From zero to hero

Infrastructure as Code

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Goals for this session

1. Understand how you can seperate functionality
2. Understand how you structure your code

Modules

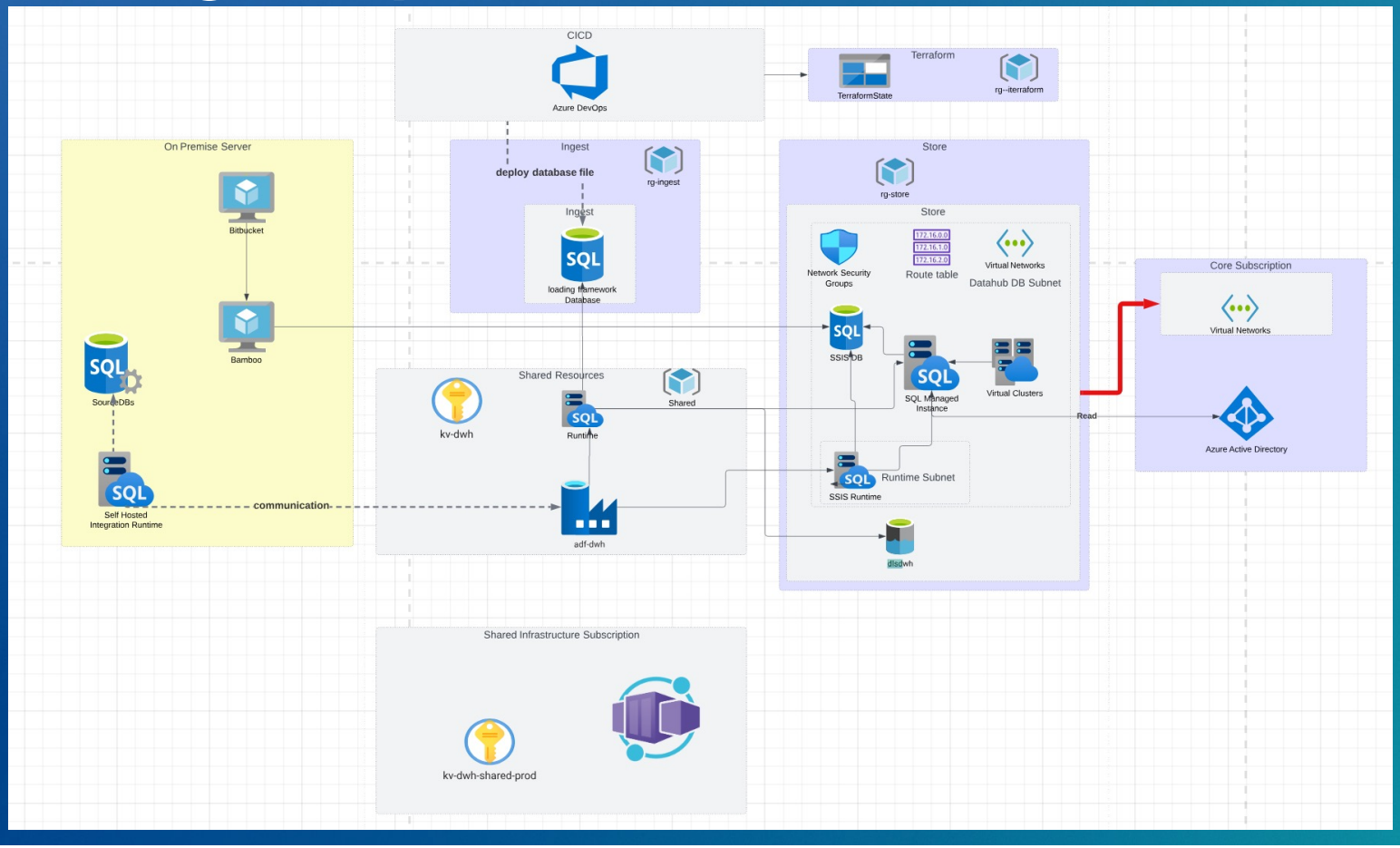
- Like a class from programming language
- Only a folder
- More Maintenance than divide with only seperation of files
- References can be only inside of a module
- Has a
    - main.tf (required)
    - variables.tf (optional)
    - output.tf (optional)
    - providers.tf(should be)

