EXAM BLUEPRINT

F5 Certified Administrator, BIG-IP (F5-CA, BIG-IP)

ABOUT THE F5 CERTIFIED ADMINISTRATOR, BIG-IP CERTIFICATION

The F5 Certified Administrator certification is earned by passing these five exams, in any order:

BIG-IP Administration Install, Initial Configuration, and Upgrade
BIG-IP Administration Data Plane Concepts
BIG-IP Administration Data Plane Configuration
BIG-IP Administration Control Plane Administration
BIG-IP Administration Support and Troubleshooting

F5 Certification exams are designed to test the knowledge, skills, and abilities of the candidate. Passing these exams shows competence in performing day-to-day operations and basic deployment, management, security and support of BIG-IP in various application environments after it has been installed, configured, and implemented. As well able to demonstrate an understanding of BIG-IP Administration for Data Plane and Control Plane. These exams are not designed to test version-specific BIG-IP features, but rather assess knowledge and understanding of F5 technology solutions for which the exam is developed.

WHAT IS THE F5 CERTIFIED ADMINISTRATOR CERTIFICATION BLUEPRINT?

The F5 Certified Administrator Certification blueprint provides a list of exams and objectives, as well as a breakdown of the skills and knowledge a candidate should have to pass each of the five exams and earn the F5 Certified Administrator, BIG-IP certification credential. The objectives and examples can be used to identify areas for additional study, experience, and knowledge. The examples provided are illustrative, not exhaustive.

PREREQUISITE:

Individuals must register with the F5 Certification program: certification.f5.com

CREDENTIAL AWARDED:

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F5CAB1: BIG-IP Administration Install, Initial Configuration, and Upgrade	
Topics and Examples	**CC***
F5CAB1.01 **Securing BIG-IP** • Securing Management-IP • Port lockdown • Firewall Rules for Self-IPs • Configure DDOS Vectors • Secure Password Policies • SSHD ACLs • HTTPd ACLs	U/A
F5CAB1.02 **Identify management connectivity configurations** • Identify the configured management-IP address • Interpret port lockdown settings to Self-IP • Show remote connectivity to the BIG-IP Management interface • Explain management IP connectivity issue • Identify HTTP/SSH access list to management-IP address	U/A
F5CAB1.03 **Explain the processes of licensing, license reactivation, and license modification** • Show where to license (activate.F5.com) • Identify license issues • Identify Service Check Date (upgrade) • Show provisioned modules – CLI/config/TMUI • Report modules which are licensed for – CLI/config/TMUI	U/A
F5CAB1.04 **Apply procedural concepts required to manage software images** • Given an HA pair, describe the appropriate strategy for deploying a new software image • Perform procedure to upload new software image • Show currently configured boot location • Demonstrate creating new volume for software images	U/A
F5CAB1.05 **Identify which modules are licensed and/or provisioned** • Show provisioned modules • Report modules which are licensed • Show resource utilization of provisioned modules • Report modules which are provisioned but not licensed	U/A

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

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Exam F5CAB2 : BIG-IP Administration Data Plane Concepts	
Topics and Examples	**CC***
F5CAB2.01 **Explain the relationship between interfaces, trunks, VLANs, self-IPs, routes and their status/statistics** • Illustrate the use of a trunk in a BIG-IP solution • Demonstrate ability to assign VLAN to interface and/or trunk • Identify, based on traffic, which VLAN/route/egress IP would be used • Distinguish between tagged vs untagged VLAN • Compare Interface status (Up/Down) • Explain the dependencies of interfaces/trunks, VLANs, self-IPs	**U/A**
F5CAB2.02 **Define ADC application objects** • Define load balancing including intelligent load balancing and server selection • Explain features of an application delivery controller • Explain benefits of an application delivery controller	**R**
F5CAB2.03 **Determine expected traffic behavior based on configuration** • Identify traffic diverted due to persistence • Consider the packet and/or virtual server processing order (wildcard vips) • Identify traffic diverted due to status of traffic objects (vs, pool, pool member) • Determine the egress source IP based on configuration • Identify when connection/rate limits are reached	**U/A**
F5CAB2.04 **Identify the different virtual server types** • Standard, Forwarding, Stateless, Reject • Performance (Layer 4) and Performance (HTTP)	**R**
F5CAB2.05 **Explain high availability (HA) concepts** • Explain methods of providing HA integrity • Explain methods of providing HA • Explain advantages of HA	**R**

