

Acceso de red a una máquina virtual

Creación de Máquina Virtual

```
🏠 | Azure Cloud Shell

Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

javier@Azure:~$ az vm create
the following arguments are required: --name/-n, --resource-group/-g

Examples from AI knowledge base:
az vm create --name MyVm --resource-group MyResourceGroup --image RedHat:RHEL:7-RAM:7.4.2018010506
Create a default RedHat VM with automatic SSH authentication using an image URN.

az vm create --name MyVm --resource-group rg1 --image debian --assign-identity /subscriptions/99999999-1bf0-4dda-aec3-cb9272f09590/resourcegroups/myRG/providers/Microsoft.ManagedIdentity/userAssignedIdentities/myID
Create a debian VM with a user assigned identity.

az group create --location westus --resource-group MyResourceGroup
Create a new resource group in the West US region.

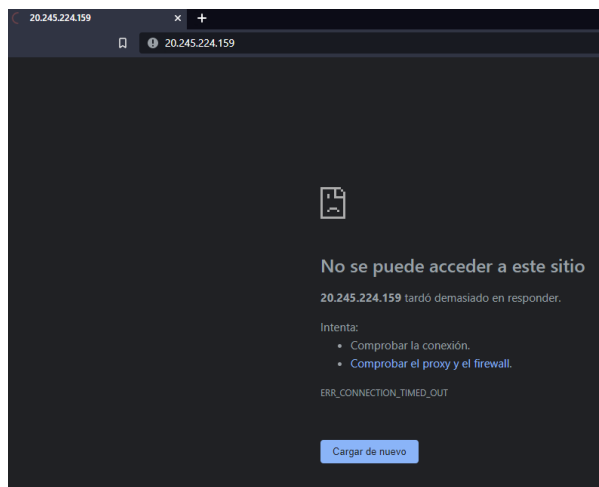
https://docs.microsoft.com/en-US/cli/azure/vm#az_vm_create
Read more about the command in reference docs
javier@Azure:~$ az vm create \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --name my-vm \
> --image UbuntuLTS \
> --admin-username azureuser \
> --generate-ssh-keys
SSH key files '/home/javier/.ssh/id_rsa' and '/home/javier/.ssh/id_rsa.pub' have been generated under ~/.ssh to allow SSH access to the VM. If using machines without permanent storage, back up your keys to a safe location.
It is recommended to use parameter "--public-ip-sku Standard" to create new VM with Standard public IP. Please note that the default public IP used for VM creation will be changed from Basic to Standard in the future.
{
  "fqdns": "",
  "id": "/subscriptions/293caa52-ebff-42e6-9e6f-4871148aeed/resourceGroups/learn-1d999c6f-e772-47de-bde8-e61fc6a105e1/providers/Microsoft.Compute/virtualMachines/my-vm",
  "location": "westus",
  "macAddress": "08-22-48-08-A3-05",
  "powerState": "VM running",
  "privateIpAddress": "10.0.0.4",
  "publicIpAddress": "20.245.224.159",
  "resourceGroup": "learn-1d999c6f-e772-47de-bde8-e61fc6a105e1",
  "zones": ""
}
javier@Azure:~$
```

Configuración de Nginx y establecer la página principal

```
javier@Azure:~$ az vm extension set \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --vm-name my-vm \
> --name customScript \
> --publisher Microsoft.Azure.Extensions \
> --version 2.1 \
> --settings '{"fileUri":["https://raw.githubusercontent.com/MicrosoftDocs/mslearn-welcome-to-azure/master/configure-nginx.sh"]}' \
> --protected-settings '{"commandToExecute": "./configure-nginx.sh"}'
{
  "autoUpgradeMinorVersion": true,
  "enableAutomaticUpgrade": null,
  "forceUpdateTag": null,
  "id": "/subscriptions/293caa52-ebff-42e6-9e6f-4871148aeed/resourceGroups/learn-1d999c6f-e772-47de-bde8-e61fc6a105e1/providers/Microsoft.Compute/virtualMachines/my-vm/extensions/customScript",
  "instanceView": null,
  "location": "westus",
  "name": "customScript",
  "protectedSettings": null,
  "protectedSettingsFromKeyVault": null,
  "provisioningState": "Succeeded",
  "publisher": "Microsoft.Azure.Extensions",
  "resourceGroup": "learn-1d999c6f-e772-47de-bde8-e61fc6a105e1",
  "settings": {
    "fileUri": [
      "https://raw.githubusercontent.com/MicrosoftDocs/mslearn-welcome-to-azure/master/configure-nginx.sh"
    ]
  },
  "suppressFailures": null,
  "tags": null,
  "type": "Microsoft.Compute/virtualMachines/extensions",
  "typeHandlerVersion": "2.1",
  "typePropertiesType": "customScript"
}
```

