

Adding a New Provider to Your Configuration



Ned Bellavance

MICROSOFT AZURE MVP

@ned1313 | nedinthecloud.com



Overview



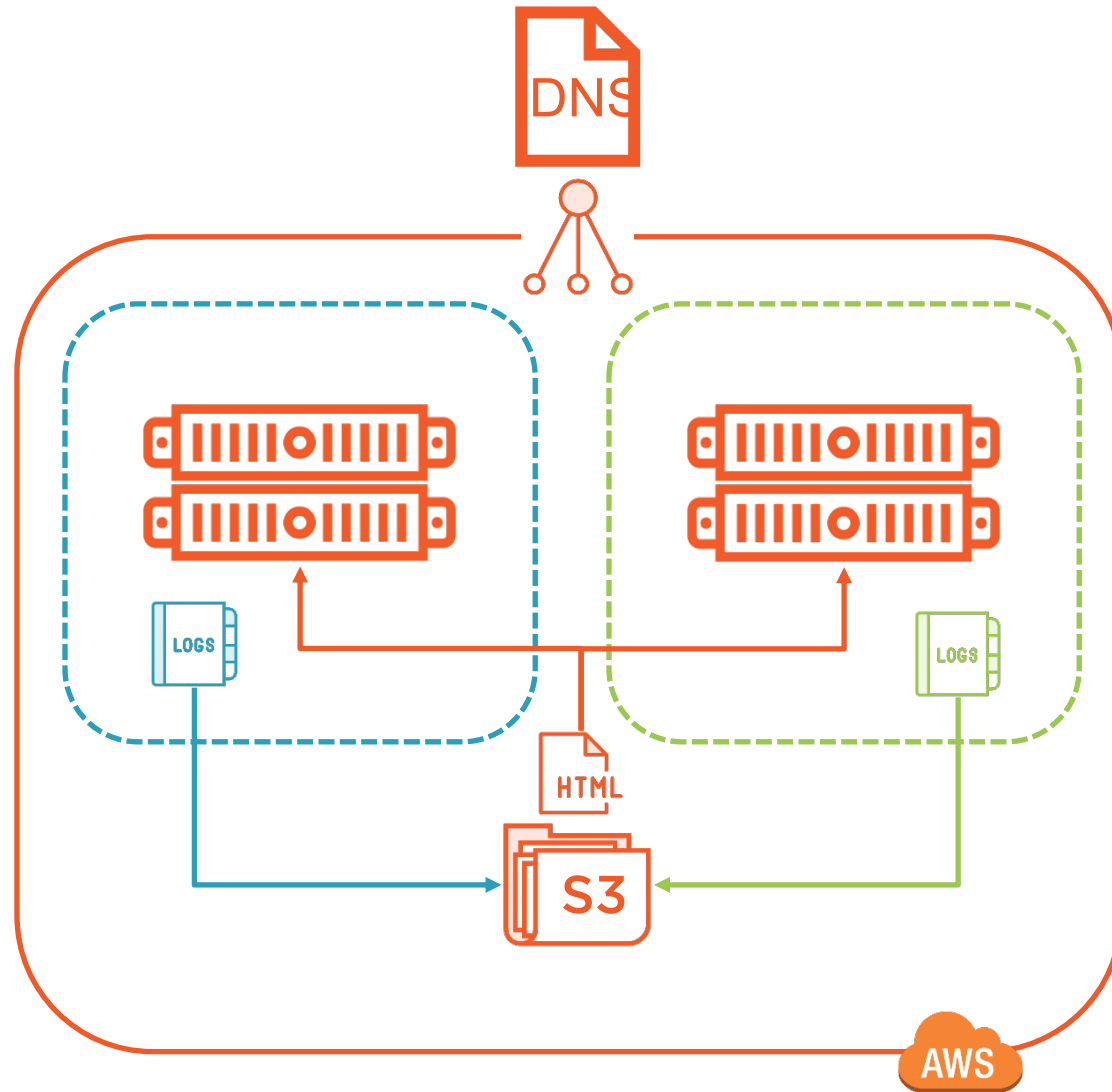
New scenario requirements

Exploring functions and the CLI

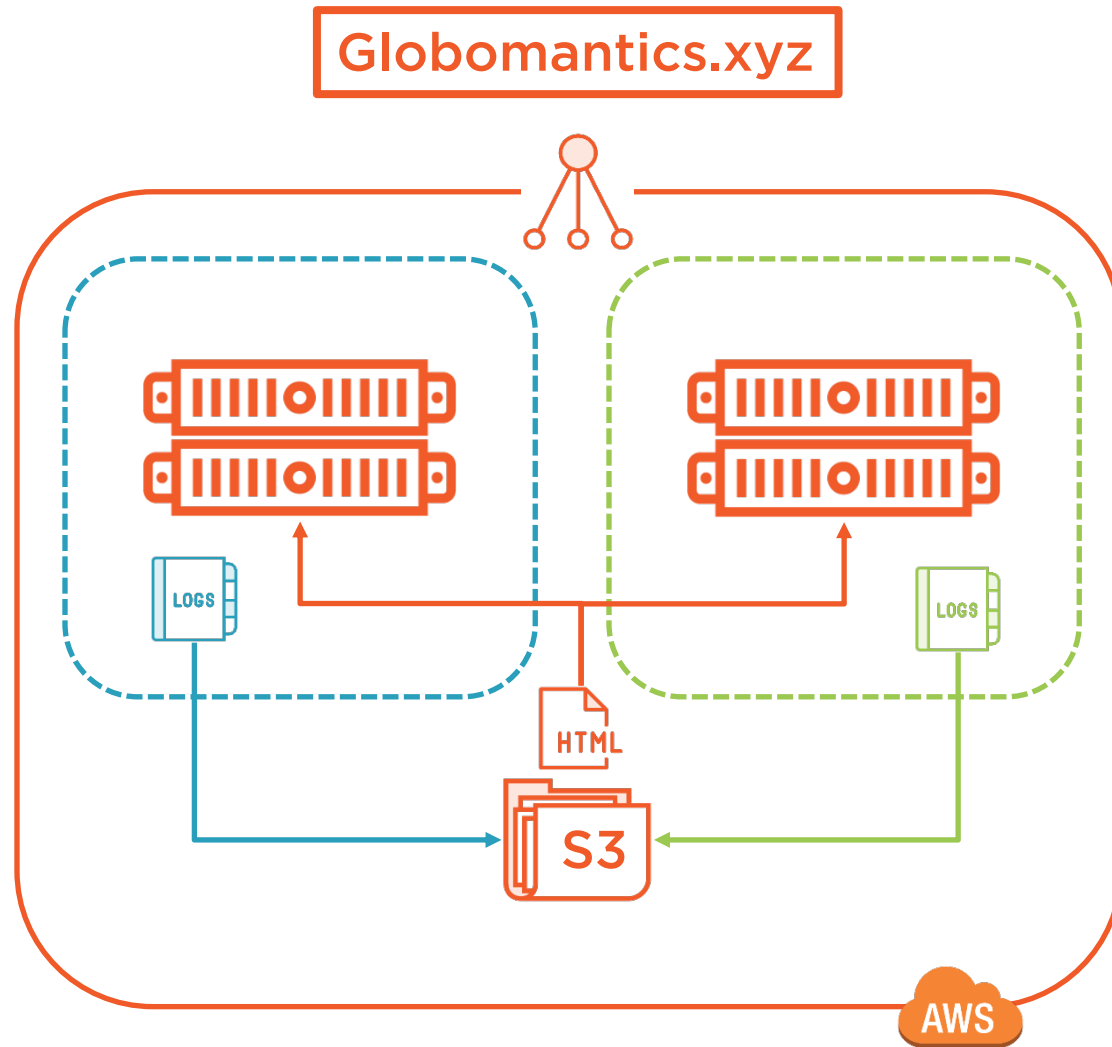
Examine available providers



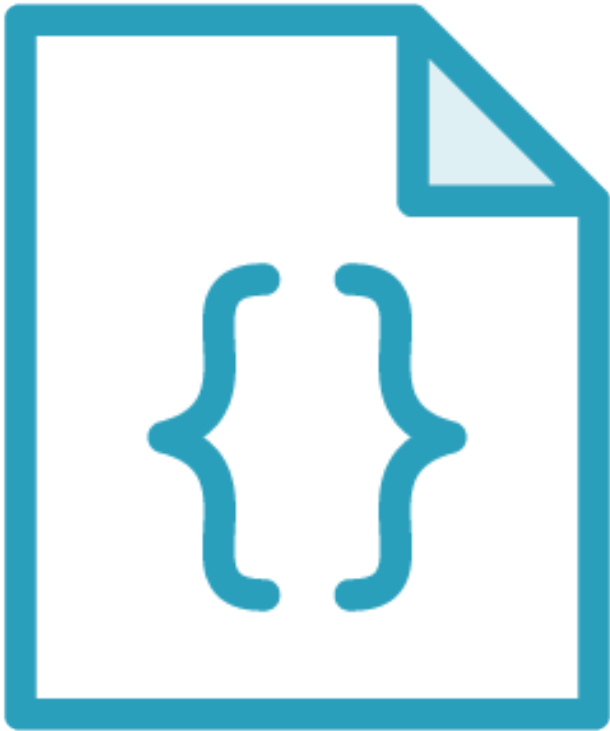
The Scenario



The Scenario



Terraform Functions



Built-in to Terraform

Func_name(arg1, arg2, arg3, ...)

Test in terraform console

Several broad categories

Common Function Categories

Numeric

`min(42, 13, 7)`

String

`lower("TACOS")`

Collection

`merge(map1, map2)`

Filesystem

`file(path)`

IP network

`cidrsubnet()`

Date and time

`timestamp()`



Terraform Functions

#Configure networking

```
variable network_info {
```

```
