Abdullah DevOps

TERRAFORM COURSE

2025

Module# 1
(Introduction)

Course Objective

Introduction to IaC

Types of IaC Tools

Why Terraform?

HCL Basics

Provision, Update and Destory

Providers

Input Variables

Output Variables

Resource Attributes

Resource Dependencies

Programmatic Access

IAM Basics

IAM with Terraform

Introduction to S3

S3 with Terraform

Introduction to DynanoDB

DynamoDB with Terraform

AWS EC2 With Terraform

Provisioners

Remote State

State Locking

Remote Backend with S3

State Commands

Introduction to EC2

Terraform Taints
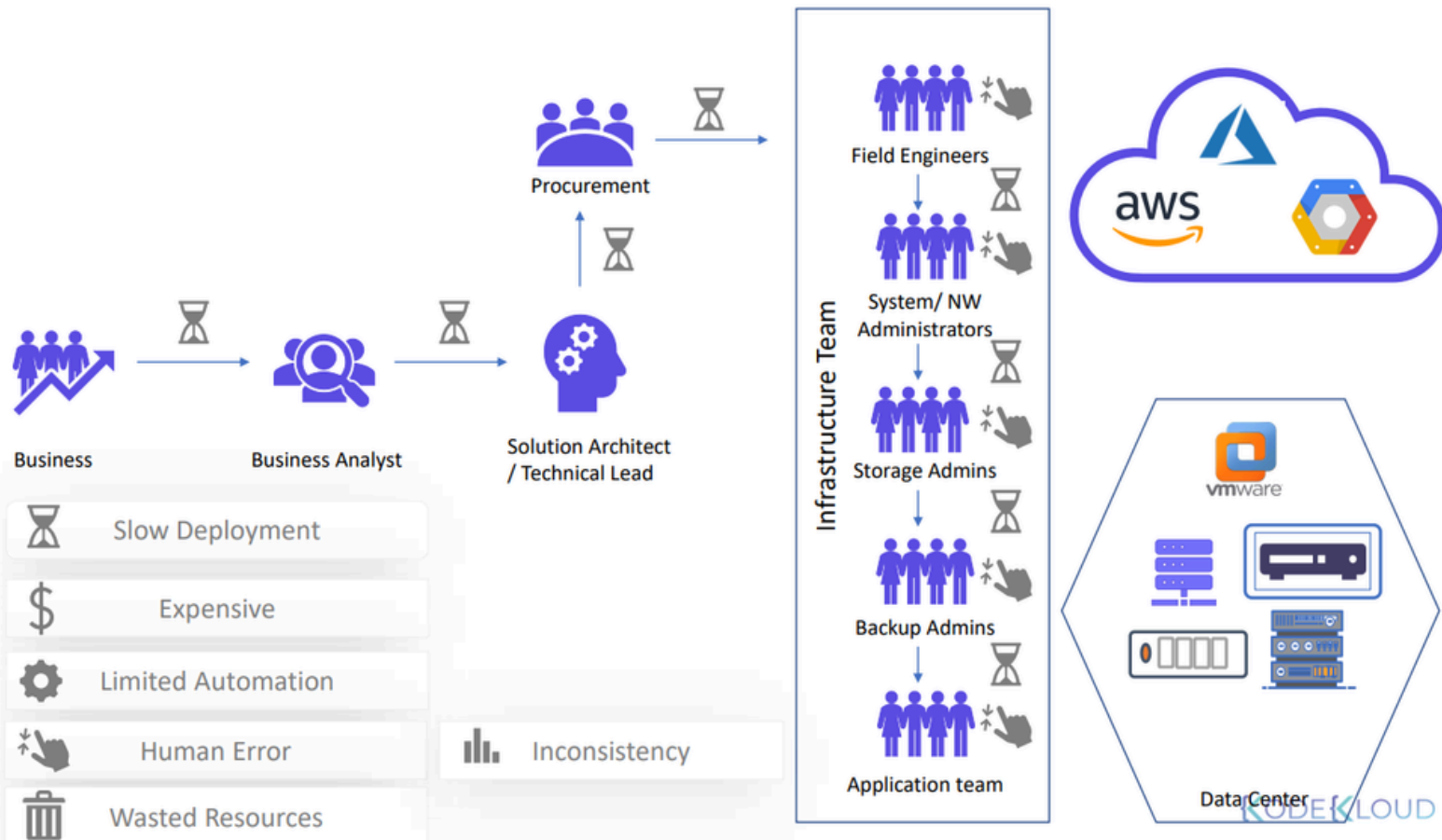
Debugging

Terraform Import

Modules

Functions

Conditional Expressions

Workspaces

Terraform Cloud

Challenges with Traditional IT infrastructure

Business → Business Analyst → Solution Architect / Technical Lead → Procurement → Field Engineers

Infrastructure Team
- Field Engineers
- System/ NW Administrators
- Storage Admins
- Backup Admins
- Application team

aws • Azure • Google Cloud

vmware

Data Center

- Slow Deployment
- Expensive
- Limited Automation
- Human Error
- Wasted Resources
- Inconsistency

Types of IAC Tools

Configuration Management

- ANSIBLE
- puppet
- SALTSTACK

- Designed to Install and Manage Software
- Maintains Standard Structure
- Version Control
- Idempotent

Server Templating

- docker
- HashiCorp Packer
- HashiCorp Vagrant

- Pre Installed Software and Dependencies
- Virtual Machine or Docker Images
- Immutable Infrastructure

Provisioning Tools

- HashiCorp Terraform
- CloudFormation

- Deploy Immutable Infrastructure resources
- Servers, Databases, Network Components etc.
- Multiple Providers