

# CompTIA Cloud+

1. A company has decided to scale its e-commerce application from its corporate datacenter to a commercial cloud provider to meet an anticipated increase in demand during an upcoming holiday.

The majority of the application load takes place on the application server under normal conditions. For this reason, the company decides to deploy additional application servers into a commercial cloud provider using the on-premises orchestration engine that installs and configures common software and network configurations.

The remote computing environment is connected to the on-premises datacenter via a site-to-site IPsec tunnel. The external DNS provider has been configured to use weighted round-robin routing to load balance connections from the Internet.

During testing, the company discovers that only 20% of connections completed successfully.

Instructions

Review the network architecture and supporting documents and fulfill these requirements:

Part 1:

-Analyze the configuration of the following components: DNS, Firewall 1, Firewall 2, Router 1, Router 2, VPN and Orchestrator Server.

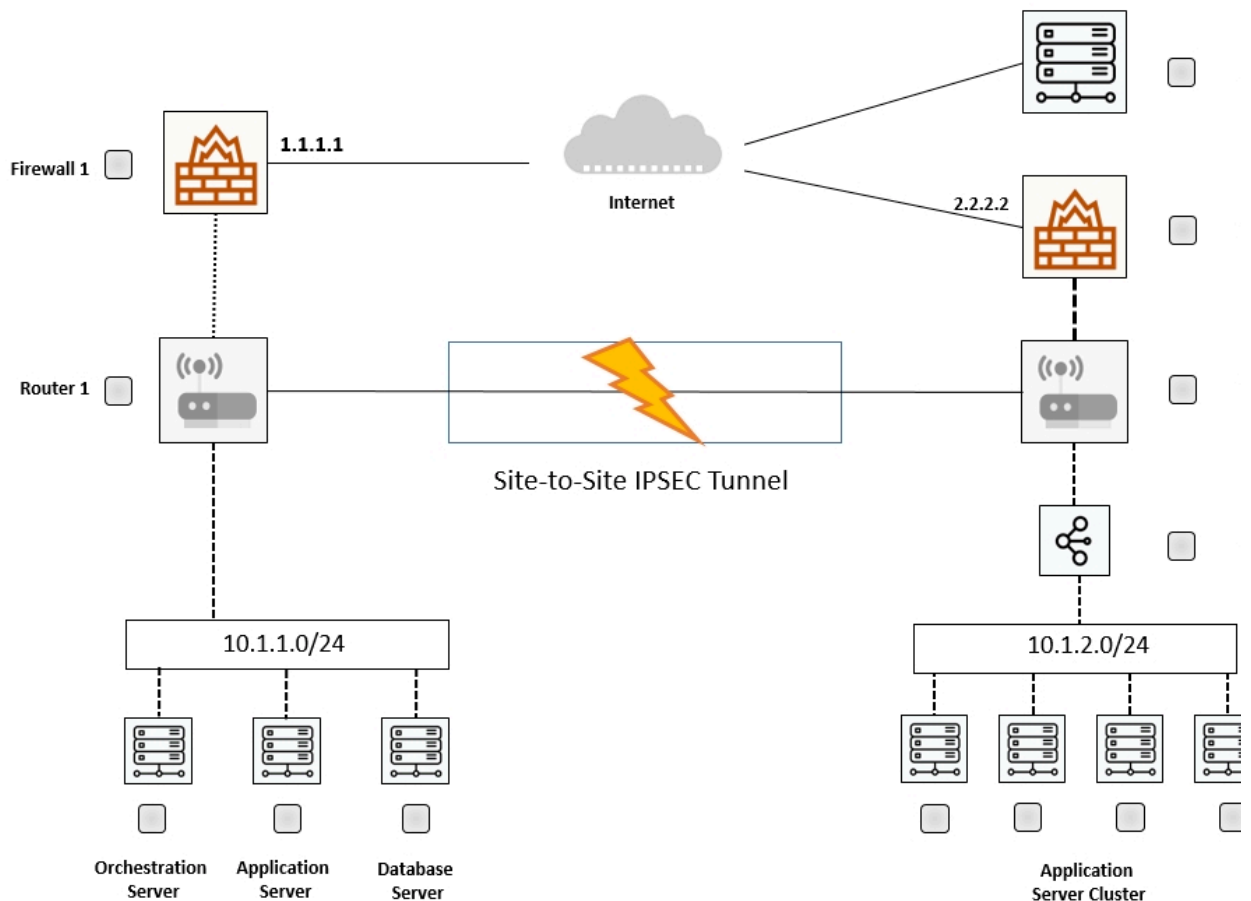
-Identify the problematic device(s).

-Part 2:

-Identify the correct options to provide adequate configuration for hybrid cloud architecture.

