

VMware
vSphere®

Introduction to Infrastructure Deployment on Azure & vSphere

With Terraform

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Experience

15 Years in IT, with Ops, Engineering and Design

VCAP Design, VCF Specialist, VCP x 2, vSAN, Azure Administrator



Agenda

What is IaC?

How can Terraform help?

Terraform Components

Deploying Infrastructure with Terraform on Azure

Deploying Infrastructure with Terraform on vSphere

What Next?

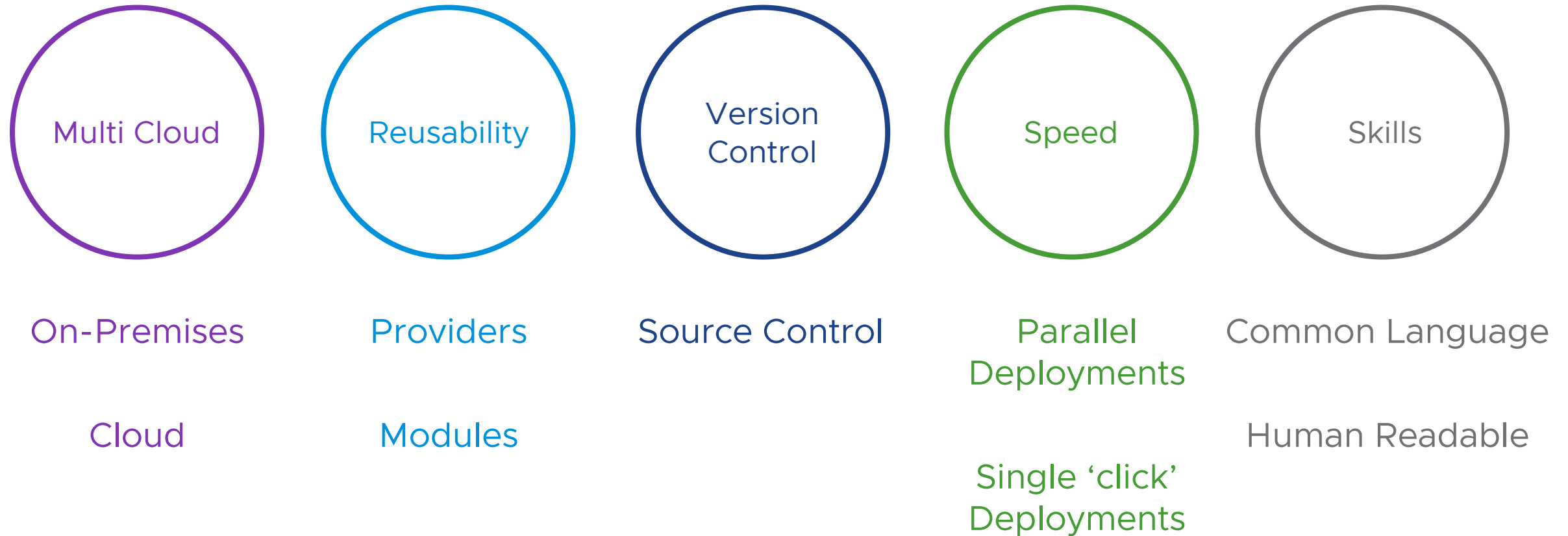
What is Infrastructure as Code?



