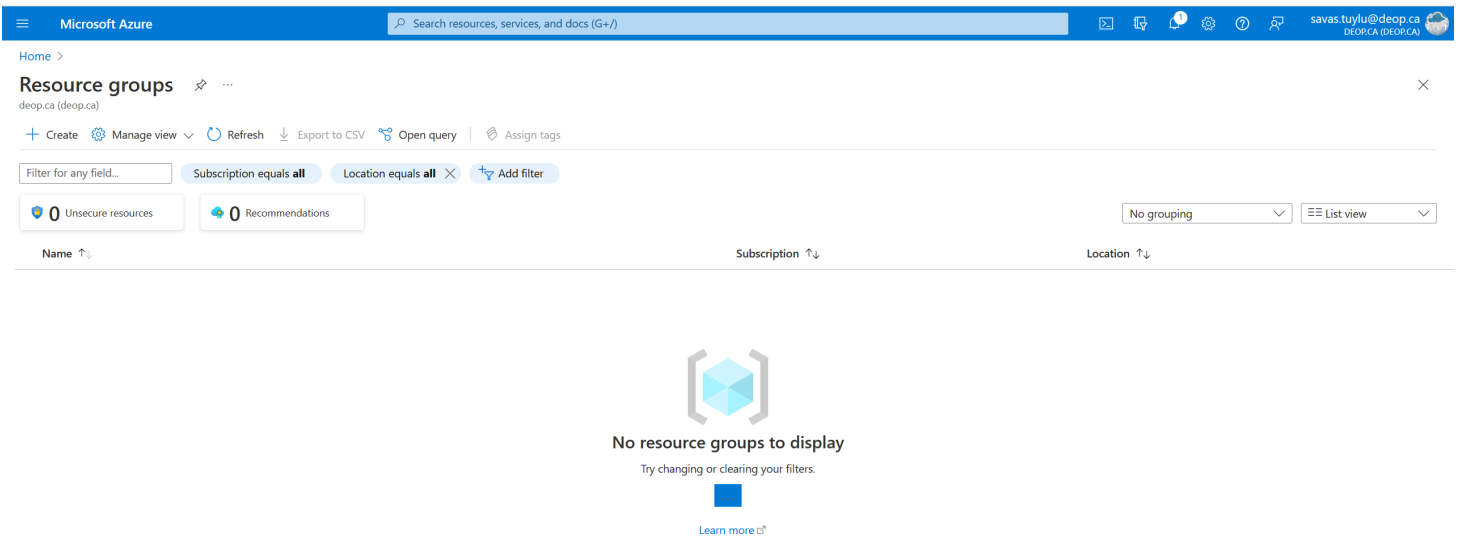


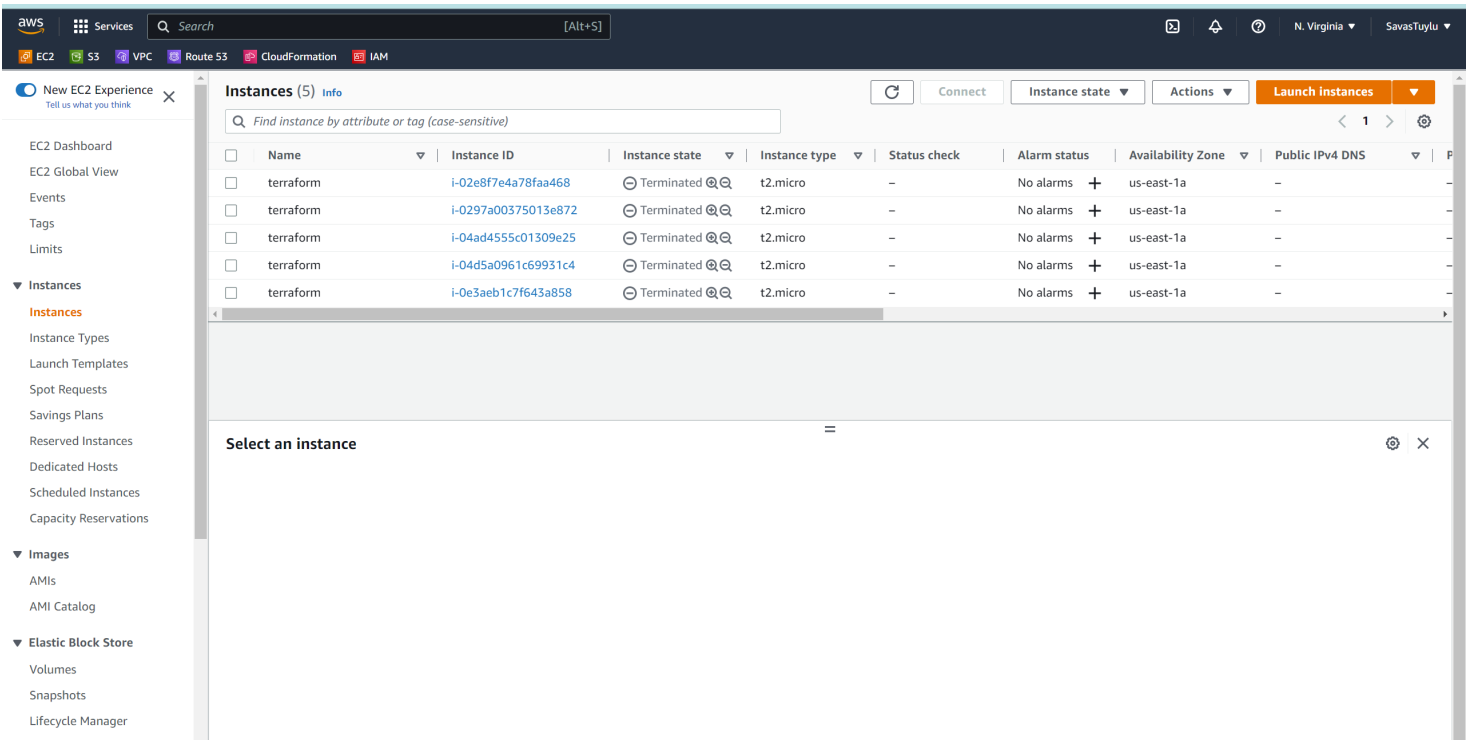
Multi-Cloud-Deployments in Azure and AWS via Terraform

Azurerm_RG_VM & Storage Account and AWS_EC2_instance & S3_bucket

1A-Before Deployment in Azure



1B-Before Deployment in AWS



2A-After Deployment RG in Azure

Microsoft Azure

Search resources, services, and docs (G+I)

Home >

Resource groups

deop.ca (deop.ca)

Create

Manage view

Refresh

Export to CSV

Open query

Assign tags

Filter for any field...

Subscription equals all

Location equals all

Add filter

0 Unsecure resources

0 Recommendations

No grouping

List view

Name	Subscription	Location
NetworkWatcherRG	Azure subscription 1	West US
savasrg	Azure subscription 1	West US

2B-After Deployment VM and Storage Account in Azure

savasrg

Resource group

Search

Create

Manage view

Delete resource group

Refresh

Export to CSV

Open query

Assign tags

Move

Delete

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Deployments

Security

Policies

Properties

Locks

Cost Management

Cost analysis

Cost alerts (preview)

Budgets

Advisor recommendations

Monitoring

Insights (preview)

Essentials

Subscription (move) : Azure subscription 1

Subscription ID : 9305bb20-ec55-4ee4-a68c-ee0db160dd61

Tags (edit) : Click here to add tags

Deployments : No deployments

Location : West US

Resources

Recommendations

Filter for any field...

Type equals all

Location equals all

Add filter

Showing 1 to 5 of 5 records.

