



EXAM BLUEPRINT

302 — BIG-IP DNS Specialist

ABOUT THE 302 – BIG-IP DNS SPECIALIST EXAM

The *302 – BIG-IP DNS Specialist* (formerly the *302 – GTM Specialist*) exam identifies individuals who can deliver scalable intelligent DNS/Global Server Load Balancing (GSLB) infrastructure across multiple data centers. They will likely be a BIG-IP DNS administrator with at least one year of experience. The BIG-IP DNS Specialist understands basic to advanced operations of DNS protocol, deploys and test configurations, troubleshoots, and remediates common misconfigurations.

WHAT IS THE 302 – BIG-IP DNS SPECIALIST EXAM BLUEPRINT?

F5 Certified exam blueprints list all the objectives an exam has to measure, much like a syllabus for the exam itself. Blueprints provide a detailed breakdown of the skills and knowledge a candidate should have to pass the exam. They contain section levels, objectives and examples, and can be used to identify areas for additional study. The examples are illustrative, not exhaustive.

F5 Certification exams are designed to test the knowledge, skills, and abilities of the candidate. These exams are not designed to test version-specific TMOS features, but rather assess knowledge and understanding of F5 technology solutions for which the exam is developed. Refer to individual exam blueprints for exam publication date.

PREREQUISITE:

F5 Certified BIG-IP Administrator (F5-CA)

CREDENTIAL AWARDED:

F5 Certified Technology Specialist, BIG-IP DNS





Section 1 : DESIGN AND ARCHITECT		
Objectives and Examples		CC*
1.01	Identify customer requirements, constraints, and challenges related to DNS <ul style="list-style-type: none"> Recognize the functionality and limitations of the DNS protocol (e.g., hierarchy, roles) Determine relevant information to gather regarding a customer's need for high availability, security, and management 	U/A
1.02	Evaluate existing DNS environment for BIG-IP DNS solutions <ul style="list-style-type: none"> Ascertain specific scope and scale of DNS requirements Recognize limitations imposed by the existing DNS service provider Identify change control procedure related the integration of BIG-IP DNS into an existing environment 	A/E
1.03	Determine appropriate deployment and integration strategy for a BIG-IP DNS solution <ul style="list-style-type: none"> Given a customer environment, requirements, and constraints, select an appropriate deployment model Given a customer environment, requirements, and constraints, recognize the use case for DNS Express, Zone Runner, DNS 64, DNSSEC, DNS Cache, various load balancing algorithms, persistence, and/or health monitor 	A/E
1.04	Determine performance requirements for a BIG-IP DNS solution <ul style="list-style-type: none"> Relate the performance characteristics of virtual edition and physical hardware to a specific use case Employ topology load balancing to optimize user experience Predict the performance implications pertaining to key DNS features (e.g., DNSSEC, topology LB) 	A/E

Section 2 : IMPLEMENT		
Objectives and Examples		CC*
2.01	Identify configuration options for TMOS and sync groups <ul style="list-style-type: none"> Create the proper self-IP configuration, routes, and settings for iQuery communications Ensure proper NTP operation of all sync group members Create logging profiles for DNS request and/or response 	U/A
2.02	Identify configure options for GSLB <ul style="list-style-type: none"> Differentiate between, and determine when to use, the two tiers of GSLB pool selection and the three tiers of virtual server selection Recognize the functionality of various load balancing methods (e.g., static, dynamic, and fallback) Recognize topology load balancing configuration parameters 	U/A

* Cognitive Complexity Key: **R** = Remember, **A/E** = Analyze/Evaluate, **U/A** = Understand/Apply



2.03	Identify configuration options for non-GSLB DNS components <ul style="list-style-type: none"> • Determine the listener IP and protocol • Configure DNS Express and DNS Cache 	U/A
2.04	Identify the necessary network environment for GSLB operations <ul style="list-style-type: none"> • Recognize the significance of source and destination ports for communication between BIG-IP DNS devices • Identify missing/non-functional network configurations when enabling GSLB operation (e.g., iQuery, generic host probing) 	U/A

