Implementing Public Key Infrastructure

Objective: To demonstrate the configuration and management of a Public Key Infrastructure (PKI) by installing and configuring Active Directory Certificate Services (ADCS) on Windows Server 2022

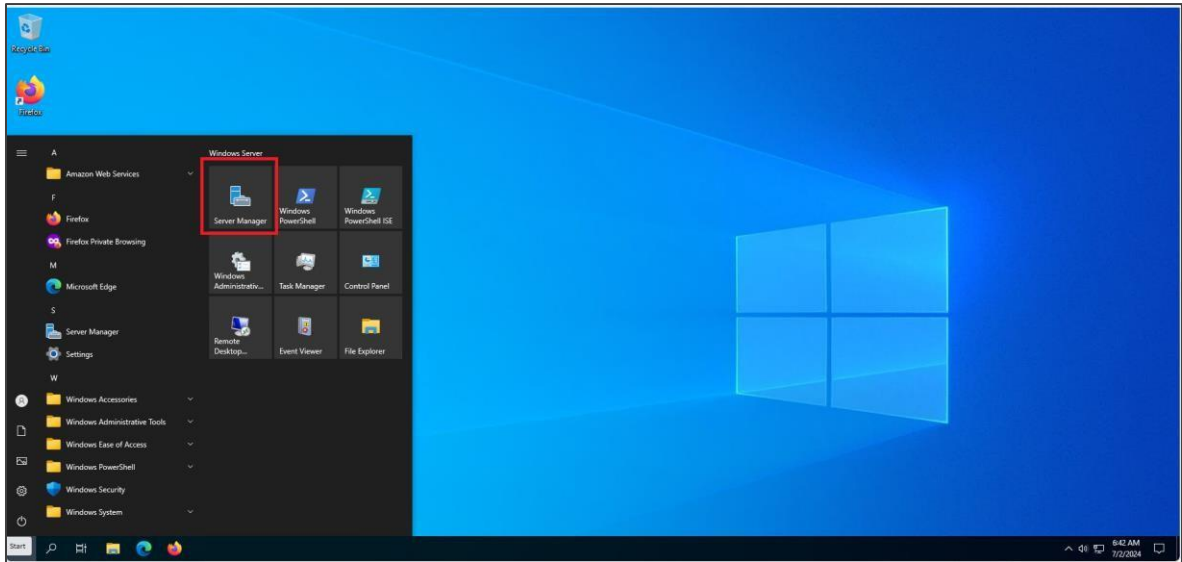Tools required: Windows Server 2022
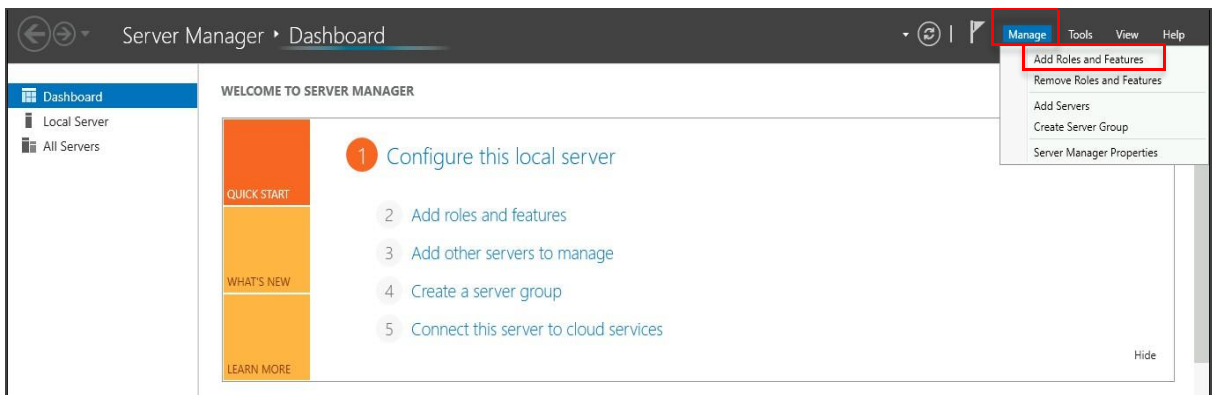
Prerequisites: None