How to use them

- Keyword = Module
- Source = Required

```
module "network_security_group" {
  source         = "./network_security_group"
  resource_group = var.resource_group
  subnet         = {
    id                   = azurerm_subnet.sql_mi.id
    vnet_address_space   = var.vnet.address_space
    subnet_address_space = azurerm_subnet.sql_mi.address_prefixes[0]
  }
  resource_name_suffix = "${module.common_definition.application_name}-sql-mi-${var.env}"
}
```

Find logical parts



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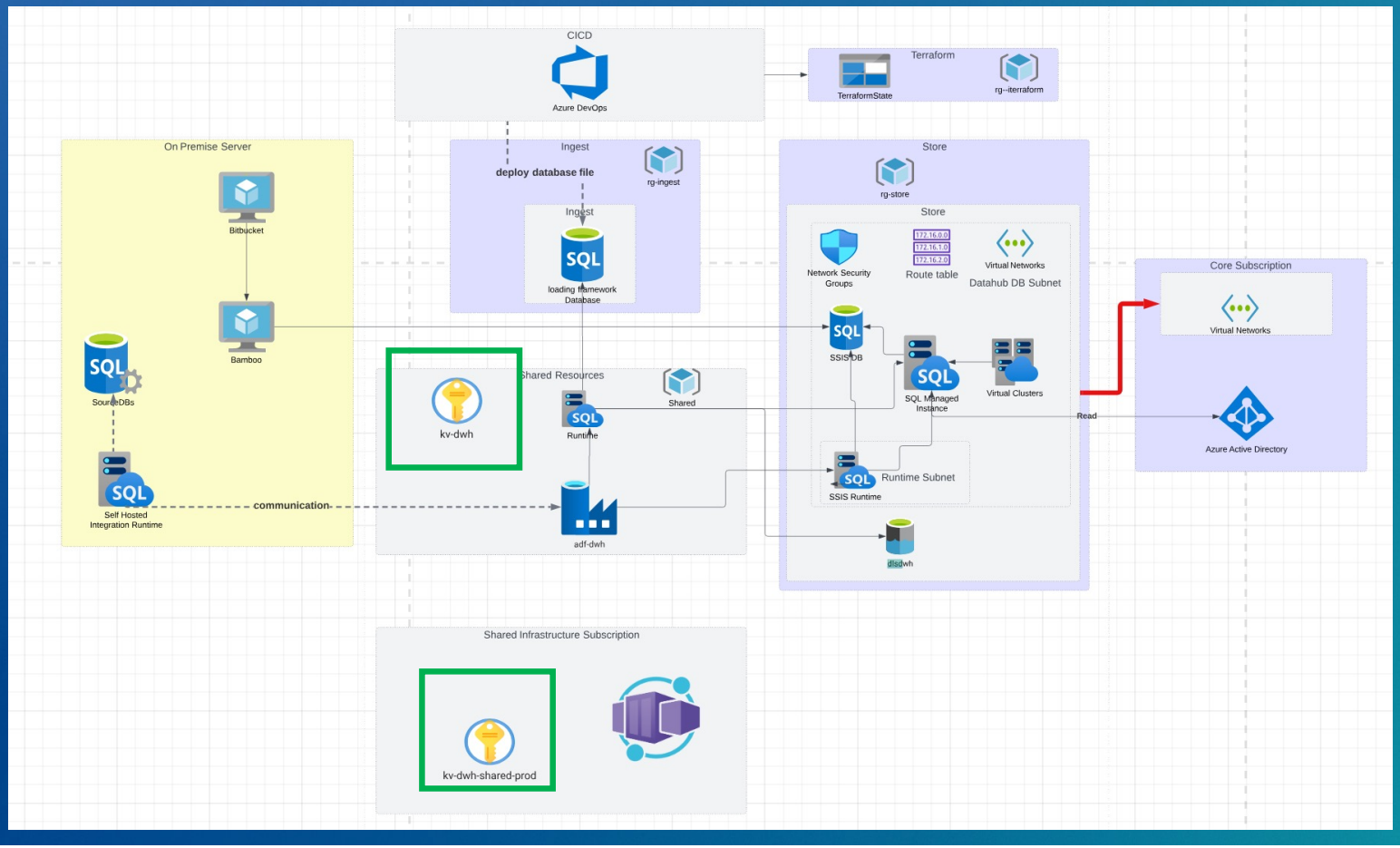
Find components that you use more than once = Base Modules



