Xerris Bootcamp Series

Infrastructure As Code - Terraform

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Infrastructure As Code

- **Infrastructure As Code** (IaC) is the process of managing and provisioning computer data centers through machine-readable definition files, rather than physical hardware configuration or interactive configuration tools.
  - Allows you to treat and provision your networks, servers, database and other infrastructure like software.
  - Quickly and reliably create the cloud environment for your business applications
  - Minimizes Risk of having different configuration between environments (dev, stage, prod)
  - Mitigates the risk of disaster recovery. If necessary a entirely new cloud environment could be provisioned very quickly.

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Terraform

- A tool for building, changing and versioning infrastructure.
- Cloud agnostic, supporting all major cloud providers, AWS, GCP (Google), Azure (Microsoft)
- Used to replicate your cloud environment across multiple environments (DEV, STAGE, PROD).
- Modules provide the ability to reuse components across multiple projects.
- Xerris has many Terraform certified developers.

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Terraform

- Supports Windows, Linux/Unit and Mac OS
- Build infrastructure – create cloud infrastructure
- Change infrastructure – modify existing cloud infrastructure
- Destroy infrastructure – remove existing cloud infrastructure when no longer needed
- Perform all these from the command-line
- Perform all these from your CI/CD pipeline

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Terraform

- Terraform uses the declarative approach to IaC.
- You declare what you would like your end state to be.
- Terraform determines the current state and creates a plan to achieve your end-state.
- Your Terraform code ALWAYS represents the current state of your environment.
- Terraform allows you to store remote state of your environment to your cloud provider.

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Install Terraform

- http://www.terraform.io
- Locate/download the .zip file for your platform.
- Unzip the terraform binary from the .zip file
- Add the terraform binary to the path.
- (optionally) change permissions to allow the terraform binary to execute.

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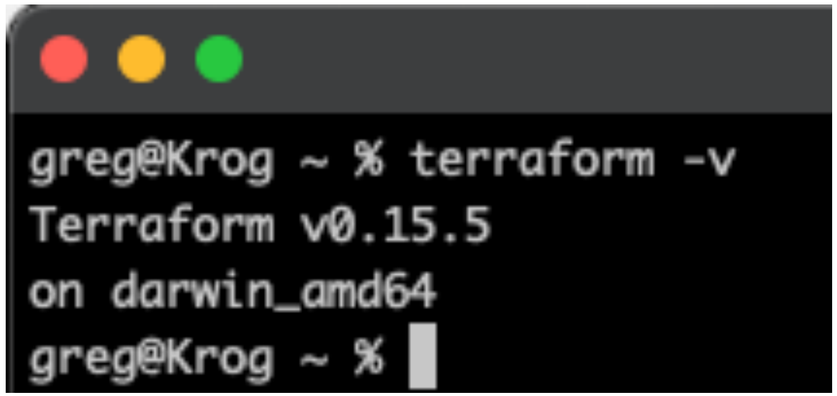
Install Terraform Mac OS

Version 0.15.5

- Filename will change with each new release

$ wget
https://releases.hashicorp.com/terraform/0.15.5/terraform_0.15.5_darwin_amd64.zip

$ unzip terraform_0.15.5_darwin_amd64.zip
$ mv terraform /usr/local/bin/terraform
$ chmod +rwx /usr/local/bin/terraform
$ terraform -v



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Install Terraform Windows

Version 0.15.5

- Filename will change with each new release

$ wget https://releases.hashicorp.com/terraform/0.15.5/terraform_0.15.5_windows_amd64.zip

$ unzip terraform_0.15.5_windows_amd64.zip

$ mkdir c:/terraform

$ copy terraform_0.15.4_windows_amd64.exe to c:/terraform

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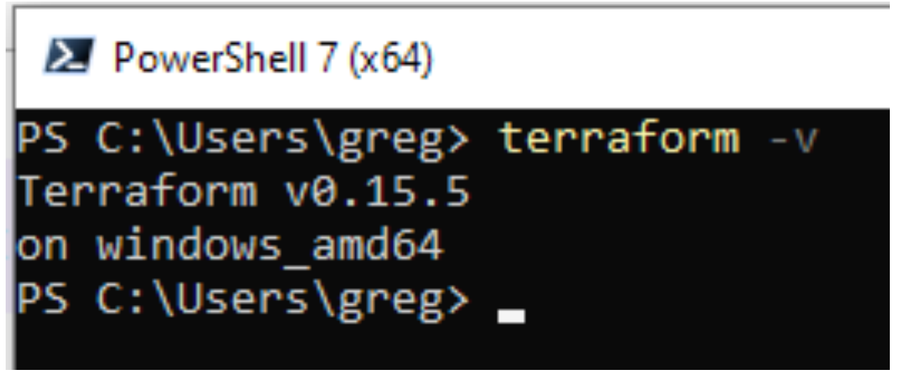
Install Terraform Windows

- Go to your advanced settings -> Environment Variables
- Locate the PATH system variable
- Add **;c:/terraform** to the end of that path



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