

# Module 6 – Worksheet

AWS Certified Solutions Architect – Associate

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## Module 6: Overview

### Domain 4 – Troubleshooting

Build security into every layer:

- Troubleshooting Connectivity
- Amazon EC2 Instance Recovery
- Amazon EBS Volume Recovery
- Limit Issues

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## Sample Questions

### QUESTION 1

You cannot use a remote desktop connection for a Windows instance you just launched. Which of the following is a possible reason? *(Choose the best answer)*

- a. ( ) There is no security group rule that allows RDP access over port 3389 from your IP address.
- b. ( ) The instance is a Reserved Instance with no SSH access from your IP address.
- c. ( ) The instance is not using Enhanced Networking for RDP access from your IP address.
- d. ( ) The instance is not EBS-optimized with SSH access from your IP address.

### QUESTION 2

Your company experienced some data corruption on an application server caused by improperly tested source code. You need to restore the application server EBS volume from a snapshot. How long before the data is available? *(Choose the best answer)*

- a. ( ) The data is available based on the provisioned size of the volume.
- b. ( ) The data is available immediately after the volume is created.
- c. ( ) The data is available immediately after all the data is transferred from Amazon S3.
- d. ( ) The data is available based on whether the attached instance is EBS-optimized.

*\*See solutions at end of document*

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## Personal Preparation Plan

Check off the items you've already completed. Mark items to complete before your exam:

### Identify personal knowledge gaps:

The certification exam validates the following proficiencies. When you are ready for the certification exam, you should feel comfortable with the following concepts. Based on your self-assessment of your own knowledge gaps, mark those items on which you should build proficiency before your exam:

- ☐ Be familiar with common connectivity issues such as gateways and routing tables. Know how ports and IP addresses work with EC2 instances.
- ☐ Know the circumstances in which it might be appropriate to re-boot an EC2 instance.
- ☐ Know how to recover a non-working EBS boot volume.
- ☐ Be aware of services that have limits and what the impact may be when limits are reached.

### Resources

- ☐ **Trusted Advisor** – what service limits to check  
<https://aws.amazon.com/premiumsupport/ta-faqs/#service-limits-check-questions>
- ☐ **Basic EC2 troubleshooting**  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-troubleshoot.html>
- ☐ **Instance Recovery**  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-recover.html>
- ☐ **Network connectivity**  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/TroubleshootingInstancesConnecting.html>
- ☐ **EBS Volume Recovery**  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-restoring-volume.html>

AWS Certified Solutions Architect – Associate website:

<http://aws.amazon.com/certification/certified-solutions-architect-associate/>

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## Sample Question Solutions

### QUESTION 1

You cannot use a **remote desktop connection** for a **Windows instance you just launched**. Which of the following is a possible reason?

- a. (•) There is no Security Group rule that allows RDP access over port 3389 from your IP address  
Correct: In order to access a Windows instance remotely via RDP it is necessary to have a security group with a rule to allow RDP access over port 3389 from your IP address. If this is not in place, you will not be able to access the Windows instance via RDP.
- b. ( ) The instance is a Reserved Instance with no SSH access from your IP address  
Incorrect: Reserved Instances are a billing discount and capacity reservation that is applied to instances to lower hourly running costs. Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network. Whether or not an instance is a Reserved Instance has no bearing on remote access. Additionally, SSH is not a relevant communication protocol for accessing a Windows instance via RDP.
- c. ( ) The instance is not using Enhanced Networking for RDP access from your IP address  
Incorrect: Enhanced networking on an instance results in higher performance (packets per second), lower latency, and lower jitter. Whether or not enhanced networking is enabled on the instance being accessed is not relevant for accessing the Windows instance via RDP.
- d. ( ) The instance is not EBS Optimized with SSH access from your IP address  
Incorrect: An Amazon EBS-optimized instance uses an optimized configuration stack and provides additional, dedicated capacity for Amazon EBS I/O. Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network. Whether or not an instance is EBS Optimized has no bearing on remote access. Additionally, SSH is not a relevant communication protocol for accessing a Windows instance via RDP.

### QUESTION 2

Your company experienced some data corruption on an application server due to improperly tested source code. You need to **restore the application server EBS volume from a snapshot**. **How long before the data is available?**

- a. ( ) The data is available based on the provisioned size of the volume  
Incorrect: While it may take longer for all of the snapshot data to be fully restored for a larger size volume, snapshot data is loaded lazily which allows the volume to be accessed immediately and if data being requested has not been restored yet it is restored upon request. Access to the data on a recovered snapshot is not based on the provisioned size of the volume.
- b. (•) The data is available immediately after the volume is created  
Correct: When restoring a snapshot the volume is created immediately but the data is loaded lazily. This means that the volume can be accessed upon creation and if the data being requested has not yet been restored it will be restored upon first request.
- c. ( ) The data is available immediately after all the data is transferred from Amazon S3  
Incorrect: When restoring a snapshot data is loaded lazily which allows the volume to be accessed immediately and if data being requested has not been restored yet it is restored upon request. You do not have to wait for all data for the snapshot to be transferred from S3.
- d. ( ) The data is available based on whether the attached instance is EBS Optimized  
Incorrect: An Amazon EBS-optimized instance uses an optimized configuration stack and provides additional, dedicated capacity for Amazon EBS I/O. Whether or not an instance is EBS Optimized has no bearing on when snapshot data is available for use.