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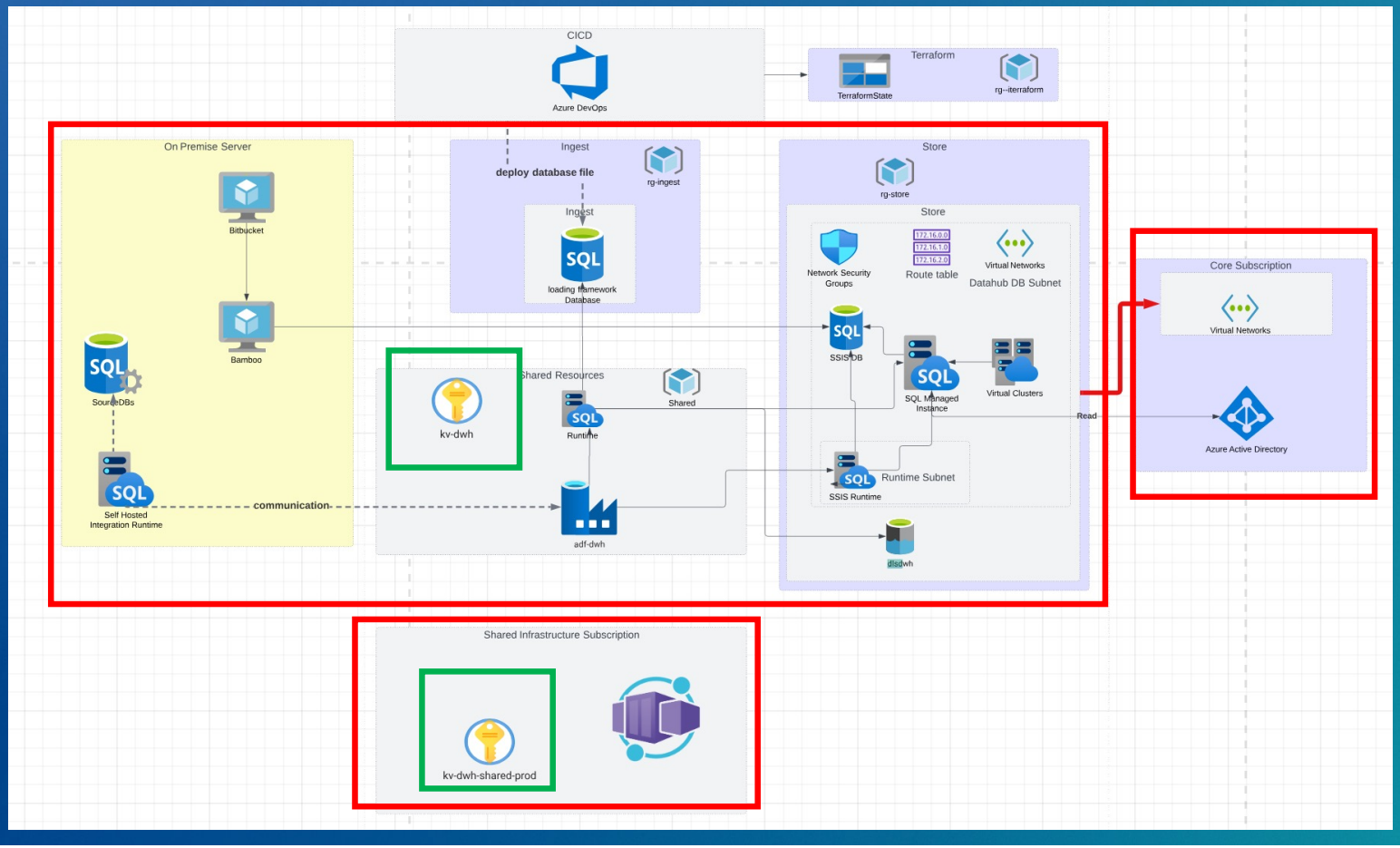
Find components that you will deploy at the same time



