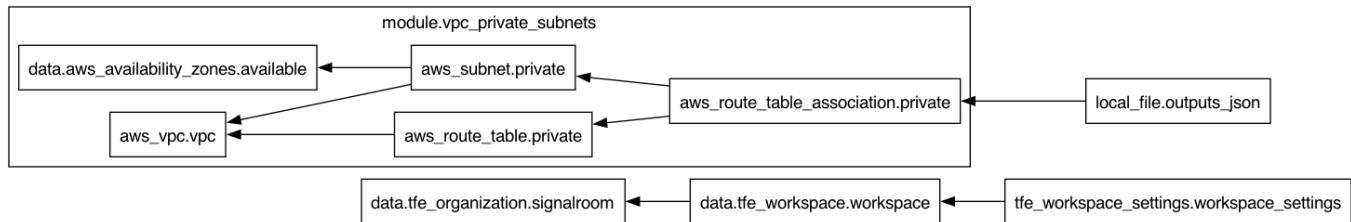


# Infrastructure as Code (IaC) AWS Private VPC Setup

---

This repository contains Terraform code to create a private Virtual Private Cloud (VPC) in AWS. The setup includes subnets, route tables, security groups, and other necessary components to establish a secure and isolated network environment.

Below is the Terraform visualization of the infrastructure that's created:



## Table of Contents

- **1.0 deploy.sh script arguments**
    - **1.1 subnet\_prefix argument:**
  - **2.0 Resources**
- 

## 1.0 deploy.sh script arguments

### 1.1 **subnet\_prefix** argument:

| VPC Prefix | subnet_prefix | newbits | Resulting Subnets | IPs per Subnet |
|------------|---------------|---------|-------------------|----------------|
| /16        | /20           | 4       | 16 subnets        | 4,096          |
| /16        | /24           | 8       | 256 subnets       | 256            |
| /16        | /28           | 12      | 4,096 subnets     | 16             |
| /20        | /24           | 4       | 16 subnets        | 256            |
| /20        | /28           | 8       | 256 subnets       | 16             |
| /24        | /28           | 4       | 16 subnets        | 16             |

### What you need to know:

- The **newbits** determines how many additional bits to add to the network prefix for subnetting.
- The **VPC Prefix** is the number after the slash in your VPC's CIDR block. It indicates **how many bits define the network portion** of the IP address range.
- The **subnet\_prefix** is the target prefix length you want for your subnets after subdividing your VPC CIDR block.

## 2.0 Resources

- **CIDR to IPv4 Conversion**

