

Special Issue 1: What happens when an instance stops running

Problem Statement

When an EC2 instance is stopped or terminated, data can be lost. We need to preserve the instance state for recovery and duplication. The solution to this problem is an AMI, or Amazon Machine image

An Amazon Machine Image is a complete snapshot of an EC2 instance that includes the operating system, installed software like Docker, images and containers, etc.

1. Create AMI Backup from EC2 Instance

Command: `create-image`

Purpose: Creates an Amazon Machine Image (AMI) backup of the running instance

Parameters:

- **Instance ID:** `i-0a133f58f231434b5`
- **AMI Name:** `my-website-ami-backup`
- **Description:** `Working website backup`

Full Command:

```
aws ec2 create-image \  
--instance-id i-0a133f58f231434b5 \  
--name "my-website-ami-backup" \  
--description "Working website backup"
```

Amazon Machine Image (AMI)

my-website-ami-backup

ami-0fad90cf5b62b249c

2025-10-11T17:33:54.000Z

Virtualization: hvm

ENA enabled: true

Root device type: ebs

Boot mode: uefi-preferred

Description

Working website backup

Architecture

x86_64

AMI ID

ami-0fad90cf5b62b249c

2. Send to S3 bucket

Command: `create-store-image-task`

Full Command:

```
aws ec2 create-store-image-task \  
  --image-id ami-0fad90cf5b62b249c \  
  --bucket dan-mora-web-bucket
```

dan-mora-web-bucket [Info](#)

Objects

Metadata

Properties

Permissions

Objects (1)



Copy S3 URI



Copy URL



Download



Upload

Objects are the fundamental entities stored in Amazon S3. You can use the S3 console to manage your objects. To access your objects, you'll need to explicitly grant them permissions.



Find objects by prefix



Name



Type



[ami-0fad90cf5b62b249c.bin](#)

bin

3. Launch New EC2 Instance from AMI

Command: `run-instances`

Purpose: Launches a new EC2 instance from the previously created AMI for testing restoration

Parameters:

- **AMI ID:** `ami-0fad90cf5b62b249c`
- **Instance Type:** `t3.micro`
- **Security Group ID:** `sg-092591f63db08d59d`
- **Subnet ID:** `subnet-03eb8345acf95303e`
- **Instance Name Tag:** `test-restore`

Full Command:

```
aws ec2 run-instances \  
  --image-id ami-0fad90cf5b62b249c \  
  --instance-type t3.micro \  
  --security-group-ids sg-092591f63db08d59d \  
  --subnet-id subnet-03eb8345acf95303e \  
  --tag-specifications 'ResourceType=instance,Tags=[{Key=Name,Value=test-restore}]'
```