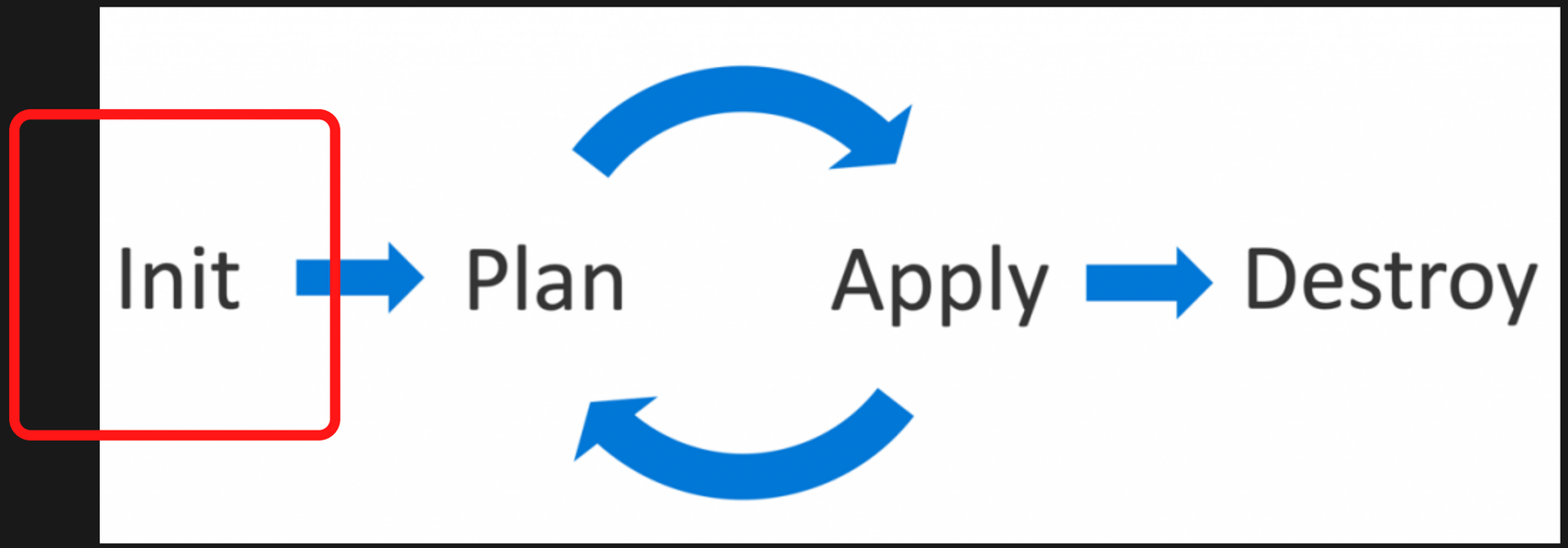
Terraform Init

Terraform Init



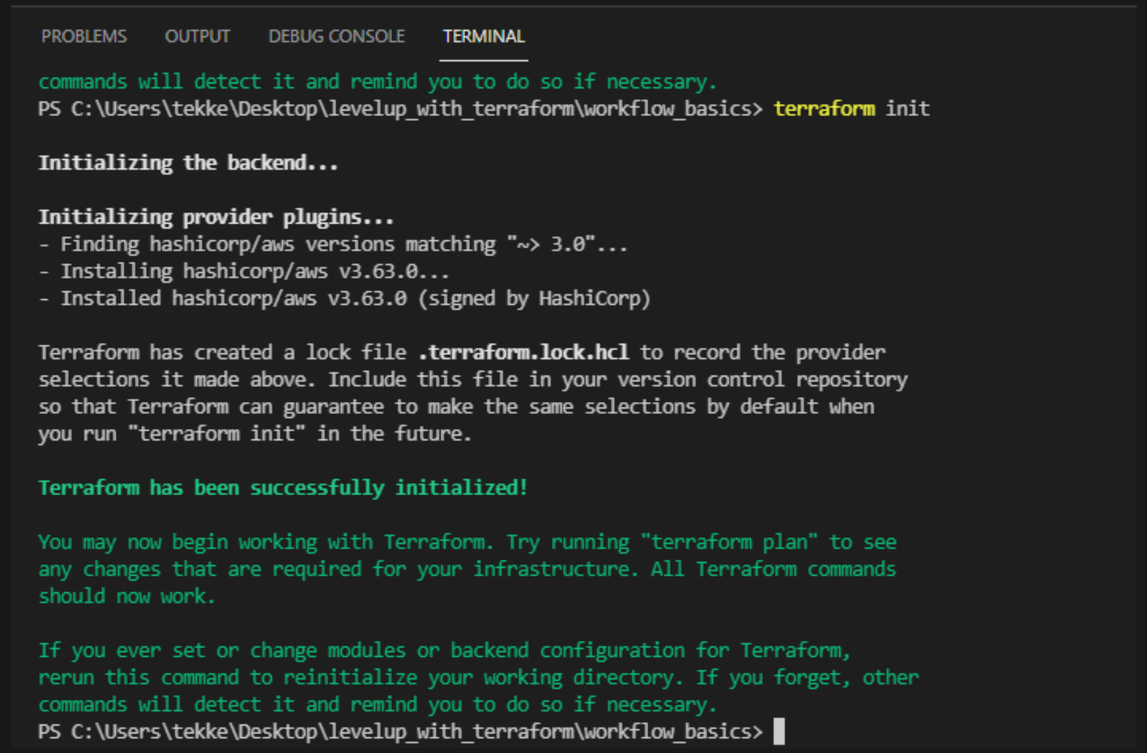
HashiCorp Terraform

Terraform Init

- terraform init
- Usually ran as the first command in the workflow
- Initializes the working directory
  - Pulls in any recent Provider changes (more on Providers later)
  - Configures any State backends (more on States & Backends later)
  - Downloads any missing Provider & Module binaries/references (more on Modules later)
- Safe command to run - run multiple times
- When to run the command?
  - On a brand new Terraform project
  - When pulling any recent changes from Github / source control
  - When first working on a Terraform project
- Always run the command when first working on a project, for that day

Terraform Init

- Several things happen in the background
- Creates .terraform folder
  - Acts as local cache - stores Provider & Module binaries and references
  - Helps improve Terraform performance
  - Do not push this folder into your repository
- Creates a .terraform.lock.hcl file
  - Helps Terraform manage the Provider version
  - Locks the Provider version to the latest acceptable version
  - If the version specifies 1.0.0 - Terraform will always download the 1.0.0 Provider version
  - Push this into your repository
- They are automatically managed by Terraform



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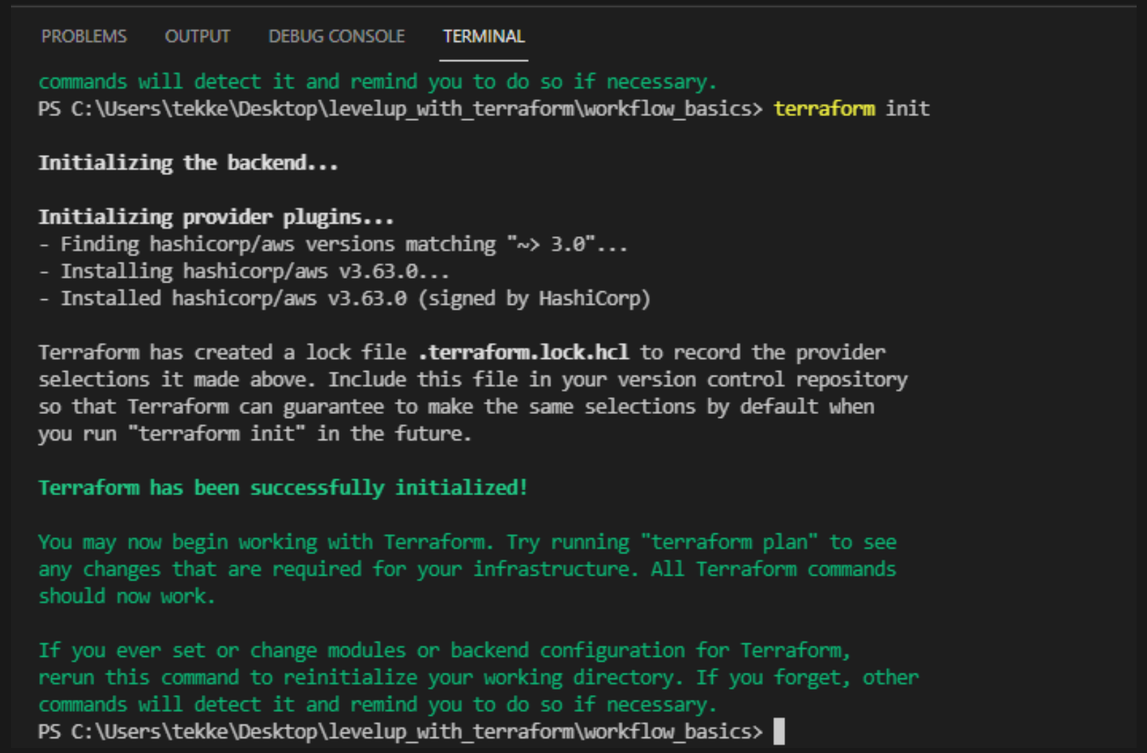
Terraform Init

- Downloads defined Providers
  - Stores the Provider binary into the .terraform folder
  - In our example, we are using the AWS Provider
- Initializing the backend
  - Backend is a central storage used to hold your state files
  - Consults your config to see where your State is stored
  - Pulls in state if using remote state, or uses the local state file
- Terraform reads your top level global configuration, to see where your State is stored, what Provider version you're using, etc.



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Terraform Init

- You have to run terraform init whenever there is a change made to your top level terraform configuration
  - Example 1 - If you changed the Provider version, you need to run terraform init to re-download the updated Provider version
  - Example 2 - If you changed your State to use a different S3 bucket backend, need to run terraform init to re-initialize your State backend
- Same thing applies to modules
  - If you added a new Module, changed an existing Module, removed a Module, need to run terraform init to download the new Module binary
    - TLDR - run terraform init whenever a change is made to your Modules and Providers
  - BUT - If you are using local modules, you do not need to run terraform
    - Terraform stores a local reference for local Modules
    - This is awesome! Means you can keep making changes to your local Modules, without running terraform init everytime