Project Documentation

# 1. Introduction

This document provides a detailed explanation of the commands used throughout the execution of the project, including setting up an SSH connection, installing AWS CLI, and running a custom script to interact with AWS resources.

# 2. Steps and Commands

## 2.1 Change to Home Directory

bash

cd $HOME

Explanation: Navigates to the home directory of the current user. This is a common starting point for file operations.

## 2.2 Change to Downloads Directory

bash

cd Downloads

Explanation: Moves to the "Downloads" directory where you usually store files downloaded from the internet.

## 2.3 Set File Permissions

### Take Ownership of File

cmd

takeown /f "C:\Users\user\Downloads\mykey.pem"

Explanation: Takes ownership of the file mykey.pem. This is necessary if the file is restricted or you need to make modifications.

### Grant Full Permissions

cmd

icacls "C:\Users\user\Downloads\mykey.pem" /grant:r admin:(F)

Explanation: Grants full control ((F)) to the file mykey.pem for the admin user. This ensures that the file can be used without permission issues.

### Verify Permissions

cmd

icacls "C:\Users\user\Downloads\mykey.pem"

Explanation: Checks the current permissions of mykey.pem to confirm that they have been set correctly.

### Grant Read-Only Permissions

cmd

icacls "C:\Users\user\Downloads\mykey.pem" /grant:r admin:(R)

Explanation: Grants read-only ((R)) permissions to mykey.pem for the admin user, if you need to adjust the permissions after modifying them.

## 2.4 Connect to Remote Server Using SSH

bash

ssh -i C:\Users\user\Downloads\mykey.pem ubuntu@3.85.121.31

Explanation: Connects to a remote server using SSH with the private key mykey.pem and the username ubuntu. The IP address 3.85.121.31 is the server’s address.

## 2.5 Install AWS CLI on the Remote Server

### Update Package List

bash

sudo apt-get update

Explanation: Updates the list of available packages and their versions on the server.

### Install AWS CLI

bash

sudo apt-get install awscli -y

Explanation: Installs the AWS CLI tool, which is used for managing AWS services from the command line.

### Check AWS CLI Version

bash

aws --version

Explanation: Verifies that the AWS CLI was installed correctly and displays its version.

### Configure AWS CLI

bash

aws configure

Explanation: Sets up the AWS CLI with your AWS credentials and default settings. You’ll be prompted to enter your AWS Access Key ID, Secret Access Key, default region, and output format.

### Download and Install AWS CLI v2

bash

curl "https://awscli.amazonaws.com/awscli-exe-linux-x86\_64.zip" -o "awscliv2.zip"

Explanation: Downloads the AWS CLI version 2 installer.

bash

unzip awscliv2.zip

Explanation: Extracts the contents of the awscliv2.zip file.

bash

sudo apt-get install unzip -y

Explanation: Installs the unzip utility, which is required to extract the ZIP file.

bash

sudo ./aws/install

Explanation: Runs the installer script to install AWS CLI version 2.

### Verify AWS CLI v2 Installation

bash

aws --version

Explanation: Checks the version of AWS CLI to confirm that version 2 is installed.

## 2.6 Run Custom Script

bash

./aws\_resource\_list.sh us-east-1 ec2

Explanation: Executes the custom script aws\_resource\_list.sh to list EC2 instances in the specified AWS region (us-east-1). Make sure the script has execute permissions (chmod +x aws\_resource\_list.sh) before running it.

# 3. Additional Important Commands

## Check Disk Space

bash

df -h

Explanation: Shows disk usage and available space.

## List Files in Directory

bash

ls -l

Explanation: Lists files in the current directory with detailed information.

## Check Running Processes

bash

top

Explanation: Displays running processes and their resource usage.

## Check Network Configuration

bash

ifconfig

Explanation: Shows network interface configuration.