BOOST
THE LEADING TRAINING PROVIDER

Information Technology

F5 Troubleshooting BIG-IP

Course Introduction

This training course is designed to provide participants with a cornerstone in modern application delivery networks. This comprehensive training aims to equip for network administrators, operators, and engineers with the essential knowledge and practical skills required to configure, operate, and troubleshoot the BIG-IP system effectively. Through a combination of theoretical insights, hands-on exercises, and real-world scenarios, participants will gain a deep understanding of BIG-IP's configuration objects, traffic processing mechanisms, and administrative workflows.

Throughout the course, participants will embark on a journey through the intricacies of the BIG-IP system, exploring its architecture, troubleshooting methodologies, and utilization of key support resources provided by F5 Networks. From configuring complex network scenarios to deciphering system logs and employing troubleshooting tools, participants will develop proficiency in navigating the BIG-IP environment with confidence and precision. By the course's conclusion, participants will emerge equipped with the expertise to optimize the performance and reliability of application delivery networks, ensuring seamless operation and enhanced user experience in today's dynamic digital landscape.

Training Course Methodology

This training course is designed to be interactive and participatory, and includes various learning tools to enable the participants to operate effectively and efficiently in a multifunctional environment. The course will use lectures and presentations, and group discussions.

Target Audience

1. Network Engineer
2. Systems Administrator
3. Security Engineer
4. IT Infrastructure Engineer
5. Cloud Engineer
6. Network Security Engineer

7. DevOps Engineer
8. IT Support Specialist
9. Solutions Architect
10. IT Consultant
11. Load Balancing Specialist
12. Data Center Engineer
13. Application Security Engineer
14. Technical Support Engineer
15. Site Reliability Engineer (SRE)

Learning Objectives

- Gain an understanding of 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
- Develop a basic network configuration on the BIG-IP system including VLANs and self IPs
- Utilize the Configuration utility and TMOS Shell (tmsh) to manage BIG-IP resources and use as a resource when troubleshooting
- Create, restore from, and manage BIG-IP archives
- Learn and implement troubleshooting methodology to find and resolve issues
- Understand resource status, availability, and statistical information and use this information to determine how the BIG-IP system is currently processing traffic
- Use iApps to update BIG-IP configuration
- Conduct troubleshooting and problem determination activities including using the iHealth diagnostic tool, researching known issues and solutions on AskF5, submitting a problem ticket to F5 Technical Support, and view traffic flow using tcpdump
- Identify and use the tools (ping, netstat, tcpdump, ssldump, WireShark, diff, Kdiff3, Fiddler, BIG-IP logs, etc.) available to use to identify BIG-IP and network issues from bottom to top
- Recognize log files available, understand log levels, and use the appropriate files, log levels, and filters for troubleshooting
- Use High Speed Logging (HSL) and SNMP trap implementations to perform troubleshooting and problem determination activities

- Know the role of iRules in affecting traffic behavior and how to use them to aid with troubleshooting and problem determination

Course Outline

- **Day 01**

  Setting Up the BIG-IP System

  - Introducing the BIG-IP System
  - Initially Setting Up the BIG-IP System

  - Archiving the BIG-IP System Configuration

  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
  - Reviewing High Availability (HA)

- **Day 02**

  Troubleshooting Methodology

  - ◦ Step-By-Step Process
  - ◦ Step 1: State the Problem
  - ◦ Step 2: Specify the Problem
  - ◦ Step 3: Map the System
  - ◦ Step 4: Develop Possible Causes
  - ◦ Step 5: Test Theories
  - ◦ Step 6: Iterate Until Root Cause Identified
  - ◦ Documenting a Problem
  - ◦ Putting Troubleshooting Steps to Use

  Working with F5 Support

  - ◦ Leveraging F5 Support Resources
  - ◦ AskF5.com
  - ◦ DevCentral
  - ◦ iHealth
  - ◦ Leveraging F5 Labs
  - ◦ Working with F5 Technical Support
  - ◦ Running End User Diagnostics (EUD) – Hardware Only

- **Day 03**

  New Platform Diagnostic Tools

  - ◦ Always-On Management (AOM) Subsystem
  - ◦ Requesting Return Materials Authorization
  - ◦ F5's Software Version Policy
  - ◦ Managing the BIG-IP License for Upgrades
  - ◦ Managing BIG-IP Disk Space

- ◦   Upgrading BIG-IP Software

• Day 04

Troubleshooting – Bottom to Top

- ◦   Introducing Differences between BIG-IP and LINUX Tools
- ◦   Troubleshooting with Layer 1/Layer 2 Tools
- ◦   Troubleshooting with Layer 2/Layer 3 Tools
- ◦   Troubleshooting with Layer 3 Tools
- ◦   Troubleshooting with LINUX Tools
- ◦   Troubleshooting Memory and CPU
- ◦   Troubleshooting with watch
- ◦   Troubleshooting with Additional tmsh commands

• Day 05

Troubleshooting Tools

- ◦   tcpdump
- ◦   Wireshark
- ◦   ssldump
- ◦   Fiddler
- ◦   diff
- ◦   KDiff3
- ◦   cURL

Using System Logs

- ◦   Configuring Logging
- ◦   Log Files
- ◦   Understanding BIG-IP Daemons Functions

- Triggering an iRule
- Deploying and Testing iRules
- Application Visibility and Reporting

Troubleshooting Lab Projects

- Network Configurations for Project

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
May 26, 2025	May 30, 2025	5 days	4250.00 $	UAE - Dubai
July 14, 2025	July 18, 2025	5 days	4950.00 $	Netherlands - Amsterdam
Oct. 27, 2025	Oct. 31, 2025	5 days	4250.00 $	UAE - Dubai