

Exercise14

Elastic File System (EFS)

1. Login to your IAM user
2. We need 3 instances
 - a. Create two (new) public Linux ec2 instances, one in the same subnet where your Linux Web Server (that you had created in the last exercise) is and the other in another public subnet. Make sure you apply the same security group that you created for the Linux Web Server.
 - b. Start the Linux Web Server.
3. Create an EFS [In the same AZ]
 - a. Search for EFS
 - b. Click Create file system, give any name, select the same VPC, click Customize, select One Zone, unselect Enable automatic backup, unselect Enable encryption of data at rest (under Encryption), choose None for Transition into Archive, choose Bursting for Throughput mode, click Next, choose appropriate VPC, under Mount targets, choose appropriate subnet, choose the Linux security group that you had created, click Next, click Next, click Create.
 - i. Click View details, click Attach, copy the command under *Using the NFS client*
 - ii. Follow these steps for each of the three ec2 instances:
 - a. Access the instance using putty (*You can increase the keepalive time of your putty session: connections->seconds between keepalives. Setting it to 60 will keep the session alive for 60 seconds if no action is performed.*)
 - b. Type ls to see if efs folder is there. If it's there then delete it using the command `rm -fR efs`
 - c. Type `sudo -s` (to get the root permissions), `mkdir efs`, then `cd efs`.
 - iii. In one of the three ec2 instances, create a text file, *file.txt*, write your full name, save it. Type `ls`. You will see the file. Open the file with the command `cat file.txt`. Type `ls` in the remaining two ec2 instances and open it there as well (using `cat`).
 - iv. Now create another text file, *file2.txt*, in another ec2 instance, write the name of your favorite movie, save it. Open the file with the command `cat file2.txt`. Type `ls` in the remaining two ec2 instances and open it there as well (using `cat`).
 - v. **Take a snapshot (with your IAM username) that captures all the commands from step iii-iv in all the three ec2 instances.**
 - vi. **Take a snapshot (with your IAM username) of the networking tab of each of your ec2 instances that shows its public and private IP addresses, and the subnet ID.** The private IP address of each of your ec2 machine should match with the title on each of the putty window. The subnet IDs of two ec2 instances will match; however, the third ec2 should have a different subnet ID.
 - vii. In each instance: type `cd ..`, `umount efs`, `rm -fR efs`
4. Upload all the screenshots from the above steps as indicated to confirm successful completion of the individual steps. **No points will be awarded if the IAM username is not there in a snapshot. No exceptions!**
5. **Cleanup:**
 - a. Terminate the two (new) ec2 instances.
 - b. If you plan to work on the next exercise later, stop the Linux Web Server ec2 instances. **Do NOT terminate it.**
 - c. Delete the EFS
6. **Key Takeaways:**
 - a. EFS can be attached only to Linux machines
 - b. EFS can be shared by multiple machine as it is a NAS (Network Attached Storage) device.