



## TRAINING OFFERING

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# Configuring BIG-IP AFM: Advanced Firewall Manager v16.1

CODE:	LENGTH:	PRICE:
F5N_BIG-AFM	16 Hours (2 days)	€1,995.00

## Description

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.

### Topics covered in this course include: v14.1 Course Topics

- Installation and setup of the BIG-IP AFM system
- AFM network firewall concepts
- Network firewall options and modes
- Network firewall rules, policies, address/port lists, rule lists and schedules
- IP Intelligence facilities of dynamic black and white lists, IP reputation database and dynamic IP shunning.
- Detection and mitigation of DoS attacks
- Event logging of firewall rules and DoS attacks
- Reporting and notification facilities
- DoS Whitelists
- DoS Sweep/Flood
- DNS Firewall and DNS DoS
- SIP DoS
- Network Firewall iRules
- Port Misuse
- Various AFM component troubleshooting commands

## Objectives

- Introducing the BIG-IP System
- Initially Setting Up the BIG-IP System
- Archiving the BIG-IP Configuration
- Leveraging F5 Support Resources and Tools
- Chapter Resources

**v14.1 Course Outline Chapter 1: Setting up the BIG-IP System** BIG-IP System Setup Labs

AFM Overview  
 AFM Release History  
 AFM Availability  
 What do you see?  
 Terminology  
 Network Firewall  
 AFM Contexts  
 AFM Modes  
 AFM Packet Processing  
 AFM Rules and Direction  
 Rules Contexts and Processing  
 Configuring Network Firewall  
 Network Firewall Rules  
 Geolocation  
 Redundant and Conflicting Rules  
 Stale Rules  
 Lists and Schedules  
 Rule Lists  
 Address Lists  
 Port Lists  
 Schedules  
 Policies  
 Policy Status and Firewall Policy Management  
 Inline Rule Editor  
 Send to Virtual

**Chapter 2: AFM Overview and Network Firewall**

Overview  
 Event Logs  
 Logging Profiles  
 Log Throttling  
 Logging and Logging Profiles  
 BIG-IP Logging Mechanisms  
 Publisher  
 Log Destination  
 Custom Search  
 Logging Global Rule Events  
 Log Configuration Changes  
 QKView and Log Files  
 SNMP MIB  
 SNMP Traps

**Packet Tester**

Overview  
 Feature 1 Dynamic Black and White Lists  
 Black List Categories  
 Feed Lists  
 IP Intelligence Policies  
 IP Intelligence Log Profile  
 IP Intelligence Reporting  
 Troubleshooting IP Intelligence Lists  
 Feature 2 IP Intelligence Database  
 Licensing  
 Installation  
 Configuration  
 Troubleshooting

**Chapter 3: Logs**

**Chapter 4: IP Intelligence**

**IP Intelligence iRule**

Reports  
 Reporting  
 General Reporting Facilities  
 Time Series Chart  
 Details  
 Report Export  
 DoS Screens  
 Dashboard  
 Analysis  
 Custom Page  
 Settings  
 Scheduled Reports  
 Troubleshooting Scheduled Reports  
 Overview  
 Summary  
 Widgets  
 Custom Widgets  
 Deleting and Restoring Widgets

**Chapter 5: Device DoS**

Denial of Service and DoS Protection Overview  
 Device DoS  
 Configuring Device DoS  
 Variant 1  
 Variant 2  
 Auto-Threshold Configuration  
 Variant 3  
 Bad Actor and Blacklist Address  
 Device DoS Profiles  
 DoS Protection Profile  
 Dynamic Signatures  
 DoS iRules