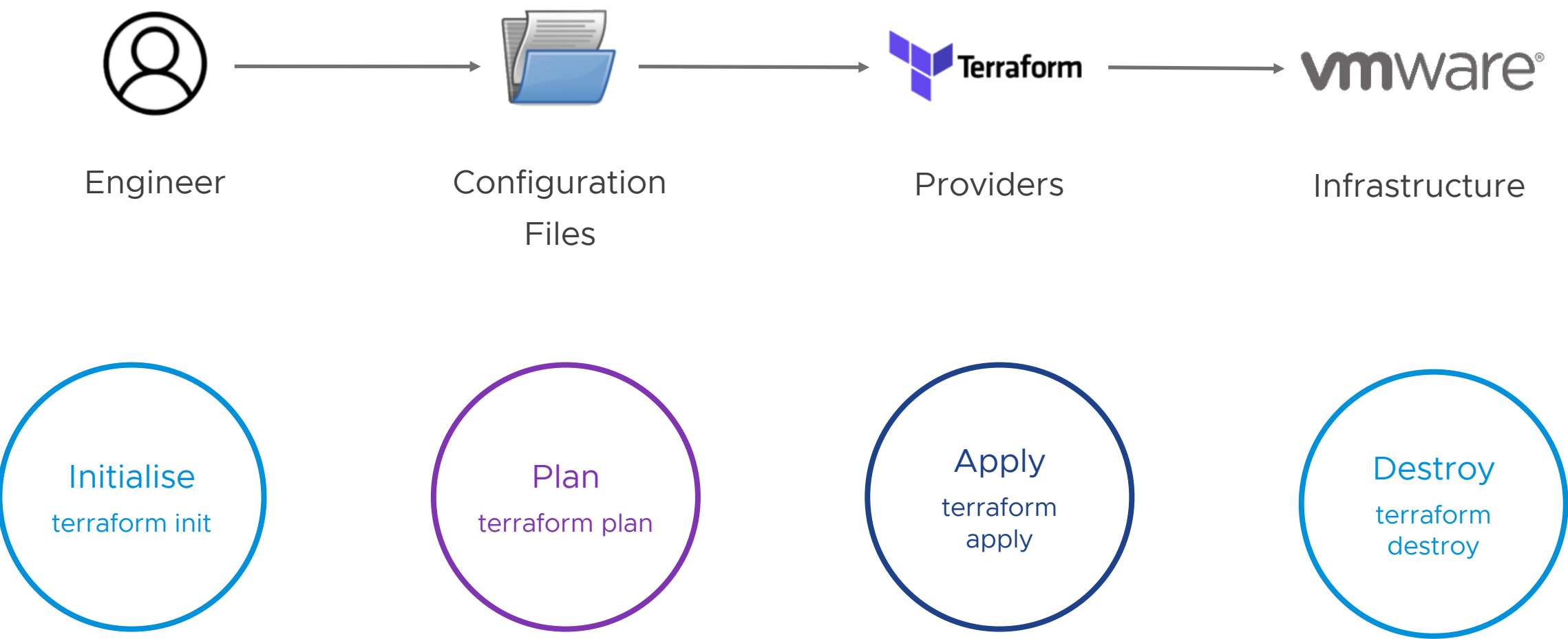
Infrastructure as Code (IaC) is the managing and provisioning of infrastructure through code instead of through manual processes



How can Terraform Help?



Basic Workflow



Terraform Components



Terraform Components

Executable



Terraform Components

Providers

Providers are plugins that Terraform uses to communicate/interact with an infrastructure platforms via API.

Multiple
Available

Written in
Golang

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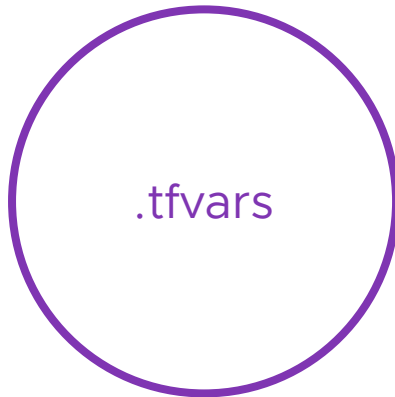
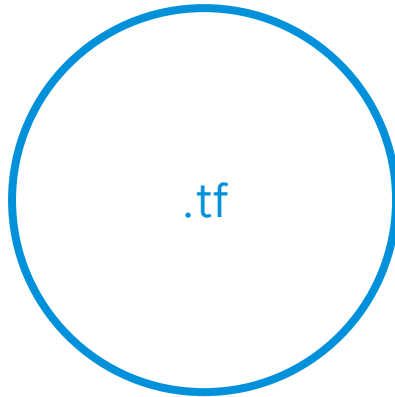