Steps to be followed:
1. Install certificate services
2. Configure active directory certificate services
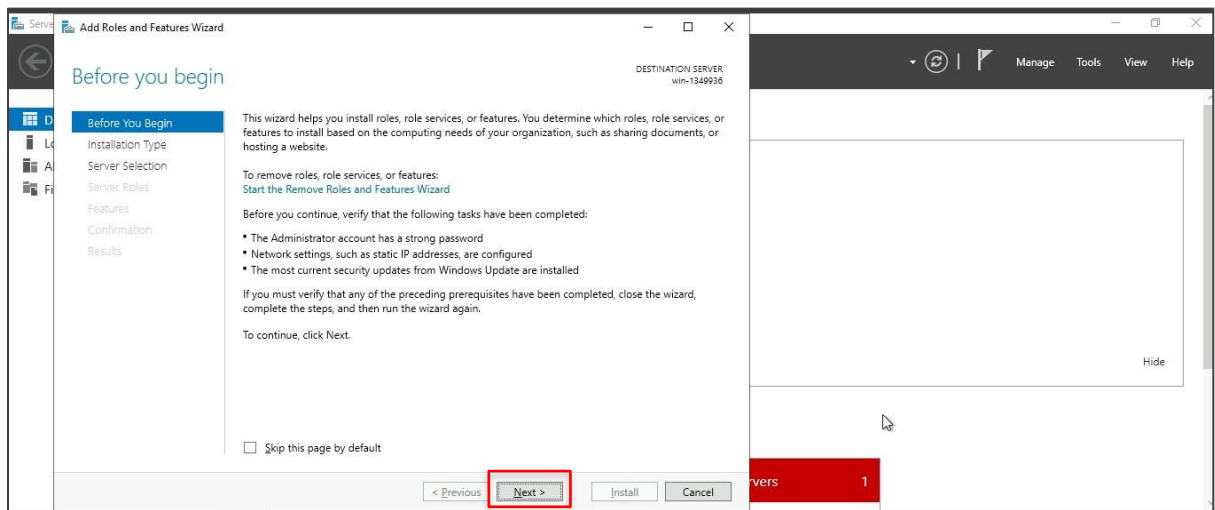
Step 1: Install certificate services

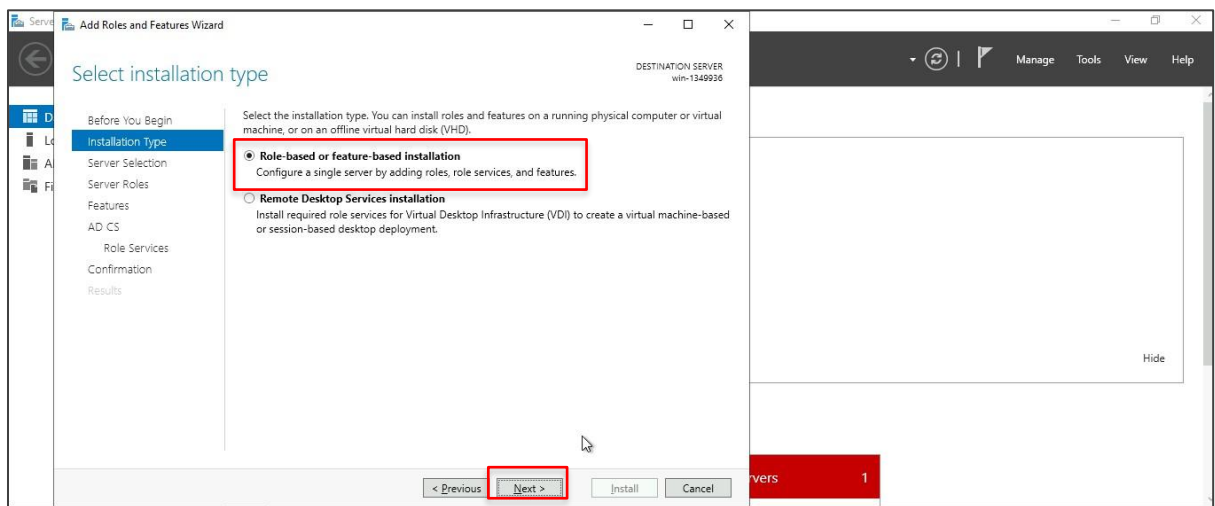1.1 Navigate to **Server Manager** on Windows Server 2022

