

Preface

A long time ago, in a datacenter far, far away, an ancient group of powerful beings known as “sysadmins” used to deploy infrastructure manually. Every server, every database, every load balancer, and every bit of network configuration was created and managed by hand. It was a dark and fearful age: fear of downtime, fear of accidental misconfiguration, fear of slow and fragile deployments, and fear of what would happen if the sysadmins fell to the dark side (i.e., took a vacation). The good news is that thanks to the DevOps movement, there is now a better way to do things: *Terraform*.

Terraform is an open source tool created by HashiCorp that allows you to define your infrastructure as code using a simple, declarative language and to deploy and manage that infrastructure across a variety of public cloud providers (e.g., Amazon Web Services [AWS], Microsoft Azure, Google Cloud Platform, DigitalOcean) and private cloud and virtualization platforms (e.g., OpenStack, VMware) using a few commands. For example, instead of manually clicking around a web page or running dozens of commands, here is all the code it takes to configure a server on AWS:

```
provider "aws" {
    region = "us-east-2"
}

resource "aws_instance" "example" {
    ami          = "ami-0fb653ca2d3203ac1"
    instance_type = "t2.micro"
}
```

And to deploy it, you just run the following:

```
$ terraform init
$ terraform apply
```