

# What & Why Terraform? Cloud Infrastructure Automation Certification [Terraform]



August 26, 2021 by [Sandeep Kumar](#) [Leave a Comment](#)

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In this post, I will share some quick tips, including Q/A's and useful links that are very helpful in learning Terraform and getting certified, which will help you get a better job.

On our **Day 1** Live Session, we have covered the basics of Infrastructure as Code (IaC), DevOps, and Terraform.

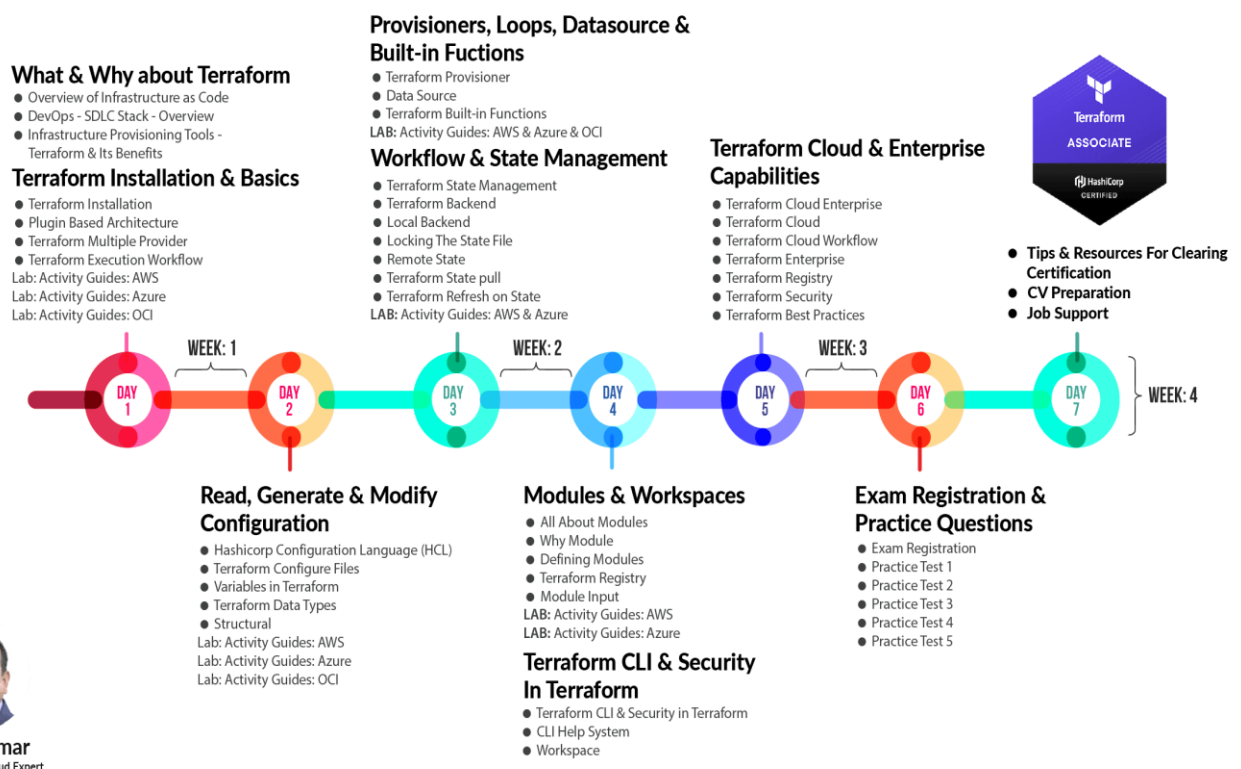
In this training program, we cover [30+ hands-on labs](#). You can check the full roadmap from the image below:



## HashiCorp Infrastructure Automation Certification- Terraform



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So, here are some of the Q/A's asked during the Live session from Module 1: What & Why about Terraform.

