Creating a document outlining the steps for configuring EC2 Hibernation

Configuring EC2 Hibernation:

Amazon Elastic Compute Cloud (Amazon EC2) hibernation allows you to pause and resume your EC2 instances, preserving the instance's in-memory state across instance stops and starts. This feature can be useful for reducing instance startup time and maintaining application state.

Here are the steps to configure EC2 hibernation:

Prerequisites:

Before you can enable hibernation on your EC2 instances, ensure that you meet the following prerequisites:

EC2 Instances: You must use instance types that support hibernation. Not all instance types support hibernation. You can find a list of supported instance types in the AWS documentation.

Amazon EBS: The root volume of your EC2 instance must be an Amazon Elastic Block Store (EBS) volume. Hibernation is not supported for instances with instance store volumes.

Amazon Linux or Windows AMI: Hibernation is supported on Amazon Linux 2, Windows Server 2019, and later versions.

IAM Permissions: Ensure that your IAM user or role has permissions to enable hibernation. You need permissions for the

ec2: Create Hibernation Configuration,

ec2: ModifyHibernationConfiguration

ec2: DescribeHibernateEnvironments actions.

Steps to Configure EC2 Hibernation:

Follow these steps to configure EC2 hibernation:

Step 1: Enable Hibernation on an EC2 Instance

Open the AWS Management Console.

Navigate to the EC2 dashboard.

Select the EC2 instance for which you want to enable hibernation.

Choose "Actions" > "Instance Settings" > "Change Hibernation Settings."

In the "Change Hibernation Settings" dialog box, select the "Enable" option for "Hibernation behavior."

Click "Save" to enable hibernation for the selected instance.

Step 2: Create or Modify a Hibernation Configuration (Optional)

By default, EC2 instances use the default hibernation configuration, which specifies the hibernation settings. If you need to customize these settings, you can create or modify a hibernation configuration.

In the EC2 dashboard, navigate to "Hibernation configurations" under "Instances" in the left navigation pane.

To create a new configuration, click "Create hibernation configuration." To modify an existing one, select the configuration and click "Actions" > "Edit hibernation configuration."

Adjust the hibernation settings as needed. You can specify the hibernation delay and other options.

Click "Save" to save your changes.

Step 3: Test Hibernation

Before relying on hibernation for production instances, it's a good practice to test it to ensure everything works as expected.

Stop your EC2 instance using the "Instance State" > "Stop" action in the EC2 dashboard.

After the instance has stopped, start it again using the "Instance State" > "Start" action.

Monitor the instance's behavior to ensure that it correctly resumes from hibernation.

Step 4: Monitor Hibernation Status

You can monitor the hibernation status of your EC2 instances using the AWS Management Console, AWS Command Line Interface (CLI), or AWS SDKs.

To check the hibernation status of an instance:

Navigate to the EC2 dashboard.

Select the instance you want to check.

Look for the "Hibernation" status in the instance details. It should indicate whether hibernation is enabled and the last hibernation state.

List of ec2 instance types that support hibernation:

Supported instance families

General purpose: M3, M4, M5, M5a, M5ad, M5d, M6i, M6id, M7i, M7i-flex, T2, T3, and T3a

Compute optimized: C3, C4, C5, C5d, C6i, and C6id

Memory optimized: R3, R4, R5, R5a, R5ad, and R5d

Storage optimized: I3, and I3en

To see the available instance types that support hibernation in a specific Region:

The available instance types vary by Region. To see the available instance types that support hibernation in a Region, use the describe-instance-types command with the --region parameter. Include the --filters parameter to scope the results to the instance types that support hibernation and the --query parameter to scope the output to the value of Instance Type.

Aws ec2 describe-instance-types --filters Name=hibernation-supported, Values=true --query "Instance Types [*].[Instance Type]" --output text | sort

Example output :

c3.2xlarge

c3.4xlarge

c3.8xlarge

c3.large

c3.xlarge

c4.2xlarge

c4.4xlarge

c4.8xlarge