

F5 Networks Administering BIG-IP v14

Course Summary

Description

This course gives network administrators, network operators, and network engineers a functional understanding of the BIG-IP system as it is commonly deployed in an application delivery network. The course introduces students to the BIG-IP system, its configuration objects, how it processes traffic, and how typical administrative and operational activities are performed. The course includes lecture, hands-on labs, interactive demonstrations, and discussions.

Objectives

By the end of the course, students will be able to:

- Describe the role of the BIG-IP system as a full proxy device in an application delivery network
- Set up, start/restart/stop, license, and provision the BIG-IP system out-of-the-box
- Create a basic network configuration on the BIG-IP system including VLANs and self IPs
- Use the Configuration utility and TMSH to manage BIG-IP resources such as virtual servers, pools, pool members, nodes, profiles, and monitors
- Create, restore from, and manage BIG-IP archives
- View resource status, availability, and statistical information and use this information to determine how the BIG-IP system is currently processing traffic
- Use profiles to manipulate the way the BIG-IP system processes traffic through a virtual server
- Perform basic troubleshooting and problem determination activities including using the iHealth diagnostic tool
- Support, and view traffic flow using TCPDUMP
- Understand and manage user roles and partitions
- Configure and manage a sync-failover device group with more than two members
- Configure stateful failover using connection mirroring and persistence mirroring

Topics

- Setting Up the BIG-IP System
- Traffic Processing Building Blocks
- Using NATs and SNATs
- Monitoring Application Health
- Modifying Traffic Behavior with Profiles
- Modifying Traffic Behavior with Persistence
- Administering the BIG-IP System
- Configuring High Availability

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Course Summary (cont.)

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.

Prerequisite

OSI model, TCP/IP addressing and routing, WAN, LAN environments, and server redundancy concepts are a prerequisite for the class.

Duration

Two Day

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Course Outline

I. *Setting Up the BIG-IP System*

- A. Introducing the BIG-IP System
- B. Initially Setting Up the BIG-IP System
- C. Configuring the Management Interface
- D. Activating the Software License
- E. Provisioning Modules and Resources
- F. Importing a Device Certificate
- G. Specifying BIG-IP Platform Properties
- H. Configuring the Network
- I. Configuring Network Time Protocol (NTP) Servers
- J. Configuring Domain Name System (DNS) Settings
- K. Configuring High Availability Options
- L. Archiving the BIG-IP Configuration
- M. Leveraging F5 Support Resources and Tools

II. *Traffic Processing Building Blocks*

- A. Identifying BIG-IP Traffic Processing Objects
- B. Configuring Virtual Servers and Pools
- C. Load Balancing Traffic
- D. Viewing Module Statistics and Logs
- E. Using the Traffic Management Shell (TMSH)
- F. Understanding the TMSH Hierarchical Structure
- G. Navigating the TMSH Hierarchy
- H. Managing BIG-IP Configuration State and Files
- I. BIG-IP System Configuration State
- J. Loading and Saving the System Configuration
- K. Shutting Down and Restarting the BIG-IP System
- L. Saving and Replicating Configuration Data (UCS and SCF)

III. *Using NATs and SNATs*

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

IV. *Monitoring Application Health*

- A. Introducing Monitors
- B. Types of Monitors
- C. Monitor Interval and Timeout Settings

- D. Configuring Monitors
- E. Assigning Monitors to Resources
- F. Managing Pool, Pool Member, and Node Status
- G. Using the Network Map

V. *Modifying Traffic Behavior with Profiles*

- A. Introducing Profiles
- B. Understanding Profile Types and Dependencies
- C. Configuring and Assigning Profiles
- D. Introducing SSL Offload and SSL Re-Encryption
- E. Managing Object State

VI. *Modifying Traffic Behavior with Persistence*

- A. Understanding the Need for Persistence
- B. Introducing Source Address Affinity Persistence
- C. Managing Object State

VII. *Administering the BIG-IP System*

- A. Configuring Logging
- B. Legacy Remote Logging
- C. Introducing High Speed Logging (HSL)
- D. High-Speed Logging Filters
- E. HSL Configuration Objects
- F. Configuring High Speed Logging
- G. Using TCPDUMP on the BIG-IP System
- H. Leveraging the BIG-IP iHealth System
- I. Viewing BIG-IP System Statistics
- J. Defining User Roles and Administrative Partitions
- K. Leveraging vCMP

VIII. *Configuring High Availability*

- A. Introducing Device Service Clustering (DSC)
- B. Preparing to Deploy a DSC Configuration
- C. Configuring DSC Communication Settings
- D. Establishing Device Trust
- E. Establishing a Sync-Failover Device Group
- F. Synchronizing Configuration Data
- G. Exploring Traffic Group Behavior
- H. Understanding Failover Managers and Triggers
- I. Achieving Stateful Failover with Mirroring