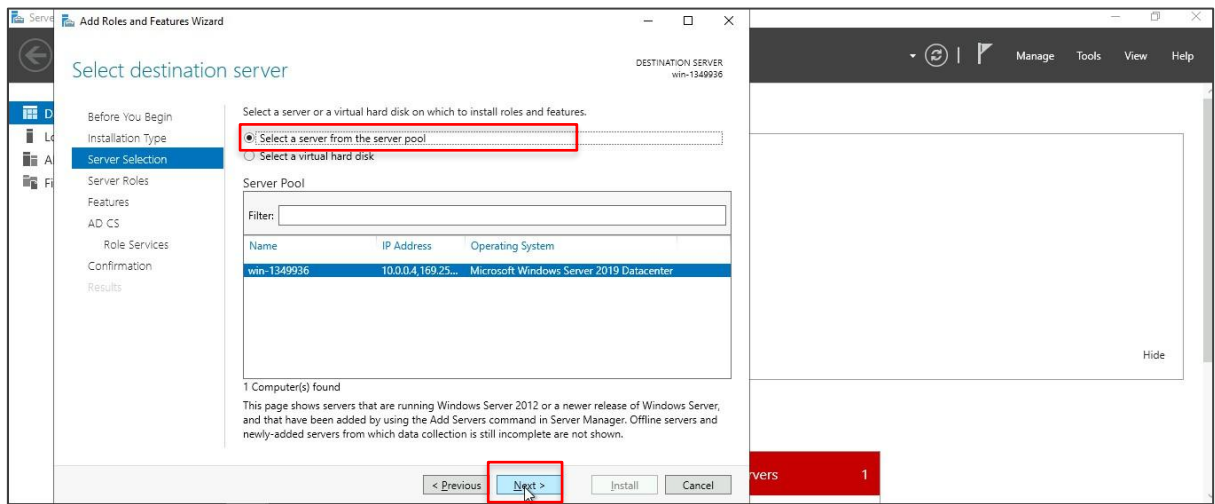1.2 Click on **Manage** and select **Add Roles and Features**
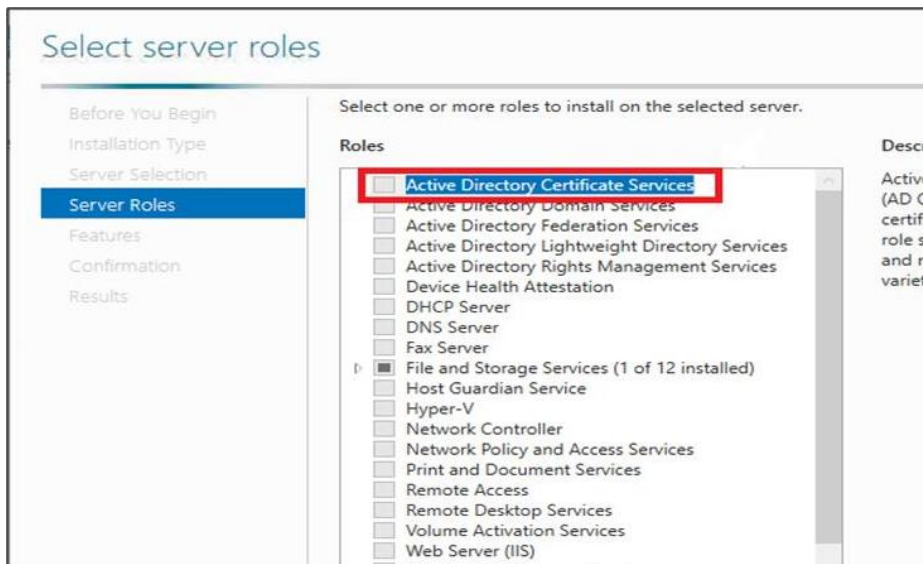
1.3 Click on **Next**

1.4 Select the **Role-based or feature-based installation** and click **Next**
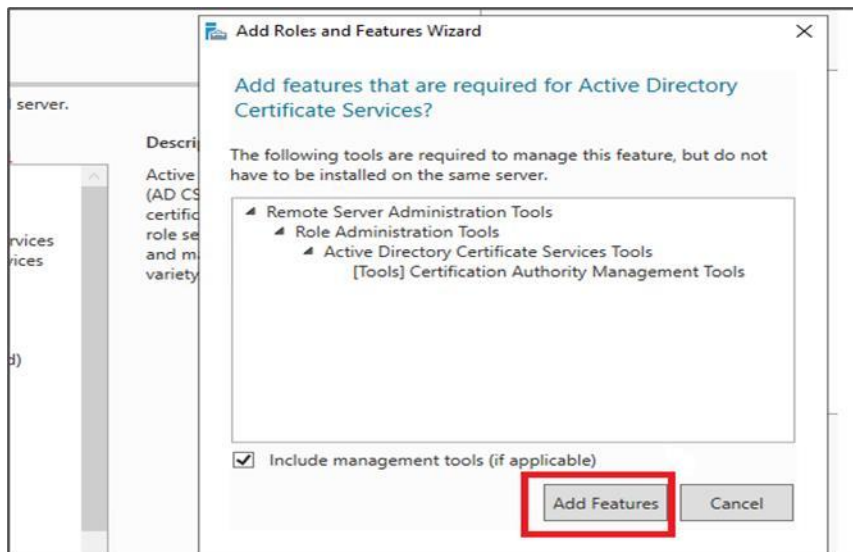
1.5 Choose the **Select a server from the server pool** option and click **Next**
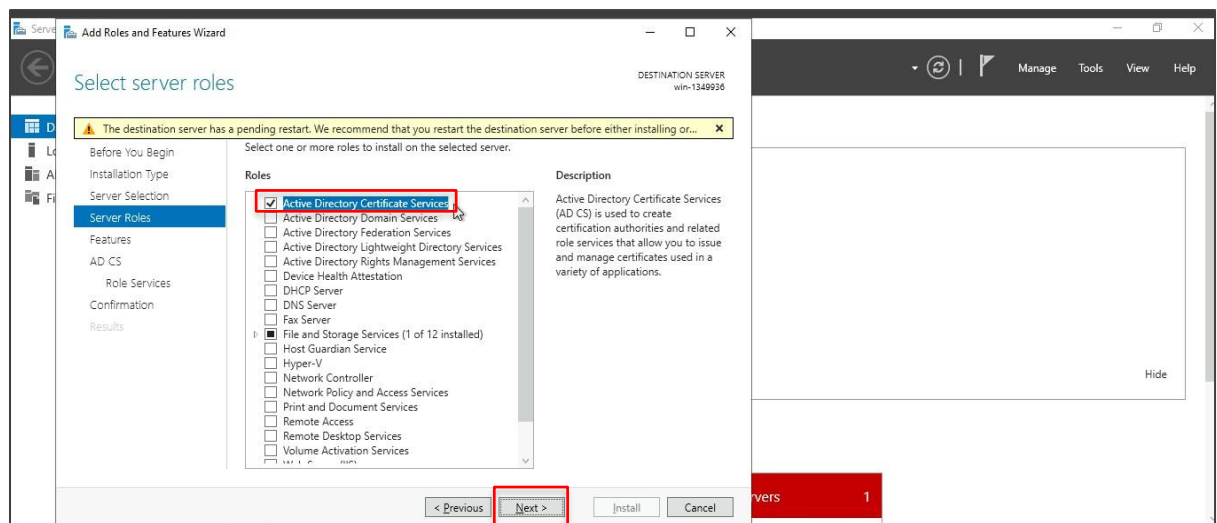

