Windows PowerShell

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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\MayankMaheshwari> d:

PS D:\> cd Devops\terraform-xops-webserver

PS D:\Devops\terraform-xops-webserver> terraform init

Terraform initialized in an empty directory!

The directory has no Terraform configuration files. You may begin working

with Terraform immediately by creating Terraform configuration files.

PS D:\Devops\terraform-xops-webserver> dir

Directory: D:\Devops\terraform-xops-webserver

Mode LastWriteTime Length Name

---- ------------- ------ ----

-a---- 06-07-2025 21:31 3549 main.tf.txt

-a---- 06-07-2025 21:34 271 variable.tf.txt

PS D:\Devops\terraform-xops-webserver> terraform init

Initializing the backend...

Initializing provider plugins...

- Finding hashicorp/aws versions matching "~> 5.50"...

- Installing hashicorp/aws v5.100.0...

- Installed hashicorp/aws v5.100.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the provider

selections it made above. Include this file in your version control repository

so that Terraform can guarantee to make the same selections by default when

you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see

any changes that are required for your infrastructure. All Terraform commands

should now work.

If you ever set or change modules or backend configuration for Terraform,

rerun this command to reinitialize your working directory. If you forget, other

commands will detect it and remind you to do so if necessary.

PS D:\Devops\terraform-xops-webserver> terraform validate

Success! The configuration is valid.

PS D:\Devops\terraform-xops-webserver> terraform plan -out tfplan

var.key\_pair\_name

Existing EC2 key pair for SSH access

Enter a value:

data.aws\_availability\_zones.azs: Reading...

data.aws\_ami.amazon\_linux\_2023: Reading...

data.aws\_availability\_zones.azs: Read complete after 0s [id=ap-south-1]

data.aws\_ami.amazon\_linux\_2023: Read complete after 1s [id=ami-0f9eda62922c0d4f8]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:

+ create

Terraform will perform the following actions:

# aws\_instance.web will be created

+ resource "aws\_instance" "web" {

+ ami = "ami-0f9eda62922c0d4f8"

+ arn = (known after apply)

+ associate\_public\_ip\_address = true

+ availability\_zone = (known after apply)

+ cpu\_core\_count = (known after apply)

+ cpu\_threads\_per\_core = (known after apply)

+ disable\_api\_stop = (known after apply)

+ disable\_api\_termination = (known after apply)

+ ebs\_optimized = (known after apply)

+ enable\_primary\_ipv6 = (known after apply)

+ get\_password\_data = false

+ host\_id = (known after apply)

+ host\_resource\_group\_arn = (known after apply)

+ iam\_instance\_profile = (known after apply)

+ id = (known after apply)

+ instance\_initiated\_shutdown\_behavior = (known after apply)

+ instance\_lifecycle = (known after apply)

+ instance\_state = (known after apply)

+ instance\_type = "t2.micro"

+ ipv6\_address\_count = (known after apply)

+ ipv6\_addresses = (known after apply)

+ key\_name = (known after apply)

+ monitoring = (known after apply)

+ outpost\_arn = (known after apply)

+ password\_data = (known after apply)

+ placement\_group = (known after apply)

+ placement\_partition\_number = (known after apply)

+ primary\_network\_interface\_id = (known after apply)

+ private\_dns = (known after apply)

+ private\_ip = (known after apply)

+ public\_dns = (known after apply)

+ public\_ip = (known after apply)

+ secondary\_private\_ips = (known after apply)

+ security\_groups = (known after apply)

+ source\_dest\_check = true

+ spot\_instance\_request\_id = (known after apply)

+ subnet\_id = (known after apply)

+ tags = {

+ "Name" = "xops-web-instance"

}

+ tags\_all = {

+ "Name" = "xops-web-instance"

}

+ tenancy = (known after apply)

+ user\_data = "75bc77fb1427a6e7e73d978b33a5aff069e3349b"

+ user\_data\_base64 = (known after apply)

+ user\_data\_replace\_on\_change = false

+ vpc\_security\_group\_ids = (known after apply)

