Configuring BIG-IP AFM: Advanced Firewall Manager

Category: Networking & Security | **Vendor:** F5

Duration: 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This course uses lectures and hands-on exercises to give participants real-time experience in setting up and configuring the BIG-IP Advanced Firewall Manager (AFM) system. Students are introduced to the AFM user interface, stepping through various options that demonstrate how AFM is configured to build a network firewall and to detect and protect against DoS (Denial of Service) attacks. Reporting and log facilities are also explained and used in the course labs. Further Firewall functionality and additional DoS facilities for DNS and SIP traffic are discussed.

About This Course

- Setting up the BIG-IP System
- AFM Overview
- Network Firewall
- Logs
- IP Intelligence
- DoS Protection
- Reports
- DoS White Lists
- DoS Sweep Flood Protection
- IP Intelligence Shun
- DNS Firewall
- DNS DoS
- SIP DoS
- Port Misuse
- Network Firewall iRules
- Recap
- Additional Training and Certification

Who Should Attend

This course is intended for network operators, network administrators, network engineers, network architects, security administrators, and security architects responsible for installation, setup, configuration, and administration of the BIG-IP AFM system.

Prerequisites & Entry Requirements

General Prerequisites:

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

- Administering BIG-IP (TRG-BIG-OP-ADMIN) instructor-led course

or

- F5 Certified BIG-IP Administrator

The following free web-based courses, although optional, will be very helpful for any student with limited BIG-IP administration and configuration experience. These courses are available at F5 University:

- Getting Started with BIG-IP web-based training
- Getting Started with BIG-IP Local Traffic Manager (LTM) web-based training
- Getting Started with BIG-IP Advanced Firewall Manager (AFM) web-based training

The following general network technology knowledge and experience are recommended before attending any F5 Global Training Services instructor-led course:

- OSI model encapsulation
- Routing and switching
- Ethernet and ARP
- TCP/IP concepts
- IP addressing and subnetting
- NAT and private IP addressing
- Default gateway
- Network firewalls
- LAN vs. WAN

The following course-specific knowledge and experience is suggested before attending this course:

- HTTP and DNS protocols

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Configure and manage an AFM system
- Configure AFM Network Firewall in a positive or negative security model
- Configure Network Firewall to allow or deny network traffic using rules based on protocol, source, destination, geography, and other predicate types
- Prebuild firewall rules using lists and schedule components
- Enforce firewall rules immediately or test them using policy staging
- Use Packet Tester and Flow Inspector features to check network connections against your security configurations for Network Firewall, IP intelligence and DoS features
- Configure various IP Intelligence features to identify, record, allow or deny access by IP address
- Configure the Device DoS detection and mitigation feature to protect the BIG-IP device and all applications from multiple types of attack vectors
- Configure DoS detection and mitigation on a per-profile basic to protect specific applications from attack
- Use DoS Dynamic Signatures to automatically protect the system from DoS attacks based on long term traffic and resource load patterns
- Configure and use the AFM local and remote log facilities
- Configure and monitor AFM’s status with various reporting facilities
- Export AFM system reports to your external monitoring system directly or via scheduled mail
- Allow chosen traffic to bypass DoS checks using Whitelists
- Isolate potentially bad clients from good using the Sweep Flood feature
- Isolate and re-route potentially bad network traffic for further inspection using IP Intelligence Shun functionality
- Restrict and report on certain types of DNS requests using DNS Firewall
- Configure, mitigate, and report on DNS based DoS attacks with the DNS DoS facility
- Configure, mitigate, and report on SIP based DoS attacks with the SIP DoS facility
- Configure, block, and report on the misuse of system services and ports using the Port Misuse feature
- Build and configure Network Firewall rules using BIG-IP iRules
- Be able to monitor and do initial troubleshooting of various AFM functionality

Detailed 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 System Configuration
- Leveraging F5 Support Resources and Tools

Chapter 2: AFM Overview

- AFM Overview
- AFM Availability
- AFM and the BIG-IP Security Menu

Chapter 3: Network Firewall

- AFM Firewalls
- Contexts
- Modes
- Packet Processing
- Rules and Direction
- Rules Contexts and Processing
- Inline Rule Editor
- Configuring Network Firewall
- Network Firewall Rules and Policies
- Network Firewall Rule Creation
- Identifying Traffic by Region with Geolocation
- Identifying Redundant and Conflicting Rules