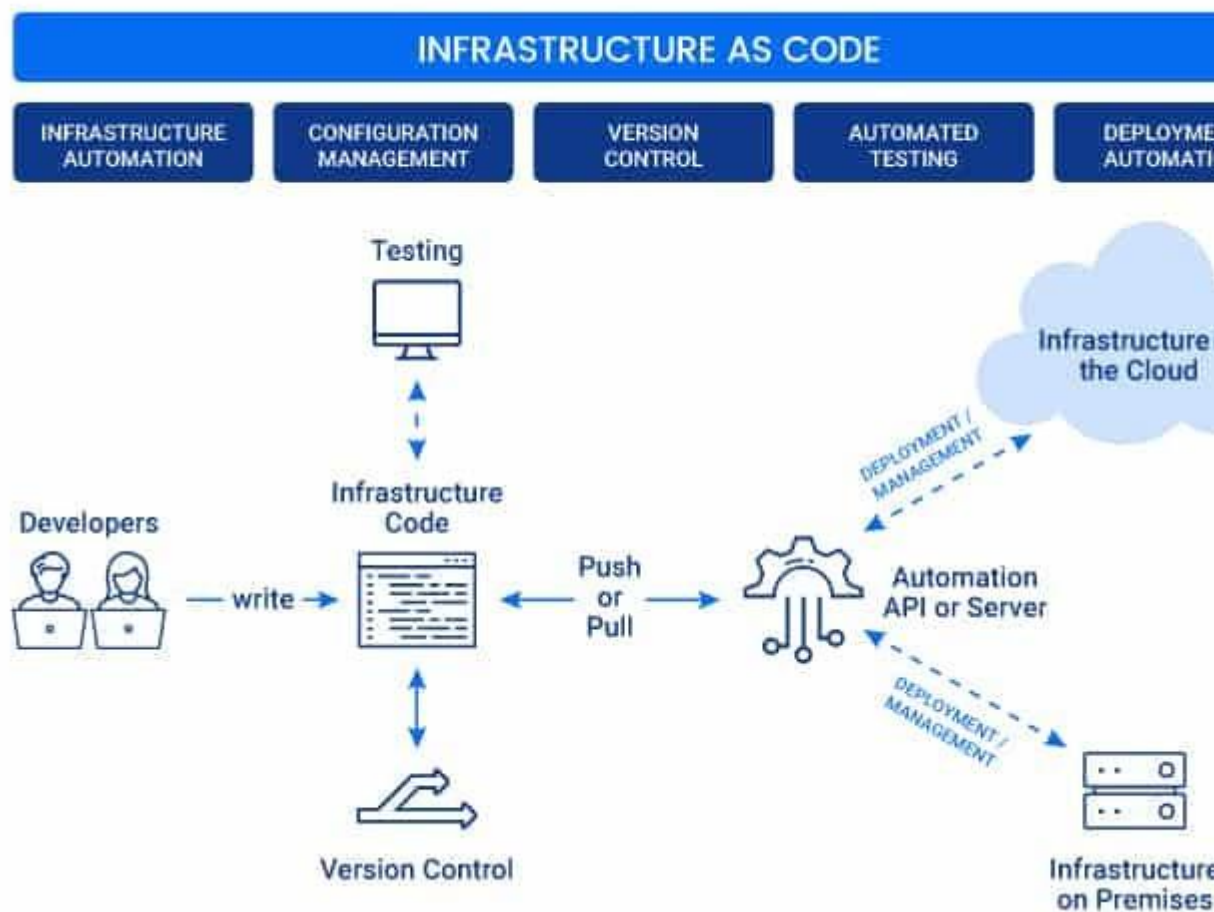
# HashiCorp Terraform Associate

A Terraform Associate is a Cloud Engineer specializing in operations, IT, or developers who know the basic concepts and skills associated with open source HashiCorp Terraform. This person understands which enterprise features exist and what can and cannot be done using the open-source offering.

## Infrastructure as Code

Infrastructure as Code (IaC) is a widespread terminology among DevOps professionals and a key DevOps practice in the industry. It is the process of managing and provisioning the complete IT infrastructure (comprises both physical and virtual machines) using machine-readable definition files.

Any (On-prem or Cloud) infrastructure with a programmatic interface can participate in IaC.



**Q1. When should we use IaC?**

**Ans.** You should use IaC when:

- You use a large amount of [IaaS](#), [PaaS](#) & [SaaS](#) resources.

