

F5-TRG-BIG-OP-ADMIN

Administering BIG-IP v.15.1

Overview

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.

Course Length

2 days

Topics covered in this course Include

- Getting started with the BIG-IP system
- Traffic processing with BIG-IP Local Traffic Manager (LTM)
- Using the TMSH (TMOS Shell) command line interface
- Using NATs and SNATs
- Monitoring application health and managing object status
- Modifying traffic behavior with profiles, including SSL offload and re-encryption
- Modifying traffic behavior with persistence, including source address affinity and cookie persistence
- Troubleshooting the BIG-IP system, including logging (local, high-speed, and legacy remote logging), and using tcpdump
- User roles and administrative partitions
- vCMP concepts
- Configuring high availability (including active/standby and connection and persistence mirroring)

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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.

Prerequisites

The following free web-based training courses, although optional, will be very helpful for any student with limited BIG-IP administration and configuration experience. These courses are available at LearnF5 (<https://www.f5.com/services/training>):

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

The following general network technology knowledge and experience are recommended before attending any F5 Global Training Services instructor-led course:

- OSI model encapsulation
- Routing and switching
- Ethernet and ARP
- TCP/IP concepts
- IP addressing and subnetting
- NAT and private IP addressing
- Default gateway
- Network firewalls
- LAN vs. WAN

Course Outline

- Chapter 1: Setting Up the BIG-IP System
 - Introducing the BIG-IP System
 - Initially Setting Up the BIG-IP System
 - Configuring the Management Interface

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- 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

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- 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
 - Managing Object State
- 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 vCMP

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- 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

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