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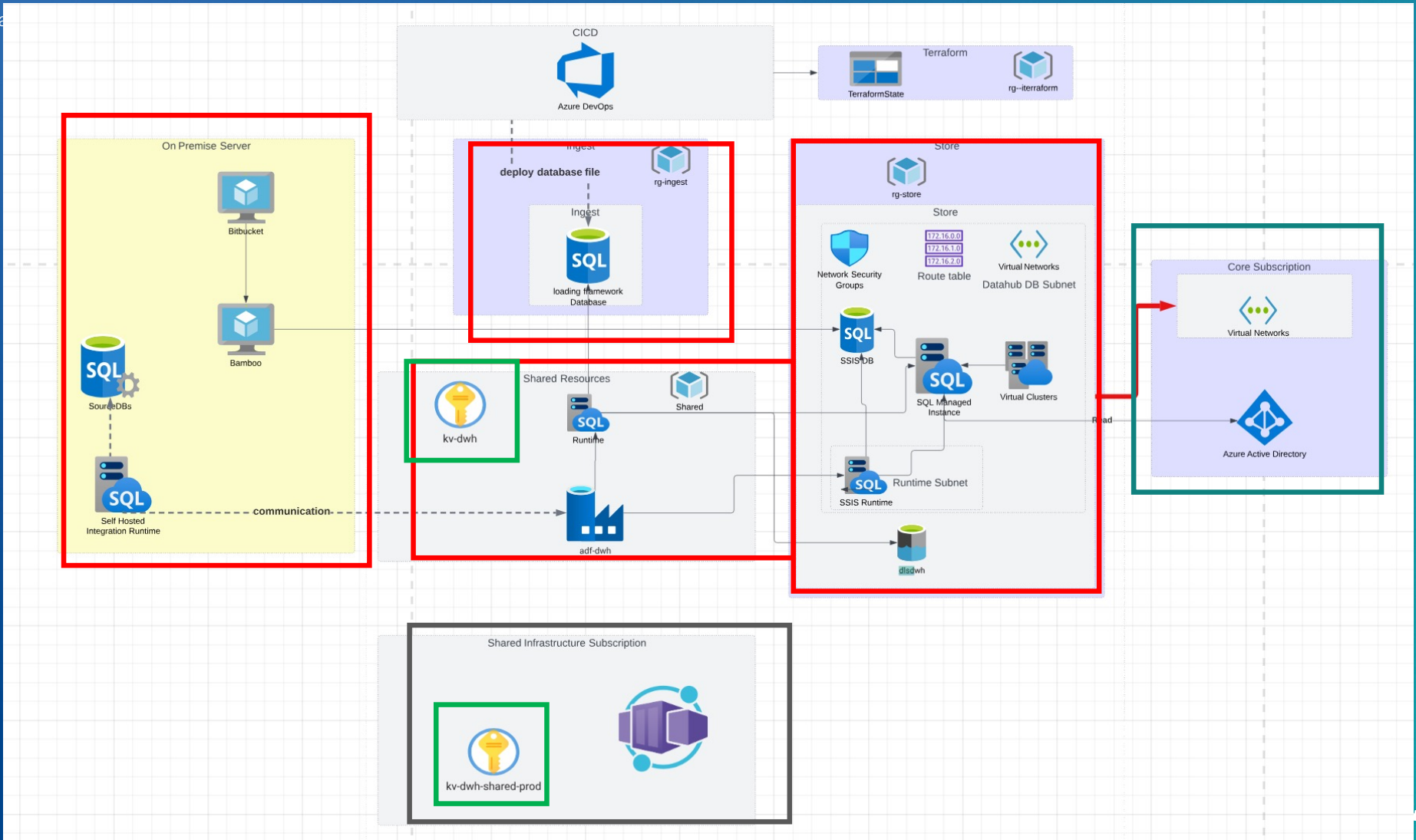
