

## introduction to BIG IP F5

### Day 1: BIG-IP F5 Overview & System Fundamentals

**Objective:** Understand BIG-IP's role in application delivery and become familiar with its core components.

#### Session 1: Introduction to Application Delivery Controllers (ADCs)

What is BIG-IP F5?

Use cases: Load balancing, security, acceleration

Licensing and BIG-IP modules (LTM, DNS, ASM, APM, etc.)

#### Session 2: BIG-IP System Architecture

TMM (Traffic Management Microkernel)

Configuration objects: nodes, pools, virtual servers

TMOS overview and key processes

#### Session 3: Initial Setup & Configuration

Lab: Accessing the system (GUI, CLI, SSH)

Network configuration (interfaces, VLANs, self IPs)

Device licensing and provisioning modules

### Day 2: Local Traffic Manager (LTM) Essentials

**Objective:** Learn to configure LTM for intelligent traffic distribution and high availability.

#### Session 1: Virtual Servers, Pools, and Nodes

Understanding traffic flow

Health monitors and availability

Persistence and load balancing methods

#### Session 2: Profiles and iRules

TCP/HTTP profiles and optimization

SSL offloading and re-encryption

Writing and applying basic iRules

#### Session 3: SNATs, NATs, and Routing

Source Network Address Translation (SNAT)

Default gateway and routing logic  
VLAN groups and traffic segmentation

### Day 3: DNS (GTM) & High Availability

**Objective:** Explore DNS services and implement high availability in F5 environments.

#### Session 1: BIG-IP DNS (formerly GTM) Overview

Global Server Load Balancing (GSLB)  
DNS zones, listeners, and wide IPs  
Intelligent DNS resolution based on geolocation, latency

#### Session 2: Device Clustering and Sync-Failover

HA setup: Active/standby pairs  
ConfigSync and failover groups  
Manual vs. auto sync modes

#### Session 3: Upgrades and Backups

Software lifecycle and image management  
UCS and SCF backups  
Upgrade best practices

**Lab Exercise:** Set up DNS services and test failover scenarios

### Day 4: Security, Access, and Application Protection (Optional ASM/APM Intro)

**Objective:** Introduce BIG-IP's security features and modules for application and access control.

#### Session 1: Application Security Manager (ASM) Basics

Web Application Firewall (WAF) concepts  
Policies, learning modes, signatures  
Logging and attack reporting

#### Session 2: Access Policy Manager (APM) Intro

Identity and access control  
SSL VPN configuration  
Visual policy editor

#### Session 3: Secure Configuration Best Practices

User authentication and RBAC

System hardening tips

Integration with external security tools

### Day 5: Troubleshooting, Logging & Capstone Project

**Objective:** Build confidence in real-world F5 management, diagnostics, and hands-on configuration.

#### Session 1: Troubleshooting Tools and Logs

tcpdump and packet capture

Log locations and analytics

GUI tools: Statistics, analytics, and dashboards

#### Session 2: Advanced Diagnostics

Common issues: failed health checks, SSL issues, routing loops

Support tools: QKView, iHealth

Configuration review and validation

#### Session 3: Capstone Project

Design and deploy a full application delivery scenario

Configure virtual servers, pools, monitors, profiles

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