



# Elastic Compute Cloud (EC2)

## EXAM CHEAT SHEET

### SOLUTIONS ARCHITECT

- Effective October 2<sup>nd</sup> 2017, usage of Linux instances will be billed in one-second increments. Similarly, provisioned storage for EBS volumes will be billed in one-second increments.
- **Rebooting** an instance is equivalent to rebooting an operating system. **Restarting** an instance (stopping then starting) means the instance will be run on new hardware.
- Windows AMIs prior to Windows Server 2016 include an optional service called the EC2Config service for configuring Windows instances. Later versions use EC2Launch.
- To help you manage your instances, images, and other Amazon EC2 resources, you can optionally assign your own metadata to each resource in the form of tags.
- The tag key is the required name of the tag. The string value can be from 1 to 128 Unicode characters in length and cannot be prefixed with "aws:" or "rds:". The string may contain only the set of Unicode letters, digits, white-space, '\_', '.', '/', '=', '+', '-'.
- Security group rules may be added or removed with the CLI commands:
  - authorize-security-group-ingress, authorize-security-group-egress
  - revoke-security-group-ingress, revoke-security-group-egress
- Dedicated instances can run on single-tenant hardware.
- To provide the lowest latency, and the highest packet-per-second network performance for a placement group, choose an instance type that supports enhanced networking.
- You can attach a network interface to an instance when it's running (hot attach), when it's stopped (warm attach), or when the instance is being launched (cold attach). The attributes of a network interface follow it as it's attached or detached from an instance and reattached to another instance
- All AMIs are categorized as either backed by Amazon EBS or backed by instance store. The former means that the root device for an instance launched from the AMI is an Amazon EBS volume created from an Amazon EBS snapshot. The latter means that the root device for an instance launched from the AMI is an instance store volume created from a template stored in Amazon S3 (S3 based AMI).
- Amazon EBS volumes are designed for 99.999% availability and are automatically replicated within their Availability Zone.
- EBS snapshots occur asynchronously; the point-in-time snapshot is created immediately, but the status of the snapshot is pending until the snapshot is complete (when all of the modified blocks have been transferred to Amazon S3).
- You can take a snapshot of an attached volume that is in use. However, snapshots only capture data that has been written to your Amazon EBS volume at the time the snapshot command is issued.
- You can attach an EBS volume to only one instance. You can attach multiple EBS volumes to an instance.

- EBS volumes can be reattached to other instances in the same AZ only.
- Snapshots can be created with the *create-snapshot* CLI command or *CreateSnapshot* API action.
- Snapshots with AWS Marketplace product codes cannot be made public.
- You can't delete a snapshot of the root device of an EBS volume used by a registered AMI. You must first deregister the AMI before you can delete the snapshot.
- RAID 0 – Data distributed across multiple volumes. High performance, low fault tolerance.
- RAID 1 – Data replicated across multiple volumes. Low performance, high fault tolerance.
- EBS volumes can persist independently from the running life of an instance.
- The data in an instance store persists only during the lifetime of its associated instance. If an instance reboots (intentionally or unintentionally), data in the instance store persists. However, data in the instance store is lost under the following circumstances:
  - The underlying disk drive fails
  - The instance stops
  - The instance terminates

## SYSOPS ADMINISTRATOR

All the Solutions Architect and;

- Understand how to troubleshoot EC2 instances:
  - <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-troubleshoot.html>

## DEVELOPER

All the Solutions Architect and;

- Amazon Linux AMIs may contain additional scripts installed by AWS, known as *ec2-net-utils*. These scripts optionally automate the configuration of your network interfaces including secondary IP addresses for additional ENI added.
- EBS volumes must be mounted after attachment.
- *xvd[f-z]* is recommended name for EBS volumes on Windows.
- Use the *modify-image-attribute* CLI command to share an AMI.