EXAM BLUEPRINT

304 — BIG-IP APM Specialist

ABOUT THE *304 – BIG-IP APM SPECIALIST* EXAM

The *304 – BIG-IP APM Specialist* exam identifies individuals who are able to configure, implement, troubleshoot, and maintain APM in various application environments. The BIG-IP APM Specialist is able to describe and explain how APM interacts with industry standard remote access, authentication, authorization methods, and applications. They understand the underlying principles of APM and can draw on that insight to securely integrate APM with other platforms and products.

WHAT IS THE *304 – BIG-IP APM 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, APM

Section 1 : AUTHENTICATION, AUTHORIZATION, AND ACCOUNTING (AAA), SINGLE SIGN-ON (SSO), FEDERATED AUTHORIZATION, MOBILE DEVICE MANAGEMENT (MDM)		
Objectives and Examples		**CC***
1.01	**Explain how to configure different types of AAA methods** • Configure AAA objects • Microsoft Active Directory, LDAP, Radius, RSA SecurID, TACACS, (Kerberos/NTLM, Client Cert auth), end-point management system profile	**U/A**
1.02	**Demonstrate knowledge of the network requirements for each authentication service type** • Demonstrate ability to test and validate connectivity to each authentication service (adtest output, ldapsearch output)	**U/A**
1.03	**Explain how to configure SSO objects** • Determine specific SSO object requirements (e.g. Kerberos SPN requirements) • Determine when to choose one type of SSO over another	**A/E**
1.04	**Explain how to configure SAML as an SP and/or IdP** • Integrate BIG-IP APM Service Provider (SP) with external vendor IdP (e.g. PING, Okta, SaaS, etc.) Configure Single Logout (SLO)	**U/A**

Section 2 : NETWORK AND APPLICATION ACCESS		
Objectives and Examples		**CC***
2.01	**Explain how to configure SSL VPN manually or using a wizard** • Determine which option is appropriate to use: Network access, Portal access, Web Application access (APM/LTM Mode) • Choose appropriate Webtop type: Full, Network Access, Portal Access	**U/A**
2.02	**Explain how to configure Network Access Profiles** • Configure profile settings (e.g. Connectivity profile options, Edge Client Options and updates, SNAT) • Configure App Optimization	**U/A**
2.03	**Explain how to configure portal access** • Determine the appropriate level of patching • Evaluate global ACL order • Configure Resource Items	**A/E**
2.04	**Explain how to configure application access** • Configure Remote Desktop access (e.g. Launching applications, Custom Parameters) • Deploy Citrix Bundle • Configure App Tunnels	**U/A**

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

2.05	**Explain how to configure Web Access Management (LTM-APM Mode)** • Configure pool and virtual server • Determine when to use Web Access Management	**U/A**

Section 3 : VISUAL POLICY EDITOR		
Objectives and Examples		**CC***
3.01	**Explain how to configure authentication and logon objects in VPE** • Configure an auth and/or query object (e.g. Determine group membership, Configure required attributes) • Add appropriate logon page type	**U/A**
3.02	**Explain how to configure resource/custom variables** • Set up SSO credential mapping • Assign Webtops dynamically • Configure variable assignment	**A/E**
3.03	**Explain how to configure VPE flow with multiple branches and objects** • Determine policy ending types (allow, deny, redirect) • Use a message box to display a variable in a VPE • Assign custom session variables	**A/E**
3.04	**Explain how to configure and apply macros** • Use a macro to combine multiple VPE objects • Demonstrate an understanding of differences in creating a macro versus an access policy	**U/A**

Section 4 : DEPLOY AND MAINTAIN iAPPS		
Objectives and Examples		**CC***
4.01	**Determine when to use an iApp** • Import and deploy supported iApp templates • Determine the min/max BIG-IP module versions supported by a specific iApp template • Determine which BIG-IP modules are required to deploy a specific iApp template	**U/A**
4.02	**Apply procedural concepts to maintain iApps** • Reconfigure a deployed iApp to update objects • Identify iApp used to deploy an object	**U/A**
4.03	**Determine appropriate applications for enabling/disabling strict updates** • Make manual changes to a deployed application service • Demonstrate an understanding of the impact of disabling strict updates	**U/A**

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Section 5 : ADMINISTRATING AND TROUBLESHOOTING BIG-IP APM		
Objectives and Examples		**CC***
5.01	**Apply procedural concepts to manage and maintain access profiles** • Determine proper use of profile scope (e.g. profile, virtual server, global) • Tune policy settings (e.g. multiple concurrent users, limit active sessions per IP address)	**A/E**
5.02	**Perform basic customizations of the U/I** • Apply corporate branding (i.e. adding a logo, footer, logon form) • Add additional languages for browser localization	**R**
5.03	**Demonstrate an understanding of how High Availability applies to BIG-IP APM (with respect to end users, policy sync, device fail-over)** • Demonstrate an understanding of the limitation of two units per HA pair and traffic group • Configure Access Policy Sync (e.g. Configuring local objects vs global, validate access policy sync)	**A/E**
5.04	**Explain provisioning/licensing for BIG-IP APM** • Update an existing license for BIG-IP APM • Consider CCU utilization for different types of access policy deployments	**R**
5.05	**Apply procedural concepts to gather relevant data** • Gather data from relevant BIG-IP tools (e.g. session reports, session variables, tcpdump, ssldump, sessiondump, APM log) • Add debug logic to APM iRules • Configure Debug logging	**U/A**
5.06	**Determine root cause** • Compare expected vs actual behaviors based on problem description • Analyze and correlate all collected data (client/BIG-IP/serverside) to understand where a failure occurred • Determine cause of EPSEC failures	**A/E**

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Section 6 : SECURITY		
Objectives and Examples		**CC***
6.01	**Explain how BIG-IP APM mitigates common attack vectors and methodologies** • Demonstrate an understanding of how the BIG-IP solution mitigates common security risks (e.g., cookiehijacking, DoS attacks) • Determine which features of the BIG-IP device mitigate common DoS attacks • Deploy GeoIP and IP intelligence in the VPE to protect resources	**U/A**
6.02	**Determine which BIG-IP APM features should be used to mitigate a specific authentication attack** • Configure logging • Configure objects needed to deploy MFA • Configure SNMP traps	**A/E**
6.03	**Apply procedural concepts to manage user sessions** • Identify user session details • Demonstrate an understanding of BIG-IP APM session cookies	**U/A**
6.04	**Identify use cases of Secure Web Gateway (SWG)** • Compare transparent vs explicit proxy deployments • Determine the purpose of SWG	**R**
6.05	**Describe access policy timeouts as related to security** • Describe the differences between inactivity timeout, access policy timeout, and maximum session timeout	**R**
6.06	**Explain how to configure and manage ACLs** • Explain how ACLs are deployed by default when creating a policy • Explain when a layer 4 or layer 7 ACL would be needed	**A/E**
6.07	**Demonstrate an understanding of network security requirements for application access** • Demonstrate an understanding of TCP/UDP ports required for application services	**U/A**
6.08	**Apply procedural concepts to implement EPSEC** • Configure client-side checks (e.g. anti-virus, firewall, registry) • Update and install EPSEC software	**A/E**

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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	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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