302 - GTM TECHNOLOGY SPECIALIST
EXAM BLUEPRINT

ABOUT THE 302-GTM TECHNOLOGY SPECIALIST EXAM.
The 302-GTM Technology Specialist exam is required to achieve Certified F5 GTM Technology Specialist status.

Successful completion of the 302-GTM Technology Specialist exam indicates that the candidate possesses the knowledge and understands the concepts and technology standards that are applicable to application delivery architects and application delivery engineers working with F5 BIG-IP GTM (TMOS v11).

WHAT IS THE 302-GTM TECHNOLOGY SPECIALIST EXAM BLUEPRINT?
F5 Certified Exam Blueprints list all the objectives an exam has to measure, much like a syllabus for the exam itself. The blueprint provides the detailed breakdown of the skills and knowledge a candidate should have to pass the exam. Blueprints can be used to identify areas for additional study, and are best used in conjunction with the Exam Study Guides.

PREREQUISITE:
F5 Certified BIG-IP Administrator (F5-CA)

CREDENTIAL AWARDED:
F5 Certified Technology Specialist, GTM

THIS EXAM IS BASED ON V11.2.

302 - GTM TECHNOLOGY SPECIALIST

EXAM BLUEPRINT

F5 CERTIFIED TECHNOLOGY SPECIALIST

Section 1:	Concepts	Cognitive Complexity
Objective 1.01	Identify resource record types and their purpose including DNSSEC record types	R
Examples	Identify resource record types and their purpose Identify DNSSEC purpose and GTM implementation	
Objective 1.02	Identify the different zone types and their purpose	R
Examples	Identify the different types of zones (Master, Slaves, Hint, Root, Stub)	
Objective 1.03	Explain the purpose of tools and when to use them	U/A
Examples	Explain the purpose of tools and when to use them, specifically nslookup, dig, named-checkzone, rndc	
Objective 1.04	Explain the dataflow of the DNS query process [iterative, recursive, lame delegation, host file, and resolvers]	U/A
Examples	Explain recursive versus iterative	
Objective 1.05	Distinguish IPv4 versus IPv6 query including differentiating IPv4/6 transport versus IPv4/6 query type and extrapolating when different query types will be used on different transports	U/A or higher
Examples	Explain the difference between IPv6 and IPv4 data transport Explain the difference between IPv6 record and IPv6 data transport	
Objective 1.06	Given a DNS hierarchical diagram determine what source IP the GTM will receive the query from	A/E
Objective 1.07	Identify DNS security concepts and their purpose [DDOS, DNSSEC, AnyCast, DNSFirewall, site validation, iRules, and impacts of floating self-IP versus non-floating self-IP listener]	R or higher
Objective 1.08	Describe data center, server/virtual server, and object monitoring including explanation of resulting object statuses [prober pools, BIG-IP and generic server objects, monitors, etc.]	R or higher
Examples	Identify the purpose and uses of prober pools	
Objective 1.09	Define the GTM load balancing methods and when to use them [dynamic, static]	R or higher
Objective 1.10	Identify applicable iRules events including application to WideIP versus Listener	R or higher

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

Examples	Identify the purpose and use of Wide IP Identify LTM iRule events versus GTM iRule events (Apply to WideIP vs Listener)	
Objective 1.11	Identify the purpose of GTM tools and when to use them [checkcert, iqdump, etc.]	R
Objective 1.12	Explain how zone transfers work [multi master, master/slave, DNSExpress, incremental/full, updates (notify/expire)]	U/A
Objective 1.13	Given a scenario determine the impact of a custom DNS profile for various types of queries, determine what response will be given and where it will come from	A/E
Examples	Explain all of the features that can be enabled in a DNS profile (DNS cache, unhandled query, DNS Express, enable GTM, enable bind)	
Objective 1.14	Given a scenario with a specific query source IP address and various pool and Wide IP loading balancing methods and topology rules/regions determine the response that will be given	A/E
Objective 1.15	Explain sync group/iQuery purpose, configuration and basic requirements	U/A
Examples	Explain how iQuery is used in sync groups and LTM monitoring	
Objective 1.16	Explain the networking requirements of placing devices within a GTM data center object	U/A
Examples	Explain and identify GTM objects (Data center, link, server, virtual server, prober pool, pool, wideIP)	
Section 2:	**Deployment**	Cognitive Complexity
Objective 2.01	Explain when to configure translation addresses for local data center connectivity	U/A
Objective 2.02	Explain how to configure GTM sync groups and iQuery	U/A
Objective 2.03	Given a set of requirements select the appropriate load balancing methods [ex. wide IP level, pool level, different types and combinations]	A/E
Examples	Given a scenario determine the load balancing decision based on virtual server status and configure load balancing (single pool versus multiple pools, effect of secondary and fallback mechanisms in the first pool, effect of topology and topology records at the Wide IP level versus pool level, iRule effects)	