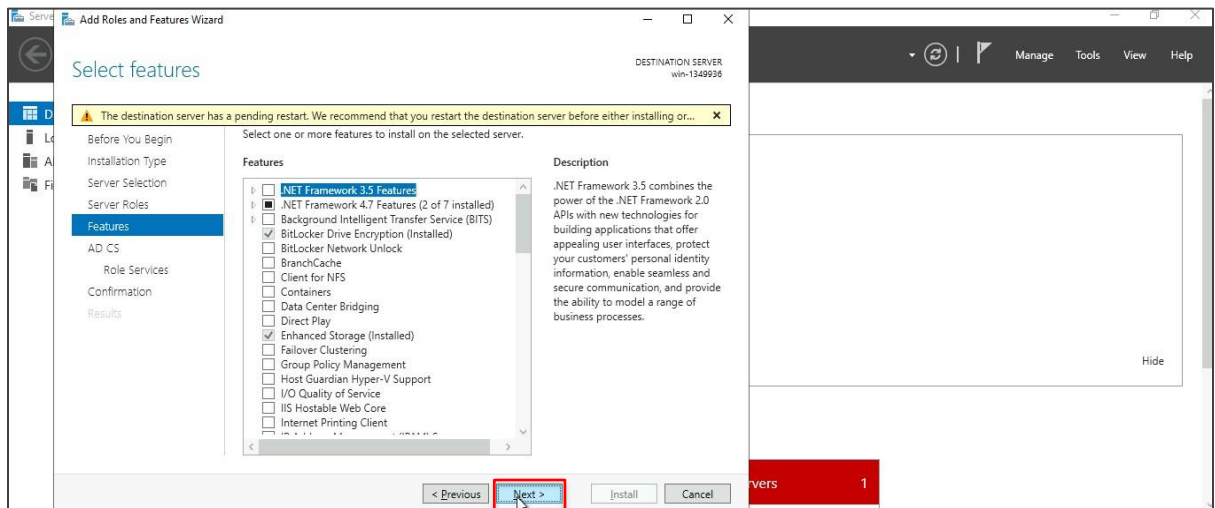1.6 Select the **Active Directory Certificate Services** option

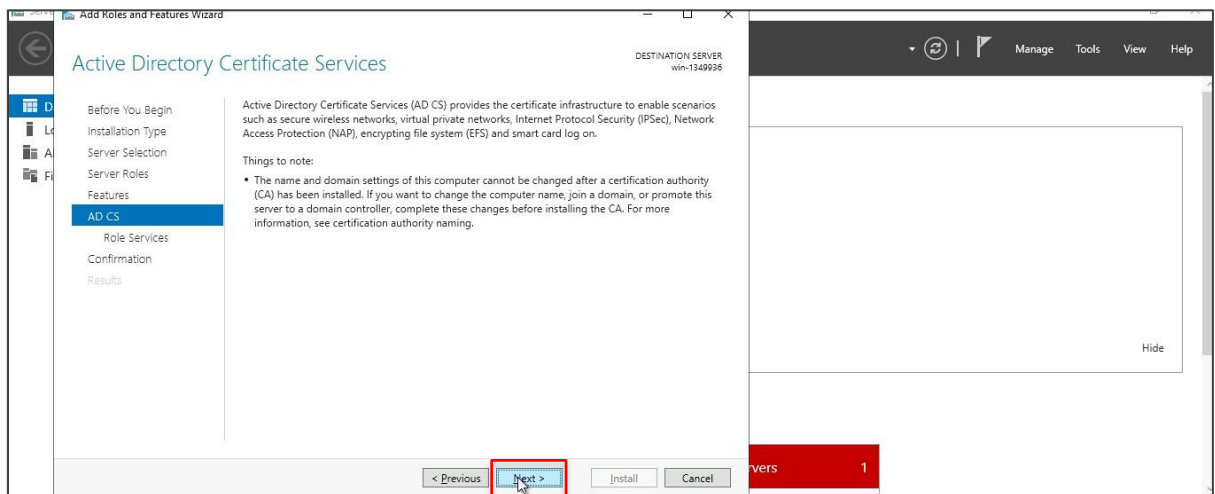1.7 Click on **Add Features** when asked to include management tools

