Why do we use terraform?

What is Infrastructure as Code (IaC)?

What is a Resource?

What is Provider?

What is a State file in terraform? What’s the importance of it?

What is Desired and Current State?

Terraform lets you use the same workflow to manage multiple providers and handle cross-cloud dependencies. This simplifies management and orchestration for large-scale, multi-cloud infrastructures.

Infrastructure as code (IaC) uses DevOps methodology and versioning with a descriptive model to define and deploy infrastructure, such as networks, virtual machines, load balancers, and connection topologies. Just as the same source code always generates the same binary, an IaC model generates the same environment every time it deploys.

Resources are the most important element in the Terraform language. Each resource block describes one or more infrastructure objects, such as virtual networks, compute instances, or higher-level components such as DNS records. Resource Blocks document the syntax for declaring resources.

A provider is a plugin that lets Terraform manage an external API. In your CDK for Terraform (CDKTF) application, you use your preferred programming language to define the resources you want Terraform to manage on one or more providers.

Terraform must store the state of your managed infrastructure and configuration. This state is used by Terraform to map real-world resources to your configuration, keep track of metadata, and improve performance for large infrastructures. This state is stored by default in a local file named "terraform.

Desired State is the state that you want the system to be in. The actual State is the state that the system is actually in.