Configuring Resources After Creation

Ned Bellavance
MICROSOFT AZURE MVP
@ned1313 | nedinthecloud.com

Overview

Country grammar with Terraform

What's the (updated) scenario?

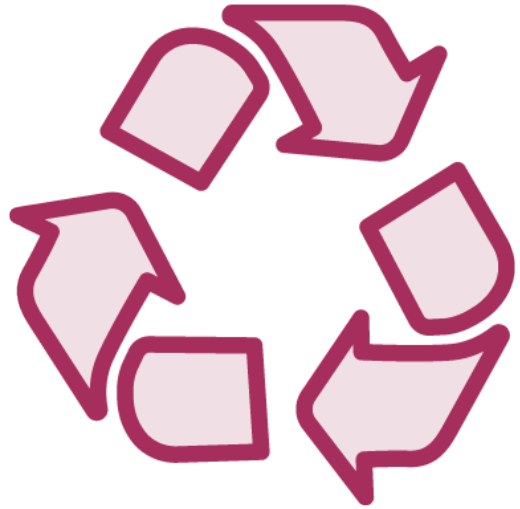
Get the party started with provisioners

Automating Infrastructure Deployment

Provisioning resources

Planning updates

Using source control



Reusing templates

Terraform Syntax

HashiCorp configuration language

Why not JSON?

Human readable and editable

Configuration syntax and expressions

Conditionals, functions, templates

Terraform Syntax - Blocks

```
#Basic block

block_type label_one label_two {
  key = value
  embedded_block {
    key = value
  }
}
```

Terraform Syntax - Blocks

```
#Example block

resource "aws_route_table" "route-table" {
  vpc_id = "id928310928"
  route {
    cidr_block = "0.0.0.0/0"
    gateway_id = "id128073987"
  }
}
```

Terraform Syntax – Object Types

```
#Different value types

string = "taco"

number = 5

bool = true

list = ["bean-taco","beef-taco"]

map = {name = "Ned", age = 42, loves_tacos = true}
```

Terraform Syntax - References

#Keyword reference

var.taco_day

aws_instance.taco_truck.name

local.taco_toppings.cheeses

module.taco_hut.locations

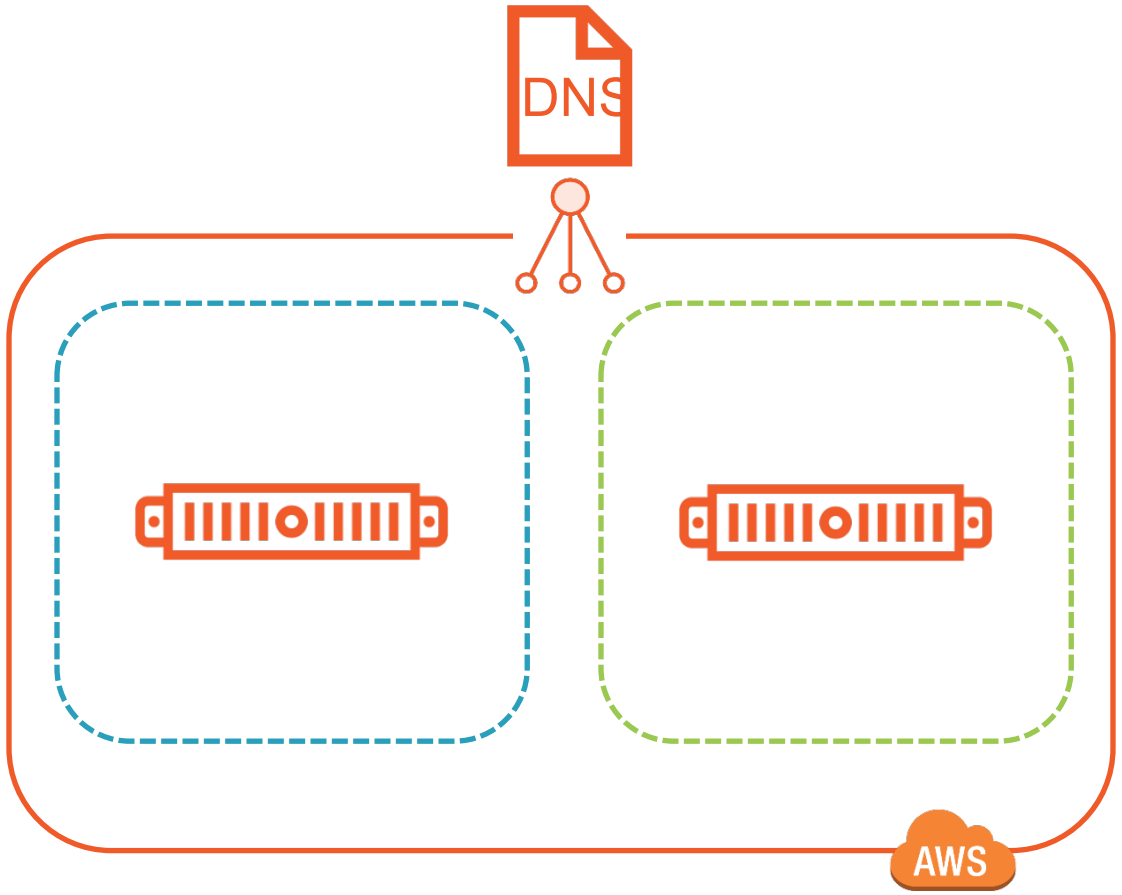
#Interpolation

taco_name = "neds-${var.taco_type}"