+ capacity\_reservation\_specification (known after apply)

+ cpu\_options (known after apply)

+ ebs\_block\_device (known after apply)

+ enclave\_options (known after apply)

+ ephemeral\_block\_device (known after apply)

+ instance\_market\_options (known after apply)

+ maintenance\_options (known after apply)

+ metadata\_options (known after apply)

+ network\_interface (known after apply)

+ private\_dns\_name\_options (known after apply)

+ root\_block\_device (known after apply)

}

# aws\_internet\_gateway.igw will be created

+ resource "aws\_internet\_gateway" "igw" {

+ arn = (known after apply)

+ id = (known after apply)

+ owner\_id = (known after apply)

+ tags = {

+ "Name" = "xops-igw"

}

+ tags\_all = {

+ "Name" = "xops-igw"

}

+ vpc\_id = (known after apply)

}

# aws\_route\_table.public\_rt will be created

+ resource "aws\_route\_table" "public\_rt" {

+ arn = (known after apply)

+ id = (known after apply)

+ owner\_id = (known after apply)

+ propagating\_vgws = (known after apply)

+ route = [

+ {

+ cidr\_block = "0.0.0.0/0"

+ gateway\_id = (known after apply)

# (11 unchanged attributes hidden)

},

]

+ tags = {

+ "Name" = "xops-public-rt"

}

+ tags\_all = {

+ "Name" = "xops-public-rt"

}

+ vpc\_id = (known after apply)

}

# aws\_route\_table\_association.public\_assoc will be created

+ resource "aws\_route\_table\_association" "public\_assoc" {

+ id = (known after apply)

+ route\_table\_id = (known after apply)

+ subnet\_id = (known after apply)

}

# aws\_security\_group.web\_sg will be created

+ resource "aws\_security\_group" "web\_sg" {

+ arn = (known after apply)

+ description = "Allow HTTP (80) and SSH (22)"

+ egress = [

+ {

+ cidr\_blocks = [

+ "0.0.0.0/0",

]

+ from\_port = 0

+ ipv6\_cidr\_blocks = []

+ prefix\_list\_ids = []

+ protocol = "-1"

+ security\_groups = []

+ self = false

+ to\_port = 0

# (1 unchanged attribute hidden)

},

]

+ id = (known after apply)

+ ingress = [

+ {

+ cidr\_blocks = [

+ "0.0.0.0/0",

]

+ description = "HTTP"

+ from\_port = 80

+ ipv6\_cidr\_blocks = []

+ prefix\_list\_ids = []

+ protocol = "tcp"

+ security\_groups = []

+ self = false

+ to\_port = 80

},

+ {

+ cidr\_blocks = [

+ "0.0.0.0/0",

]

+ description = "SSH from anywhere (tighten in prod)"

+ from\_port = 22

+ ipv6\_cidr\_blocks = []

+ prefix\_list\_ids = []

+ protocol = "tcp"

+ security\_groups = []

+ self = false

+ to\_port = 22

},

]

+ name = (known after apply)

+ name\_prefix = "xops-web-sg-"

+ owner\_id = (known after apply)

+ revoke\_rules\_on\_delete = false

+ tags = {

+ "Name" = "xops-web-sg"

}

+ tags\_all = {

+ "Name" = "xops-web-sg"

}

+ vpc\_id = (known after apply)

}

# aws\_subnet.public will be created

+ resource "aws\_subnet" "public" {

+ arn = (known after apply)

+ assign\_ipv6\_address\_on\_creation = false

+ availability\_zone = "ap-south-1a"

+ availability\_zone\_id = (known after apply)

+ cidr\_block = "10.0.1.0/24"

+ enable\_dns64 = false

+ enable\_resource\_name\_dns\_a\_record\_on\_launch = false

+ enable\_resource\_name\_dns\_aaaa\_record\_on\_launch = false

+ id = (known after apply)

+ ipv6\_cidr\_block\_association\_id = (known after apply)

+ ipv6\_native = false

+ map\_public\_ip\_on\_launch = true

+ owner\_id = (known after apply)