- Your infrastructure is rented from many different providers(AWS, GCP, OCI ,etc.) or platforms.
- You need to make regular adjustments to your infrastructure.
- You need proper documentation of changes made to your infrastructure.
- You want to optimize collaboration between administrators and developers.

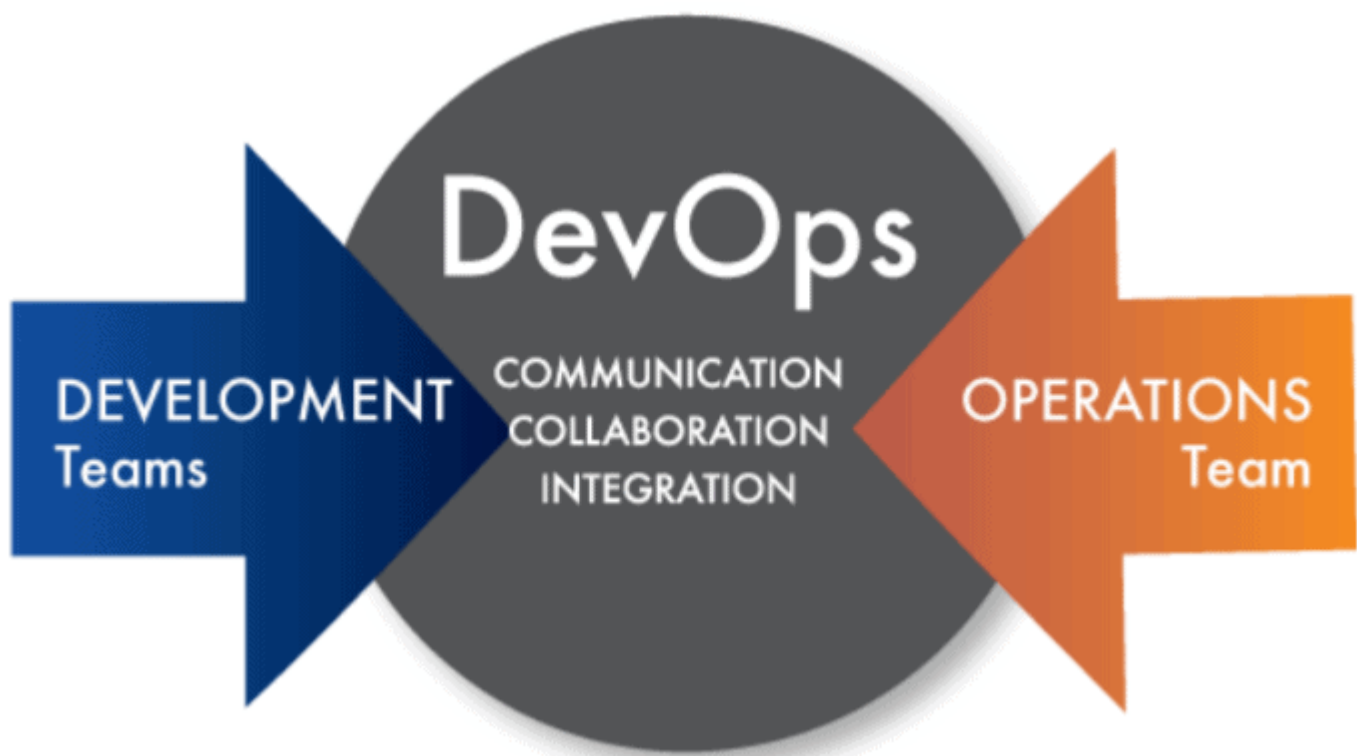
**Q2. What are the benefits of using IaC?**