  default = "10.1.0.0/16" #type, default, description
```

```
}
```

#Returns 10.1.0.0/24

```
cidr_block = cidrsubnet(var.network_info, 8, 0)
```

#Returns 10.1.0.5

```
host_ip = cidrhost(var.network_info,5)
```



Terraform Functions

#Create ami map

```
variable "amis" {  
  type = "map"  
  default = {  
    us-east-1 = "ami-1234"  
    us-west-1 = "ami-5678"  
  }  
}  
  
ami = lookup(var.amis, "us-east-1", "error")
```



Terraform Commands



Terraform Providers



IaaS, PaaS, and SaaS

Community and HashiCorp

Open source

Resources and data sources

Multiple instances

Provider Example

```
provider "azurerm" {  
  subscription_id = "subscription-id"  
  client_id       = "principal-used-for-access"  
  client_secret   = "password-of-principal"  
  tenant_id      = "tenant-id"  
  alias          = "arm-1"  
}  
  
resource "azurerm_resource_group" "azure_tacos" {  
  name = "resource-group-name"  
  location = "East US"  
  provider = azurerm.arm-1  
}
```



Resource Arguments

`depends_on`

`count`

`for_each`

`provider`



Depends_on and Count

```
resource "aws_instance" "taco_servers" {  
  count = 2  
  
  tags {  
    Name = "customer-${count.index}"  
  }  
  
  depends_on = [aws_iam_role_policy.allow_s3]  
}
```



For_each

```
resource "aws_s3_bucket" "taco_toppings" {  
  for_each = {  
    food = "public-read"  
    cash = "private"  
  }  
  bucket = "${each.key}-${var.bucket_suffix}"  
  acl = each.value  
}
```



Summary



Terraform providers

Functions and resource expressions

Terraform commands

Coming up

- Managing variables
- Multiple environments
- Securing credentials