-If any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Part 1



**Firewall 1**

Source	Destination	Port	Action
ANY	1.1.1.1	80,443	ALLOW
10.1.1.0/24	ANY	ANY	ALLOW
ANY	ANY	DENY	DENY

**Router 1****Router Configuration**

**Public IP** 1.1.1.1

**Internal IP** 10.1.1.1/24

**Site-to-site VPN Configuration**

**Address Space** 10.1.1.0/24

**Subnet** 255.255.255.0

**PSK** Cloud001

**IKE** SHA1/AES256/DH2/SA Lifetime: 28800

**IPSEC TUNNEL****Site-to-site VPN Configuration**

**PSK** Cloud001

**IKE** SHA1/AES256/DH2/SA Lifetime: 28800

**DNS Provider**

Name	Type	Value	Weight
www.mycorp.com	CNAME		20%
www.mycorp.com	CNAME		80%
openprem.mycorp.com	A	1.1.1.1	-
cloud.mycorp.com	A	2.2.2.2	-

Orchestration Server	
<b>Name</b>	Basic_Server
<b>Network</b>	10.1.1.0/24
<b>Name</b>	Cloud_Server
<b>Network</b>	10.1.2.0/24
<b>Name</b>	Application_Server
<b>Baseline</b>	Basic_Server
<b>Type</b>	Webserver
<b>Version</b>	1.0
<b>Name</b>	Database_Server
<b>Baseline</b>	Basic_Server
<b>Type</b>	Database Server
<b>Version</b>	1.0
<b>Name</b>	Corporate_Datacenter

Firewall 2			
Source	Destination	Port	Action
ANY	2.2.2.2	80,443	ALLOW
10.1.2.0/24	ANY	ANY	ALLOW
ANY	ANY	DENY	DENY

Router 2	
<b>Router Configuration</b>	
<b>Public IP</b>	2.2.2.2
<b>Internal IP</b>	10.1.2.1/24
<b>Site-to-site VPN Configuration</b>	
<b>Address Space</b>	10.1.1.0/24
<b>Subnet</b>	255.255.255.0
<b>PSK</b>	Cloud002
<b>IKE</b>	SHA1/AES256/DH2/SA Lifetime: 28800

Part 2

Only select a maximum of TWO options from the multiple choice question. (Choose two.)

A. Update the PSK (Pre-shared key) in Router 2.

B. Update the A record on the DNS from 2.2.2.2 to 1.1.1.1.

C. Promote deny All to allow All in Firewall 1 and Firewall 2.

D. Change the Address Space on Router 2.

E. Change internal IP Address of Router 1.

F. Reverse the Weight property in the two CNAME records on the DNS.

G. Add the Application Server at on-premises to the Load Balancer.

**Answer(s): A D**

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2. An organization suffered a critical failure of its primary datacenter and made the decision to switch to the DR site. After one week of using the DR site, the primary datacenter is now ready to resume operations. Which of the following is the MOST efficient way to bring the block storage in the primary datacenter up to date with the DR site?

A. Set up replication.

B. Copy the data across both sites.

C. Restore incremental backups.

D. Restore full backups.

**Answer(s): A**

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3. A cloud administrator is building a new VM for machine-learning training. The developer requesting the VM has stated that the machine will need a full GPU dedicated to it. Which of the following configuration options would BEST meet this requirement?

A. Virtual GPU

B. External GPU

C. Passthrough GPU

D. Shared GPU

**Answer(s): C**

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4. Which of the following service models would be used for a database in the cloud?

A. PaaS

B. IaaS

C. CaaS

D. SaaS

**Answer(s): A**

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5. A VDI administrator has received reports from the drafting department that rendering is slower than normal. Which of the following should the administrator check FIRST to optimize the performance of the VDI infrastructure?

A. GPU

B. CPU

C. Storage

D. Memory

**Answer(s): D**

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6. A Chief Information Security Officer (CISO) is evaluating the company's security management program. The CISO needs to locate all the assets with identified deviations and mitigation measures. Which of the following would help the CISO with these requirements?

A. An SLA document

B. A DR plan

C. SOC procedures

D. A risk register

**Answer(s): D**

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7. A cloud engineer is responsible for managing a public cloud environment. There is currently one virtual network that is used to host the servers in the cloud environment. The environment is rapidly growing, and the network does not have any more available IP addresses. Which of the following should the engineer do to accommodate additional servers in this environment?

A. Create a VPC and peer the networks.

B. Implement dynamic routing.

C. Enable DHCP on the networks.

D. Obtain a new IPAM subscription.

**Answer(s): A**

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8. A system administrator is migrating a bare-metal server to the cloud. Which of the following types of migration should the systems administrator perform to accomplish this task?