1.8 Verify that the **Active Directory Certificate Services** is selected and click **Next**
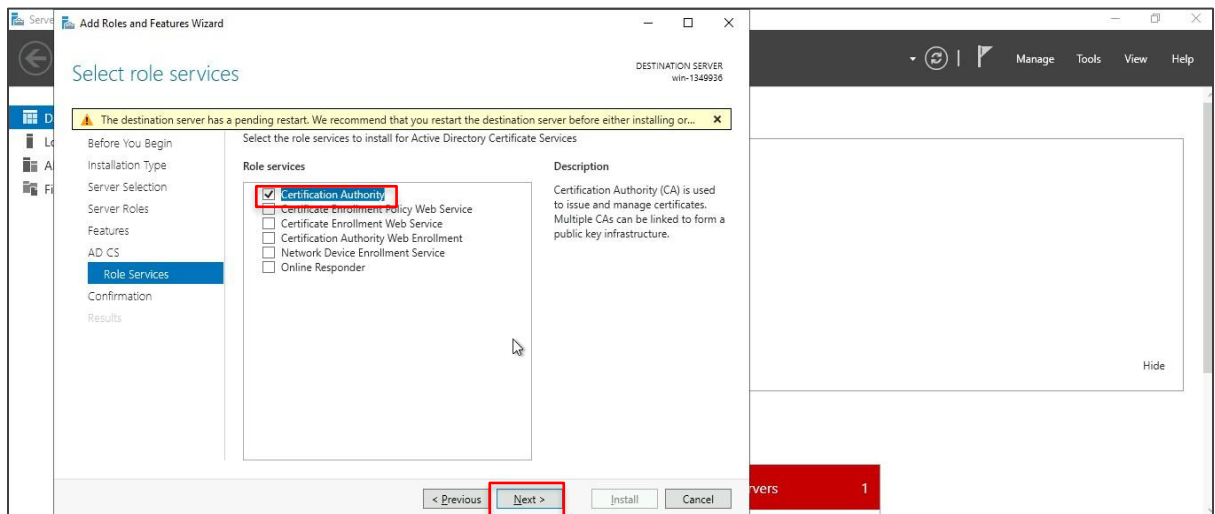
1.9 In the **Select Features** window, click **Next**, leaving the default selections as they are
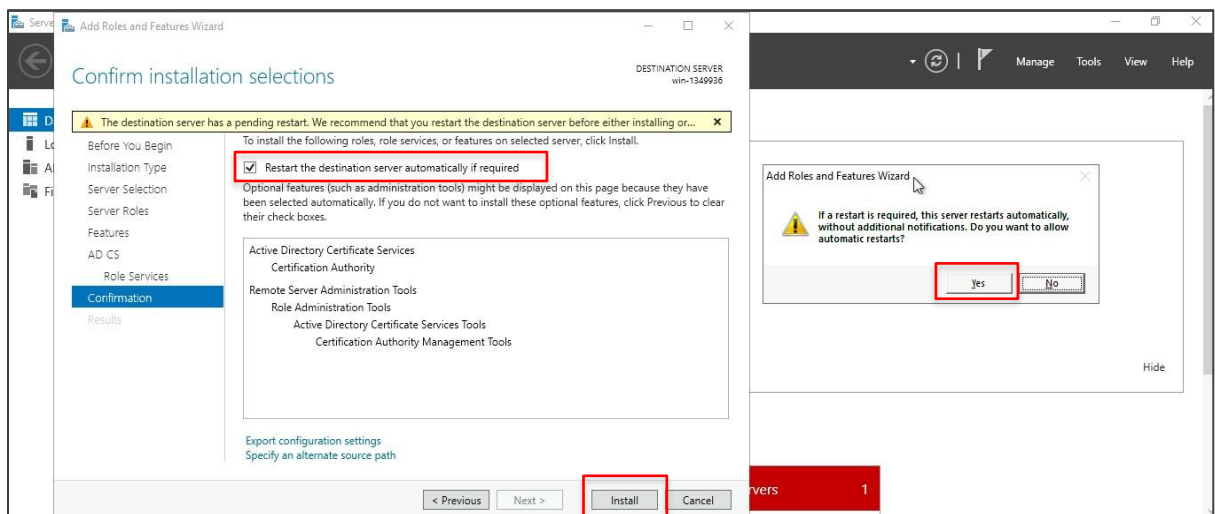

