

Infrastructure Automation Test Framework – Test Design / Plan

Unit Test

Unit tests guarantee that module configuration updates are thoroughly validated, minimizing the risk of disruptions and ensuring seamless integration with your infrastructure.

Scenarios

Provider Configuration

1. TEST_ID: TFProv_001
 - Description: Verify AWS provider configuration.
 - Input: Terraform config with AWS provider.
 - Expected Result: AWS provider configured correctly.
2. TEST_ID: TFProv_002
 - Description: Verify Azure provider configuration.
 - Input: Terraform config with Azure provider.
 - Expected Result: Azure provider configured correctly.

Resource Configuration

3. TEST_ID: TFRes_001
 - Description: Verify EC2 instance resource configuration.
 - Input: Terraform config with EC2 instance.
 - Expected Result: EC2 instance resource configured correctly.
4. TEST_ID: TFRes_003
 - Description: Verify Azure VM resource configuration.
 - Input: Terraform config with Azure VM.
 - Expected Result: Azure VM resource configured correctly.

Variable Validation

5. TEST_ID: TFVar_001

- Description: Verify variable declaration.
- Input: Terraform config with variable declaration.
- Expected Result: Variable declared correctly.

6. TEST_ID: TFVar_002

- Description: Verify variable type validation.
- Input: Terraform config with variable type mismatch.
- Expected Result: Error thrown for variable type mismatch.

Output Validation

7. TEST_ID: TFOut_001

- Description: Verify output value.
- Input: Terraform config with output value.
- Expected Result: Output value matches expected value.

8. TEST_ID: TFOut_002

- Description: Verify output format.
- Input: Terraform config with output format.
- Expected Result: Output format matches expected format.

Error Handling

9. TEST_ID: TFErr_001

- Description: Verify error handling for invalid provider.
- Input: Terraform config with invalid provider.
- Expected Result: Error thrown for invalid provider.

10. TEST_ID: TFErr_002

- Description: Verify error handling for resource creation failure.
- Input: Terraform config with resource creation failure.
- Expected Result: Error thrown for resource creation failure.

Best Practices

1. TEST_ID: TFBP_001

- Description: Verify Terraform formatting.
- Input: Terraform config with formatting issues.
- Expected Result: Error thrown for formatting issues.

1. TEST_ID: TFBP_002

- Description: Verify Terraform version.
- Input: Terraform config with outdated version.
- Expected Result: Warning thrown for outdated version.