Cloud Native Day
Pune 2023

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PUNE 2023

About US

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Session on

Crafting the serverless magic : Seize control of container access

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Agenda

01. Generate a PPK Key
02. Create a security Groups
03. Launch an EC2 Instance
04. Create IAM Custom-Managed Policies
05. Create IAM Role
06. Attach the Role to the EC2 Instance
07. Validate the Access Keys
08. Create an ECS Cluster
09. Create a New Task Definition
10. Create a New Service
11. Allow the ports in a Security Group
12. Execute the ECS Commands
13. Restart the Service
14. SSH to ECS Container

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PRE-REQUISITES

- ❑ An Active AWS Account with Full Access
- ❑ Familiarity with AWS Console
- ❑ Basic Networking Knowledge

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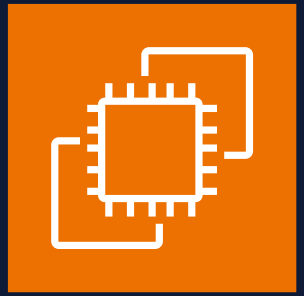
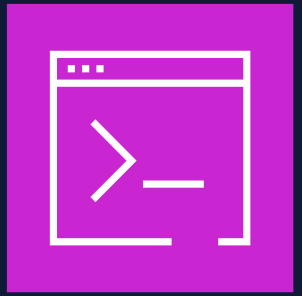
AWS SERVICES

AWS IAM



AWS EC2



AWS CLI

AWS ECS

AWS Fargate

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Key Generation and Security Group Creation

- ## Generate a PPK Key :

  Creating a unique PPK key for secure access to instances

- ## Create Security Groups :

  Setting up specific security groups for controlled access.

  Allow Port : SSH (22) ; HTTP (**80**) ; HTTPS (**443**) ;

Workshop Hands-On Steps

https://github.com/iamrajaram1/cnd-pune-serverless/blob/main/cnd-pune.txt

EC2 Instance Launch and Configuration

- ## Launch an EC2 Instance :

  Deploy and configure an EC2 Instance.

  Choose the key we created.

  Choose the key which we created.

  Choose the VPC

  Choose the Metadata version

IAM Custom Policies and Role Creation

- ## Create IAM Custom-Managed Policies :

  Creating customized policies for fine-grained access control

  Create a custom-managed Policy : **AmazonEnableSSMToManageSSHInstance**

  Create a custom-managed Policy : AmazonAllowToManageDeployECSService

  Create a custom-managed Policy : AmazonEC2ReadOnlyAccess

- ## Create IAM Role :

  Establishing roles for services with specific permissions

  Create a Role : **AWS-EC2-SSH-Role** (AmazonAllowToManageDeployECSService,EC2Read)

  Create a Role : **ECS-SSH-Role** (**AmazonEnableSSMToManageSSHInstance**)

Attach Role to EC2 Instance & Validate Access Keys

- **Attach the Role to the EC2 Instance:**

  Connecting the established role to the EC2 instance for seamless integration.

- **Validate the Access Keys**

```
aws configure list
aws ec2 describe-instances --region ap-south-1
```

AWS CLI and AWS SSM Agents Installations

- ## Install AWS CLI on Linux :

  Install the SSM Plugin and Verify the Version

- ## Install AWS SSM on Linux :

  Install the SSM Plugin and Verify the Version

Creation of ECS Cluster, Task Definition for HTTP & Service

- **Create a ECS Cluster:**

  Setting up an ECS cluster for efficient container management.

- **Create a task Definition:**

  Configuring a new task definition.

- **Create a Service:**

  Establishing a new service within the ECS cluster.

ECS Container Management

- **Login to ECS Container:**

  Accessing and managing the ECS container for necessary adjustments.

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Let’s Connect

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