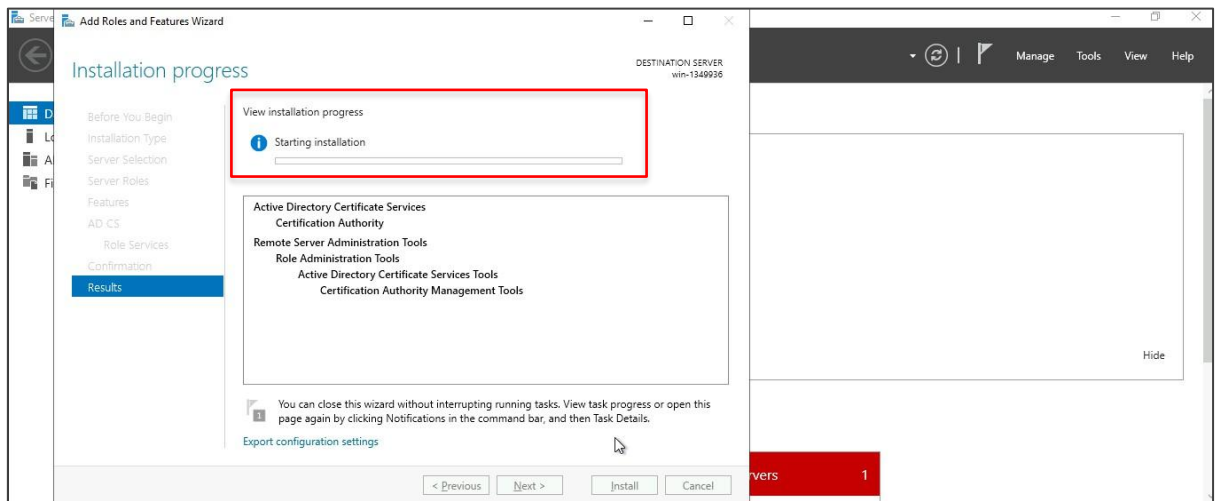1.10 Read the **Things to note** section and click **Next**

1.11 Select **Certification Authority** under **Role services** and click **Next**
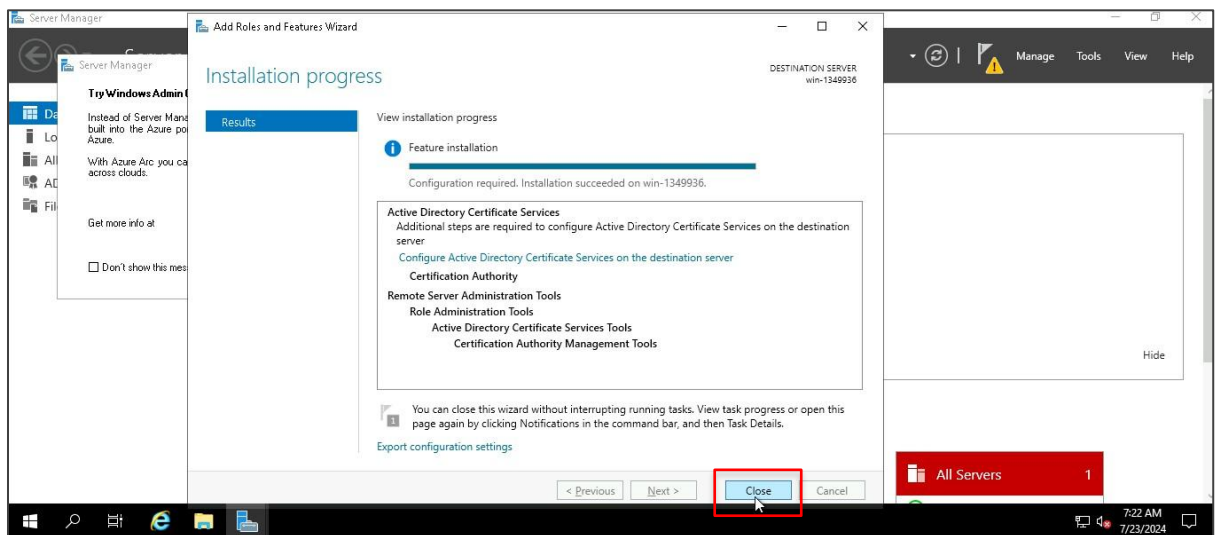

