



# Module 6

## Terraform Cloud



# Agenda

- Terraform Editions
- Introduction to Terraform Cloud
- Terraform Cloud Workspaces
- Lab 6



# Terraform Editions

- Terraform Open Source

Terraform open source is a free, downloadable tool that you interact with on the command line. It lets you provision infrastructure on any cloud provider and manages configuration, plugins, infrastructure, and state.

- Terraform Cloud

SaaS application that runs Terraform in a stable, remote environment and securely stores state and secrets

- Terraform Enterprise

Terraform Enterprise allows you to set up a self-hosted distribution of Terraform Cloud. It offers customizable resource limits and is ideal for organizations with strict security and compliance requirements.



[Why Terraform Enterprise ?](#)

[Recommended Enterprise Patterns](#)



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# Introduction to Terraform Cloud

- Run Terraform from the local CLI or in a remote environment, trigger operations through your version control system, or use an API to integrate Terraform Cloud into your existing workflows.
- Ensure that only approved teams can access, edit, and provision infrastructure with Terraform Cloud workspaces, single sign-on, and role-based access controls.
- Securely store and version Terraform state remotely, with encryption at rest. Versioned state files allow you to access state file history.
- Publish configuration modules in the Terraform Cloud private registry that define approved infrastructure patterns.
- Enforce best practices and security rules with the Sentinel embedded policy as code framework. For example, policies may restrict regions for production deployments.



# Terraform Cloud Workspaces

- Not the same as workspaces on your local machine
- Terraform Cloud manages infrastructure collections with *workspaces* instead of directories. A workspace contains everything Terraform needs to manage a given collection of infrastructure, and separate workspaces function like completely separate working directories.

Component	Local Terraform	Terraform Cloud
Terraform configuration	On disk	In linked version control repository, or periodically uploaded via API/CLI
Variable values	As <code>.tfvars</code> files, as CLI arguments, or in shell environment	In workspace
State	On disk or in remote backend	In workspace
Credentials and secrets	In shell environment or entered at prompts	In workspace, stored as sensitive variables

<https://developer.hashicorp.com/terraform/cloud-docs/overview>



# Lab 6

Introducing Terraform Cloud

This lab introduces Terraform Cloud and will demonstrate moving state storage and command execution off the local machine and into Terraform Cloud.

