

# Terraform, Infrastructure As Code

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HashiCorp  
**Terraform**

# Hi

I'm Eric

I'm a Web Developer / Software  
engineer

I'm a motorcycle junkie

I'm an avid Magic The Gathering™  
player

I like cloud computing

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I work for



Professional photogrammetry and  
drone-mapping

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# What we'll talk about today

- What's Infrastructure As Code (IaC)
- What is Terraform and how does it work
- A real example live



Let's talk about:  
Infrastructure as Code

# The Benefits

## Auditable

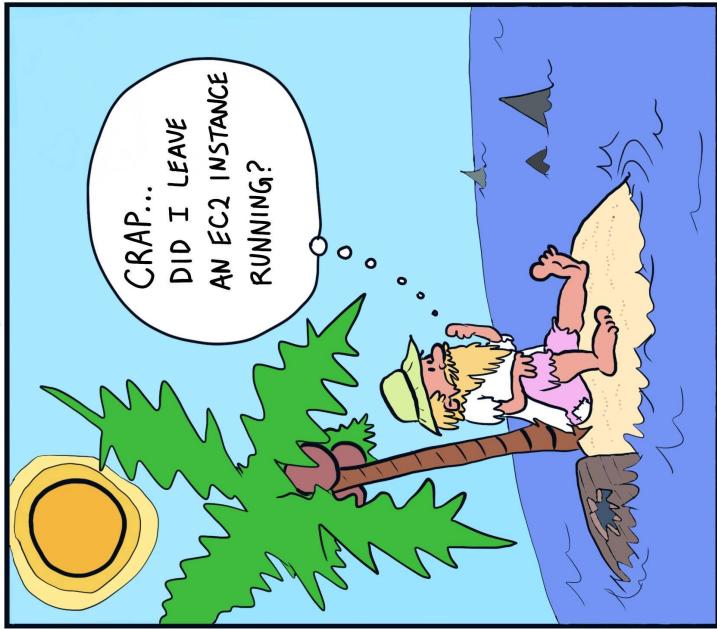
It's easier to audit code than physical infrastructure

## Repeatable

Because going through hundreds of different buttons and screens on your cloud provider's web UI isn't the kind of thing that's easy to replicate 100% accurately

## Dependable

If you can't audit and repeat the actions that built your infrastructure, you can't depend on your infra



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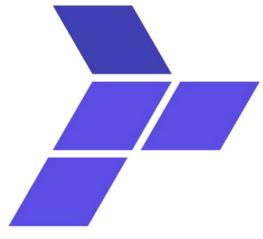
<https://read.acloud.guru/acq-faas-and-furious-b9574b6675c5>

# Advantages of IaC

It's code, so you can work on it just like your application

- Versioning
- Easy to collaborate on
- Easy to integrate in a CI setup (it's code after all)
- Automate your deployment and recovery processes
- No need to repair, just redeploy
- Etc.

# What's Terraform ?



HashiCorp  
**Terraform**

A tool by HashiCorp

Terraform is a tool for provisioning infrastructure, from low-level components such as virtual machines, storage and networking, to higher-level components such as DNS entries.

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# Terraform is :

Open Source

Yeah Open Source !

It's available on [Github](#)



Multi vendor

**95** different providers supported  
(as of 05.02.2018), not counting  
community providers

# Tonight's plan

What's HCL ?

**HashiCorp Configuration Language**

What it looks like, how does it work, why

**Creating things is good**

Let's create virtual machines in the cloud for fun and profit

Creating resources

Edit existing resources

**Make things better**

If it's not broken, break it and make it better

# Tonight's plan, Part 2 : The return of the revenge

*Remastered edition*

Make it reproducible

Delete everything

Beer Time

**The greatness of IaC**

Let's create a new workspace and make a copy of our infrastructure

**Nuke from orbit**

Let's destroy the entire infrastructure we created

**Let's talk around a drink**

Let's talk cloud infrastructure, the web and beer preferences

# What's HCL (HashiCorp Configuration Language) ?

HCL is a configuration language built by HashiCorp.

- Designed to be written and modified by humans
- Designed to allow JSON as an input so that it is also machine-friendly

```
resource "aws_instance" "example" {  
    ami = "${data.aws_ami.latest-ubuntu.id}"  
    instance_type = "t2.micro"  
}
```



Now is time for a live example

# Some prerequisites

- Install Terraform (Obviously)
- An AWS account (for our use case)
- An AWS user with an Access key and a secret key
- Install the AWS CLI

This is already setup as this is not very interesting

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Treat your servers like pets - dispose of them humanely.

# Thank You !

Thanks for listening,  
Time for questions