+ private\_dns\_hostname\_type\_on\_launch = (known after apply)

+ tags = {

+ "Name" = "xops-public-subnet"

}

+ tags\_all = {

+ "Name" = "xops-public-subnet"

}

+ vpc\_id = (known after apply)

}

# aws\_vpc.web\_vpc will be created

+ resource "aws\_vpc" "web\_vpc" {

+ arn = (known after apply)

+ cidr\_block = "10.0.0.0/16"

+ default\_network\_acl\_id = (known after apply)

+ default\_route\_table\_id = (known after apply)

+ default\_security\_group\_id = (known after apply)

+ dhcp\_options\_id = (known after apply)

+ enable\_dns\_hostnames = true

+ enable\_dns\_support = true

+ enable\_network\_address\_usage\_metrics = (known after apply)

+ id = (known after apply)

+ instance\_tenancy = "default"

+ ipv6\_association\_id = (known after apply)

+ ipv6\_cidr\_block = (known after apply)

+ ipv6\_cidr\_block\_network\_border\_group = (known after apply)

+ main\_route\_table\_id = (known after apply)

+ owner\_id = (known after apply)

+ tags = {

+ "Name" = "xops-web-vpc"

}

+ tags\_all = {

+ "Name" = "xops-web-vpc"

}

}

Plan: 7 to add, 0 to change, 0 to destroy.

Changes to Outputs:

+ web\_public\_ip = (known after apply)

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Saved the plan to: tfplan

To perform exactly these actions, run the following command to apply:

terraform apply "tfplan"

PS D:\Devops\terraform-xops-webserver>

PS D:\Devops\terraform-xops-webserver> terraform apply "tfplan"

aws\_vpc.web\_vpc: Creating...

aws\_vpc.web\_vpc: Still creating... [00m10s elapsed]

aws\_vpc.web\_vpc: Creation complete after 13s [id=vpc-01c8bdeb94c534fbc]

aws\_internet\_gateway.igw: Creating...

aws\_subnet.public: Creating...

aws\_security\_group.web\_sg: Creating...

aws\_internet\_gateway.igw: Creation complete after 0s [id=igw-03e67c40de9f27bb8]

aws\_route\_table.public\_rt: Creating...

aws\_route\_table.public\_rt: Creation complete after 1s [id=rtb-0e90633bb08730408]

aws\_security\_group.web\_sg: Creation complete after 2s [id=sg-01928d5651ae5141f]

aws\_subnet.public: Still creating... [00m10s elapsed]

aws\_subnet.public: Creation complete after 11s [id=subnet-0a6d29bfeed070a04]

aws\_route\_table\_association.public\_assoc: Creating...

aws\_instance.web: Creating...

aws\_route\_table\_association.public\_assoc: Creation complete after 0s [id=rtbassoc-01411d20361ee0428]

aws\_instance.web: Still creating... [00m10s elapsed]

aws\_instance.web: Still creating... [00m20s elapsed]

aws\_instance.web: Still creating... [00m30s elapsed]

aws\_instance.web: Creation complete after 32s [id=i-036a4f2b589261e06]

Apply complete! Resources: 7 added, 0 changed, 0 destroyed.

Outputs:

web\_public\_ip = "3.110.178.2"

PS D:\Devops\terraform-xops-webserver> terraform destroy -auto-approve

var.key\_pair\_name

Existing EC2 key pair for SSH access

Enter a value:

data.aws\_availability\_zones.azs: Reading...

data.aws\_ami.amazon\_linux\_2023: Reading...

aws\_vpc.web\_vpc: Refreshing state... [id=vpc-01c8bdeb94c534fbc]

data.aws\_availability\_zones.azs: Read complete after 1s [id=ap-south-1]

data.aws\_ami.amazon\_linux\_2023: Read complete after 2s [id=ami-0f9eda62922c0d4f8]

aws\_internet\_gateway.igw: Refreshing state... [id=igw-03e67c40de9f27bb8]

aws\_subnet.public: Refreshing state... [id=subnet-0a6d29bfeed070a04]

aws\_security\_group.web\_sg: Refreshing state... [id=sg-01928d5651ae5141f]

aws\_route\_table.public\_rt: Refreshing state... [id=rtb-0e90633bb08730408]

aws\_instance.web: Refreshing state... [id=i-036a4f2b589261e06]

aws\_route\_table\_association.public\_assoc: Refreshing state... [id=rtbassoc-01411d20361ee0428]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:

- destroy

Terraform will perform the following actions:

# aws\_instance.web will be destroyed

- resource "aws\_instance" "web" {

- ami = "ami-0f9eda62922c0d4f8" -> null

- arn = "arn:aws:ec2:ap-south-1:851919409108:instance/i-036a4f2b589261e06" -> null

- associate\_public\_ip\_address = true -> null

- availability\_zone = "ap-south-1a" -> null

- cpu\_core\_count = 1 -> null

- cpu\_threads\_per\_core = 1 -> null

- disable\_api\_stop = false -> null

- disable\_api\_termination = false -> null

- ebs\_optimized = false -> null

- get\_password\_data = false -> null

- hibernation = false -> null

- id = "i-036a4f2b589261e06" -> null

- instance\_initiated\_shutdown\_behavior = "stop" -> null

- instance\_state = "running" -> null

- instance\_type = "t2.micro" -> null

- ipv6\_address\_count = 0 -> null

- ipv6\_addresses = [] -> null

- monitoring = false -> null

- placement\_partition\_number = 0 -> null

- primary\_network\_interface\_id = "eni-0744b9e82c3ed4b0e" -> null

- private\_dns = "ip-10-0-1-251.ap-south-1.compute.internal" -> null

- private\_ip = "10.0.1.251" -> null

- public\_dns = "ec2-3-110-178-2.ap-south-1.compute.amazonaws.com" -> null

- public\_ip = "3.110.178.2" -> null

- secondary\_private\_ips = [] -> null

- security\_groups = [] -> null

- source\_dest\_check = true -> null

- subnet\_id = "subnet-0a6d29bfeed070a04" -> null

- tags = {

- "Name" = "xops-web-instance"

} -> null

- tags\_all = {

- "Name" = "xops-web-instance"

} -> null

- tenancy = "default" -> null

- user\_data = "75bc77fb1427a6e7e73d978b33a5aff069e3349b" -> null

- user\_data\_replace\_on\_change = false -> null

- vpc\_security\_group\_ids = [

- "sg-01928d5651ae5141f",

] -> null

# (8 unchanged attributes hidden)

- capacity\_reservation\_specification {

- capacity\_reservation\_preference = "open" -> null

}

- cpu\_options {

- core\_count = 1 -> null

- threads\_per\_core = 1 -> null

# (1 unchanged attribute hidden)

}

- credit\_specification {

- cpu\_credits = "standard" -> null

}

- enclave\_options {

- enabled = false -> null

}

- maintenance\_options {

- auto\_recovery = "default" -> null

}

- metadata\_options {

- http\_endpoint = "enabled" -> null

- http\_protocol\_ipv6 = "disabled" -> null

- http\_put\_response\_hop\_limit = 2 -> null

- http\_tokens = "required" -> null

- instance\_metadata\_tags = "disabled" -> null

}

- private\_dns\_name\_options {

- enable\_resource\_name\_dns\_a\_record = false -> null

- enable\_resource\_name\_dns\_aaaa\_record = false -> null

- hostname\_type = "ip-name" -> null

}

- root\_block\_device {

- delete\_on\_termination = true -> null

- device\_name = "/dev/xvda" -> null

- encrypted = false -> null

- iops = 3000 -> null

- tags = {} -> null

- tags\_all = {} -> null

- throughput = 125 -> null

- volume\_id = "vol-0f64fb71f2d1b9a63" -> null

- volume\_size = 30 -> null

- volume\_type = "gp3" -> null

# (1 unchanged attribute hidden)

}

}

# aws\_internet\_gateway.igw will be destroyed

- resource "aws\_internet\_gateway" "igw" {

- arn = "arn:aws:ec2:ap-south-1:851919409108:internet-gateway/igw-03e67c40de9f27bb8" -> null