**Ans.** The benefits of using IaC are:

- Repeatability
- Speed
- Documentation
- Version Control
- Validation
- Reuse

## DevOps

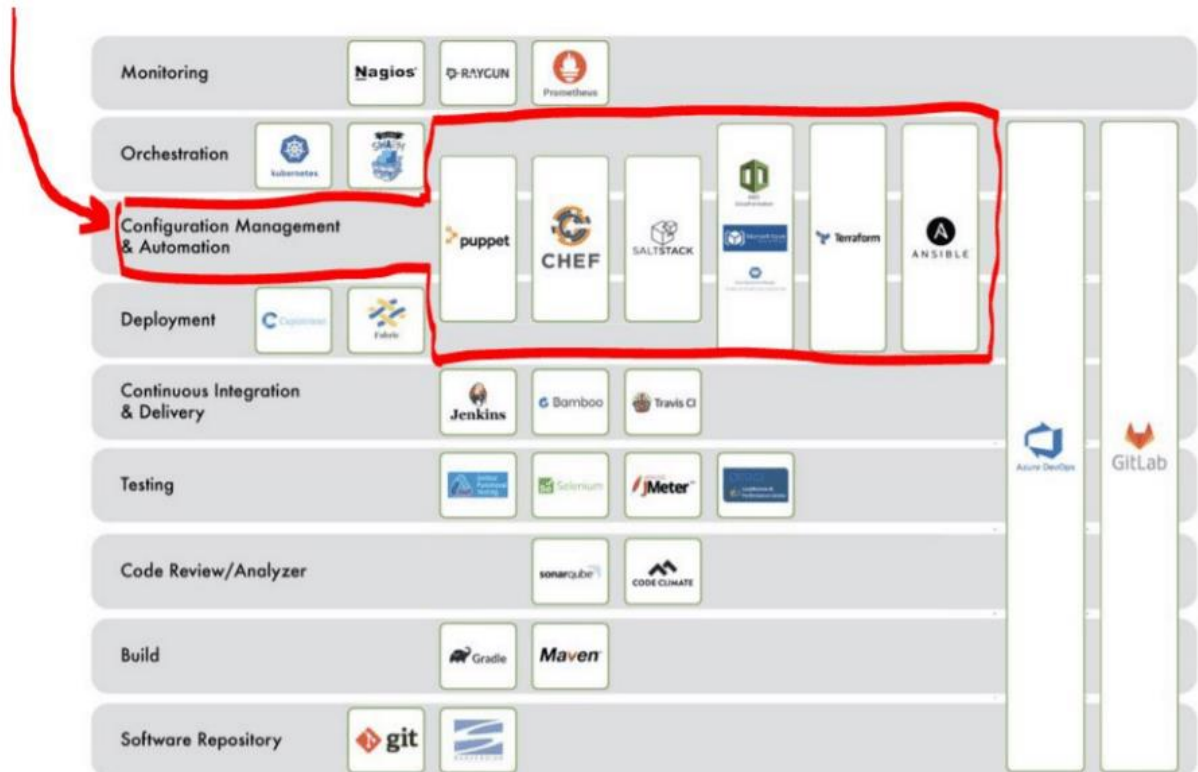
DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.



**Q3. Among DevOps tools, where is the use of Terraform?**

**Ans.** Terraform is used for configuration Management and Automation along with other tools like chef, puppet, and Ansible.

Check the below image for reference:



