Troubleshooting BIG-IP

This course gives networking professionals hands-on knowledge of how to troubleshoot a BIG-IP system using a number of troubleshooting techniques as well as troubleshooting and system tools. This course includes lectures, labs, and discussions.

Course length: 2 days

Audience

This course assumes that you have successfully completed the Administering BIG-IP course, or equivalent, and have hands-on experience working in a production BIG-IP environment for several months. You should have a solid understanding of the environment in which the BIG-IP is deployed. This course is meant for BIG-IP administrators, network engineers, applications engineers, etc., who will be responsible for troubleshooting problems associated with their BIG-IP 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

v13 COURSE OUTLINE

Chapter 1: Setting Up the BIG-IP System

- Introducing the BIG-IP System
- Initially Setting Up the BIG-IP System
- Archiving the BIG-IP Configurations
- 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: Troubleshooting Methodology

- Troubleshooting Methodology
- Troubleshooting Methodology Steps
- Step 1: Define the Problem
- Step 2: Gather Information
- Step 3: Define Hypotheses
- Step 4: Develop a Test Plan
- Steps 5 and 6: Implement the Plan and Observe the Results
- Step 7: Repeat as Necessary
- Documenting a Problem
- Putting the Troubleshooting Steps to Use

Chapter 4: Working with F5 Support

- Leveraging AskF5
- Finding Resources on DevCentral
- Using the BIG-IP iHealth System
- Working with F5 Technical Support
- Running End User Diagnostics (EUD)
- Requesting Return Materials Authorization
- Understanding F5's Software Version Policy
- Managing Upgrades and Hotfixes
- Managing the BIG-IP License for Upgrades
- Managing BIG-IP Disk Space
- Upgrading BIG-IP Software

Chapter 5: Product Architecture

- Introducing BIG-IP Architecture
- Introducing and Accessing AOM
- Introducing Switch Fabric Function
- Introducting Host Subsystem Function

Chapter 6: 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
- Troubleshooting with End-User Diagnostics (EUD)

Chapter 7: Troubleshooting Tools

- tcpdump

- Wireshark
- ssldump
- Fiddler
- diff
- KDiff3
- cURL

Chapter 8: Using System Logs

- Configuring Logging
- Log Files
- Understanding BIG-IP Daemons Functions
- Triggering an iRule
- Deploying and Testing iRules
- Application Visibility and Reporting

Chapter 9: Troubleshooting Lab Projects

- Network Configurations for Projects

Chapter 10: Additional Training and Certification

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

Appendix A: Support Requirements

- L1 and L2 Partner Support Requirements

Appendix B: iApps Template Usage

- Overview
- Lab Expected Results
- iApps Template

Appendix C: Initial Configuration Steps