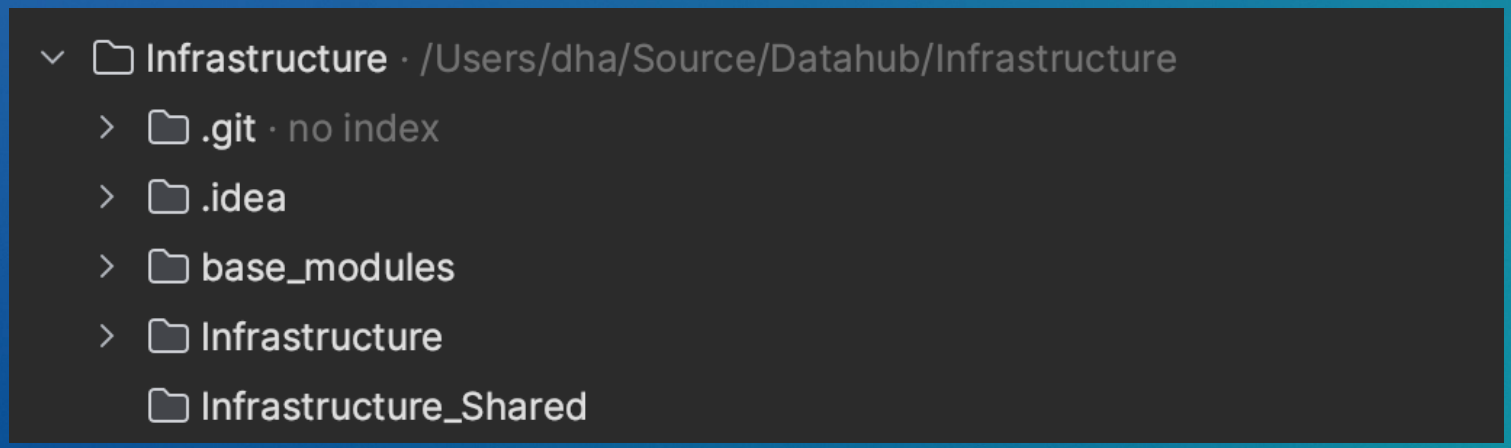
