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*Terraform: Navigate Terraform workflow*

# *Terraform : Deployment Automation*

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- **Section 6 : Navigate Terraform workflow**
  - Describe Terraform workflow
  - Initialize a Terraform working directory
  - Validate a Terraform configuration
  - Generate and Review an execution plan for Terraform
  - Execute changes to Infrastructure with Terraform
  - Destroy Terraform managed Infrastructure

## *Terraform : Deployment Automation*

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- Describe Terraform workflow :
- Terraform workflow have 3 Steps:
  - Write
  - Plan
  - Apply
- Write - Write Terraform configuration just like you write code.
- Plan - Preview changes before applying.
- Apply - Provision reproducible infrastructure.

## *Terraform : Deployment Automation*

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- Initialize a Terraform working directory :
- `terraform init` command is used to initialize a working directory containing Terraform configuration files.
- This is the first command that should be run after writing a new Terraform configuration or cloning an existing configuration.
- Terraform init initialize the backend.
- Initialisation search for modules in configuration files, and install child modules.
- Download the Plugins.

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- Validate a Terraform configuration :
- `terraform validate` command validates the configuration files in a directory.
- Validate runs checks that verify whether a configuration is syntactically valid and internally consistent.
- `terraform validate -json` : Produce output in a machine-readable JSON format.

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- **Generate and Review an execution plan for Terraform :**
- **terraform plan** command is used to create an execution plan.
- This command is a convenient way to check whether the execution plan for a set of changes matches your expectations without making any changes to real resources or to the state.
- The optional **-out** argument can be used to save the generated plan to a file for later execution with **terraform apply**.

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- Execute changes to infrastructure with Terraform :
- `terraform apply` command is used to apply the changes required to reach the desired state of the configuration, or the pre-determined set of actions generated by a terraform plan execution plan.

## *Terraform : Deployment Automation*

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- **Destroy Terraform managed Infrastructure :**
- The terraform destroy command is used to destroy the Terraform-managed infrastructure.
- `terraform destroy -auto-approve` : Destroy confirmation will not be shown.



*Will see you in Next Lecture...*

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*Thank you!*

A close-up photograph of a hand holding a black marker, completing the cursive word 'Thank you!' on a white surface. The hand is positioned on the right side of the frame, with the index and thumb fingers visible, holding the marker. The marker's tip is just finishing the exclamation mark. The background is a plain, light-colored surface.

*See you in next lecture ...*