Obtención de IP e intento de conexión

```
javier@Azure:~$ IPADDRESS=$(az vm list-ip-addresses \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --name my-vm \
> --query "[].virtualMachine.network.publicIpAddresses[*].ipAddress" \
> --output tsv)
javier@Azure:~$ curl --connect-timeout
curl: option --connect-timeout: requires parameter
curl: try 'curl --help' or 'curl --manual' for more information
javier@Azure:~$ curl --connect-timeout 5 http://$IPADDRESS
curl: (1) Protocol "http" not supported or disabled in libcurl
javier@Azure:~$ curl --connect-timeout 5 http://$IPADDRESS
curl: (28) Connection timed out after 5001 milliseconds
javier@Azure:~$
```



Grupo de seguridad y sus reglas

```
javier@Azure:~$ az network nsg list \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --query '[].name' \
> --output tsv

my-vmNSG
javier@Azure:~$
javier@Azure:~$ az network nsg rule list \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --nsg-name my-vmNSG
[
  {
    "access": "Allow",
    "description": null,
    "destinationAddressPrefix": "*",
    "destinationAddressPrefixes": [],
    "destinationApplicationSecurityGroups": null,
    "destinationPortRange": "22",
    "destinationPortRanges": [],
    "direction": "Inbound",
    "etag": "W/\"25c2cb91-1697-4fcb-bf29-7ff5209fdd1f\"",
    "id": "/subscriptions/293caa52-ebff-42e6-9e6f-48771148aeed/resourceGroups/learn-1d999c6f-e772-47de-bde8-e61fc6a105e1/providers/Microsoft.Network/networkSecurityGroups/my-vmNSG/securityRules/default-allow-ssh",
    "name": "default-allow-ssh",
    "priority": 1000,
    "protocol": "Tcp",
    "provisioningState": "Succeeded",
    "resourceGroup": "learn-1d999c6f-e772-47de-bde8-e61fc6a105e1",
    "sourceAddressPrefix": "*",
    "sourceAddressPrefixes": [],
    "sourceApplicationSecurityGroups": null,
    "sourcePortRange": "*",
    "sourcePortRanges": [],
    "type": "Microsoft.Network/networkSecurityGroups/securityRules"
  }
]
javier@Azure:~$
```

Se muestra la regla *default-allow-ssh*

Se leen el nombre (*default-allow-ssh*), su prioridad (*1000*) que en este caso es baja, el puerto (*22*) y el acceso (*Allow*)

```
javier@Azure:~$ az network nsg rule list \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --nsg-name my-vmNSG \
> --query '[].{Name:name, Priority:priority, Port:destinationPortRange, Access:access}' \
> --output table
```

Name	Priority	Port	Access
default-allow-ssh	1000	22	Allow

```
javier@Azure:~$
```

Creación de una nueva regla llamada *allow-http* que permite el acceso En el puerto *80*

```
javier@Azure:~$ az network nsg rule create \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --nsg-name my-vmNSG \
> --name allow-http \
> --protocol tcp \
> --priority 100 \
> --destination-port-ranges 80 \
> --access Allow
{
  "access": "Allow",
  "description": null,
  "destinationAddressPrefix": "*",
  "destinationAddressPrefixes": [],
  "destinationApplicationSecurityGroups": null,
  "destinationPortRange": "80",
  "destinationPortRanges": [],
  "direction": "Inbound",
  "etag": "W/\"9538324f-00b9-4514-b906-6239cb684094\"",
  "id": "/subscriptions/293caa52-ebff-42e6-9e6f-48771148aeed/resourceGroups/learn-1d999c6f-e772-47de-bde8-e61fc6a105e1/providers/Microsoft.Network/networkSecurityGroups/my-vmNSG/securityRules/allow-http",
  "name": "allow-http",
  "priority": 100,
  "protocol": "Tcp",
  "provisioningState": "Succeeded",
  "resourceGroup": "learn-1d999c6f-e772-47de-bde8-e61fc6a105e1",
  "sourceAddressPrefix": "*",
  "sourceAddressPrefixes": [],
  "sourceApplicationSecurityGroups": null,
  "sourcePortRange": "*",
  "sourcePortRanges": [],
  "type": "Microsoft.Network/networkSecurityGroups/securityRules"
}
javier@Azure:~$ az network nsg rule list \
> --resource-group learn-1d999c6f-e772-47de-bde8-e61fc6a105e1 \
> --nsg-name my-vmNSG \
> --query '[].{Name:name, Priority:priority, Port:destinationPortRange, Access:access}' \
> --output table
```

Name	Priority	Port	Access
default-allow-ssh	1000	22	Allow
allow-http	100	80	Allow

```
javier@Azure:~$
```

Acceso al servidor

```
javier@Azure:~$ curl --connect-timeout 5 http://$IPADDRESS
<html><body><h2>Welcome to Azure! My name is my-vm.</h2></body></html>
javier@Azure:~$
```



Welcome to Azure! My name is my-vm.