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

Duration: **3 Day**

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Learn how to install, configure, and manage BIG-IP LTM systems.

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.

Is This The Right Course?

You must complete one of the following:

- Administering BIG-IP v12
- BIG-IP Local Traffic Manager (LTM) Essentials
- Achieve F5 Certified BIG-IP Administrator certification

You should understand:

- TCP/IP Addressing and Routing including the Address Resolution Protocol, Direct and Indirect Routing, and TCP Handshakes
- Command Line Configuration
- Common elements of and differences between WAN and LAN components
- Fundamental programming concepts

In addition, you should be proficient in:

- The Linux File System
- PICO editor or VI editor
- The TCPDUMP program

Who Should Attend?

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

Prerequisites

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What You Will Learn

- 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)
- Configuring high availability (including active/standby and N+1 sync failover device groups, connection and persistence mirroring, and sync-only device groups)
- Modifying traffic behavior with profiles (including advanced HTTP profile options, caching, compression, and OneConnect profiles)
- Advanced BIG-IP LTM configuration options (including VLAN tagging and trunking, SNMP features, and packet filters)
- Deploying application services with iApps
- Customizing application delivery with iRules and local traffic policies

Training Outline

Lesson 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

Lesson 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)

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- Reviewing Managing BIG-IP Configuration Data

Lesson 3 : Load Balancing Traffic with LTM

- Exploring Load Balancing Options
- Using Priority Group Activation and Fallback Host
- Comparing Member and Node Load Balancing

Lesson 4 : Modifying Traffic Behavior with Persistence

- Reviewing Persistence
- Introducing Cookie Persistence
- Introducing SSL Persistence
- Introducing SIP Persistence
- Introducing Universal Persistence
- Introducing Destination Address Affinity Persistence
- Using Match Across Options for Persistence

Lesson 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

Lesson 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

Lesson 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
- **Lesson 8 : Modifying Traffic Behavior with Profiles**
- Profiles Overview
- TCP Express Optimization
- TCP Profiles Overview
- HTTP Profile Options
- OneConnect
- Offloading HTTP Compression to BIG-IP
- HTTP Caching
- Stream Profiles
- F5 Acceleration Technologies

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Lesson 9 : Selected Topics

- VLAN, VLAN Tagging, and Trunking
- Restricting Network Access
- SNMP Features
- Segmenting Network Traffic with Route Domains

Lesson 10 : Deploying Application Services with iApps

- Simplifying Application Deployment with iApps
- Using iApps Templates
- Deploying an Application Service
- Leveraging the iApps Ecosystem on DevCentral

Lesson 11 : Customizing Application Delivery with iRules and Local Traffic Policies

- Getting Started with iRules
- Triggering an iRule
- Introducing iRule Constructs
- Leveraging the DevCentral Ecosystem
- Deploying and Testing iRules
- Getting Started with Local Traffic Policies
- What Can You Do with a Local Traffic Policy?
- How Does a Local Traffic Policy Work?
- Understanding Local Traffic Policy Workflow
- Introducing the Elements of a Local Traffic Policy
- Specifying the Matching Strategy
- What Are Rules?
- Understanding Requires and Controls
- Configuring and Managing Policy Rules
- Configuring a New Rule
- Including Tcl in Certain Rule Settings

Lesson 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

Lesson 13 : Final Lab Project

- About the Final Lab Project
- Possible Solution to Lab 14.0