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Terraform Components

Configuration Files



```
#Datacenter
data "vsphere_datacenter" "datacenter" {
  name = "sfo-m01-dc01"
}

#Datastore
data "vsphere_datastore" "datastore" {
  name           = "sfo-m01-cl01-ds-vsan01"
  datacenter_id = data.vsphere_datacenter.datacenter.id
}

#Cluster
data "vsphere_compute_cluster" "cluster" {
  name           = "sfo-m01-cl01"
  datacenter_id = data.vsphere_datacenter.datacenter.id
}

#PortGroups
data "vsphere_network" "network" {
  name           = "sfo01-m01-cl01-vds01-pg-web"
  datacenter_id = data.vsphere_datacenter.datacenter.id
}

#Content Library
data "vsphere_content_library" "library" {
  name = "Subscribed"
}
```



Terraform Components

State Files



```
"resources": [  
  {  
    "mode": "data",  
    "type": "vsphere_datacenter",  
    "name": "datacenter",  
    "provider": "provider[\"registry.terraform.io/hashicorp/vsphere\"]",  
    "instances": [  
      {  
        "schema_version": 0,  
        "attributes": {  
          "id": "datacenter-3",  
          "name": "sfo-m01-dc01"  
        },  
        "sensitive_attributes": []  
      }  
    ]  
  },  
]
```