Show hidden types

No grouping

List view

Name	Type	Location
myosdisk1	Disk	West US
savasstg55	Storage account	West US
savasvm-network	Virtual network	West US
savasvm-nic	Network Interface	West US
savasvm-vm	Virtual machine	West US

< Previous

Page 1 of 1

Next >

Give feedback

2C-After Deployment EC2 in AWS

Services

Search

[Alt+S]

EC2

S3

VPC

Route S3

CloudFormation

IAM

New EC2 Experience

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Instances (10)

Info

Find instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	terraform	i-0716a5918873eb63f	Running	t2.micro	Initializing	No alarms	us-east-1b	ec2-34-230-18-178.co...
<input type="checkbox"/>	terraform	i-0965e162cd8da6de0	Running	t2.micro	Initializing	No alarms	us-east-1b	ec2-54-167-34-76.com...
<input type="checkbox"/>	terraform	i-02511766c23613d39	Running	t2.micro	Initializing	No alarms	us-east-1b	ec2-52-23-174-40.com...
<input type="checkbox"/>	terraform	i-070166c0e42efa11e	Running	t2.micro	Initializing	No alarms	us-east-1b	ec2-54-234-124-225.co...
<input type="checkbox"/>	terraform	i-03560045021ca09ba	Running	t2.micro	Initializing	No alarms	us-east-1b	ec2-3-89-141-254.com...
<input type="checkbox"/>	terraform	i-02e8f7e4a78faa468	Terminated	t2.micro	-	No alarms	us-east-1a	-
<input type="checkbox"/>	terraform	i-0297a00375013e872	Terminated	t2.micro	-	No alarms	us-east-1a	-
<input type="checkbox"/>	terraform	i-04ad4555c01309e25	Terminated	t2.micro	-	No alarms	us-east-1a	-
<input type="checkbox"/>	terraform	i-04d5a0961c69931c4	Terminated	t2.micro	-	No alarms	us-east-1a	-

Select an instance

2D-After Deployment S3 in AWS

Services

Search

[Alt+S]

EC2

S3

VPC

Route S3

CloudFormation

IAM

Amazon S3

Buckets

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

Access analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

AWS Organizations settings

Feature spotlight

AWS Marketplace for S3

Get hands-on guidance on how to get started with S3 Intelligent-Tiering and experience automatic storage cost savings.

View tutorial

Amazon S3 > Buckets

Account snapshot

Storage lens provides visibility into storage usage and activity trends. Learn more

View Storage Lens dashboard

Buckets (1)