- Identifying Stale Rules

- Prebuilding Firewall Rules with Lists and Schedules

- Rule Lists

- Address Lists

- Port Lists

- Schedules

- Network Firewall Policies

- Policy Status and Management

- Other Rule Actions

- Redirecting Traffic with Send to Virtual

- Checking Rule Processing with Packet Tester

- Examining Connections with Flow Inspector

Chapter 4: Logs

- Event Logs

- Logging Profiles

- Limiting Log Messages with Log Throttling

- Enabling Logging in Firewall Rules

- BIG-IP Logging Mechanisms

- Log Publisher

- Log Destination

- Filtering Logs with the Custom Search Facility

- Logging Global Rule Events

- Log Configuration Changes

- QKView and Log Files

- SNMP MIB

- SNMP Traps

Chapter 5: IP Intelligence

- Overview

- IP Intelligence Policy

- Feature 1 Dynamic White and Blacklists

- Black List Categories

- Feed Lists

- Applying an IP Intelligence Policy

- IP Intelligence Log Profile

- IP Intelligence Reporting

- Troubleshooting IP Intelligence Lists

- Feature 2 IP Intelligence Database

- Licensing

- Installation

- Linking the Database to the P Intelligence Policy

- Troubleshooting

- IP Intelligence iRule

Chapter 6: DoS Protection

- Denial of Service and DoS Protection Overview

- Device DoS Protection

- Configuring Device DoS Protection

- Variant 1 DoS Vectors

- Variant 2 DoS Vectors

- Automatic Configuration or Automatic Thresholds

- Variant 3 DoS Vectors

- Device DoS Profiles

- DoS Protection Profile

- Dynamic Signatures

- Dynamic Signatures Configuration

- DoS iRules

Chapter 7: Reports

- AFM Reporting Facilities Overview
- Examining the Status of Particular AFM Features
- Exporting the Data
- Managing the Reporting Settings
- Scheduling Reports
- Troubleshooting Scheduled Reports
- Examining AFM Status at High Level
- Mini Reporting Windows (Widgets)
- Building Custom Widgets
- Deleting and Restoring Widgets
- Dashboards

Chapter 8: DoS White Lists

- Bypassing DoS Checks with White Lists
- Configuring DoS White Lists
- tmsh options
- Per Profile Whitelist Address List

Chapter 9: DoS Sweep Flood Protection

- Isolating Bad Clients with Sweep Flood
- Configuring Sweep Flood

Chapter 10: IP Intelligence Shun

- Overview
- Manual Configuration
- Dynamic Configuration
- IP Intelligence Policy
- tmsh options
- Troubleshooting

- Extending the Shun Feature

- Route this Traffic to Nowhere - Remotely Triggered Black Hole

- Route this Traffic for Further Processing - Scrubber

Chapter 11: DNS Firewall

- Filtering DNS Traffic with DNS Firewall

- Configuring DNS Firewall

- DNS Query Types

- DNS Opcode Types

- Logging DNS Firewall Events

- Troubleshooting

Chapter 12: DNS DoS

- Overview

- DNS DoS

- Configuring DNS DoS

- DoS Protection Profile

- Device DoS and DNS

Chapter 13: SIP DoS

- Session Initiation Protocol (SIP)

- Transactions and Dialogs

- SIP DoS Configuration

- DoS Protection Profile

- Device DoS and SIP

Chapter 14: Port Misuse

- Overview

- Port Misuse and Service Policies

- Building a Port Misuse Policy

- Attaching a Service Policy

- Creating a Log Profile

Chapter 15: Network Firewall iRules

- Overview

- iRule Events

- Configuration

- When to use iRules

- More Information

Chapter 16: Recap

- BIG-IP Architecture and Traffic Flow

- AFM Packet Processing Overview

Chapter 17: Additional Training and Certification

- Getting Started Series Web-Based Training

- F5 Instructor Led Training Curriculum

- F5 Professional Certification Program

Skills You Will Learn:

- Configure and manage an AFM system
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Frequently Asked Questions

Q: What delivery options are available for Configuring BIG-IP AFM: Advanced Firewall Manager?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 2-day Configuring BIG-IP AFM: Advanced Firewall Manager course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Configuring BIG-IP AFM: Advanced Firewall Manager training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Configuring BIG-IP AFM: Advanced Firewall Manager?

Yes, we provide corporate training, dedicated training, and closed classes for Configuring BIG-IP AFM: Advanced Firewall Manager. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Configuring BIG-IP AFM: Advanced Firewall Manager, F5 Networks, TRG-BIG-AFM-CFG

Q: Why choose Nexus Human for Configuring BIG-IP AFM: Advanced Firewall Manager?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Configuring BIG-IP AFM: Advanced Firewall Manager training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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