Deploying Infrastructure with Terraform on Azure



Deploying Resources to Azure

Resource Groups

Virtual Networks

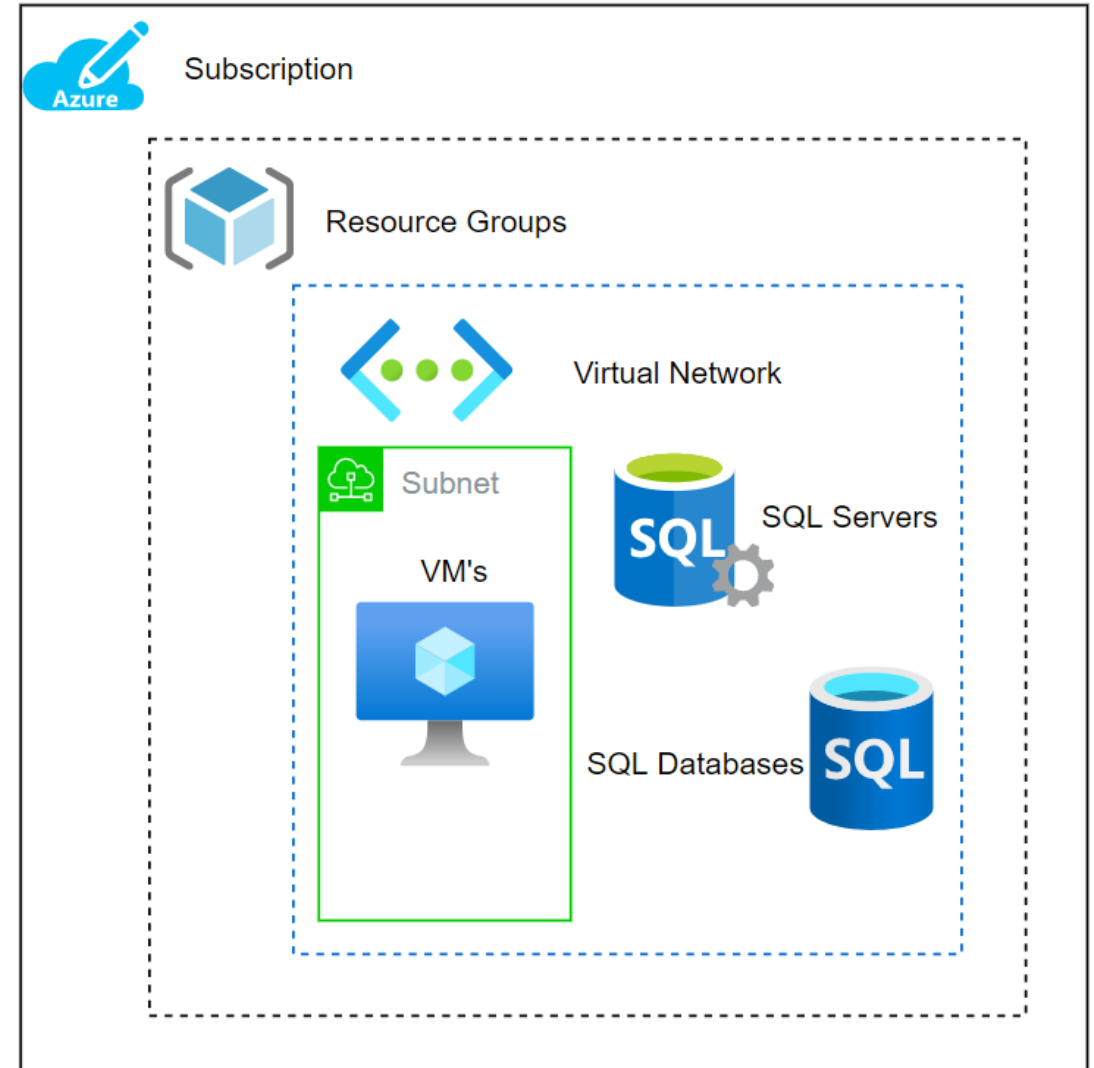
Subnets

Virtual Machines - IaaS

Blob Storage - IaaS

SQL DB's - PaaS

Policy



Deploying Infrastructure with Terraform on vSphere



Deploying Resources to vSphere

Datacenters

Clusters

Networks

Storage

Virtual Machines

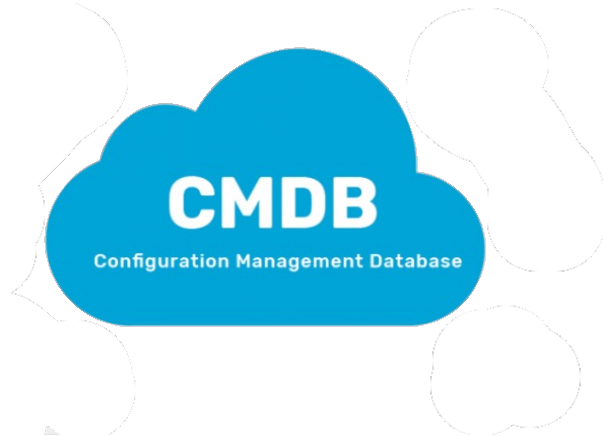
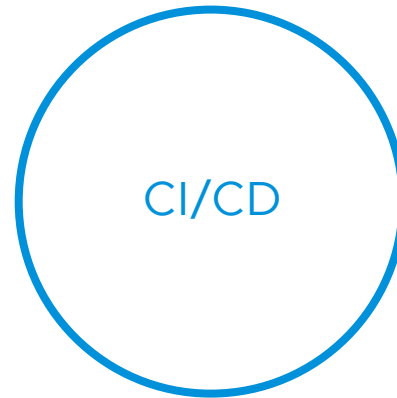
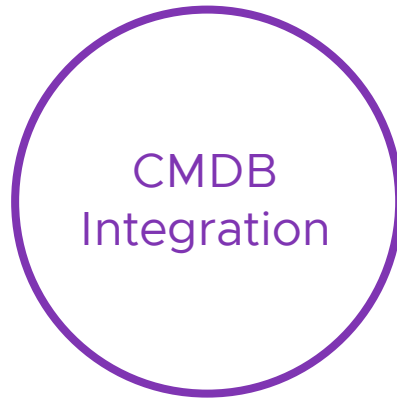
Role and Privileges



What Next?



Going Further...



Questions?



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Thank You