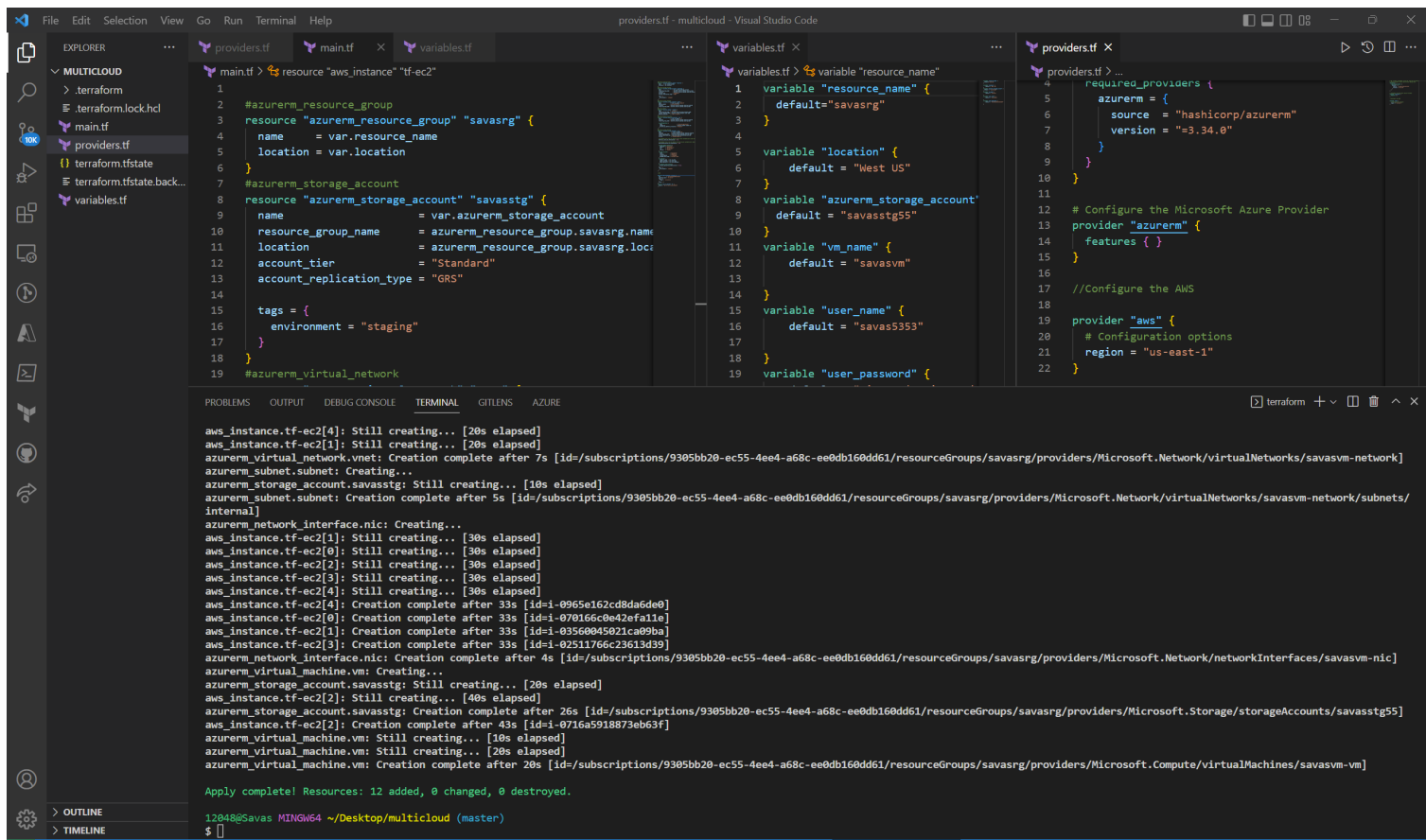
Info

Buckets are containers for data stored in S3. Learn more

Find buckets by name

	Name	AWS Region	Access	Creation date
<input type="radio"/>	my-tf-test-bucket345353	US East (N. Virginia) us-east-1	Objects can be public	December 13, 2022, 21:04:51 (UTC-05:00)