**Q4. Name all the categories of IaC tools?**

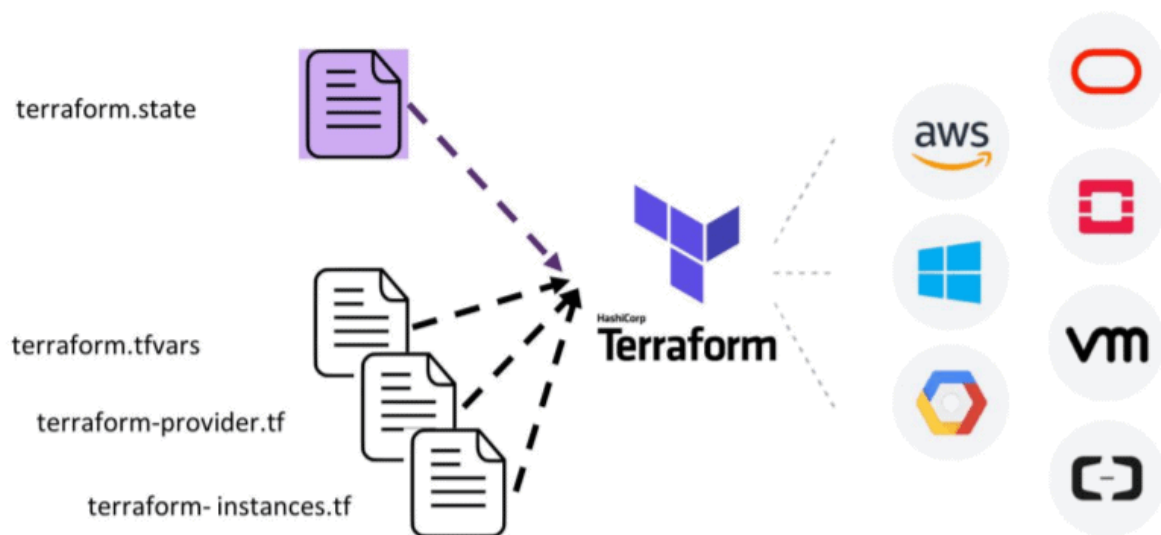
**Ans.** IaC tools are divided into 4 parts which are:

- **Configuration Management:** Tools available are – Chef, Ansible, Puppet & SaltStack.
- **Server Templating:** Tools available are – Packer, Docker & Vagrant.
- **Server Provisioning:** Tools available are -Terraform, ARM, Cloud Formation & Openstack Heat.
- **Ad-hoc Scripts**

## Terraform

Terraform is one of the most popular Infrastructure-as-code (IaC) tools used by DevOps teams to automate infrastructure tasks. It is used to automate the provisioning of your cloud resources.

Know more about [Terraform](#).

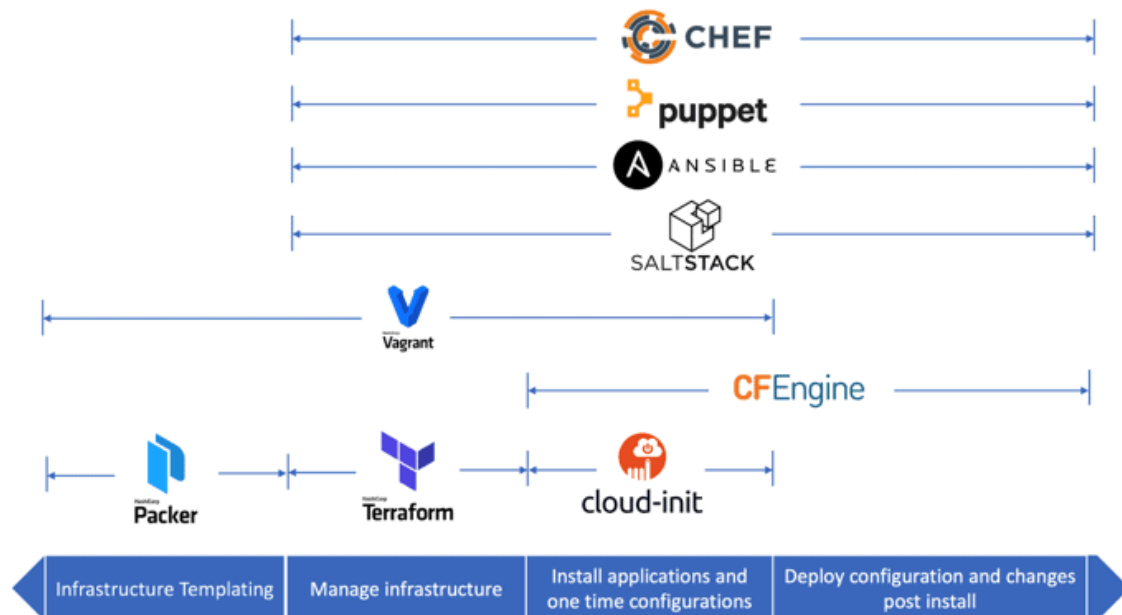


### Q5. Name some major competitors of Terraform?

**Ans.** The major competitors of terraform are:

- [Ansible](#)
- Puppet
- Chef
- Packer
- Cloud Foundry

Know which of the above [IaC tools](#) is best.



