Configure AWS EC2 instances for Redis Enterprise Software

There are some special considerations that are important when installing and running Redis Enterprise Software on Amazon Web Services (AWS), whether Amazon Electric Cloud Compute (EC2) AWS Outposts.

These include:

- Storage considerations
- Instance types
- Security group configuration

Storage considerations

AWS EC2 instances are ephemeral, but your persistent database storage should not be. If you require a persistent storage location for your database, the storage must be located outside of the instance. Therefore, when you set up an instance make sure that it has a properly sized EBS backed volume connected. Later, when setting up RS on the instance, make sure that the persistence storage is configured to use this volume.

Another feature that may be of importance to you is the use of Provisioned IOPS for EBS backed volumes. Provisioned IOPS guarantee a certain level of disk performance. There are two features in RS where this feature could be critical to use:

1. When using Redis on Flash
2. When using AOF on every write and there is a high write load. In this case, the provisioned IOPS should be on the nodes used as replicas in the cluster.

Instance types

Choose an instance type that has (at minimum) enough free memory and disk space to meet RS's hardware requirements.

In addition, some instance types are optimized for EBS backed volumes and some are not. If you are using persistent storage, you should use an instance type that is, especially if disk drain rate matters to your database implementation.

Security group configuration

When configuring the Security Group:

- Define a custom TCP rule for port 8443 to allow web browser access to the RS management UI from the IP address/ range you use to access the UI.
- If you are using the DNS resolving option with RS, define a DNS UDP rule for port 53 to allow access to the databases’ endpoints by using the DNS resolving mechanism.
- To create a cluster that has multiple nodes all running as instances on AWS, you need to define a security group that has an All TCP rule for all ports, 0 - 65535, and add it to all instances that are part of the cluster. This makes sure that all nodes are able to communicate with each other. To limit the number of open ports, you can open just the ports used by RS.

Note: After installing the RS package on the instance and before running through the setup process, you must give the group 'redislabs' permissions to the EBS volume by running the following command from the OS command-line interface (CLI):

```
chown redislabs:redislabs /< ebs folder name>
```
After successfully launching the instances:

1. Install Redis Enterprise Software from the Linux package or AWS AMI.

2. Set up the cluster.

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