Training: F5
Configuring BIG-IP LTM: Local Traffic Manager

TRAINING GOALS:

Learn how to configure and manage BIG-IP Local Traffic Manager (LTM) as it is commonly deployed in an application delivery network to achieve operational efficiency and maintain critical business applications. Through a combination of lecture and hands-on labs, explore features and functionality to process and modify traffic behavior using profiles, persistence, caching, compression, and source network address translation (SNAT).

Monitor application health at layers 3, 4, and 7, and implement dynamic load balancing methods. Use traffic management shell (TMSH), the Configuration utility, and Linux commands to create traffic processing and monitoring objects, observe the resulting traffic statistics, and effectively operate the BIG-IP LTM system. Customize application delivery with iRules, establish application security, and harden system security using BIG-IP LTM functionality.

Audience

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

CONSPECT:

- Chapter 1: Introducing 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

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- 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
- 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

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- 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
- 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 iRules
  - 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
  - Configuring 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
- Chapter 14: Additional Training and Certification

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- Getting Started Series Web-Based Training
- F5 Instructor Led Training Curriculum
- F5 Professional Certification Program

REQUIREMENTS:

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

- Administering BIG-IP (instructor-led training)
- F5 Certified BIG-IP Administrator
- Administering BIG-IP Equivalency Assessment

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.

Prospective students should have a basic understanding of BIG-IP local traffic concepts, including virtual servers, pools, health monitors, and profiles. Familiarity with web application delivery, the TCP and HTTP protocols, and TLS/SSL are also suggested.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by F5 (course completion).

This course helps prepare participants for the F5 Certified Technology Specialist, BIG-IP LTM (F5-CTS, BIG-IP LTM) certification. Candidates must first hold the F5 Certified Administrator, BIG-IP credential

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and then pass two exams: BIG-IP LTM Specialist: Architect, Setup, and Deploy (301a) and BIG-IP LTM Specialist: Maintain and Troubleshoot (301b).

More information: https://education.f5.com/learning-path/view/11

This course helps prepare participants for the F5 Certified Solution Expert, Cloud (F5-CSE, CLD) certification. Before taking the Cloud Solutions exam (402), candidates must hold all of the following credentials: F5 Certified Administrator, BIG-IP (F5-CA, BIG-IP); F5 Certified Technology Specialist, BIG-IP LTM (F5-CTS, BIG-IP LTM); and F5 Certified Technology Specialist, BIG-IP DNS (F5-CTS, BIG-IP DNS).

More information: https://education.f5.com/learning-path/view/22

This course helps prepare participants for the F5 Certified Solution Expert, Security (F5-CSE, SEC) certification. Before taking the Security Solutions exam (401), candidates must hold all of the following credentials: F5 Certified Administrator, BIG-IP (F5-CA, BIG-IP); F5 Certified Technology Specialist, BIG-IP LTM (F5-CTS, BIG-IP LTM); F5 Certified Technology Specialist, BIG-IP ASM (F5-CTS, BIG-IP ASM); and F5 Certified Technology Specialist, BIG-IP APM (F5-CTS, BIG-IP APM).

More information: https://education.f5.com/learning-path/view/20

TRAINER:

Certified F5 Networks Trainer.

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