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Objective 2.04	Given a scenario select the appropriate deployment type: screening mode, DNS delegation, caching resolver, and DNS 6 to 4	U/A
Examples	Determine when to use ZoneRunner to manage DNS records on GTM	
Objective 2.05	Explain how to configure GTM to return non-wide IP supported records [ex. MX, SRV, TXT records, etc.]	U/A
Objective 2.06	Given a scenario of specific virtual server status, pool and Wide IP load balancing settings determine the answer returned [Single pool versus multiple pools, effect of secondary and fall-back mechanisms in the first pool, effect of topology and topology records at the Wide IP level versus pool level, and iRule effects]	A/E
Objective 2.07	Given a set of topology requirements configure a deployment using user defined topology prefixes	A/E
Examples	Given these topology regions and these rules with load balancing configured as such, what would be the response provided Explain how to add LTM to a sync group and on which host do you run bigip_add	
Objective 2.08	Given a scenario configure a deployment using auto-discovery [behavior of delete versus no-delete with auto-discovery, compatibility with translation, and route domains]	A/E
Objective 2.09	Explain the necessary steps and tools to add a new LTM to a sync group	U/A
Examples	Understand the minimal object requirements to get a sync group up Explain how to add LTM to a sync group and on which host do you run bigip_add	
Objective 2.10	Explain the necessary steps and tools to add a new GTM to an existing sync group	U/A
Examples	Describe how to add GTM to an existing deployment (add GTM to the data center, which direction to run gtm_add, how to use gtm_add)	
Objective 2.11	Explain how to troubleshoot and verify sync group mesh	U/A
Objective 2.12	Explain the use of device certificates in iQuery [SSL components, expiration, 3rd party certs]	U/A
Examples	Explain the implications of device certificate expiration	

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Objective 2.13	Explain how to verify that DNSSEC is working	U/A
Examples	Including records getting signed, authoritative bit set, sig files in correct location	
Objective 2.14	Given a scenario explain how to validate system health for proper operation	A/E
Section 3:	**Operations and Troubleshooting**	Cognitive Complexity
Objective 3.01	Given a scenario determine the impact of software updates in a group on monitoring and configuration state	U/A
Objective 3.02	Given a scenario determine what is the effect of changing the features enabled in a DNS profile	A/E
Examples	Including enabling/disabling recursion, protocol, unhandled query behavior, and making sure BIND is not enabled in the profile or in the GTM pools, etc.	
Objective 3.03	Explain how to renew device certificates and update them in the sync group	U/A
Objective 3.04	Explain the impact of restoring a UCS on a GTM	U/A
Examples	Including how to restore a GTM after an RMA and the effect on zone files	
Objective 3.05	Explain the importance of running compatible versions of big3d on the LTM and GTM	U/A
Examples	Explain how to update big3d on LTM (big3d_install) and what concerns might be when EM is also updating GTM	
Objective 3.06	Explain how to properly add/remove device from iQuery mesh	U/A
Objective 3.07	Explain the effect of adding a resource record without using ZoneRunner	U/A
Examples	Explain how to maintain zones via ZoneRunner, including moves, adds, and deletions	
Objective 3.08	Explain the effects and implications of securing/hardening with respect to normal operation, iQuery and resolution	U/A
Examples	Including port lockdown, packet filters, iQuery, SSH, effects of appliance mode on LTM, bridge GTM, and the limitations of not having advanced shell access to GTM	
Objective 3.09	Identify GTM specific command line tools and TMSH GTM specific commands	R
Examples	Show a GTM iQuery	
Objective 3.10	Given a scenario determine what information needs to be provided when making a support call	U/A or higher

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Cognitive Complexity Descriptions

Lower Order Thinking Skills → Higher Order Thinking Skills

Remember	Understand/Apply	Analyze/Evaluate	Create
Information retrieval	Knowledge transfer	Critical thinking and reasoning	Innovation or Creative thinking
Rote memorization	Comprehension or Ability to apply knowledge to a standard process	Determine how parts relate to whole or Knowledge integration and application to new situation(s)	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 blueprints.

Alpine Testing Solutions

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