

# HASHICORP TERRAFORM

## Provision and Manage any Infrastructure

### Moving from a Static to Dynamic World

#### The challenge of adopting multi-cloud

In the past, infrastructure was largely comprised of dedicated servers in a private datacenter. Recently, there has been a shift away from traditional static models to leveraging a pool of compute resources that are available on demand, the cloud. This new, dynamic world of infrastructure has created pressure for organizations to develop systems of engagement (i.e. applications) that are both scalable and rapidly deployable. However, these new systems of engagement require connectivity to systems of record (core databases, mainframes, etc.); most of which often still reside on-premise due to regulatory or security compliance. The challenge becomes: how do operators provision and manage infrastructure in multiple environments at scale?

#### Pre-configured, Repeatable Infrastructure Deployments

HashiCorp Terraform and VMware NSX-T Data Center enable organizations to address the challenges of moving to a dynamic, multi-cloud environment by combining automated infrastructure provisioning with virtualized networking. Operators can codify NSX-T resources in Terraform configuration to ensure that newly created infrastructure is built with the proper networking constructs which can then be managed through the NSX-T platform.



#### VMWARE NSX-T DATA CENTER

NSX-T Data Center virtualizes all networking and security functions to enable faster deployment and complete lifecycle automation of applications consistently across all sites and clouds. Automating traditional IT tasks, new cloud-native functions, and ongoing operations empowers IT organizations and developers to move at the increasing speed of business.

#### AUTOMATION WITH TERRAFORM

- Deploy traditional and new apps faster through automated, virtualized networking & security
- Automate the complete lifecycle of all apps from deployment to operations to retirement
- Apply automated networking and security consistently across different apps, sites, and clouds

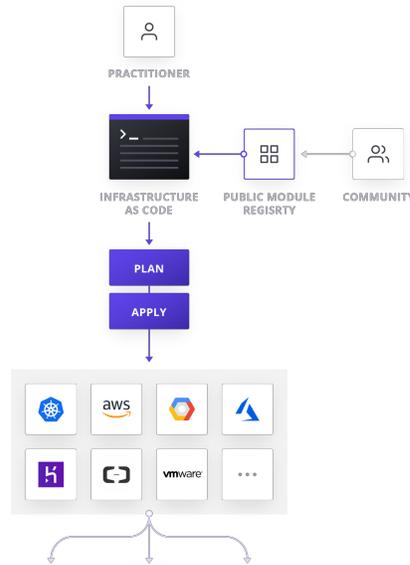


Figure 1: A step by step overview of the Terraform provisioning process.

- Manage multiple clouds and private infrastructure with a single workflow to learn, secure, govern, and audit.
- Infrastructure as Code enables version control and automation, reducing human error.
- Easily provision infrastructure on demand, with provider support for most third-party services as well as public and private clouds.

“The HashiCorp Product Suite provides us with modular solutions that are exceptional at what they do and will grow with us over the next decade, allowing us to provision any infrastructure for any application we are developing.”

— JOHN MITCHELL  
CHIEF DEVELOPMENT ARCHITECT  
SAP ARIBA

**HASHICORP COMPANY OVERVIEW**

HashiCorp is a cloud infrastructure automation company that enables organizations to adopt consistent workflows to provision, secure, connect, and run any infrastructure for any application.

HashiCorp offers four products that address the challenges of migrating to dynamic, multi-cloud environments: Terraform, Vault, Consul, and Nomad.

**AUTOMATE YOUR INFRASTRUCTURE**

Enterprises who are adopting modern, cloud-native software development practices use HashiCorp Terraform to automate workloads across public and private clouds with NSX-T Data Center.

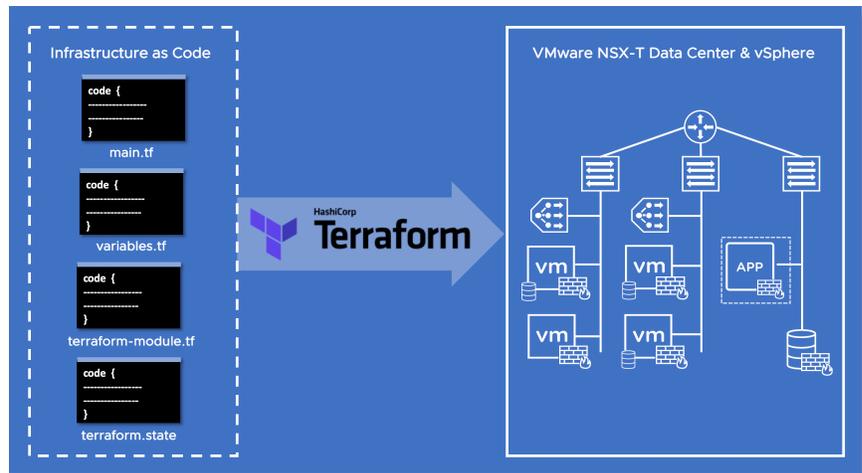
**How is Terraform with NSX-T Data Center Different than Other Options in the Market?**

HashiCorp Terraform enables NSX users to provision multiple clouds and services in the same workflow, making deployments efficient and repeatable. Rather than manually provisioning infrastructure through cloud native tools and then layering on NSX networking and security rules, Terraform allows operators to automate these provisioning tasks.

**How it Works**

Terraform uses an Infrastructure as Code methodology. Operators use the human-readable HashiCorp Configuration Language (HCL) to write the desired compute resources, networking rules, and storage resources into a Terraform configuration file, which can then be re-used and versioned across organizations.

1. Terraform supports over 190 providers. Providers enable operators to incorporate multiple cloud providers and third-party services through a single centralized workflow.
2. Users declare desired resources and services in configuration files to modify environments without having to re-provision the entire infrastructure.
3. Terraform state files contain the most recent deployment of infrastructure. The *plan* command checks the most recent state file and then details any changes prior to executing.
4. For larger organizations, Terraform Enterprise adds collaboration and governance capabilities such as VCS integration, remote state file management, and policy as code.



**Figure 2:** Terraform configuration files provision network assets such as load balancers, switches, routers, and firewalls; and application assets such as VMs, databases, and web servers in a VMware data center environment.

**Learn More**

To get started automating applications and network resources with HashiCorp and VMware, visit the NSX-T Terraform Provider page at <https://www.terraform.io/docs/providers/nsxt/index.html> or contact your HashiCorp or VMware partner or sales representative.