### Q6. Define Terraform provider?

**Ans.** Terraform is used to manage and inform infrastructure resources such as bodily machines, VMs, network switches, containers, and more. A provider is accountable for thoughtful API interactions and revealing resources. Terraform supports a large number of cloud providers.

Some of the terraform providers are:

- AWS (from [Amazon](#))
- Azure (from [Microsoft](#))
- GCP (from [Google](#))
- OCI (from [Oracle](#))
- Alibaba Cloud
- [Kubernetes](#)

**Q7. How does Terraform work?**

**Ans.** Terraform creates an implementation plan, defines what it will do to attain the preferred state, and then executes it to construct the described infrastructure. As the configuration changes, Terraform is talented to decide what changed and generate incremental execution plans which can be practical.

**Q8. Name some major features of Terraform?**

**Ans.** Some of them are:

- Execution Plan
- Change Automation
- Resource Graph
- Infrastructure as code

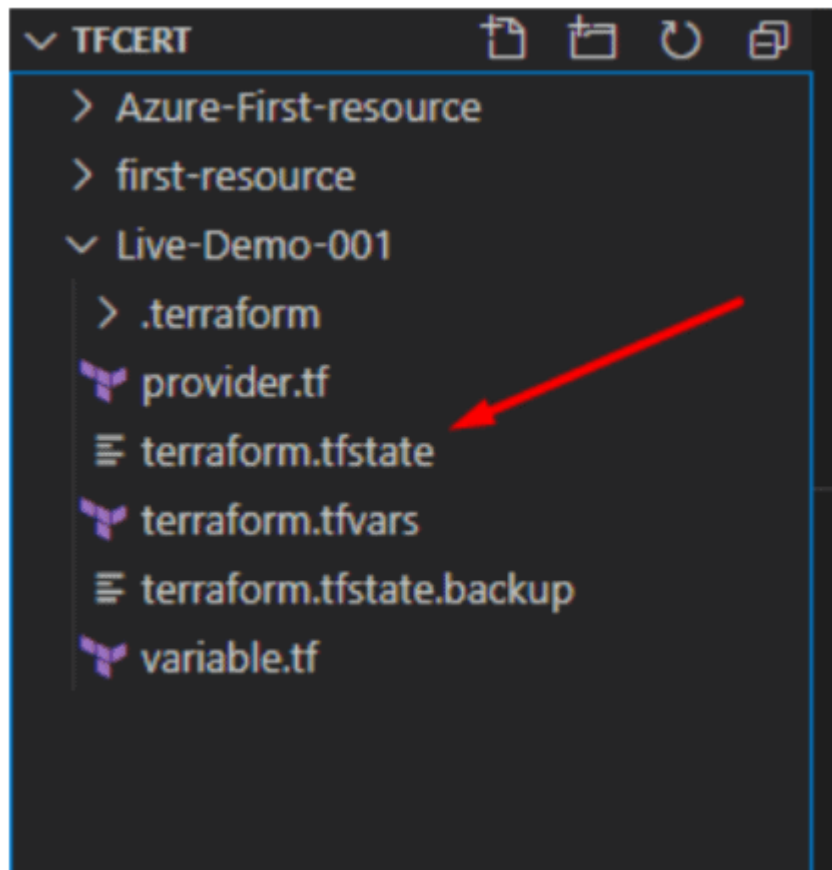
**State Management in Terraform**

A state file is created in terraform while executing the terraform script. It stores the metadata of the resources that are created and updated via terraform.

Any change in the resources via terraform will be recorded, and changes will be made in the state file.

**Terraform State File Benefits**

- Idempotence: Resources that require changes will be updated
- Dependencies: Terraform found the dependency when building its graph
- Performance: Terraform will refresh the state before each planning run but can be skipped
- Collaboration: Combined with the storage of state in a remote, shared location, teams can collaborate



## Quiz Time (Sample Exam Questions)!

With our Terraform certification training program, we cover 200+ sample exam questions to help you prepare for the certification.

Check out one of the questions and see if you can crack this...

**Ques: Is the State file required for Terraform to function?**

A. Yes

B. No