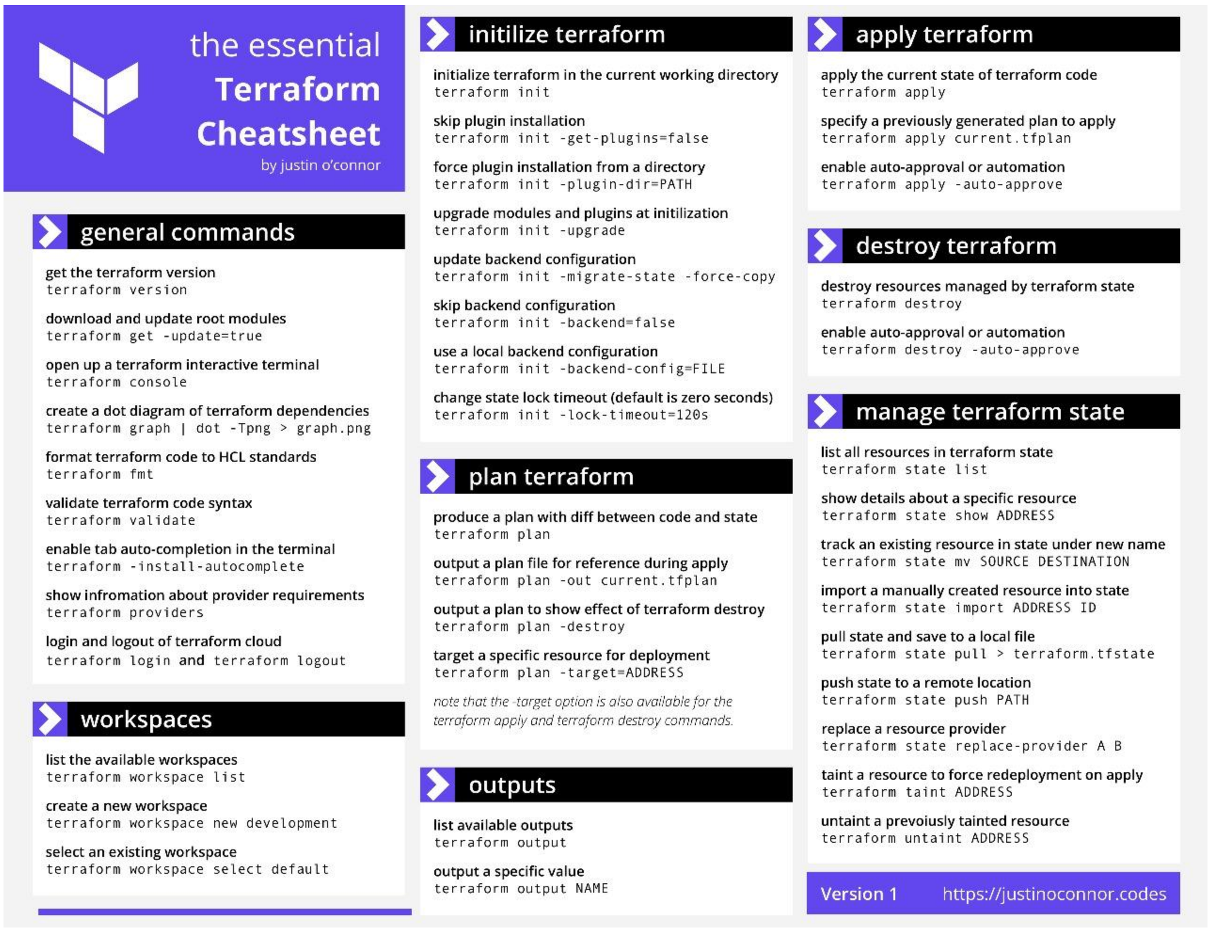
Terraform



the essential **Terraform Cheatsheet**

by justin o'connor

general commands

get the terraform version
`terraform version`

download and update root modules
`terraform get -update=true`

open up a terraform interactive terminal
`terraform console`

create a dot diagram of terraform dependencies
`terraform graph | dot -Tpng > graph.png`

format terraform code to HCL standards
`terraform fmt`

validate terraform code syntax
`terraform validate`

enable tab auto-completion in the terminal
`terraform -install-autocomplete`

show infromation about provider requirements
`terraform providers`

login and logout of terraform cloud
`terraform login` and `terraform logout`

workspaces

list the available workspaces
`terraform workspace list`

create a new workspace
`terraform workspace new development`

select an existing workspace
`terraform workspace select default`

initilize terraform

initialize terraform in the current working directory
`terraform init`

skip plugin installation
`terraform init -get-plugins=false`

force plugin installation from a directory
`terraform init -plugin-dir=PATH`

upgrade modules and plugins at initilization
`terraform init -upgrade`

update backend configuration
`terraform init -migrate-state -force-copy`

skip backend configuration
`terraform init -backend=false`

use a local backend configuration
`terraform init -backend-config=FILE`

change state lock timeout (default is zero seconds)
`terraform init -lock-timeout=120s`

plan terraform

produce a plan with diff between code and state
`terraform plan`

output a plan file for reference during apply
`terraform plan -out current.tfplan`

output a plan to show effect of terraform destroy
`terraform plan -destroy`

target a specific resource for deployment
`terraform plan -target=ADDRESS`

note that the -target option is also available for the terraform apply and terraform destroy commands.

