

Terraform, variables, interpolation and networking

variables

- tipos nativos: strings, maps (key=value), list ([])
 - boolean no es nativo
- localización:
 - en el cuerpo de script
 - por línea de comando o entono
 - en un fichero adicional de variables
 - más información: [terraform variables](#)

```
variable "nombre_variable" {
  default = "valor por defecto"
}

variable "localizaciones" {
  type = map
  default = {
    location1 = "xxxx"
    location2 = "yyyy"
  }
}
```

- testeando variables y su uso:

```
variable "server_name" {
  default = "web-server"
}

variable "locations" {
  type = "map"
  default = {
    location1 = "xxx"
    location2 = "yyy"
  }
}

variable "subnets" {
  type = "list"
  default = ["10.0.1.10", "10.0.1.11"]
}

variable "live" {
  type = "string"
  default = true
}
```

- terraform console
 - var.server_name
 - var.locations[«location1»]
 - var.locations.location1

- var.subnets[0]
- var.live

credentials

- uso variables [de entorno] para almacenar credenciales
- **TF_VAR_<NOMBRE>** definida como variable de entorno del sistema

interpolation

- variables
 - var.<nombre>
- resources
 - <resource>.<nombre>.<atributo>
- data: recoger un dato del estado
 - data.<resource>.<nombre>.<atributo>

```
• variable "subscription_id" {  
}  
  
#suponiendo que está en el entorno  
provider "azurerms" {  
  version           = ">=1.27"  
  client_id         = "6c609608-a350-476f-85ff-eaff7e82f981"  
  client_secret     = "qW0S]tToc]=]ub8HM7yciLSnw0Wh1emD"  
  tenant_id        = "c8537169-fe81-494a-a2dd-b4ea067073a1"  
  subscription_id  = var.subscription_id  
  features {}  
}
```

azure locations

- <https://azure.microsoft.com/en-us/global-infrastructure/regions/>
- <https://azure.microsoft.com/en-us/global-infrastructure/geographies/>
- <https://azure.microsoft.com/en-us/global-infrastructure/services/>
- az login --service-principal -u \$TF_VAR_client_id -p \$TF_VAR_client_secret -t \$TF_VAR_tenant_id
- az account list-locations -o table
- az login [--username | -u] <username> [--password | -p] <password>

azure resource groups

- agrupación lógica de recursos bajo tu criterio
- cada **resource* ha de ir en** resource group
- [terraform.tfvars](https://www.terraform.io/docs/providers/azurerm/r/tfvars.html)

```
web_server_location = "westus2"
```

```
web_server_rg = "web-rg"
```

main.tf

```
variable web_server_location {}
variable web_server_rg {}

resource "azurerm_resource_group" "web_server_rg" {
  name = var.web_server_rg
  location = var.web_server_location
}
```

azure VNET

- logical isolates network
- espacio IP
- creació de subnets
- conexión con otras VNET, VPN o Endpoints
- NSG = Network Security Groups (firewall básico)

- `resource_prefix = "web-server"`
- `web_server_address_space = "1.0.0.0/22"`

```
variable "resource_prefix" {}
variable "web_server_address_space" {}

resource "azurerm_virtual_network" "web_server_vnet" {
  name = "${var.resource_prefix}-vnet"
  location = var.web_server_location
  resource_group_name = azurerm_resource_group.web_server_rg.name
  address_space = [var.web_server_address_space]
}
```

dependencies

- decirle a Terraform en que orden se deben crear los recursos
- al crear elementos que dependen (o no) de otros, se pueden dar los siguientes casos:
 - que no haya dependencia
 - dependencia indirecta: Terraform la asume o las deduce de las variables
 - dependencia directa (o explícita): usando la propiedad `depends_on`

azure subnet

- subnetwork en nuestra VNET
- address space
- segmentación

- NSG = Network Security Groups
- `web_server_address_prefix = "1.0.1.0/24"`

```
variable web_server_address_prefix {}

resource "azurerm_subnet" "web_server_subnet" {
  name = "${var.resource_prefix}-subnet"
  resource_group_name = azurerm_resource_group.web_server_rg.name
  virtual_network_name = azurerm_virtual_network.web_server_vnet.name
  address_prefix = var.web_server_address_prefix
}
```

azure Network Interface

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