3- After Deployment in VS code



The screenshot displays the Visual Studio Code interface with the Terraform deployment logs in the terminal. The Explorer pane on the left shows the project structure: `MULTICLOUD` (containing `.terraform`, `.terraform.lock.hcl`, `main.tf`, `providers.tf`, `terraform.tfstate`, `terraform.tfstate.backup`, and `variables.tf`). The main editor shows the `main.tf` file, which defines the `aws_instance` resource and the `azurerm_resource_group` resource. The terminal output shows the deployment progress, including the creation of the `aws_instance` resource and the `azurerm_resource_group` resource. The logs indicate that the deployment is successful, with resources created and no errors.

```
main.tf
1 resource "aws_instance" "tf-ec2"
2
3 #azurerm_resource_group
4 resource "azurerm_resource_group" "savasrg" {
5   name = var.resource_name
6   location = var.location
7 }
8 #azurerm_storage_account
9 resource "azurerm_storage_account" "savasstg" {
10  name = var.azurerm_storage_account
11  resource_group_name = azurerm_resource_group.savasrg.name
12  location = azurerm_resource_group.savasrg.location
13  account_tier = "Standard"
14  account_replication_type = "GRS"
15
16  tags = {
17    environment = "staging"
18  }
19 }
20 #azurerm_virtual_network
```

```
providers.tf
1 variable "resource_name" {
2   default = "savasrg"
3 }
4
5 variable "location" {
6   default = "West US"
7 }
8
9 variable "azurerm_storage_account" {
10  default = "savasstg55"
11 }
12
13 variable "vm_name" {
14   default = "savasvm"
15 }
16
17 variable "user_name" {
18   default = "savas5353"
19 }
20
21 variable "user_password" {
22   default = "savas5353"
23 }
```

```
variables.tf
1 variable "resource_name" {
2   default = "savasrg"
3 }
4
5 variable "location" {
6   default = "West US"
7 }
8
9 variable "azurerm_storage_account" {
10  default = "savasstg55"
11 }
12
13 variable "vm_name" {
14   default = "savasvm"
15 }
16
17 variable "user_name" {
18   default = "savas5353"
19 }
20
21 variable "user_password" {
22   default = "savas5353"
23 }
```

```
providers.tf
1 required_providers {
2   azurerm = {
3     source = "hashicorp/azurerm"
4     version = "~>3.34.0"
5   }
6 }
7
8 # Configure the Microsoft Azure Provider
9 provider "azurerm" {
10   features {}
11 }
12
13 //Configure the AWS
14 provider "aws" {
15   # Configuration options
16   region = "us-east-1"
17 }
```

```
terminal
aws_instance.tf-ec2[4]: Still creating... [20s elapsed]
aws_instance.tf-ec2[1]: Still creating... [20s elapsed]
aws_instance.tf-ec2[0]: Still creating... [20s elapsed]
azurerm_virtual_network.vnet: Creation complete after 7s [id=/subscriptions/9305bb20-ec55-4ee4-a68c-ee0db160dd61/resourceGroups/savasrg/providers/Microsoft.Network/virtualNetworks/savasvm-network]
azurerm_subnet.subnet: Creating...
azurerm_subnet.subnet: Creation complete after 5s [id=/subscriptions/9305bb20-ec55-4ee4-a68c-ee0db160dd61/resourceGroups/savasrg/providers/Microsoft.Network/virtualNetworks/savasvm-network/subnets/internal]
azurerm_network_interface.nic: Creating...
aws_instance.tf-ec2[1]: Still creating... [30s elapsed]
aws_instance.tf-ec2[0]: Still creating... [30s elapsed]
aws_instance.tf-ec2[2]: Still creating... [30s elapsed]
aws_instance.tf-ec2[3]: Still creating... [30s elapsed]
aws_instance.tf-ec2[4]: Still creating... [30s elapsed]
aws_instance.tf-ec2[4]: Creation complete after 33s [id=i-0965e162cd8da6de0]
aws_instance.tf-ec2[0]: Creation complete after 33s [id=i-070166c0e42efalle]
aws_instance.tf-ec2[1]: Creation complete after 33s [id=i-03560045021ca09ba]
aws_instance.tf-ec2[3]: Creation complete after 33s [id=i-02511766c23619d39]
azurerm_network_interface.nic: Creation complete after 4s [id=/subscriptions/9305bb20-ec55-4ee4-a68c-ee0db160dd61/resourceGroups/savasrg/providers/Microsoft.Network/networkInterfaces/savasvm-nic]
azurerm_virtual_machine.vm: Creating...
azurerm_storage_account.savasstg: Still creating... [20s elapsed]
aws_instance.tf-ec2[2]: Still creating... [40s elapsed]
azurerm_storage_account.savasstg: Creation complete after 26s [id=/subscriptions/9305bb20-ec55-4ee4-a68c-ee0db160dd61/resourceGroups/savasrg/providers/Microsoft.Storage/storageAccounts/savasstg55]
azurerm_virtual_machine.vm: Still creating... [10s elapsed]
azurerm_virtual_machine.vm: Still creating... [20s elapsed]
azurerm_virtual_machine.vm: Creation complete after 20s [id=/subscriptions/9305bb20-ec55-4ee4-a68c-ee0db160dd61/resourceGroups/savasrg/providers/Microsoft.Compute/virtualMachines/savasvm-vm]

Apply complete! Resources: 12 added, 0 changed, 0 destroyed.
```