Administering BIG-IP

Duration: 2 Days Course Code: F5N_BIG-OP-ADMIN Version: 17.5

Overview:

Begin the BIG-IP learning journey with Administering BIG-IP. Learn how to set up and operate the BIG-IP system as it is commonly deployed in an application delivery network.
Through a combination of instructor-led lecture and hands-on labs, complete initial configuration including licensing, resource provisioning, networking, high-availability (HA), and more to establish a secure system.
Gain practical experience implementing traffic processing objects: pools, virtual servers, health monitors, network address translation (NATs and SNATs), and more.
Explore modifying traffic behavior with profiles that include SSL offload and re-encryption, and with persistence, including source address affinity and cookie persistence using the configuration utility graphical user interface (GUI) and TMSH (TMOS Shell) command line interface (CLI).
Build troubleshooting skills learning various logging methods including local, high-speed, and legacy remote logging combined with practice using troubleshooting tools like TCPDUMP.
Learn typical administrative and operational activities including user roles and administrative partition creation and management.

Updated November 2026

Target Audience:

This course is intended for network administrators, operators, and engineers responsible for managing the normal day-to-day operation and administration of a BIG-IP application delivery network. This course presents the prerequisite knowledge for many other of F5's BIG-IP instructor-led training courses.

Objectives:

- **After this course participants should be able to:**
- Set up and configure the BIG-IP system, including licensing, networking, and high availability (HA).
- Configure and manage traffic processing objects such as virtual servers, pools, monitors, NATs, and SNATs.
- Modify traffic behavior using profiles, SSL offload, SSL re-encryption, and persistence methods.
- Administer the BIG-IP system using logging, troubleshooting tools, user roles, and administrative partitions.
- Deploy and manage device service clustering (DSC), synchronization, failover, and high availability configurations.

Prerequisites:

The following free Self-Directed Training (SDT) courses, although optional, are helpful for any student with limited BIG-IP administration and configuration experience:

- Getting Started with BIG-IP
- Getting Started with Local Traffic Manager (LTM)

General network technology knowledge and experience are recommended before attending any F5 Global Training Services instructor-led course, including OSI model encapsulation, routing and switching, Ethernet and ARP, TCP/IP concepts, IP addressing and subnetting, NAT and private IP addressing, NAT and private IP addressing, default gateway, network firewalls, and LAN vs. WAN.

Follow-on-Courses:

- *None*

Content:

Programme

Chapter 1: Setting Up the BIG-IP System

- Introducing the BIG-IP System
- Initially Setting Up the BIG-IP System
- Configuring the Management Interface
- Activating the Software License
- Provisioning Modules and Resources
- Importing a Device Certificate
- Specifying BIG-IP Platform Properties
- Configuring the Network
- Configuring Network Time Protocol (NTP) Servers
- Configuring Domain Name System (DNS) Settings
- Configuring High Availability Options
- Archiving the BIG-IP Configuration
- Leveraging F5 Support Resources and Tools

Chapter 2: Traffic Processing Building Blocks

- Identifying BIG-IP Traffic Processing Objects
- Configuring Virtual Servers and Pools
- Load Balancing Traffic
- Viewing Module Statistics and Logs
- Using the Traffic Management Shell (TMSH)
- Understanding the TMSH Hierarchical Structure
- Navigating the TMSH Hierarchy
- Managing BIG-IP Configuration State and Files
- BIG-IP System Configuration State
- Loading and Saving the System Configuration
- Shutting Down and Restarting the BIG-IP System
- Saving and Replicating Configuration Data (UCS and SCF)

Chapter 3: Using NATs and SNATs

- Address Translation on the BIG-IP System
- Mapping IP Addresses with NATs
- Solving Routing Issues with SNATs
- Configuring SNAT Auto Map on a Virtual Server
- Monitoring for and Mitigating Port Exhaustion

Chapter 4: Monitoring Application Health

- Introducing Monitors
- Types of Monitors
- Monitor Interval and Timeout Settings
- Configuring Monitors
- Assigning Monitors to Resources
- Managing Pool, Pool Member, and Node Status
- Using the Network Map

Chapter 5: Modifying Traffic Behavior with Profiles

- Introducing Profiles
- Understanding Profile Types and Dependencies
- Configuring and Assigning Profiles
- Introducing SSL Offload and SSL Re-Encryption

Chapter 6: Modifying Traffic Behavior with Persistence

- Understanding the Need for Persistence
- Introducing Source Address Affinity Persistence
- Managing Object State

Chapter 7: Administering the BIG-IP System

- Configuring Logging
- Legacy Remote Logging
- Introducing High Speed Logging (HSL)
- High-Speed Logging Filters
- HSL Configuration Objects
- Configuring High Speed Logging
- Using TCPDUMP on the BIG-IP System
- Leveraging the BIG-IP iHealth System
- Viewing BIG-IP System Statistics
- Defining User Roles and Administrative Partitions
- Leveraging Multitenancy and vCMP (Legacy)

Chapter 8: Configuring High Availability

- Introducing Device Service Clustering (DSC)
- Preparing to Deploy a DSC Configuration
- Configuring DSC Communication Settings
- Establishing Device Trust
- Establishing a Sync-Failover Device Group
- Synchronizing Configuration Data
- Exploring Traffic Group Behavior
- Understanding Failover Managers and Triggers
- Achieving Stateful Failover with Mirroring

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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