1.12 Select the **Restart the destination server automatically if required** option, confirm
with **Yes**, and then click **Install**
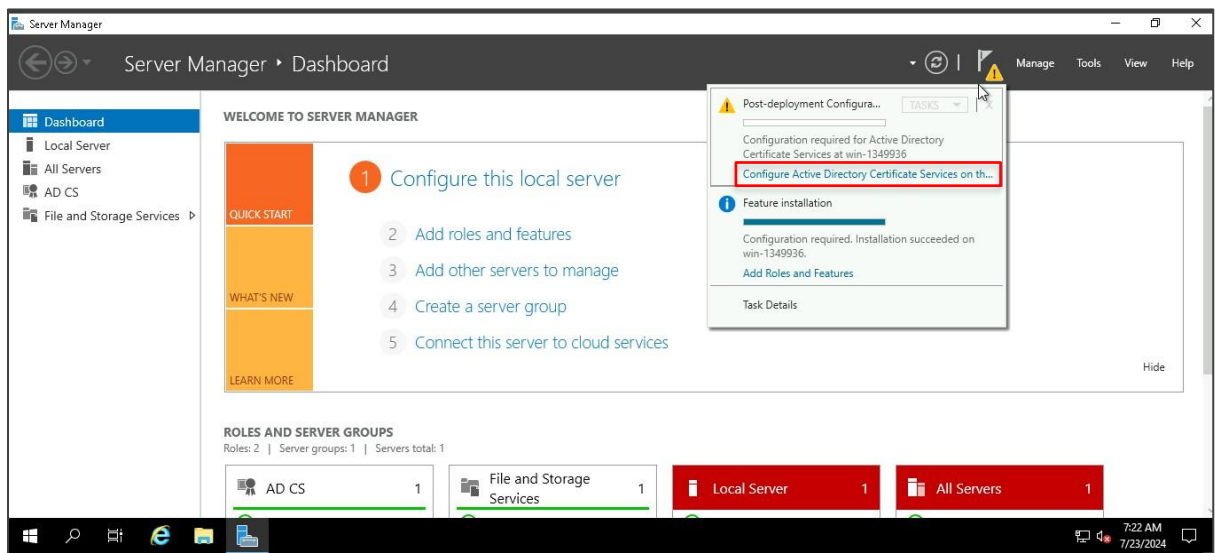
1.13 Verify that the installation has started

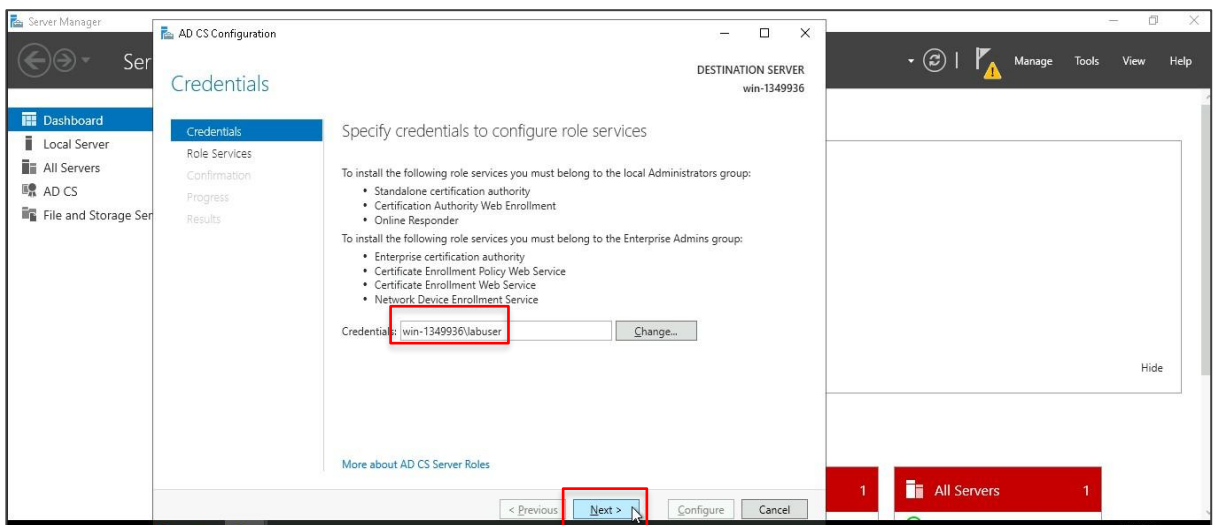## 1.14 Once the installation is successful, click **Close**

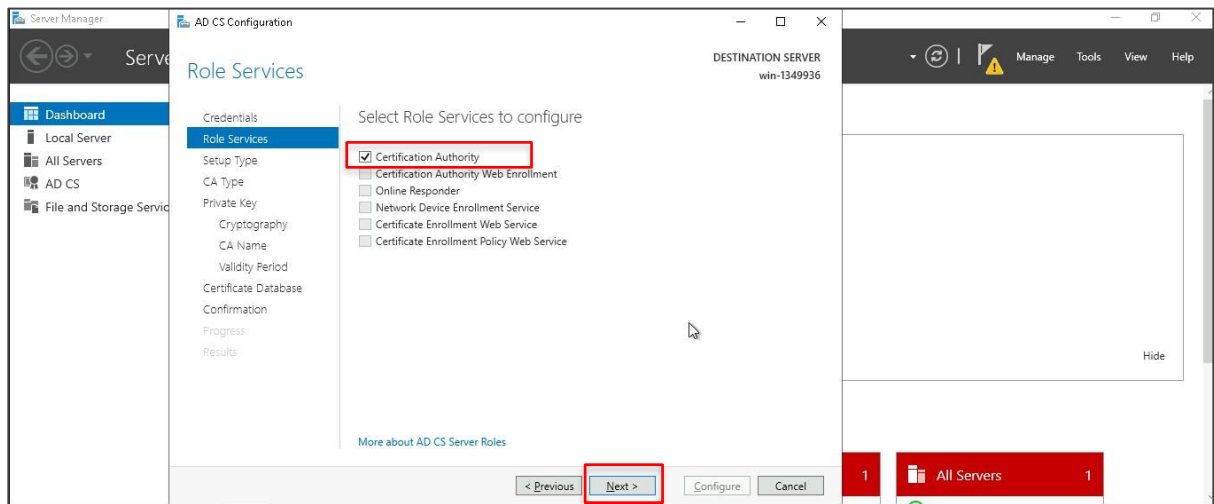**Step 2: Configure active directory certificate services**