A. V2V

B. V2P

C. P2P

D. P2V

Answer(s): D

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9. A company is utilizing a private cloud solution that is hosted within its datacenter. The company wants to launch a new business application, which requires the resources below:

Maximum concurrent sessions	Number of nodes required	Required per-node vCPU	Required per-node RAM
1,000	2	4	32
5,000	4	6	64
10,000	6	8	64
25,000	8	8	128

The current private cloud has 30 vCPUs and 512GB RAM available. The company is looking for a quick solution to launch this application, with expected maximum sessions to be close to 24,000 at launch and an average of approximately 5,000 sessions. Which of the following solutions would help to company accommodate the new workload in the SHORTEST amount of time and with the maximum financial benefits?

- A. Configure auto-scaling within the private cloud.
- B. Set up cloud bursting for the additional resources.
- C. Migrate all workloads to a public cloud provider.
- D. Add more capacity to the private cloud.

Answer(s): B

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10. A cloud administrator is reviewing the authentication and authorization mechanism implemented within the cloud environment. Upon review, the administrator discovers the sales group is part of the finance group, and the sales team members can access the financial application. Single sign-on is also implemented, which makes access much easier. Which of the following access control rules should be changed?

- A. Discretionary-based
- B. Attribute-based
- C. Mandatory-based
- D. Role-based

Answer(s): D

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11. A company developed a product using a cloud provider's PaaS platform and many of the platform-based components within the application environment. Which of the following would the company MOST likely be concerned about when utilizing a multicloud strategy or migrating to another cloud provider?

- A. Licensing
- B. Authentication providers
- C. Service-level agreement
- D. Vendor lock-in

Answer(s): D

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12. A systems administrator is trying to establish an RDP session from a desktop to a server in the cloud. However, the connection appears to be refused even though the VM is responding to ICMP echo requests. Which of the following should the administrator check FIRST?

A. The firewall

B. The subnet

C. The gateway

D. The services

**Answer(s): A**

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13. Which of the following would be the BEST option for discussion of what individuals should do in an incident response or disaster recovery scenario?

A. A business continuity plan

B. Incident response/disaster recovery documentation

C. A tabletop exercise

D. A root cause analysis

**Answer(s): C**

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14. A systems administrator has migrated an internal application to a public cloud. The new web server is running under a TLS connection and has the same TLS certificate as the internal application that is deployed. However, the IT department reports that only internal users who are using new versions of the OSs are able to load the application home page. Which of the following is the MOST likely cause of the issue?

A. The local firewall from older OSs is not allowing outbound connections.

B. The local firewall from older OSs is not allowing inbound connections.

C. The cloud web server is using a self-signed certificate that is not supported by older browsers.

D. The cloud web server is using strong ciphers that are not supported by older browsers.

**Answer(s): D**

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15. A systems administrator is configuring RAID for a new server. This server will host files for users and replicate to an identical server. While redundancy is necessary, the most important need is to maximize storage. Which of the following RAID types should the administrator choose?

A. 5

B. 6

C. 10

D. 50

**Answer(s): A**

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**16.** A cloud architect is designing the VPCs for a new hybrid cloud deployment. The business requires the following:

- High availability
- Horizontal auto-scaling
- 60 nodes peak capacity per region
- Five reserved network IP addresses per subnet
- /24 range

Which of the following would BEST meet the above requirements?

A. Create two /25 subnets in different regions.

B. Create three /25 subnets in different regions.

C. Create two /26 subnets in different regions.

D. Create three /26 subnets in different regions.

E. Create two /27 subnets in different regions.

F. Create three /27 subnets in different regions.

**Answer(s): A**

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**17.** A company recently experienced a power outage that lasted 30 minutes. During this time, a whole rack of servers was inaccessible, even though the servers did not lose power. Which of the following should be investigated FIRST?

A. Server power

B. Rack power

C. Switch power

D. SAN power

**Answer(s): C**

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**18.** A cloud provider wants to make sure consumers are utilizing its IaaS platform but prevent them from installing a hypervisor on the server. Which of the following will help the cloud provider secure the environment and limit consumers' activity?

A. Patch management

B. Hardening

C. Scaling

D. Log and event monitoring

**Answer(s): B**



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19. A resource pool in a cloud tenant has 90 GB of memory and 120 cores. The cloud administrator needs to maintain a 30% buffer for resources for optimal performance of the hypervisor. Which of the following would allow for the maximum number of two-core machines with equal memory?

A. 30 VMs, 3GB of memory

B. 40 VMs, 1,5GB of memory

C. 45 VMs, 2 GB of memory

D. 60 VMs, 1 GB of memory

**Answer(s): B**

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20. A company that utilizes an IaaS service provider has contracted with a vendor to perform a penetration test on its environment. The vendor is able to exploit the virtualization layer and obtain access to other instances within the cloud provider's environment that do not belong to the company. Which of the following BEST describes this attack?

A. VM escape

B. Directory traversal

C. Buffer overflow

D. Heap spraying

**Answer(s): A**

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