**Chapter 6: Reports**

**Firewall Manager**

White Lists  
 Configuration  
 tmsb

Sweep Flood

**Chapter 7: DoS White Lists**

**Chapter 8: DoS Sweep Flood Protection**

Source Address List

Configuration

	IP Intelligence Shun Manual Configuration Dynamic Configuration IP Intelligence Policy tmsh Extending the Shun Feature Remotely Triggered Black Hole Scrubber		DNS Firewall Configuration DNS Query DNS Opcodes Logging Troubleshooting
<b>Chapter 9: IP Intelligence Shun</b>		<b>Chapter 10: DNS Firewall</b>	
	DNS DoS Configuration DoS Protection Profile Device DoS		Session Initiation Protocol (SIP) Transactions and Dialogs SIP DoS Configuration DoS Protection Profile Device DoS SIP iRules
<b>Chapter 11: DNS DoS</b>		<b>Chapter 12: SIP DoS</b>	
	Network Firewall iRules iRule Events Configuration Recommended Practice More Information		Port Misuse Port Misuse Policy Attaching a Service Policy Log Profile
<b>Chapter 13: Network Firewall iRules</b>		<b>Chapter 14: Port Misuse</b>	

## Audience

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

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

Administering BIG-IP 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 v12 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 Configuration

Leveraging F5 Support Resources and Tools **Chapter 2: AFM Overview and Network Firewall**

AFM Overview		
AFM Release History		
AFM Availability		
What do you see?		
Terminology		
Network Firewall		
AFM Contexts		
AFM Modes		
AFM Packet Processing		
AFM Rules and Direction		Event Logs
Rules Contexts and Processing		Logging Profiles
Configuring Network Firewall		Log Throttling
Network Firewall Rules		Traffic Flow Statistics
Geolocation		Logging and Logging Profiles
Redundant and Conflicting Rules		BIG-IP Logging Mechanisms
Stale Rules		Publisher
Lists and Schedules		Log Destination
Rule Lists		Custom Search
Address Lists		Logging Global Rule Events
Port Lists		Log Configuration Changes
Schedules		QKView
Policies		Other Log Files
Policy Status and Firewall Policy Management		SNMP MIB
Inline Rule Editor	<b>Chapter 3: Logs</b>	SNMP Traps
Overview		<b>Chapter 4: IP Intelligence</b>
Feature 1 Dynamic Black and White Lists		
Black List Categories		
Feed Lists		Denial of Service and DoS Protection Overview
IP Intelligence Policies		Configuring Device DoS
IP Intelligence Log Profile		Configuring Device DoS Vectors
IP Intelligence Reporting		Variant 1
Troubleshooting IP Intelligence Lists		Rate and Leak Limit
Feature 2 IP Intelligence Database		Variant 2
Licensing		Auto-Threshold Configuration
Installation		Variant 3
Configuration		Bad Actor and Blacklist Attacking Address
Troubleshooting		Device DoS Profiles
IP Intelligence iRule	<b>Chapter 5: Device DoS</b>	DoS Protection Profile
Reports		
Reporting		
General Reporting Facilities		
Charts		
Details		
Report Export		
Network Screens		
DoS Screens		
Settings		
Overview		
Summary		White Lists
Widgets		Configuration
Time Periods, Settings, Export, and Delete Options		tmsh
<b>Chapter 6: Reports</b>	Firewall Manager	<b>Chapter 7: DoS White Lists</b> Source Address List
		IP Intelligence Shun
		Manual
		Dynamic
		IP Intelligence Policy
		tmsh
<b>Chapter 8: DoS Sweep Flood Protection</b>	Sweep Flood	Troubleshooting
	Configuration	
<b>Chapter 9: IP Intelligence Shun</b>		
	DNS Firewall	
	DNS Query	DNS DoS
	DNS Opcodes	DoS Protection Profile
<b>Chapter 10: DNS Firewall</b>	Troubleshooting	Device DoS
<b>Chapter 11: DNS DoS</b>		<b>Chapter 12: SIP DoS</b>
Session Initiation Protocol (SIP)		
Transactions and Dialogs		Network Firewall iRules
SIP DoS		iRule Events
DoS Protection Profile		Use Cases
Device DoS		Recommended Practice
SIP iRules	<b>Chapter 13: Network Firewall iRules</b>	More Information
		<b>Chapter 14: DoS iRules</b>

DoS iRules  
iRule Events  
Use Cases  
More Information  
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

## Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
28 Nov 2024	Virtual Classroom (CET / UTC +1)		English	Instructor Led Online		€1,995.00

## Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)