- id = "igw-03e67c40de9f27bb8" -> null

- owner\_id = "851919409108" -> null

- tags = {

- "Name" = "xops-igw"

} -> null

- tags\_all = {

- "Name" = "xops-igw"

} -> null

- vpc\_id = "vpc-01c8bdeb94c534fbc" -> null

}

# aws\_route\_table.public\_rt will be destroyed

- resource "aws\_route\_table" "public\_rt" {

- arn = "arn:aws:ec2:ap-south-1:851919409108:route-table/rtb-0e90633bb08730408" -> null

- id = "rtb-0e90633bb08730408" -> null

- owner\_id = "851919409108" -> null

- propagating\_vgws = [] -> null

- route = [

- {

- cidr\_block = "0.0.0.0/0"

- gateway\_id = "igw-03e67c40de9f27bb8"

# (11 unchanged attributes hidden)

},

] -> null

- tags = {

- "Name" = "xops-public-rt"

} -> null

- tags\_all = {

- "Name" = "xops-public-rt"

} -> null

- vpc\_id = "vpc-01c8bdeb94c534fbc" -> null

}

# aws\_route\_table\_association.public\_assoc will be destroyed

- resource "aws\_route\_table\_association" "public\_assoc" {

- id = "rtbassoc-01411d20361ee0428" -> null

- route\_table\_id = "rtb-0e90633bb08730408" -> null

- subnet\_id = "subnet-0a6d29bfeed070a04" -> null

# (1 unchanged attribute hidden)

}

# aws\_security\_group.web\_sg will be destroyed

- resource "aws\_security\_group" "web\_sg" {

- arn = "arn:aws:ec2:ap-south-1:851919409108:security-group/sg-01928d5651ae5141f" -> null

- description = "Allow HTTP (80) and SSH (22)" -> null

- egress = [

- {

- cidr\_blocks = [

- "0.0.0.0/0",

]

- from\_port = 0

- ipv6\_cidr\_blocks = []

- prefix\_list\_ids = []

- protocol = "-1"

- security\_groups = []

- self = false

- to\_port = 0

# (1 unchanged attribute hidden)

},

] -> null

- id = "sg-01928d5651ae5141f" -> null

- ingress = [

- {

- cidr\_blocks = [

- "0.0.0.0/0",

]

- description = "HTTP"

- from\_port = 80

- ipv6\_cidr\_blocks = []

- prefix\_list\_ids = []

- protocol = "tcp"

- security\_groups = []

- self = false

- to\_port = 80

},

- {

- cidr\_blocks = [

- "0.0.0.0/0",

]

- description = "SSH from anywhere (tighten in prod)"

- from\_port = 22

- ipv6\_cidr\_blocks = []

- prefix\_list\_ids = []

- protocol = "tcp"

- security\_groups = []

- self = false

- to\_port = 22

},

] -> null

- name = "xops-web-sg-20250707053739106200000001" -> null

- name\_prefix = "xops-web-sg-" -> null

- owner\_id = "851919409108" -> null

- revoke\_rules\_on\_delete = false -> null

- tags = {

- "Name" = "xops-web-sg"

} -> null

- tags\_all = {

- "Name" = "xops-web-sg"

} -> null

- vpc\_id = "vpc-01c8bdeb94c534fbc" -> null

}

# aws\_subnet.public will be destroyed

- resource "aws\_subnet" "public" {

- arn = "arn:aws:ec2:ap-south-1:851919409108:subnet/subnet-0a6d29bfeed070a04" -> null

