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Enterprise Computing Solutions - Education Services

TRAINING OFFERING

You can reach us at:

Arrow ECS, Nidderdale House, Beckwith Knowle, Harrogate, HG3 1SA

Email: educationteam.ecs.uk@arrow.com
Phone: 0870 251 1000

Troubleshooting BIG-IP v.16.1

CODE:	LENGTH:	PRICE:
F5N_BIG-TRBL-INT2	16 Hours (2 days)	£1,595.00

Description

Apply bottom-to-top techniques to troubleshoot BIG-IP systems. Review a variety of lower layer tools including ping, bigtop, netstat and tcpdump for manipulating different flags for viewing hex and ASCII.

Analyze network protocols using Wireshark and a variety of capture file formats including pcap and tcpdump. Build filters and use different commands and expressions to capture data on different connections in hands-on lab scenarios. Use the Fiddler HTTP proxy to view and analyze different session elements including URL, Content-Type and other headers, bytes sent/received, response codes, and performance statistics. Explore various curl command options for testing endpoint availability and analyzing ingress and egress payloads in detail.

Learn how to use KDiff to compare files from different BIG-IP devices for locating different traffic processing objects. Gain familiarity with using local and remote logging data, facilities, messaging, and levels for troubleshooting. See how iRules can be used for setting up message logging and logging levels. Finally, learn how to create an analytics profile to view traffic statistics, application visibility, and reporting.

Audience

This course is intended for network administrators responsible for managing the normal day-to-day operation and administration of a BIG-IP application delivery network. This course presents the prerequisite knowledge for many of F5's other BIG-IP instructor-led training courses.

Objectives

At the end of this course, the student will be able to:

- Describe 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

- Create a basic network configuration on the BIG-IP system including VLANs and self IPs

- Use 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

- Understand and implement troubleshooting methodology to find and resolve issues

- View 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

- Perform 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

- Understand 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

- List 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

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

Audience

Students must complete one of the following F5 prerequisites before attending this course:
• Administering BIG-IP (ILT)
• F5 Certified BIG-IP Administrator   Suggested Prework
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.
Students should be familiar with and be able to configure basic BIG-IP elements such as virtual servers, pools, pool members, and nodes, pool monitors, and basic virtual server profiles. In addition, students should be familiar with the basics of the Linux command line, and have solid understanding of Layer 2 Ethernet and ARP networking, Layer 3 and 4 TCP/IP networking, including IP addressing and subnetting, Layer 7 HTTP networking, and HTML.
The following course-specific knowledge and experience is suggested before attending this course:
• Web application delivery
• HTTP, HTTPS, FTP and SSH protocols
• TLS/SSL

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Programme

Chapter 1: Setting Up the BIG-IP System
• Introducing the BIG-IP System
• Initially Setting Up the BIG-IP System
• Archiving the BIG-IP System Configuration
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
• Reviewing High Availability (HA)
Chapter 3: Troubleshooting Methodology
• Step-By-Step Process
• Documenting a Problem
• Putting Troubleshooting Steps to Use
Chapter 4: Working with F5 Support
• Leveraging F5 Support Resources
• Leveraging F5 Labs
• Working with F5 Technical Support
• Running End User Diagnostics (EUD) - Hardware Only
• 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
Chapter 5: 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 Network Communication
• Troubleshooting Memory and CPU
• Troubleshooting with watch
• Troubleshooting with Additional tmsh commands
Chapter 6: Troubleshooting Tools
• tcpdump
• Wireshark
• SSL/TLS
• Fiddler
• diff

• KDiff3
• cURL
Chapter 7: Using System Logs
• Configuring Logging
• Log Files
• Understanding BIG-IP Daemons Functions
• Triggering an iRule
• Deploying and Testing iRules
• Application Visibility and Reporting
Chapter 8: Troubleshooting Lab Projects
• Network Configurations for Project
Chapter 9: Additional Training and Certification
• Getting Started Series Web-Based Training
• F5 Instructor Led Training Curriculum
• F5 Professional Certification Program

Follow on courses

F5N_BIG-LTM-CFG-3, Configuring BIG-IP LTM: Local Traffic Manager v.16.1
F5N_BIG-DNS-I, Configuring BIG-IP DNS (formerly GTM) v.16.1
F5N_BIG-AWF-CFG, Configuring F5 Advanced WAF (previously licensed as ASM) v16.1
F5N_BIG-EGW-APM, Configuring BIG-IP APM: Access Policy Manager v.16.1
F5N_BIG-AFM, Configuring BIG-IP AFM: Advanced Firewall Manager v.16.1
Other courses available: F5N_BIG-IRULE-CFG, Developing iRules for BIG-IP v.16.1

Further Information

Course Changes since v15
The Troubleshooting BIG-IP v16.1 course presents much of the same content as v15.1 with minor modifications to improve flow.
Password length is 8 digits.

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
11 Jul 2024	Virtual Classroom	BST	English	Instructor Led Online		~~£ 1,595.00~~ £1,435.50
03 Oct 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,595.00

Additional Information

This training is also available as onsite training. Please contact us to find out more.