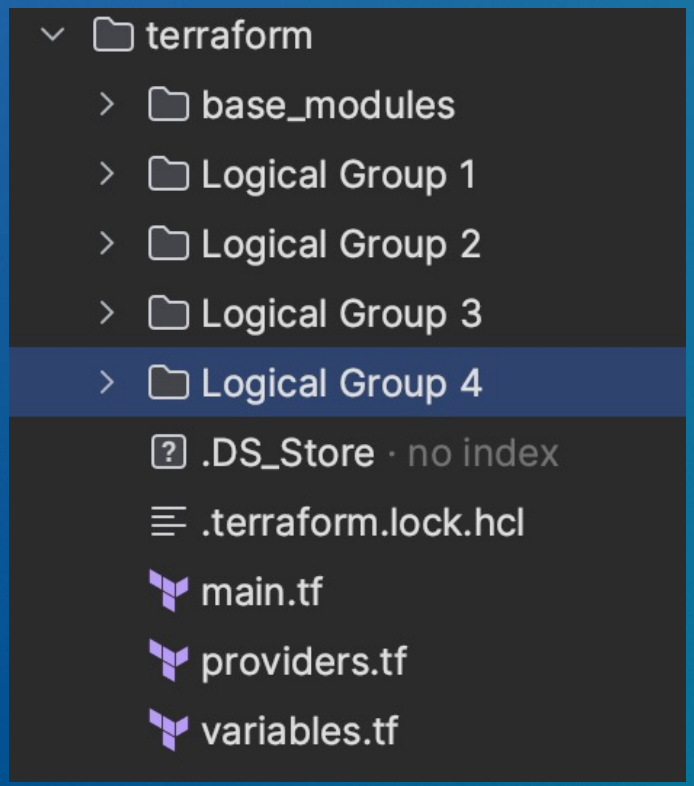
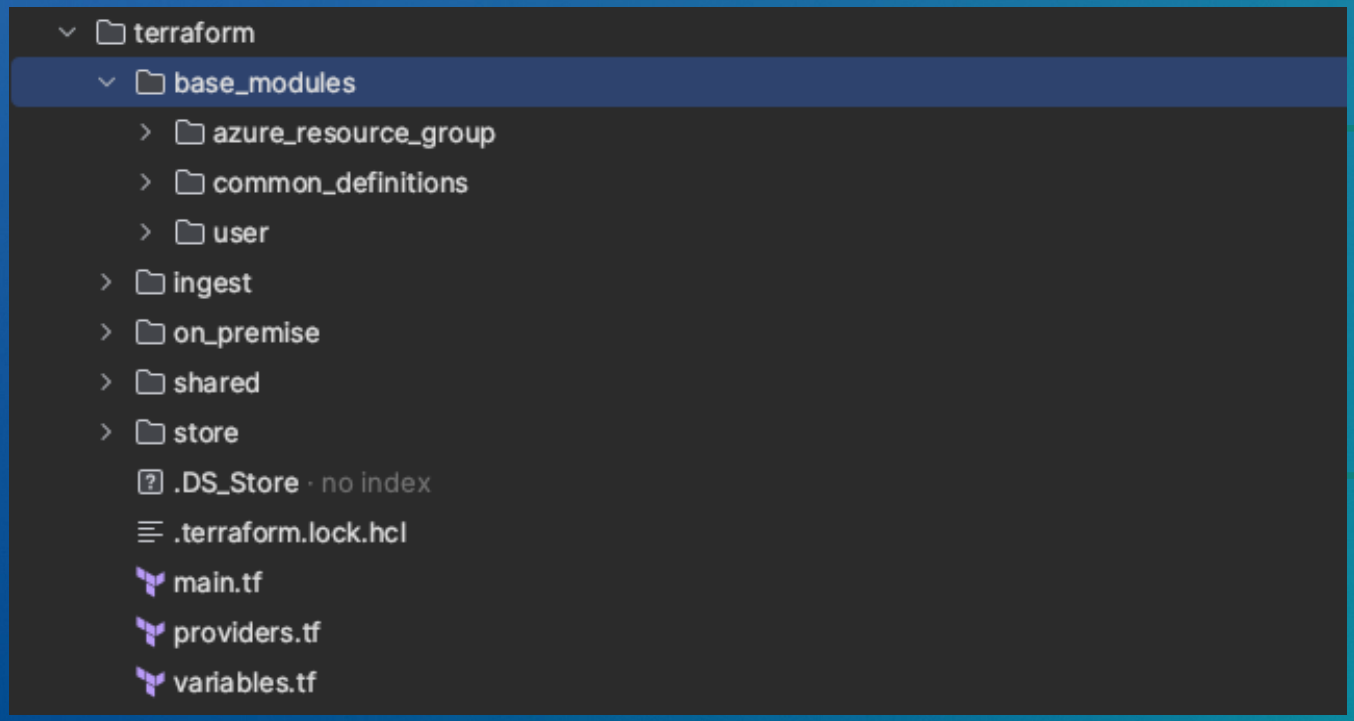
Terra