Exam F5CAB3 : BIG-IP Administration Data Plane Configuration	
Topics and Examples	**CC***
F5CAB3.01 **Apply procedural concepts required to modify and manage virtual servers** • Apply appropriate persistence profile • Apply appropriate HTTPS encryption profile • Apply appropriate protocol specific profile • Identify iApp configured objects • Report use of iRules • Show default pool configuration	**U/A**

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| **F5CAB3.02** | **Apply procedural concepts required to modify and manage pools**
• Determine configured health monitor
• Determine the load balancing method for a pool
• Determine the active nodes in a priority group configuration
• Determine pool member service port configuration
• Apply appropriate health monitor
• Apply load balancing method for a pool
• Apply pool member service port configuration | **U/A** |

Exam F5CAB4 : BIG-IP Administration Control Plane Administration	
Topic and Examples	**CC***
F5CAB4.01	**Apply procedural concepts required to manage the state of a high availability pair** • Execute force to standby procedure • Report current active/standby failover state • Execute force to offline procedure • Show device trust status	**U/A**
F5CAB4.02	**Identify management connectivity configurations** • Identify the configured management-IP address • Interpret port lockdown settings to Self-IP • Show remote connectivity to the BIG-IP Management interface • Explain management IP connectivity issue • Identify HTTP/SSH access list to management-IP address	**U/A**
F5CAB4.03	**Identify and report current device status** • Interpret the LCD panel warning messages • Use the dashboard to gauge the current running status of the system • Review the Network Map in order to determine the status of objects • Interpret current systems status via GUI or TMSH • Interpret high availability and device trust status	**U/A**
F5CAB4.04	**List which log files could be used to find events and/or hardware issues** • Identify use of /var/log/ltm, var/log/secure, /var/log/audit • Identify severity log level of an event • Identify event from a log message	**R**

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F5CAB4.05	**Apply procedural concepts required to create, manage, and restore a UCS archive** • Execute UCS backup procedure • Execute UCS restore procedure • Summarize the use case of a UCS backup • Explain proper long-term storage of UCS backup file • Explain the contents of the UCS file (private keys)	U/A
F5CAB4.06	**Explain authentication methods** • Explain how to create a user • Explain how to modify user properties • Explain options for remote authentication provider • Explain use of groups using remote authentication provider	U/A
F5CAB4.07	**Identify configured system services** • Show proper configuration for: DNS, NTP, SNMP, syslog	U/A
F5CAB4.08	**Explain config sync** • Demonstrate config sync procedure • Report errors which occur during config sync • Explain when a config sync is necessary • Show config sync status • Compare configuration timestamp	U/A
F5CAB4.09	**Given a scenario, determine device upgrade eligibility** • Determine when to upgrade software • Determine when to upgrade platform • Determine steps to minimize upgrade downtime	U/A
F5CAB4.10	**Given a scenario, interpret Service status** • Compare active vs inactive ADC elements • Infer services for given netstat output • Determine whether a service is listening on a given port based on netstat output	U/A

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Exam F5CAB5: BIG-IP Administration Support and Troubleshooting	
Topics and Examples	**CC***
F5CAB5.01 **Determine resource utilization** • Distinguish between control plane and data plane resources • Identify CPU statistics per virtual server • Interpret Statistics for interfaces • Determine Disk utilization and Memory utilization	**U/A**
F5CAB5.02 **Identify network level performance issues** • Identify when a packet capture is needed within the context of a performance issue • Interpret availability status of interfaces • Identify when drops are occurring • Identify Speed and Duplex • Distinguish TCP profiles (optimized profiles)	**U/A**
F5CAB5.03 **Identify the reason load balancing is not working as expected** • Consider persistence, priority group activation, rate/connection limits • Identify misconfigurations (incorrect health checks, action on service down, etc.) • Identify current availability status	**U/A**
F5CAB5.04 **Identify the reason a virtual server is not working as expected** • Identify the current availability status of the virtual server • Identify conflicting/misconfigured profiles • Identify misconfigured IP address and/or Port	**U/A**
F5CAB5.05 **Identify the reason a pool is not working as expected** • Identify the reason a pool member has been marked down by health monitors • Identify a pool member not in the active priority group • Identify the current configured state of the pool/pool member • Identify the current availability status of the pool/pool member	**U/A**
F5CAB5.06 **Given a scenario, review basic stats to confirm functionality** • Interpret traffic object statistics • Interpret network configuration statistics	**U/A**
F5CAB5.07 **Given a scenario, interpret traffic flow** • Explain application client-server communication • Interpret traffic graphs (Interpret SNMP results)	**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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