**Using Input Variables in Terraform**

In this lecture, we will take a look at the different ways in which we can make use of input variables in Terraform.

**Default Parameter and Interactive Mode**

Earlier, we learned that the default parameter in a variable block is optional. This means that we can very well have our variable block look like this:

**variable "filename" {}**

What happens if we run Terraform commands now?

**When we run terraform apply, we will be prompted to enter values for each variable used in an interactive mode.**

Using Command Line Flags

If we do not want to supply values interactively, we can also make use of command line flags like this:

**terraform apply -var="filename=/root/pets.txt"**

We can pass in multiple variables using the -var flag multiple times:

**terraform apply -var="filename=/root/pets.txt" -var="length=2"**

Using Environment Variables

We can also make use of environment variables with the TF\_VAR\_ prefix followed by the variable name:

**export TF\_VAR\_filename="/root/pets.txt"**

**export TF\_VAR\_length="2"**

Using Variable Definition Files

When dealing with multiple variables, we can load values using variable definition files. These files should end in .tfvars or .tfvars.json.

**Example terraform.tfvars file:**

**filename = "/root/pets.txt"**

**length = 2**

Terraform automatically loads files named:

* **terraform.tfvars**
* **terraform.tfvars.json**
* **\*.auto.tfvars**
* **\*.auto.tfvars.json**

For other filenames, use the -var-file flag:

**terraform apply -var-file="custom.tfvars"**

Variable Definition Precedence

**Terraform follows a precedence order for assigning values:**

1. **Environment Variables (TF\_VAR\_)**
2. **terraform.tfvars file**
3. **.auto.tfvars files (in alphabetical order)**
4. **Command-line -var or -var-file (Highest Priority)**

**Example Precedence Order**

Given these values:

* **Environment variable: export TF\_VAR\_filename="/root/cats.txt"**
* **terraform.tfvars: filename = "/root/pets.txt"**
* **variable.auto.tfvars: filename = "/root/mypet.txt"**
* **Command-line: terraform apply -var="filename=/root/best-pet.txt"**

Terraform assigns: /root/best-pet.txt (highest priority).