DP-300: Administering Microsoft Azure SQL Solutions

From August 4, 2022

	Plan and implement data platform resources (20—25%)
	Plan and deploy Azure SQL Database solutions
1	deploy database offerings on selected platforms
2	understand automated deployment
3	apply patches and updates for hybrid and infrastructure as a service (IaaS) deployment
4	deploy hybrid SQL Server database solutions
5	recommend an appropriate database offering based on specific requirements
6	evaluate the security aspects of the possible database offering
7	recommend a table partitioning solution
8	recommend a database sharding solution
	Configure resources for scale and performance
9	configure Azure SQL Database for scale and performance
10	configure Azure SQL Managed Instance for scale and performance
11	configure SQL Server on Azure Virtual Machines for scale and performance
12	configure table partitioning
13	configure data compression
	Plan and implement a migration strategy
14	evaluate requirements for the migration
15	evaluate offline or online migration strategies
16	implement an online migration strategy
17	implement an offline migration strategy
18	perform post migration validations
19	troubleshoot a migration
20	set up SQL Data Sync for Azure
21	implement a migration to Azure
22	implement a migration between Azure SQL services

	Implement a secure environment (15—20%)
	Configure database authentication and authorization
23	configure Azure Active Directory (Azure AD) authentication and Active Directory authentication
24	create users from Azure AD identities
25	configure security principals
26	configure database and object-level permissions using graphical tools
27	apply principle of least privilege for all securables
28	troubleshoot authentication and authorization issues
29	manage authentication and authorization by using T-SQL
	Implement security for data at rest and data in transit
30	implement transparent data encryption (TDE)
31	implement object-level encryption
32	configure server- and database-level firewall rules
33	implement Always Encrypted
34	configure secure access
35	configure Transport Layer Security (TLS)
	Implement compliance controls for sensitive data
36	apply a data classification strategy
37	configure server and database audits
38	implement data change tracking
39	implement dynamic data masking
40	manage database resources by using Azure Purview
41	implement Azure SQL Database ledger
42	implement row-level security
43	configure Advanced Threat Protection

	Monitor, configure, and optimize database resources (20—25%)
	Monitor resource activity and performance
44	prepare an operational performance baseline
45	determine sources for performance metrics
46	interpret performance metrics
47	configure and monitor activity and performance
48	monitor by using SQL Insights
49	monitor by using Extended Events
	Monitor and optimize query performance
50	configure Query Store
51	monitor by using Query Store
52	identify sessions that cause blocking
53	identify performance issues using dynamic management views (DMVs)
54	identify and implement index changes for queries
55	recommend query construct modifications based on resource usage
56	assess the use of query hints for query performance
57	review execution plans
	Configure database solutions for optimal performance
58	implement index maintenance tasks
59	implement statistics maintenance tasks
60	implement database integrity checks
61	configure database automatic tuning
62	configure server settings for performance
63	configure Resource Governor for performance
64	implement database-scoped configuration
65	configure compute and storage resources for scaling
66	configure intelligent query processing (IQP)

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	Configure and manage automation of tasks (15—20%)
	Create and manage SQL Server Agent jobs
67	manage schedules for regular maintenance jobs
68	configure job alerts and notifications
69	troubleshoot SQL Server Agent jobs
	Automate deployment of database resources
70	automate deployment by using Azure Resource Manager templates (ARM templates) and Bicep
71	automate deployment by using PowerShell
72	automate deployment by using Azure CLI
73	monitor and troubleshoot deployments
	Create and manage database tasks in Azure
74	create and configure elastic jobs
75	create and configure database tasks by using automation
76	automate database workflows by using Azure Logic Apps
77	configure alerts and notifications on database tasks
78	troubleshoot automated database tasks
	Plan and configure a high availability and disaster recovery (HA/DR) environment (20—25%)
	Recommend an HA/DR strategy for database solutions
79	recommend HA/DR strategy based on Recovery Point Objective/Recovery Time Objective (RPO/RTO) requirements
80	evaluate HA/DR for hybrid deployments
81	evaluate Azure-specific HA/DR solutions
82	recommend a testing procedure for an HA/DR solution
	Plan and perform backup and restore of a database
83	recommend a database backup and restore strategy
84	perform a database backup by using database tools
85	perform a database restore by using database tools
86	perform a database restore to a point in time
87	configure long-term backup retention
88	backup and restore a database by using T-SQL
	Configure HA/DR for database solutions
89	configure active geo-replication
90	configure an Always On availability group
91	configure auto-failover groups
92	configure quorum options for a Windows Server Failover Cluster
93	configure failover cluster instances on Azure Virtual Machines
94	configure log shipping
95	monitor an HA/DR solution
96	troubleshoot an HA/DR solution