

Setting Up a Virtual Machine in an AWS Cloud Environment

Standard Operating Procedure (SOP)

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RECORD OF CHANGES

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# 1.0 Introduction

This SOP outlines the steps for creating and configuring a virtual machine (VM) in Amazon Web Services (AWS) to ensure a consistent and secure setup process.

# 2.0 Scope

This procedure applies to all personnel responsible for deploying virtual machines in the AWS environment.

# 3.0 Prerequisites

1. Access to an AWS account with sufficient permissions to create resources (e.g., Elastic Compute Cloud (EC2) instances).

2. Familiarity with the AWS Management Console.

3. Predefined requirements for the virtual machine (e.g., operating system, instance size, and region).

4. SSH key pair for secure access to the VM (if applicable).

# 4.0 Procedure

4.1 Log in to the AWS Management Console

1. Navigate to <https://aws.amazon.com>.

2. Enter your credentials and log in to the AWS Management Console.

3. Select the appropriate account or role if prompted.

## 4.2 Navigate to the EC2 Dashboard

1. In the AWS Management Console, use the search bar at the top and type “EC2”.

2. Click on EC2 under Services to open the EC2 dashboard.

## 4.3 Launch an EC2 Instance

1. From the EC2 dashboard, click Launch Instance.

2. Provide a name for your instance in the Name and Tags field (e.g., “WebServer01”).

3. Select an Amazon Machine Image (AMI):

• Choose a predefined AMI from the list (e.g., Amazon Linux 2, Ubuntu, or Windows Server).

• Alternatively, click Browse more AMIs to search for community or custom AMIs.

4. Choose the instance type:

• Select an instance type based on your requirements (e.g., t2.micro for a free-tier eligible, lightweight instance).

• Click Next or Select depending on the UI.

## 4.4 Configure Instance Details

1. Specify the number of instances to launch.

2. Select a network Virtual Private Cloud (VPC) and subnet:

• Use the default VPC or select a custom VPC based on the project requirements.

• Choose an availability zone for the subnet.

3. Enable auto-assign public IP:

• Ensure that the instance has a public IP if external access is required.

4. Add user data (optional):

• In the Advanced Details section, provide a startup script if necessary (e.g., bash script for Linux).

## 4.5 Add Storage

1. Specify the size and type of the root volume:

• Default: 8 GiB, General Purpose SSD (gp2).

• Modify the volume size if needed for your workload.

2. Add additional volumes as required.

## 4.6 Add Tags

1. Create key-value pairs to help identify and manage the instance:

• Example: Key: Environment, Value: Production.

## 4.7 Configure Security Groups

1. Create a new security group or select an existing one:

• Add rules to allow inbound traffic (e.g., HTTP, HTTPS, or SSH).

• Restrict access to specific IPs for security.

2. Ensure outbound traffic rules meet project needs.

## 4.8 Review and Launch

1. Review all configurations:

• Instance details, AMI, storage, tags, and security group.

2. Click Launch.

## 4.9 Select or Create a Key Pair

1. Select an existing key pair, or create a new one:

• If creating a new key pair, download the .pem file and store it securely.

2. Acknowledge that you have access to the private key file.

## 4.10 Access the Virtual Machine

1. Once the instance is running, locate the Public IPv4 Address or DNS Name:

• Go to the Instances section in the EC2 dashboard.

2. Use SSH or Remote Desktop Protocol (RDP) to access the VM:

• Linux/Mac:

ssh -i /path/to/your-key.pem ec2-user@<Public-IP>

• Windows: Use an RDP client to connect to the instance using its public IP.

# 5.0 Post-Setup Configuration

1. Install necessary software or updates on the VM.

2. Configure firewalls, monitoring tools, or other required services.

3. Verify connectivity and application functionality.

# 6.0 Roles and Responsibilities

• System Administrator: Performs setup and initial configuration.

* Security Team: Reviews security group rules and key management.
* Project Owner: Defines VM requirements and tags.

# References

* AWS Documentation: [Launch an Instance](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/launching-instance.html)
* Company IT Policy Manual