

## Day 1 – AWS Key Pair Creation (AWS)

# Challenge

100 Days of Cloud (AWS & Azure)

## Day 1 – AWS Fundamentals

## Objective

Create an AWS EC2 key pair that will later be used for secure access to cloud servers.

This task validates understanding of basic AWS security concepts and correct regional configuration.

## Task Requirements

Requirement	Value
Key Name	datacenter-kp
Key Type	RSA
AWS Region	us-east-1

Task

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The Nautilus DevOps team is strategizing the migration of a portion of their infrastructure to the AWS cloud. Recognizing the scale of this undertaking, they have opted to approach the migration in incremental steps rather than as a single massive transition. To achieve this, they have segmented large tasks into smaller, more manageable units. This granular approach enables the team to execute the migration in gradual phases, ensuring smoother implementation and minimizing disruption to ongoing operations. By breaking down the migration into smaller tasks, the Nautilus DevOps team can systematically progress through each stage, allowing for better control, risk mitigation, and optimization of resources throughout the migration process.

For this task, create a key pair with the following requirements:

- Name of the `key pair` should be `datacenter-kp`.
- Key pair `type` must be `rsa`

Use below given AWS Credentials: (You can run the `showcreds` command on `awsclient` host to retrieve these credentials)

# Concept Overview

An **AWS Key Pair** is a set of cryptographic keys (public & private) used to securely authenticate to EC2 instances. AWS uses key pairs instead of passwords to improve security.

- Public key → stored in AWS
- Private key → downloaded and kept securely by the user

## AWS Management Console (GUI)

### 1. Logged into AWS Console using provided credentials

The screenshot shows the AWS Management Console with the EC2 service selected. The left sidebar includes options like Dashboard, EC2 Global View, Events, Instances (with sub-options for Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Capacity Manager), and Images. The main content area displays the 'Resources' section with tabs for Instances (running), Auto Scaling Groups, Capacity Reservations, Dedicated Hosts, Elastic IPs, Instances, Load balancers, Placement groups, Security groups, Snapshots, and Volumes. Below this are sections for 'Launch instance' (with 'Launch instance' and 'Migrate a server' buttons) and 'Service health' (showing an error message: 'An error occurred: An error occurred retrieving service health information'). On the right, there's an 'Account attributes' panel with a red box around an 'Access denied' message ('An error occurred: An error occurred checking for a default VPC') and a 'Diagnose with Amazon' button. Other panels include 'Settings' (Data protection and security, Allowed AMIs, Zones, EC2 Serial Console, Default credit specification, EC2 console preferences) and 'Explore AWS'.

### 2. Navigated to EC2 → Key Pairs

The screenshot shows the EC2 Features page. The left sidebar has the same structure as the previous screenshot. The main content area features a 'Features' section with 'Key pairs' (EC2 feature), 'Playback Key' (Amazon Interactive Video Service feature), and 'Channel' (Amazon Interactive Video Service feature). Below this is a 'Services' section with 'EC2' (Virtual Servers in the Cloud) and 'Key Management Services'. The right side of the screen contains the same 'Account attributes', 'Settings', and 'Explore AWS' panels as the first screenshot.

### 3. Clicked Create Key Pair

The screenshot shows the 'Key pairs (1/1)' list page. The left sidebar is identical. The main content area shows a table with one row for 'nautilus-kp'. The columns are Name (nautilus-kp), Type (rsa), Created (2025/12/25 01:25 GM...), Fingerprint (bf:13:a5:44:a1:7e:e0:6...), and ID (key-0d8374e718efbd516). At the top right, there are 'Actions' and 'Create key pair' buttons. The right side of the screen includes the familiar 'Account attributes', 'Settings', and 'Explore AWS' panels.

4. Entered the following:

- o **Name:** datacenter-kp
- o **Type:** RSA
- o **Region:** us-east-1

The screenshot shows the 'Create key pair' wizard on the AWS EC2 console. The 'Name' field is set to 'datacenter-kp'. The 'Key pair type' is 'RSA'. The 'Private key file format' is 'pem'. There are no tags added. At the bottom, there are 'Cancel' and 'Create key pair' buttons.

5. Created and downloaded the key

## Outcome

- Successfully created an RSA key pair named datacenter-kp
- Verified creation via CLI and AWS Console
- Private key secured with correct file permissions

## Key Takeaways

- AWS uses key pairs instead of passwords for EC2 access
- Correct region selection is critical in AWS

## Proof of Work

This task demonstrates hands-on experience with: - AWS IAM authentication - EC2 key pair management - Secure handling of private keys

Screenshots included as evidence of real cloud work

**Next:** Day 2 – EC2 Instance Launch & SSH Access