



Arrow ECS Finland Oy - Education Services

TRAINING OFFERING

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Configuring BIG-IP AFM: Advanced Firewall Manager v17.1

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:

v17.1 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

v17.1 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 Resources
- BIG-IP System Setup Labs

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
- 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
- Packet Tester

Chapter 3: Logs

- 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

Chapter 4: IP Intelligence

- 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
- IP Intelligence iRule

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

- 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
- Firewall Manager

Chapter 7: DoS White Lists

- White Lists
- Configuration
- tmsh
- Source Address List

Chapter 8: DoS Sweep Flood Protection

- Sweep Flood
- Configuration

Chapter 9: IP Intelligence Shun

- IP Intelligence Shun
- Manual Configuration
- Dynamic Configuration
- IP Intelligence Policy
- tmsh
- Extending the Shun Feature
- Remotely Triggered Black Hole
- Scrubber

Chapter 10: DNS Firewall

- DNS Firewall
- Configuration
- DNS Query
- DNS Opcodes
- Logging
- Troubleshooting

Chapter 11: DNS DoS

- DNS DoS
- Configuration
- DoS Protection Profile
- Device DoS

Chapter 12: SIP DoS

- Session Initiation Protocol (SIP)
- Transactions and Dialogs
- SIP DoS Configuration
- DoS Protection Profile
- Device DoS
- SIP iRules

Chapter 13: Network Firewall iRules

- Network Firewall iRules
- iRule Events
- Configuration
- Recommended Practice
- More Information

Chapter 14: Port Misuse

- Port Misuse
- Port Misuse Policy
- Attaching a Service Policy

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

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

Chapter 3: Logs

Event Logs

Logging Profiles

Log Throttling

Traffic Flow Statistics

Logging and Logging Profiles

BIG-IP Logging Mechanisms

Publisher

- Log Destination
- Custom Search
- Logging Global Rule Events
- Log Configuration Changes
- QKView
- Other Log Files
- SNMP MIB
- SNMP Traps

Chapter 4: IP Intelligence

- 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
- IP Intelligence iRule

Chapter 5: Device DoS

- Denial of Service and DoS Protection Overview
- Configuring Device DoS
- Configuring Device DoS Vectors
- Variant 1
- Rate and Leak Limit
- Variant 2
- Auto-Threshold Configuration
- Variant 3
- Bad Actor and Blacklist Attacking Address
- Device DoS Profiles
- DoS Protection Profile

Chapter 6: Reports

- Reports
- Reporting
- General Reporting Facilities
- Charts
- Details
- Report Export
- Network Screens
- DoS Screens
- Settings
- Overview
- Summary
- Widgets
- Time Periods, Settings, Export, and Delete Options
- Firewall Manager

Chapter 7: DoS White Lists

- White Lists
- Configuration
- tmsh
- Source Address List

Chapter 8: DoS Sweep Flood Protection

- Sweep Flood
- Configuration

Chapter 9: IP Intelligence Shun

- IP Intelligence Shun
- Manual
- Dynamic

IP Intelligence Policy
tmsh
Troubleshooting

Chapter 10: DNS Firewall

DNS Firewall
DNS Query
DNS Opcodes
Troubleshooting

Chapter 11: DNS DoS

DNS DoS
DoS Protection Profile
Device DoS

Chapter 12: SIP DoS

Session Initiation Protocol (SIP)
Transactions and Dialogs
SIP DoS
DoS Protection Profile
Device DoS
SIP iRules

Chapter 13: Network Firewall iRules

Network Firewall iRules
iRule Events
Use Cases
Recommended Practice
More Information

Chapter 14: DoS iRules

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

Aikataulutamme kiinnostuksen mukaan. [Ota yhteyttä](#)

Additional Information

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