

F5-TRG-BIG-LTM-CFG-3

Configuring BIG-IP LTM: Local Traffic Manager

Overview

This course gives network professionals a functional understanding of BIG-IP Local Traffic Manager, introducing students to both commonly used and advanced BIG-IP LTM features and functionality. Incorporating lecture, extensive hands-on labs, and classroom discussion, the course helps students build the well-rounded skill set needed to manage BIG-IP LTM systems as part of a flexible and high performance application delivery network.

Course Length

3 days

Exam

201 – TMOS Administration

Course Topics

- BIG-IP initial setup (licensing, provisioning, and network configuration)
- A review of BIG-IP local traffic configuration objects
- Using dynamic load balancing methods
- Modifying traffic behavior with persistence (including SSL, SIP, universal, and destination address affinity persistence)
- Monitoring application health with Layer 3, Layer 4, and Layer 7 monitors (including transparent, scripted, and external monitors)
- Processing traffic with virtual servers (including network, forwarding, and reject virtual servers)
- Processing traffic with SNATs (including SNAT pools and SNATs as listeners)
- Modifying traffic behavior with profiles (including TCP profiles, advanced HTTP profile options, caching, compression, and OneConnect profiles)
- Advanced BIG-IP LTM configuration options (including VLAN tagging and trunking, SNMP features, packet filters, and route domains)
- Deploying application services with iApps
- Customizing application delivery with iRules and local traffic policies
- Securing application delivery using BIG-IP LTM



AUTHORIZED

SECURE AND DELIVER EXTRAORDINARY
DIGITAL EXPERIENCES



Audience

This course is intended for system and network administrators responsible for installation, setup, configuration, and administration of the BIG-IP LTM system

Prerequisites

Students must complete one of the following F5 prerequisites before attending this course:

- Administering BIG-IP instructor-led course
- F5 Certified BIG-IP Administrator

The following free web-based courses, although optional, will be very helpful for any student with limited BIG-IP administration and configuration experience.

- Getting Started with BIG-IP web-based training
- 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

The following course-specific knowledge and experience is suggested before attending this course:

- Web application delivery
- HTTP, HTTPS, FTP and SSH protocols
- TLS/SSL



Course Outline

Day 1

- Chapter 1: Setting Up the BIG-IP System
 - Introducing the BIG-IP System
 - Initially Setting Up the BIG-IP System
 - Archiving the BIG-IP Configuration
 - Leveraging F5 Support Resources and Tools
- Chapter 2: Reviewing Local Traffic Configuration
 - Reviewing Nodes, Pools, and Virtual Servers
 - Reviewing Address Translation
 - Reviewing Routing Assumptions
 - Reviewing Application Health Monitoring
 - Reviewing Traffic Behavior Modification with Profiles
 - Reviewing the TMOS Shell (TMSH)
 - Reviewing Managing BIG-IP Configuration Data
- Chapter 3: Load Balancing Traffic with LTM
 - Exploring Load Balancing Options
 - Using Priority Group Activation and Fallback Host
 - Comparing Member and Node Load Balancing
- Chapter 4: Modifying Traffic Behavior with Persistence
 - Reviewing Persistence
 - Introducing Cookie Persistence
 - Specifying Default and Fallback Persistence
 - Introducing SSL Persistence
 - Introducing SIP Persistence
 - Introducing Universal Persistence
 - Introducing Destination Address Affinity Persistence
 - Using Match Across Options for Persistence
- Chapter 5: Monitoring Application Health
 - Differentiating Monitor Types
 - Customizing the HTTP Monitor
 - Monitoring an Alias Address and Port
 - Monitoring a Path vs. Monitoring a Device



- Managing Multiple Monitors
- Using Application Check Monitors
- Using Manual Resume and Advanced Monitor Timer Settings

Day 2

- Chapter 6: Processing Traffic with Virtual Servers
 - Understanding the Need for Other Virtual Server Types
 - Forwarding Traffic with a Virtual Server
 - Understanding Virtual Server Order of Precedence
 - Path Load Balancing
- Chapter 7: Processing Traffic with SNATs
 - Overview of SNATs
 - Using SNAT Pools
 - SNATs as Listeners
 - SNAT Specificity
 - VIP Bounceback
 - Additional SNAT Options
 - Network Packet Processing Review
- Chapter 8: Modifying Traffic Behavior with Profiles
 - Profiles Overview
 - TCP Express Optimization
 - TCP Profiles Overview
 - HTTP Profile Options
 - HTTP/2 Profile Options
 - OneConnect
 - Offloading HTTP Compression to BIG-IP
 - Web Acceleration Profile and HTTP Caching
 - Stream Profiles
 - F5 Acceleration Technologies

Day 3

- Chapter 9: Selected Topics
 - VLAN, VLAN Tagging, and Trunking
 - Restricting Network Access



- SNMP Features
- Segmenting Network Traffic with Route Domains
- Chapter 10: Customizing Application Delivery with iRule
 - Getting Started with iRules
 - Understanding When iRules are Triggered
 - Deploying iRules
 - Constructing an iRule
 - Testing and Debugging iRules
 - Exploring iRules Documentation
- Chapter 11: Customizing Application Delivery with Local Traffic Policies
 - Getting Started with Local Traffic Policies
 - Configuration and Managing Policy Rules
- Chapter 12: Securing Application Delivery with LTM
 - Understanding Today's Threat Landscape
 - Integrating LTM Into Your Security Strategy
 - Defending Your Environment Against SYN Flood Attacks
 - Defending Your Environment Against Other Volumetric Attacks
 - Addressing Application Vulnerabilities with iRules and Local Traffic Policies
 - Detecting and Mitigating Other Common HTTP Threats
- Chapter 13: Final Lab Project
 - About the Final Lab Project