- assign\_ipv6\_address\_on\_creation = false -> null

- availability\_zone = "ap-south-1a" -> null

- availability\_zone\_id = "aps1-az1" -> null

- cidr\_block = "10.0.1.0/24" -> null

- enable\_dns64 = false -> null

- enable\_lni\_at\_device\_index = 0 -> null

- enable\_resource\_name\_dns\_a\_record\_on\_launch = false -> null

- enable\_resource\_name\_dns\_aaaa\_record\_on\_launch = false -> null

- id = "subnet-0a6d29bfeed070a04" -> null

- ipv6\_native = false -> null

- map\_customer\_owned\_ip\_on\_launch = false -> null

- map\_public\_ip\_on\_launch = true -> null

- owner\_id = "851919409108" -> null

- private\_dns\_hostname\_type\_on\_launch = "ip-name" -> null

- tags = {

- "Name" = "xops-public-subnet"

} -> null

- tags\_all = {

- "Name" = "xops-public-subnet"

} -> null

- vpc\_id = "vpc-01c8bdeb94c534fbc" -> null

# (4 unchanged attributes hidden)

}

# aws\_vpc.web\_vpc will be destroyed

- resource "aws\_vpc" "web\_vpc" {

- arn = "arn:aws:ec2:ap-south-1:851919409108:vpc/vpc-01c8bdeb94c534fbc" -> null

- assign\_generated\_ipv6\_cidr\_block = false -> null

- cidr\_block = "10.0.0.0/16" -> null

- default\_network\_acl\_id = "acl-0fee8fc7ad4109720" -> null

- default\_route\_table\_id = "rtb-0aca99b9d4913f55e" -> null

- default\_security\_group\_id = "sg-07570b214635607cb" -> null

- dhcp\_options\_id = "dopt-0935a2eb94b58ebd8" -> null

- enable\_dns\_hostnames = true -> null

- enable\_dns\_support = true -> null

- enable\_network\_address\_usage\_metrics = false -> null

- id = "vpc-01c8bdeb94c534fbc" -> null

- instance\_tenancy = "default" -> null

- ipv6\_netmask\_length = 0 -> null

- main\_route\_table\_id = "rtb-0aca99b9d4913f55e" -> null

- owner\_id = "851919409108" -> null

- tags = {

- "Name" = "xops-web-vpc"

} -> null

- tags\_all = {

- "Name" = "xops-web-vpc"

} -> null

# (4 unchanged attributes hidden)

}

Plan: 0 to add, 0 to change, 7 to destroy.

Changes to Outputs:

- web\_public\_ip = "3.110.178.2" -> null

aws\_route\_table\_association.public\_assoc: Destroying... [id=rtbassoc-01411d20361ee0428]

aws\_instance.web: Destroying... [id=i-036a4f2b589261e06]

aws\_route\_table\_association.public\_assoc: Destruction complete after 0s

aws\_route\_table.public\_rt: Destroying... [id=rtb-0e90633bb08730408]

aws\_route\_table.public\_rt: Destruction complete after 1s

aws\_internet\_gateway.igw: Destroying... [id=igw-03e67c40de9f27bb8]

aws\_instance.web: Still destroying... [id=i-036a4f2b589261e06, 00m10s elapsed]

aws\_internet\_gateway.igw: Still destroying... [id=igw-03e67c40de9f27bb8, 00m10s elapsed]

aws\_instance.web: Still destroying... [id=i-036a4f2b589261e06, 00m20s elapsed]

aws\_internet\_gateway.igw: Still destroying... [id=igw-03e67c40de9f27bb8, 00m20s elapsed]

aws\_internet\_gateway.igw: Destruction complete after 27s

aws\_instance.web: Still destroying... [id=i-036a4f2b589261e06, 00m30s elapsed]

aws\_instance.web: Destruction complete after 30s

aws\_subnet.public: Destroying... [id=subnet-0a6d29bfeed070a04]

aws\_security\_group.web\_sg: Destroying... [id=sg-01928d5651ae5141f]

aws\_subnet.public: Destruction complete after 0s

aws\_security\_group.web\_sg: Destruction complete after 0s

aws\_vpc.web\_vpc: Destroying... [id=vpc-01c8bdeb94c534fbc]

aws\_vpc.web\_vpc: Destruction complete after 1s

Destroy complete! Resources: 7 destroyed.

PS D:\Devops\terraform-xops-webserver>

PS D:\Devops\terraform-xops-webserver>