AWS Session 10

1-3-2023

- Launch 2 Instance in AWS Portal
  - Name the instance
  - Select Instance type
  - Create Key
  - Allow HTTP (Traffic)

- We have two ways for configuring operating system/EC2 Instance :
  - Manual
  - Automatically

- For configuring EC2 Instances automatically, AWS provides services called **System Manger** which is a centralized service used for configuring instances automatically.

- Scripts : Scripts are the command documents/shell scripts. AWS provides many pre-created scripts for common activities like update, patch etc.

- Services in AWS are discrete entities. Hence, each service needs authentication for accessing other services. It can be done by using authentication techniques like **Key**.

- IAM is a service which can be used to provide **ROLE** for authenticating one service to be used by other services.

- Example :

  Allowing EC2 to use S3
  - Open IAM on AWS WebUI
  - Create **Role**
  - Select trust entity type as **AWS Services**

Note : Here, EC2 can be treated as source service which needs the access and S3 as destination service.

  - Select EC2 in Use Case

- o Search **S3** for adding permissions (Permission can be like view-only, Full Access etc)
- o Select **AmazonS3FullAccess**
- o Fill Role details

(Role is created for authenticating EC2 to use S3 with full access. Now we need to add role to specific instance.)

- o At EC2 portal, Select Instance to be authenticated
- o Click on Actions > Security > Modify IAM role
- o Select the role which is just been created in previous steps

- System Manager has its Database in which it stores data like scripts for been executed in EC2 instances.
- EC2 constantly reaches to System Manager to check for any scripts or automation. (By default, EC2 have agent installed to reach system manager)
- **Automating EC2**
  - o Create a role with permission AmazonEC2RoleforSSM
  - o Select EC2 at portal and modify IAM role
  - o Connect to the EC2 instance
  - o Restart the amazon-ssm-agent

  Command : $ systemctl restart amazon-ssm-agent

  - o Check logs at

  /var/log/amazon/ssm/amazon-ssm-agent.log

  - o In System Manager > Run Command
    - Select AWS-RunShellScript
    - Enter some commands for testing
      Eg. $mkdir /vimal
    - Select Instance

- Any procedure/setup can be automated by using System-Manager Service. Like launching a web-server.

For launching a web-server following commands can be run.

$ yum install httpd -y

$ echo "welcome" > /var/www/html/index.html

$ systemctl enable httpd --now

Note : EC2 instance can be connect with SSH only if SSH Service is running in instance. If the service is stopped then one cannot connect to instance.

In such case, System Manager can be used to execute commands and also to activate SSH service again.

Command : $ systemctl start sshds