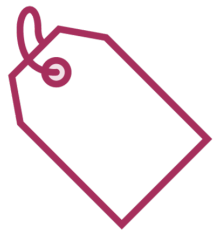
Terraform Syntax - References

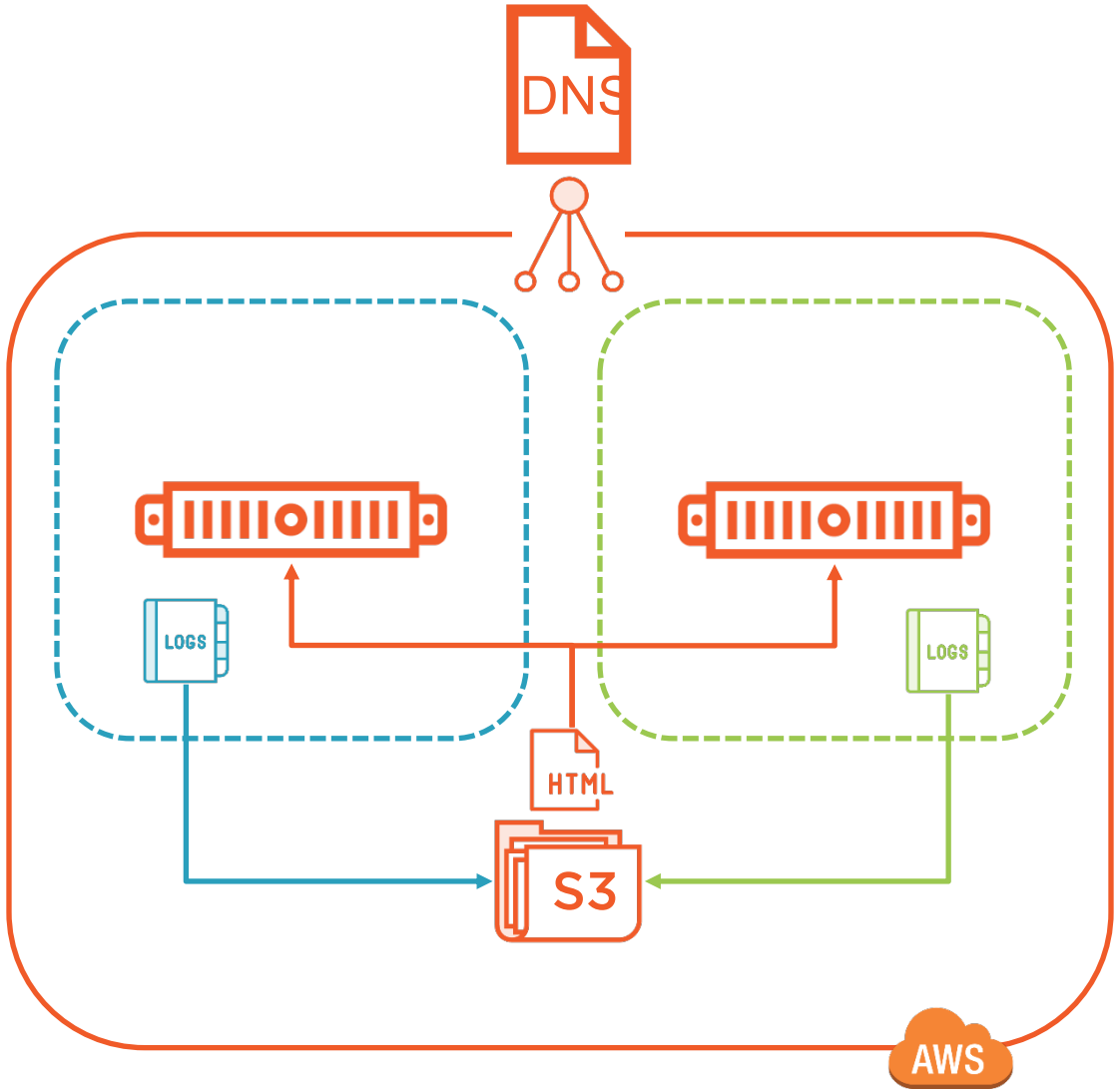
```
#Strings, numbers, and bools

local.taco_count #returns the number

#Lists and maps

local.taco_toppings[2] #returns element 3

local.taco_map["likes-tacos"] #returns value at keyname

#Resource values

var.region #returns us-east-1

data.aws_availability_zones.azs.names[1] #returns 2nd AZ
```

The Scenario



The Scenario





Terraform Provisioners

- Last resort
- Local or remote
- Creation or destruction
- Multiple provisioners
- What if it all goes wrong?

Provisioner Example

```
provisioner "file" {
  connection {
    type = "ssh"
    user = "root"
    private_key = var.private_key
    host = var.hostname
  }
  source = "/local/path/to/file.txt"
  destination = "/path/to/file.txt"
}
```

Provisioner Example

```
provisioner "local-exec" {
  command = "local command here"
}

provisioner "remote-exec" {
  scripts = ["list", "of", "local", "scripts"]
}
```

Summary

Terraform provisioners

Syntax and object types

S3 buckets, tags, and more!

Coming up

- Providers
- Functions
- Taking cmd.exe!