Section 3 : TEST AND TROUBLESHOOT

Objectives and Examples		CC*
3.01	Determine when and how to employ the appropriate network and DNS troubleshooting tools <ul style="list-style-type: none"> • Use openssl to review trusted cert information • Use tcpdump to capture and analyze DNS and iQuery traffic on appropriate VLAN and IP • Use dig/nslookup to verify DNS configuration and operation 	U/A
3.02	Diagnose BIG-IP DNS issues <ul style="list-style-type: none"> • Investigate root cause for virtual server flapping issue • Analyze DNS request/response pattern to confirm BIG-IP DNS configuration, health monitor an iQuery operation 	A/E
3.03	Analyze system log data and statistics for problem analysis <ul style="list-style-type: none"> • Verify the status of pools based on relevant log entries • Analyze statistical data to pinpoint any issues regarding query response times • Analyze appropriate log for proper zone transfer operation 	A/E
3.04	Address DNS-related issues based on troubleshooting and log analysis <ul style="list-style-type: none"> • Apply config change (e.g., monitor or prober) to remedy flapping of server objects • Address proper IP address choice(s) for iQuery communication between devices 	U/A

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Section 4 : OPERATIONS AND SUPPORT		
Objectives and Examples		CC*
4.01	Identify process to perform BIG-IP DNS configuration backup <ul style="list-style-type: none"> Perform the steps in the GUI to create system archive files Issue TMSH commands to create system archive files. Verify file creation and move to remote storage 	R
4.02	Identify the prerequisites and procedure for BIG-IP DNS configuration restoration <ul style="list-style-type: none"> Recognize the special requirements for restoring configuration data to a BIG-IP DNS RMA unit Compare configuration objects between a new BIG-IP DNS and existing sync group member Determine when and how to restore the master encryption keys for TSIG and DNSSEC 	U/A
4.03	Identify various BIG-IP DNS monitoring strategies <ul style="list-style-type: none"> Configure SNMP polling Describe and use DNS statistics and DNS analytics 	U/A
4.04	Recognize appropriate procedures for performing BIG-IP DNS software upgrades <ul style="list-style-type: none"> Recognize the significance of the requirement for license reactivation prior to upgrade Given a GSLB configuration, predict the potential end-user impact when upgrading a DNS sync group member while it is offline Validate BIG-IP DNS operation status, post-upgrade 	U/A

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Exam Details

HOW MUCH DO F5 EXAMS COST?

All F5 exams are currently priced at US\$180 (not including local taxes and fees) per exam, per attempt.

HOW LONG ARE F5 EXAMS?

This exam is 90 minutes long (not including any non-native English or other accommodations).

WHAT IS THE PASSING SCORE FOR F5 EXAMS?

F5 exams require a passing score of 245 out of a range between 100 and 350.

SCALED SCORING

Scaled scores ensure that the reported scores across exam forms and versions have the same meaning regardless of difficulty. Fair and consistent decisions can then be made about exam results regardless of the exam form or version. [More information >](#)

HOW MANY QUESTIONS ARE THERE?

This exam has 80 questions (70 items that are scored, 10 pilot/beta items).

WHAT FORMAT ARE F5 EXAMS?

F5 exams are all computer-based, multiple-choice-response exams. Some questions contain exhibits or scenarios that you will need to view in order to answer the question.

WHAT IS THE F5 RETAKE POLICY?

1st failure: Exam hold for 15 days (You cannot take the exam again for 15 days.)

2nd failure: Exam hold for 30 days

3rd failure: Exam hold for 45 days

4th failure: Exam hold for 365 days

5th and subsequent failed attempts: 90 days



Cognitive Complexity Descriptions

Lower Order Thinking Skills



Higher Order Thinking Skills

Remember	Understand/Apply	Analyze/Evaluate	Create
Information retrieval Rote memorization	Knowledge transfer Comprehension or ability to apply knowledge to a standard process	Critical thinking and reasoning Determine how parts relate to whole or knowledge integration and application to new situations	Innovation or creative thinking Forming an original work product
Retrieve relevant knowledge from long-term memory	Construct meaning from information	Make judgments based on criteria	Combine or reorganize parts to form a new pattern or structure
E.g., recall, retrieve, recognize	E.g., interpret, classify, compare, explain, implement	E.g., troubleshoot, attribute, diagnose, critique	E.g., generate, plan, produce

Alpine Testing Solutions’ suggested cognitive complexity levels and associated verb references consider multiple approaches to defining cognitive processing (e.g., Anderson et al., Webb, Bloom, Frisbie). Above material created with assistance from Alpine and distributed with Alpine’s permission as an attachment to certification test



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