

Terraform, conditionals, state and VM

azure public ip

- public IP = external access to resources
- SND
- Estáticas/Dinámicas
- Acceso a recursos

```
resource "azurerm_network_interface" "web_server_nic" {
  name            = "${var.web_server_name}-nic"
  location        = "${var.web_server_location}"
  resource_group_name = "${azurerm_resource_group.web_server_rg.name}"

  ip_configuration {
    name                = "${var.web_server_name}-ip"
    subnet_id           = "${azurerm_subnet.web_server_subnet.id}"
    private_ip_address_allocation = "dynamic"
    public_ip_address_id = "${azurerm_public_ip.web_server_public_ip.id}"
  }
}

resource "azurerm_public_ip" "web_server_public_ip" {
  name            = "${var.web_server_name}-public-ip"
  location        = "${var.web_server_location}"
  resource_group_name = "${azurerm_resource_group.web_server_rg.name}"
  public_ip_address_allocation = "dynamic"
}
```

conditionals

```
"web_server_location" = "westus2"
"web_server_rg"       = "web-rg"
"resource_prefix"     = "web-server"
"web_server_address_space" = "1.0.0.0/22"
"web_server_address_prefix" = "1.0.1.0/24"
"web_server_name"     = "web-01"
"environment"        = "production"
```

```
variable "environment" {}

resource "azurerm_public_ip" "web_server_public_ip" {
  name            = "${var.web_server_name}-public-ip"
  location        = "${var.web_server_location}"
  resource_group_name = "${azurerm_resource_group.web_server_rg.name}"
  public_ip_address_allocation = "${var.environment == "production" ? "static" :
"dynamic" }"
```

```
}
```

azure Network Security Group

- traffic control
 - like firewall
- default rules
- own rules
- scope (network, subnets, resources)

```
resource "azurerm_network_interface" "web_server_nic" {
  name                = "${var.web_server_name}-nic"
  location            = "${var.web_server_location}"
  resource_group_name = "${azurerm_resource_group.web_server_rg.name}"
  network_security_group_id = "${azurerm_network_security_group.web_server_nsg.id}"

  ip_configuration {
    name                = "${var.web_server_name}-ip"
    subnet_id          = "${azurerm_subnet.web_server_subnet.id}"
    private_ip_address_allocation = "dynamic"
    public_ip_address_id = "${azurerm_public_ip.web_server_public_ip.id}"
  }
}

resource "azurerm_network_security_rule" "web_server_nsg_rule_rdp" {
  name                = "RDP Inbound"
  priority            = 100
  direction           = "Inbound"
  access              = "Allow"
  protocol            = "TCP"
  source_port_range   = "*"
  destination_port_range = "3389"
  source_address_prefix = "*"
  destination_address_prefix = "*"
  resource_group_name = "${azurerm_resource_group.web_server_rg.name}"
  network_security_group_name =
"${azurerm_network_security_group.web_server_nsg.name}"
}
```

azure Terraform state

- track and map deployed resources
- **terraform.tfstate, terraform.tfstate.backup**
- metadata
- stored locally o remotely (to be shared, more security)
- sensitive data!
- don't edit this file, IMPORT
- [Azure Resource Explorer](#)

azure Market Place Images

- como obtener datos de las VM
 - desde el template, en un RG en el que ya tenemos desplegada una máquina
 - `az vm image list-publishers -l <LOCATION> -o table`
 - `az vm image list-offers -l <LOCATION> -p MicrosoftWindowsServer -o table`
 - **MicrosoftWindowsServer** lo hemos sacado del comando anterior
 - `az vm image list-skus -l <LOCATION> -p MicrosoftWindowsServer -f WindowsServer -o Table`
 - **WindowsServer** lo hemos sacado del listado anterior
 - esto nos devuelve un listado con las versiones específicas

azure Hardware Models

- <https://docs.microsoft.com/en-us/azure/virtual-machines/sizes-general>
- <https://azure.microsoft.com/en-us/pricing/calculator/>
- `az vm list-sizes -l <LOCATION> -o table`

Azure Virtual Machine

- Hardware model
- Image
- Networking
- Disks
- Availability and Scale Sets

```
resource "azurerm_virtual_machine" "vm" {
  name                = "${var.web_server_name}-vm"
  location            = "${var.web_server_location}"
  resource_group_name = "${azurerm_resource_group.web_server_rg.name}"
  network_interface_ids = ["${azurerm_network_interface.web_server_nic.id}"]
  vm_size             = "Standard_B1s"

  storage_image_reference {
    publisher = "MicrosoftWindowsServer"
    offer     = "WindowsServer"
    sku       = "2016-Datacenter-Server-Core-smalldisk"
    version   = "latest"
  }

  storage_os_disk {
    name                = "${var.web_server_name}-osdisk"
    caching             = "ReadWrite"
    create_option       = "FromImage"
    managed_disk_type   = "Standard_LRS"
  }

  os_profile {
    computer_name = "${var.web_server_name}-os"
    admin_username = "webserver"
    admin_password = "password"
  }
}
```

```
os_profile_windows_config {  
  
}  
}
```

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