EXAM BLUEPRINT

F5 BIG-IP LTM Certified Technology Specialist Recertification Exam (F5-CTS, LTM)

WHAT IS THE F5 CERTIFIED TECHNOLOGY SPECIALIST, LTM RENEWAL EXAM BLUEPRINT?

This is the blueprint for the exam required to ***renew*** the F5 Certified Technology Specialist, BIG-IP LTM (F5-CTS, LTM) certification.

ABOUT THIS EXAM:

Successful completion of the F5 Certified LTM Technology Specialist Recertification exam validates that an individual understands concepts from traffic management to BIG-IP configurations, and can apply the skills required to integrate LTM solutions into existing networks and new implementations. The individual is able to design, implement, maintain, optimize, and troubleshoot BIG-IP LTM product features to enhance the effectiveness of an application delivery network.

Note: Candidates who have previously achieved F5-CTS, LTM certification are eligible to take the Technology Specialist Recertification exam regardless of when the F5-CTS, LTM certification was achieved. The renewal exam applies to all candidates with an inactive and/or expired F5-CTS, LTM credential.

Candidates in the F5-CTS, LTM certification renewal period will need to take and pass the Certified LTM Technology Specialist Recertification exam to refresh their certification status.

PREREQUISITE:

F5-CTS, LTM Certification

CREDENTIAL AWARDED:

F5 LTM Certified Technology Specialist (F5-CTS, LTM)

BIG-IP LTM Specialist Base Configuration and Networking Setup		
Topics		**CC***
1.01	**Determine whether or not an application can be deployed with only the LTM module provisioned**	**U/A**
1.02	**Identify the difference between deployments (e.g., one arm, two arm, nPath/ Direct Server Return/DSR)**	**U/A**
1.03	**Determine how to secure Self IPs**	**U/A**
1.04	**Determine how to perform basic device configuration**	**U/A**
1.05	**Understand route domains**	**U/A**
1.06	**Interpret log file messages and/or command line output to identify LTM device issues**	**U/A**

BIG-IP LTM Specialist Virtual Server and Local Traffic Configuration Objects		
Topics		**CC***
2.01	**Determine which configuration objects are necessary to deploy an application**	**U/A**
2.02	**Choose correct profiles and settings to fit application requirements**	**U/A**
2.03	**Choose virtual server type and load balancing type to fit application requirements**	**U/A**
2.04	**Determine how to architect and deploy multi-tier applications using LTM**	**U/A**
2.05	**Distinguish between packet-based versus connection-based load balancing**	**U/A**
2.06	**Determine which configuration objects are necessary for applications that need the original client IP address**	**R**
2.07	**Identify the matching order of multiple virtual servers**	**U/A**
2.08	**Determine how to secure virtual servers**	**U/A**
2.09	**Determine how configuration changes affect existing and new connections**	**U/A**
2.10	**Given a scenario, determine the appropriate profile setting modifications**	**A/E**
2.11	**Given a sub-set of an LTM configuration, determine which objects to remove or consolidate to simplify the LTM configuration**	**A/E**

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

2.12	**Given a set of LTM device statistics, determine which objects to remove or consolidate to simplify the LTM configuration**	**U/A**
2.13	**Given a packet capture, identify monitor issues**	**U/A**
2.14	**Given a monitor issue, determine an appropriate solution**	**U/A**

BIG-IP LTM Specialist iRules, Analytics and Templates		
Topics		**CC***
3.01	**Given a basic iRule's functionality, determine the profiles and configuration options necessary to implement the iRule**	**U/A**
3.02	**Describe how to deploy applications using templates**	**R**
3.03	**Determine which iRule to use to resolve an application issue**	**U/A**
3.04	**Explain the functionality of a simple iRule**	**U/A**
3.05	**Given specific traffic and configuration containing a simple iRule determine the result of the iRule on the traffic**	**A/E**
3.06	**Interpret AVR and/or Telemetry on application behavior to identify performance issues or application attacks**	**U/A**
3.07	**Interpret AVR information to identify LTM device misconfiguration**	**U/A**

BIG-IP LTM Specialist Software Upgrades, HA Configuration, and Device Monitoring		
Topics		**CC***
4.01	**Determine how to perform a software upgrade while maintaining application availability**	**U/A**
4.02	**Determine how to configure a high availability group of LTM devices to fit the requirements**	**U/A**
4.03	**Explain the uses of user roles and administrative partitions**	**U/A**
4.04	**Determine how to deploy or upgrade vCMP guests and how the resources are distributed**	**U/A**

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4.05	**Determine how to deploy or upgrade F5 OS Tenants and how the resources are distributed**	**U/A**
4.06	**Given a scenario, determine the appropriate upgrade and recovery steps required to restore functionality and minimize application outages to LTM devices**	**U/A**
4.07	**Describe the benefits of custom alerting within an LTM environment**	**U/A**
4.08	**Describe how to set up custom alerting for an LTM device**	**R**
4.09	**Identify the appropriate command to use to determine the cause of an LTM device problem**	**U/A**
4.10	**Analyze performance data to identify a resource problem on an LTM device**	**A/E**
4.11	**Given a scenario, determine the cause of an LTM device failover**	**U/A**
4.12	**Given a scenario, determine the cause of loss of high availability and/or sync failure**	**U/A**

BIG-IP LTM Specialist Packet Capture/Troubleshooting - TCP/UDP/Application Layer		
Topics		**CC***
5.01	**Given a set of headers or packet captures, determine the root cause of an HTTP/HTTPS application problem**	**U/A**
5.02	**Given a scenario, determine which protocol analyzer tool and its options are required to resolve an application issue**	**U/A**
5.03	**Given a packet capture, and necessary supporting documentation, determine the root cause of an application problem**	**A/E**
5.04	**Given a packet capture, and necessary supporting documentation, determine a solution to an application problem**	**A/E**

BIG-IP LTM Specialist Packet Capture/Troubleshooting - TLS/SSL		
Topics		**CC***
6.01	**Given a set of headers or packet captures, determine a solution to an HTTP/HTTPS application problem**	**A/E**

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6.02	**Given a direct packet capture, a packet capture through the LTM device, and other relevant information, determine the root cause of an HTTP/HTTPS application problem**	**A/E**
6.03	**Given a direct packet capture, a packet capture through the LTM device, and other relevant information, determine a solution to an HTTP/HTTPS application problem**	**A/E**
6.04	**Given a scenario, determine from where the protocol analyzer data should be collected**	**U/A**

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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 situations	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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