



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Configuring BIG-IP DNS (formerly GTM) v.16.1

CODE:	LENGTH:	PRICE:
F5N_BIG-DNS-I	16 Hours (2 days)	£1,595.00

Description

Learn how to configure and deploy BIG-IP DNS as it is commonly used. Learn how the Domain Name System (DNS) resolves hostnames into IP addresses, and how to use DNS Express to cache DNS query responses, accelerating DNS resolution. Practice working with key features to perform intelligent DNS resolution and configure wide IP pools to use a path load balancing method. Explore using persistence to effectively return one or more clients to the same virtual server on each query. Practice manual controls for resuming certain load balancing behaviors in the event of an outage. Configure BIG-IP DNS to participate in the DNSSEC chain of trust. Configure limit settings on virtual servers, and wide IP pools to temporarily direct client traffic away from resources that may not be performing at certain thresholds of efficiency. Customize intelligent DNS resolution using iRules on a wide IP. Learn how to configure a BIG-IP DNS sync group.

Reinforce knowledge transfer through the use of hands-on labs, and gain the confidence needed to start using BIG-IP DNS in a production environment.

Objectives

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

- Provision the BIG-IP system for operation
- Back up the BIG-IP system configuration for safekeeping
- Describe how the Domain Name System (DNS) resolves host names into IP addresses
- Describe how the BIG-IP DNS system can participate in the DNS resolution process DNS resolution with wide IPs and wide IP pools
- Describe how the BIG-IP DNS system can participate in the DNS resolution process
- Cache DNS query responses on BIG-IP DNS to accelerate DNS resolution
- Load balance DNS queries to a pool of DNS servers and monitor pool health
- Configure the key features of the BIG-IP DNS system to perform intelligent DNS resolution
- Describe the LDNS probes used by BIG-IP DNS to support path-based load balancing
- Configure a wide IP pool to use a path load balancing method

- View and confirm DNS resolution behavior using path load balancing methods
- Use static and dynamic load balancing methods to intelligently resolve DNS queries
- Use persistence to effectively return one or more clients to the same virtual server on each query
- Use manual resume to control certain load balancing behavior in the event of an outage
- Configure and use load balancing decision logs to fine-tune and troubleshoot DNS resolution
- Configure monitors on the BIG-IP DNS system in support of DNS resolution
- Configure BIG-IP DNS to participate in the DNSSEC chain of trust
- Configure limit settings on virtual servers, servers, and wide IP pools to temporarily direct client traffic away from resources that may not be performing at certain thresholds of efficiency
- Configure iRules on a wide IP to customize intelligent DNS resolution
- Describe the other wide IP types provided with BIG-IP DNS
- Configure a BIG-IP DNS sync group
- Apply all the principles learned throughout the course to configure a BIG-IP DNS system based on hypothetical specifications

Audience

This course is intended for system and network administrators responsible for installation, setup, configuration, and administration of BIG-IP DNS systems.

Prerequisites

The following free Self-Directed Training (SDT) courses, although optional, are helpful for any student with limited BIG-IP administration and configuration experience:

- Getting Started with BIG-IP
- Getting Started with BIG-IP DNS

General network technology knowledge and experience are recommended before attending any F5 Global Training Services instructor-led course, including OSI model encapsulation, routing and switching, Ethernet and ARP, TCP/IP concepts, IP addressing and subnetting, NAT and private IP addressing, NAT and private IP addressing, default gateway, network firewalls, and LAN vs. WAN.

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

- DNS resolution process
- Experience configuring DNS content and resolution servers
- DNSSEC

Programme

- Introducing the BIG-IP System
- Initially Setting Up the BIG-IP System
- Archiving the BIG-IP Configuration

Chapter 1: Setting Up the BIG-IP System • Leveraging F5 Support Resources and Tools

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

Chapter 2: Introducing the Domain Name System (DNS) and BIG-IP DNS • Using DNS Resolution Diagnostic Tools

- 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

Chapter 3: Accelerating DNS Resolution • Integrating BIG-IP DNS into Existing DNS Environments

- 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 and State

Chapter 4: Implementing Intelligent DNS Resolutions • Using the Traffic Management Shell (TMSH)

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

Chapter 5: Using LDNS Probes and Metrics • Configuring Probe Metrics Collection

- 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
- Using Quality of Service Load Balancing
- Persisting DNS Query Responses
- Configuring GSLB Load Balancing Decision Logs
- Using Manual Resume

Chapter 6: Load Balancing Intelligent DNS Resolution • Using Topology Load Balancing

- Exploring Monitors
- Configuring Monitors
- Assigning Monitors to Resources

Chapter 7: Monitoring Intelligent DNS Resources • Monitoring Best Practices

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

Chapter 8: Advanced BIG-IP DNS Topics

Follow on courses

F5N_BIG-LTM-CFG-3, Configuring BIG-IP LTM: Local Traffic Manager v.16.1

F5N_BIG-AWF-CFG, Configuring F5 Advanced WAF (previously licensed as ASM) v.16.1

F5N_BIG-EGW-APM, Configuring BIG-IP APM: Access Policy Manager v.16.1

Test and Certification

Exam 302 – BIG-IP DNS Specialist Prerequisites: Valid F5-CA, BIG-IP Certification

Candidates that pass Exam 302 will receive the F5 Certified! Technology Specialist, BIG-IP DNS certification.

People with this certification have the fundamental knowledge necessary to application delivery architects and application delivery engineers working with BIG-IP DNS, including the ability to understand the basic operation of the DNS protocol, deploy and test configurations, and troubleshoot and remedy common misconfigurations.

These individuals also are able to explain the capabilities of DNS services to deploy applications globally.

Receiving the F5-CTS, BIG-IP DNS certification is a prerequisite for the Cloud Solutions Expert certification tracks.

View Exam 302 study materials on AskF5

Exam vouchers can be purchased from Arrow ECS at an additional charge. Vouchers can be used at www.vue.com/f5 to schedule exams at a time and location convenient to the attendee.

Further Information

Course Changes since v15

The Configuring DNS v16.1 course presents much of the same content as v15.1, with very minor modifications.

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
13 May 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,595.00 £1,435.50
07 Oct 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,595.00
02 Dec 2024	Virtual Classroom	GMT	English	Instructor Led Online		£1,595.00

Additional Information

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