CICD
Azure DevOps
Terraform
TerraformState
rg--iterraform
On Premise Server
Bitbucket
Bamboo
SourceDBs
Self Hosted
Integration Runtime
communication
deploy database file
rg-ingest
Ingest
loading framework
Database
Shared Resources
Shared
kv-dwh
Runtime
adf-dwh
Store
rg-store
Store
Network Security
Groups
Route table
Virtual Networks
Datahub DB Subnet
SSIS DB
SQL Managed
Instance
Virtual Clusters
Runtime Subnet
SSIS Runtime
dlsdwh
Read
Core Subscription
Virtual Networks
Azure Active Directory
Shared Infrastructure Subscription
kv-dwh-shared-prod

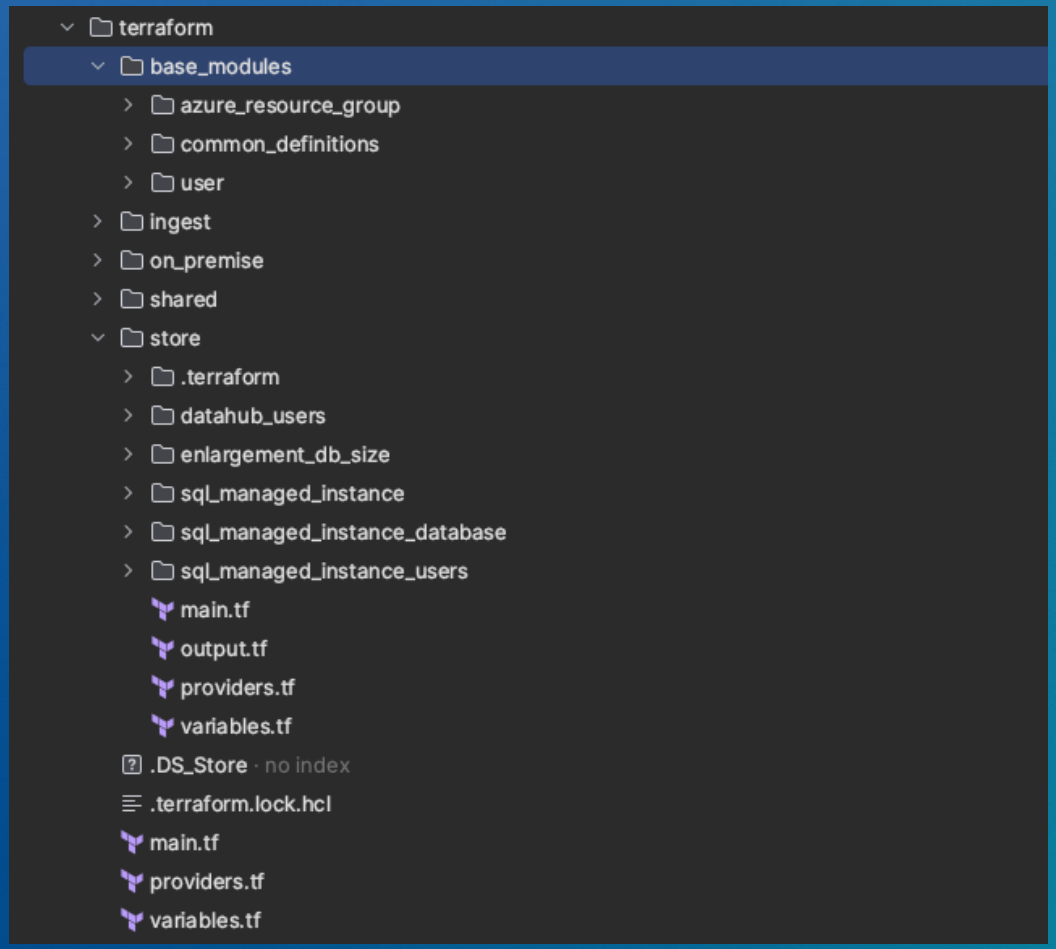

Infrastructure · /Users/dha/Source/Datahub/Infrastructure
.git · no index
.idea
base_modules
Infrastructure
Infrastructure_Shared


terraform
base_modules
Logical Group 1
Logical Group 2
Logical Group 3
Logical Group 4
.DS_Store · no index
.terraform.lock.hcl
main.tf
providers.tf
variables.tf

Real World Code


terraform
base_modules
azure_resource_group
common_definitions
user
ingest
on_premise
shared
store
.DS_Store · no index
.terraform.lock.hcl
main.tf
providers.tf
variables.tf

Terraform



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Practice