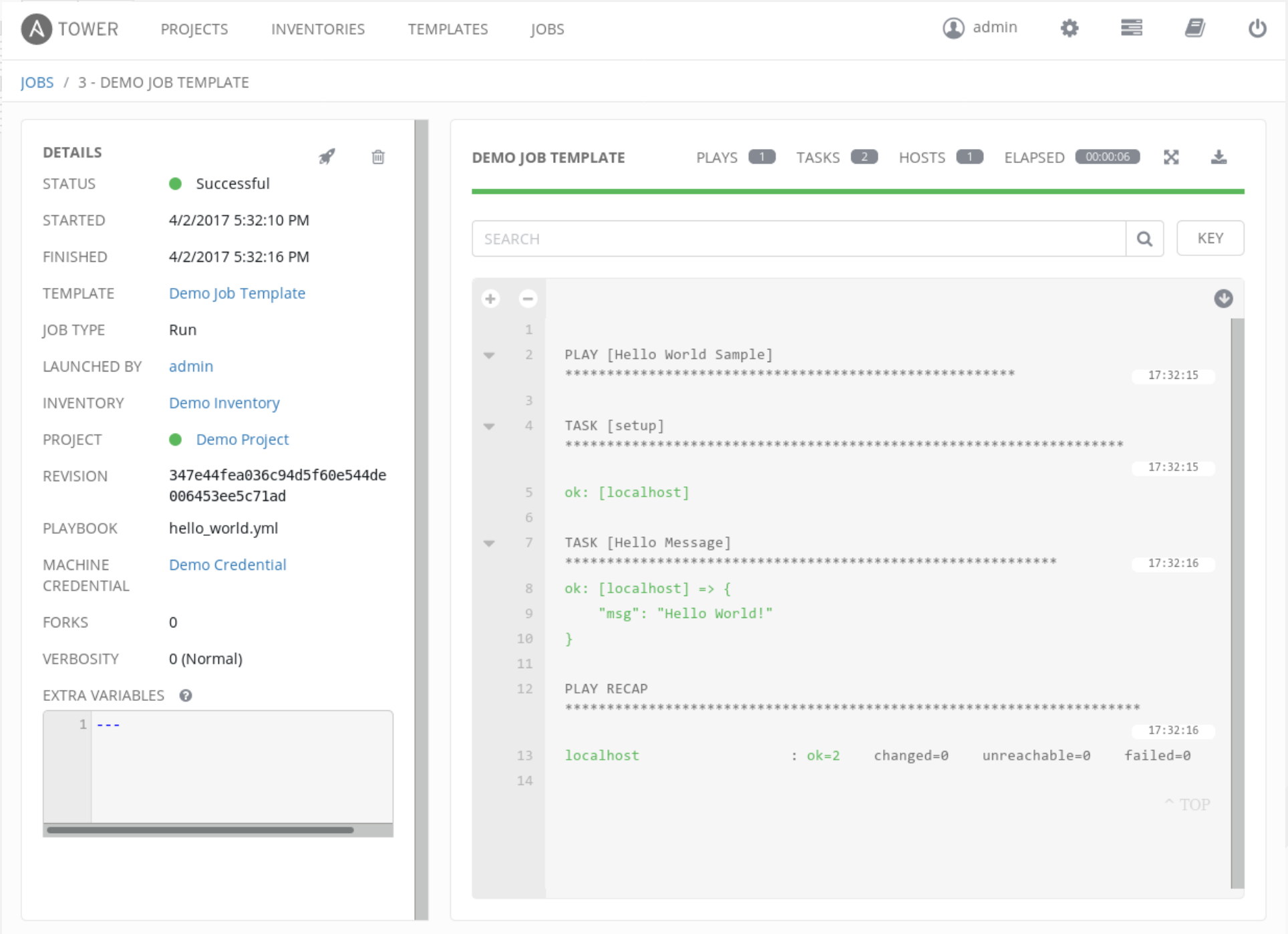


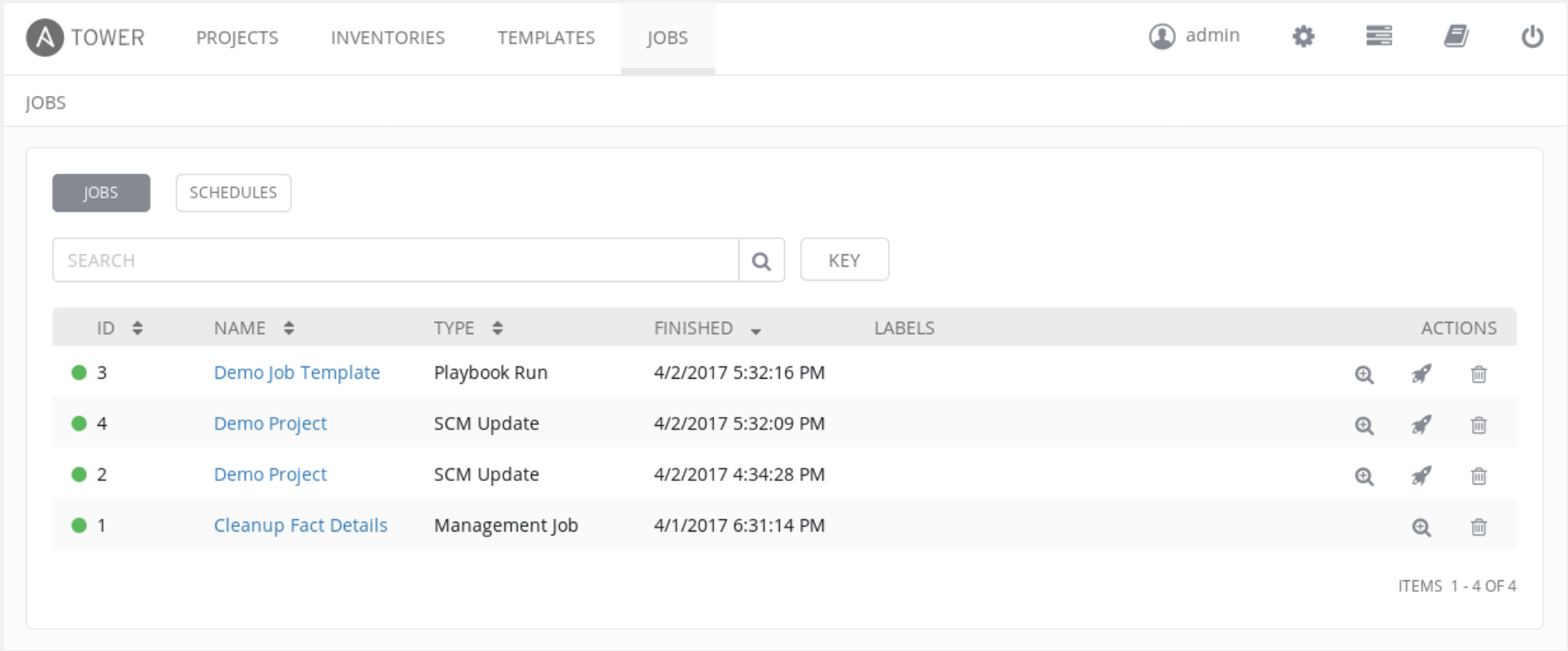












Guided Exercise: Navigating the Ansible Tower Web Interface

Quiz: Implementing Ansible Tower

Summary

Chapter 12: Implementing Ansible in a DevOps Environment

Goal:

- Implement Ansible in a DevOps environment using Vagrant.

Objectives:

- Describe Ansible in a DevOps environment and provision Vagrant machines.
- Deploy Vagrant in a DevOps environment.

Provisioning Vagrant Machines

Guided Exercise: Provisioning Vagrant Machines

Deploying Vagrant in a DevOps Environment

Guided Exercise: Deploying Vagrant in a DevOps Environment

Lab: Implementing Ansible in a DevOps Environment

Summary

Chapter 13: Comprehensive Review: Automation with Ansible

Goal:

- Demonstrate skills learned in this course by installing, optimizing, and configuring Ansible for the management of managed hosts.

Sections:

- Comprehensive Review

Comprehensive Review

Lab: Deploying Ansible

Lab: Creating Playbooks

Lab: Creating Roles and Using Dynamic Inventory

Lab: Optimizing Ansible

Lab: Deploying Ansible Tower and Executing Jobs

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THANK YOU!