# Deployment of VM with OS + on full auto

<https://docs.microsoft.com/en-us/azure/ansible/ansible-install-configure?toc=https%3A%2F%2Fdocs.microsoft.com%2Fen-us%2Fazure%2Fansible%2Ftoc.json&bc=https%3A%2F%2Fdocs.microsoft.com%2Fen-us%2Fazure%2Fbread%2Ftoc.json>

<https://docs.microsoft.com/en-us/cli/azure/create-an-azure-service-principal-azure-cli?view=azure-cli-latest>

<https://docs.ansible.com/ansible/latest/scenario_guides/guide_azure.html#providing-credentials-to-azure-modules>

<https://docs.ansible.com/ansible/latest/user_guide/playbooks.html>

<https://docs.bitnami.com/azure/faq/administration/find-subscription-id/>

<https://docs.microsoft.com/en-us/azure/ansible/ansible-install-configure?toc=https%3A%2F%2Fdocs.microsoft.com%2Fen-us%2Fazure%2Fansible%2Ftoc.json&bc=https%3A%2F%2Fdocs.microsoft.com%2Fen-us%2Fazure%2Fbread%2Ftoc.json#create-azure-credentials>

<https://www.youtube.com/watch?v=dBvLrjrB82Y>

**Update and install the software packages to get Ansible working**

sudo apt-get update && sudo apt-get install -y libssl-dev libffi-dev python-dev python-pip

sudo pip install ansible[azure]

**Make the folders and files to get started with Azure on the VM**

mkdir ~/.azure

nano ~/.azure/credentials

**Insert the following lines into the file. Replace the placeholders with the service principal values.**

[default]

subscription\_id=<your-subscription\_id> PRIVATE!

client\_id=<security-principal-appid>1367f684-096d-4845-ab2a-bf559ba08366

secret=<security-principal-password>890c91af-9290-4112-a3a0-a35216528a4a

tenant=<security-principal-tenant> c9e7bb4d-4734-49ba-95ee-3cd2e20b90f2

daniils@Azure:~$ az ad sp create-for-rbac --name AnsibleService

Changing "AnsibleService" to a valid URI of "http://AnsibleService", which is the required format used for service principal names

Creating a role assignment under the scope of "/subscriptions/869f509e-cb9b-4113-8af7-57ec5789ba6c"

Retrying role assignment creation: 1/36

{

"appId": "1367f684-096d-4845-ab2a-bf559ba08366",

"displayName": "AnsibleService",

"name": "http://AnsibleService",

"password": "890c91af-9290-4112-a3a0-a35216528a4a",

"tenant": "c9e7bb4d-4734-49ba-95ee-3cd2e20b90f2"

}

daniils@Azure:~$ Nano rg.yml

---

- hosts: localhost

connection: local

tasks:

- name: Create resource group

azure\_rm\_resourcegroup:

name: ansible-rg

location: eastus

register: rg

- debug:

var: rg

daniils@Azure:~$ ansible-playbook rg.yml

[WARNING]: No inventory was parsed, only implicit localhost is available

[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [localhost] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

TASK [Gathering Facts] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ok: [localhost]

TASK [Create resource group] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*changed: [localhost]

TASK [debug] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ok: [localhost] => {

"rg": {

"changed": true,

"contains\_resources": false,

"failed": false,

"state": {

"id": "/subscriptions/869f509e-cb9b-4113-8af7-57ec5789ba6c/resourceGroups/ansible-rg",

"location": "eastus",

"name": "ansible-rg",

"provisioning\_state": "Succeeded",

"tags": null

}

}

}

PLAY RECAP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*localhost : ok=3 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

daniils@Azure:~$ nano createvm.yml

- name: Create Azure VM

hosts: localhost

connection: local

tasks:

- name: Create resource group

azure\_rm\_resourcegroup:

name: myResourceGroup

location: eastus

- name: Create virtual network

azure\_rm\_virtualnetwork:

resource\_group: myResourceGroup

name: myVnet

address\_prefixes: "10.0.0.0/16"

- name: Add subnet

azure\_rm\_subnet:

resource\_group: myResourceGroup

name: mySubnet

address\_prefix: "10.0.1.0/24"

virtual\_network: myVnet

- name: Create public IP address

azure\_rm\_publicipaddress:

resource\_group: myResourceGroup

allocation\_method: Static

name: myPublicIP

register: output\_ip\_address

- name: Dump public IP for VM which will be created

debug:

msg: "The public IP is {{ output\_ip\_address.state.ip\_address }}."

- name: Create Network Security Group that allows SSH

azure\_rm\_securitygroup:

resource\_group: myResourceGroup

name: myNetworkSecurityGroup

rules:

- name: SSH

protocol: Tcp

destination\_port\_range: 22

access: Allow

priority: 1001

direction: Inbound

- name: Create virtual network interface card

azure\_rm\_networkinterface:

resource\_group: myResourceGroup

name: myNIC

virtual\_network: myVnet

subnet: mySubnet

public\_ip\_name: myPublicIP

security\_group: myNetworkSecurityGroup

- name: Create VM

azure\_rm\_virtualmachine:

resource\_group: myResourceGroup

name: myVM

vm\_size: Standard\_DS1\_v2

admin\_username: azureuser

ssh\_password\_enabled: false

ssh\_public\_keys:

- path: /home/azureuser/.ssh/authorized\_keys

key\_data: <your-key-data>

network\_interfaces: myNIC

image:

offer: CentOS

publisher: OpenLogic

sku: '7.5'

version: latest