outputs

list available outputs
`terraform output`

output a specific value
`terraform output NAME`

apply terraform

apply the current state of terraform code
`terraform apply`

specify a previously generated plan to apply
`terraform apply current.tfplan`

enable auto-approval or automation
`terraform apply -auto-approve`

destroy terraform

destroy resources managed by terraform state
`terraform destroy`

enable auto-approval or automation
`terraform destroy -auto-approve`

manage terraform state

list all resources in terraform state
`terraform state list`

show details about a specific resource
`terraform state show ADDRESS`

track an existing resource in state under new name
`terraform state mv SOURCE DESTINATION`

import a manually created resource into state
`terraform state import ADDRESS ID`

pull state and save to a local file
`terraform state pull > terraform.tfstate`

push state to a remote location
`terraform state push PATH`

replace a resource provider
`terraform state replace-provider A B`

taint a resource to force redeployment on apply
`terraform taint ADDRESS`

untaint a prevoiusly tainted resource
`terraform untaint ADDRESS`

Version 1 https://justinoconnor.codes

```
terraform {
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "5.92.0"
    }
  }
}
```

```
provider "aws" {
  # Configuration options
}
```

Terraform version:

```
terraform {
  required_providers {
    aws = {
      source  = "hashicorp/aws"
      version = "~> 5.0"
    }
  }
}

# Configure the AWS Provider
provider "aws" {
  region = "us-east-1"
}

# Create a VPC
resource "aws_vpc" "example" {
  cidr_block = "10.0.0.0/16"
}
```

```
region = "us-east-1"



resource "aws_vpc" "myvpc" {
  cidr_block       = "10.0.0.0/16"

  tags = {
    Name = "demovpc"
  }



resource "aws_subnet" "pubsub" {
  vpc_id     = aws_vpc.myvpc.id
  cidr_block = "10.0.1.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "sn1"
  }
}
```

Internet Gateway:

```
resource "aws_internet_gateway" "tfigw" {
  vpc_id = aws_vpc.myvpc.id
  tags = {
    Name = "tfigw"
  }
}



resource "aws_route_table" "tfpubrt" {
  vpc_id = aws_vpc.myvpc.id

  route {
    cidr_block = "0.0.0.0/0"
    gateway_id = aws_internet_gateway.tfigw.id
  }

  tags = {
    Name = "tfpublicroute"
  }
}



resource "aws_route_table_association" "pubsn1" {
  subnet_id      = aws_subnet.pubsub.id
  route_table_id = aws_route_table.tfpubrt.id
}
```

```
resource "aws_route_table_association" "pubsn2" {
  subnet_id      = aws_subnet.pub_sub.id
  route_table_id = aws_route_table.tfpubrt.id
}


resource "aws_eip" "tfeip" {
  domain   = "vpc"
}


resource "aws_nat_gateway" "tfnat" {
  allocation_id = aws_eip.tfeip.id
  subnet_id     = aws_subnet.pub_sub.id

  tags = {
    Name = "gw NAT"
  }
}


resource "aws_route_table" "tfprirt" {
  vpc_id = aws_vpc.myvpc.id

  route {
    cidr_block = "0.0.0.0/0"
    gateway_id = aws_nat_gateway.tfnat.id
  }

  tags = {
    Name = "tfprivateroute"
  }
}



resource "aws_security_group" "allow_tfsg" {
  name        = "allow_tfsg"
  description = "Allow TLS inbound traffic"
  vpc_id      = aws_vpc.myvpc.id

  ingress {
    description      = "HTTPS "
    from_port        = 443
    to_port          = 443
    protocol         = "tcp"
    cidr_blocks      = ["0.0.0.0/0"]
  }
   ingress {
    description      = "HTTP "
    from_port        = 80
    to_port          = 80
    protocol         = "tcp"
    cidr_blocks     = ["0.0.0.0/0"]
  }
   ingress {
    description     = "SSH"
    from_port       = 22
    to_port         = 22
    protocol        = "tcp"
    cidr_blocks     = ["0.0.0.0/0"]
  }

  egress {
    from_port       = 0
    to_port         = 0
    protocol        = "-1"
    cidr_blocks     = ["0.0.0.0/0"]
  }

  tags = {
    Name = "TfsecurityGroup"
  }
}
```

```
#terraform init
#terraform validate
#terraform plan
```

#terraform app

#terraform destroy