# F5 Networks Configuring BIG-IP DNS v12: Domain Name System (F5-DNS-12)

**Modality: Virtual Classroom**

**Duration: 2 Days**

## About this course:

In this course, you will be taught on the topics of installation, configuration, and regulation of the BIG-IP DNS system. The course will be delivered through a combination of lecture, discussion, and hands-on labs.

This is an IT Ops training course and you will be learning about the ways of installing, regulating, and configuring a BIG-IP DNS system through a combination of lectures, discussions and hands-on labs.

## Audience:

This course is designed for and is suitable for system and network administrators who have a regular job of installing, setting up, configuring, and managing the BIG-IP DNS systems.

## Requirements:

The course has some requirements. You should be able to manage BIG-IP, TCP/IP addressing and routing, WAN/LAN elements. You should also be clear with Data Center Server redundancy concepts.

## Course Outline:

**Lesson 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
- Provision the BIG-IP System and Confirm Network Configuration

**Lesson 2: Introducing the Domain Name System (DNS) and BIG-IP DNS**

- Understanding the Domain Name System (DNS)
- Reviewing the Name Resolution Process
- Implementing BIG-IP DNS
- Using DNS Resolution Diagnostic Tools

**Lesson 3: Accelerating DNS Resolution**

- Introducing DNS Resolution with BIG-IP DNS
- BIG-IP DNS Resolution Decision Flow
- Configuring BIG-IP DNS Listeners
- Resolving DNS Queries in the Labs (Lab Zone Records)
- Load Balancing Queries to a DNS Server Pool
- Accelerating DNS Resolution with DNS Cache
- Accelerating DNS Resolution with DNS Express
- Introducing Wide IPs
- Using Other Resolution Methods with BIG-IP DNS
- Integrating BIG-IP DNS into Existing DNS Environments

## Lesson 4: Implementing Intelligent DNS Resolutions

- Introducing Intelligent DNS Resolution
- Identifying Physical Network Components
- Identifying Logical Network Components
- Collecting Metrics for Intelligent Resolution
- Configuring Data Centers
- Configuring a BIG-IP DNS System as a Server
- Configuring a BIG-IP LTM System as a Server
- Establishing iQuery Communication between BIG-IP Systems
- Configuring a Non-F5 Server
- Defining Links and Routers
- Configuring Wide IP Pools
- Configuring Wide IPs
- Managing Object Status
- Using the Traffic Management Shell (TMSH)

## Lesson 5: Using LDNS Probes and Metrics

- Introducing LDNS Probes and Metrics
- Types of LDNS Probes
- Excluding an LDNS from Probing
- Configuring Probe Metrics Collection

## Lesson 6: Load Balancing Intelligent DNS Resolution

- Introducing Load Balancing on BIG-IP DNS
- Using Static Load Balancing Methods
- Round Robin
- Ratio
- Global Availability
- Static Persist
- Other Static Load Balancing Methods
- Using Dynamic Load Balancing Methods
- Round Trip Time
- Completion Rate
- CPU

- Hops
- Least Connections
- Packet Rate
- Kilobytes per Second
- Other Dynamic Load Balancing Methods
- Virtual Server Capacity
- Virtual Server Score
- Using Quality of Service Load Balancing
- Persisting DNS Query Responses
- Configuring GSLB Load Balancing Decision Logs
- Using Manual Resume
- Using Topology Load Balancing

## Lesson 7: Monitoring Intelligent DNS Resources

- Exploring Monitors
- Configuring Monitors
- Assigning Monitors to Resources
- Monitoring Best Practices

## Lesson 8: Advanced BIG-IP DNS Topics

- Implementing DNSSEC
- Setting Limits for Resource Availability
- Using iRules with Wide IPs
- Introducing Other Wide IP Types
- Implementing BIG-IP DNS Sync Groups

## Lesson 9: Final Configuration Projects