

F5 Administering BIG-IP

Duration: 32 Hours (4 Days)

Course Overview

The F5 Administering BIG-IP course is designed to provide learners with the foundational knowledge and skills required to manage and configure the F5 BIG-IP system. Starting with Module 1: Setting Up the BIG-IP System, students will learn to introduce, deploy, and license the BIG-IP system, as well as configure its essential network components. Throughout the course, they will gain hands-on experience with Traffic processing, NATs and SNATs, Monitoring application health, Profiles, and Persistence to ensure optimized traffic management and load balancing. As they progress, learners will also dive into administering the system with advanced features such as Logging, remote Logging, and high-speed Logging (HSL), which are crucial for maintaining network security and performance. The course emphasizes the importance of high availability configurations using Device Service Clustering (DSC) to ensure system resilience and uptime. By the end of the course, participants will be equipped with the practical expertise to administer a BIG-IP environment effectively, positioning them as valuable assets in maintaining and securing network infrastructures.

Audience Profile

The F5 Administering BIG-IP course provides IT professionals with the knowledge and skills needed to effectively manage and maintain F5 BIG-IP systems, ensuring optimal performance and reliability. This course is designed for:

- Network Administrators: Professionals managing and maintaining network infrastructure.
- System Engineers: Engineers responsible for system performance and optimization.
- Network Engineers: Specialists handling network configurations and troubleshooting.
- Application Developers: Developers integrating BIG-IP functionalities into applications.
- IT Security Specialists: Experts focused on securing networks and applications.
- Operations Professionals: Personnel ensuring smooth IT operations.
- Technical Support Engineers: Engineers providing support for BIG-IP systems.
- Implementation Consultants: Professionals deploying BIG-IP solutions for clients.
- Network Architects: Architects designing and implementing network systems.
- Data Center Managers: Managers overseeing data center operations and infrastructure.
- NOC Personnel: Network Operations Center staff monitoring and managing network performance.
- Cloud Infrastructure Engineers: Engineers managing cloud-based network infrastructures.
- DevOps Professionals: Specialists working on networking and traffic management in DevOps environments.

Course Syllabus

Chapter 1: Setting Up the BIG-IP System

- Introduction to the BIG-IP System
- Initial Setup of the BIG-IP System
- Configuring the Management Interface
- Activating the Software License
- Provisioning Modules and Resources
- Importing a Device Certificate

- Specifying BIG-IP Platform Properties
- Configuring the Network
- Setting Up Network Time Protocol (NTP) Servers
- Configuring Domain Name System (DNS) Settings
- Setting High Availability Options
- Archiving the BIG-IP Configuration
- Utilizing F5 Support Resources and Tools

Chapter 2: Traffic Processing Building Blocks

- Overview of BIG-IP Traffic Processing Objects
- Configuring Virtual Servers and Pools
- Load Balancing Traffic
- Viewing Module Statistics and Logs
- Using the Traffic Management Shell (TMSH)
- Understanding the TMSH Hierarchical Structure
- Navigating the TMSH Hierarchy
- Managing BIG-IP Configuration States and Files
- Understanding System Configuration States
- Loading and Saving the System Configuration
- Shutting Down and Restarting the BIG-IP System
- Saving and Replicating Configuration Data (UCS and SCF)

Chapter 3: Using NATs and SNATs

- Address Translation on the BIG-IP System
- Mapping IP Addresses with NATs
- Solving Routing Issues with SNATs
- Configuring SNAT Auto Map on a Virtual Server
- Monitoring and Mitigating Port Exhaustion

Chapter 4: Monitoring Application Health

- Overview of Monitors
- Types of Monitors
- Configuring Monitor Intervals and Timeout Settings
- Setting Up Monitors
- Assigning Monitors to Resources
- Managing Pool, Pool Member, and Node Status
- Using the Network Map

Chapter 5: Modifying Traffic Behavior with Profiles

- Introduction to Profiles
- Understanding Profile Types and Dependencies
- Configuring and Assigning Profiles
- Introduction to SSL Offload and SSL Re-Encryption
- Managing Object States

Chapter 6: Modifying Traffic Behavior with Persistence

- Understanding the Need for Persistence
- Introduction to Source Address Affinity Persistence
- Managing Object States

Chapter 7: Administering the BIG-IP System

- Configuring Logging
- Overview of Legacy Remote Logging
- Introduction to High-Speed Logging (HSL)
- Understanding High-Speed Logging Filters
- Configuring HSL Objects and Settings
- Using TCPDUMP on the BIG-IP System
- Leveraging the BIG-IP iHealth System
- Viewing BIG-IP System Statistics
- Defining User Roles and Administrative Partitions
- Leveraging vCMP

Chapter 8: Configuring High Availability

- Introduction to Device Service Clustering (DSC)
- Preparing to Deploy a DSC Configuration
- Configuring DSC Communication Settings
- Establishing Device Trust
- Setting Up a Sync-Failover Device Group
- Synchronizing Configuration Data
- Exploring Traffic Group Behaviors
- Understanding Failover Managers and Triggers
- Achieving Stateful Failover with Mirroring