2.1 Select the **flag** icon with a yellow exclamation mark, indicating the post-deployment configuration requirements, and click **Configure Active Directory Certificate Services on the server**
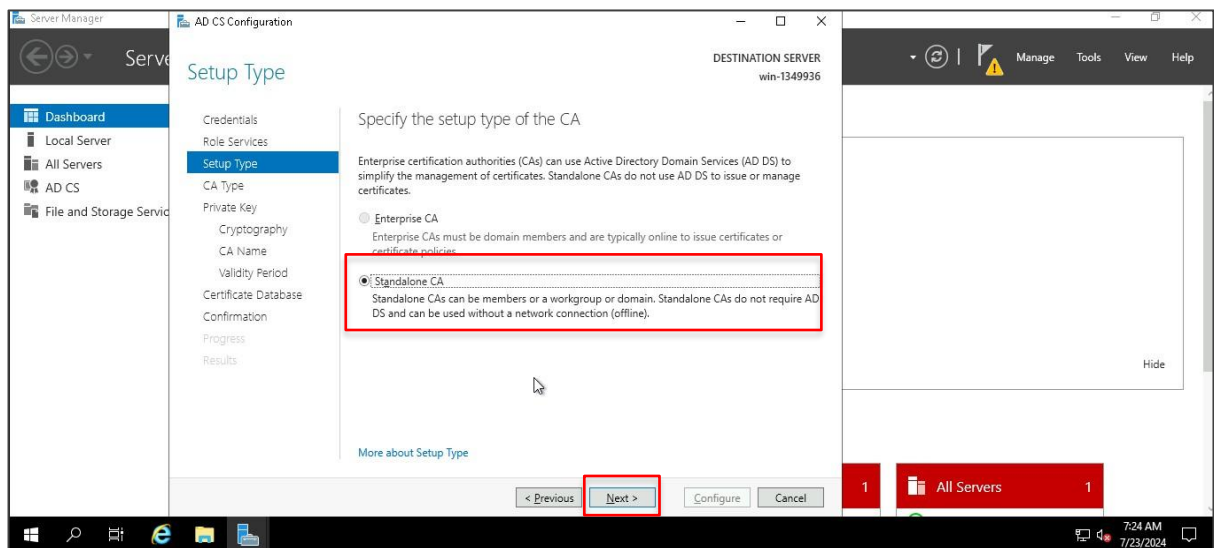

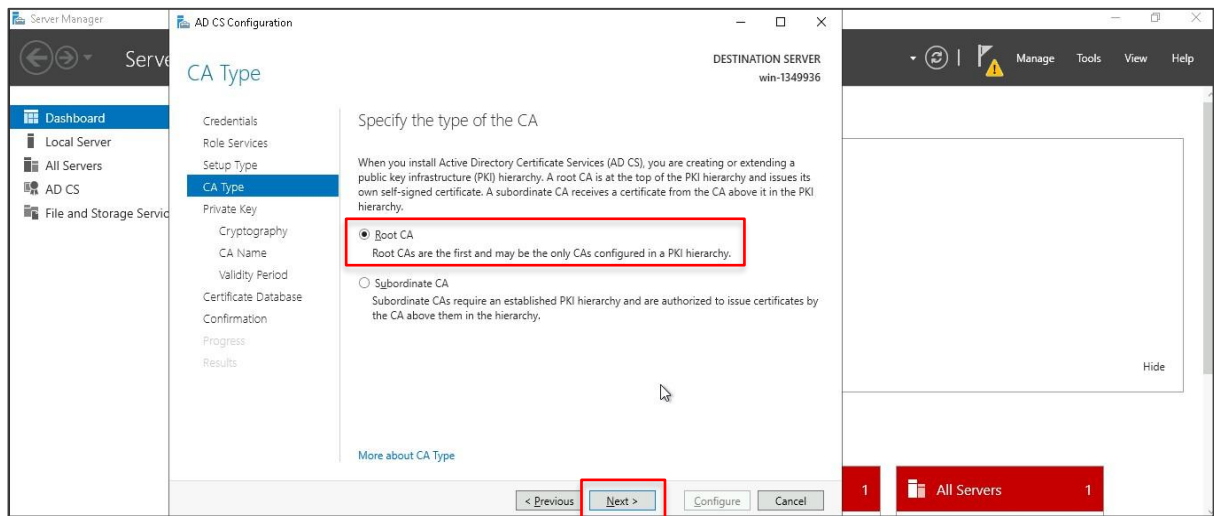2.2 Verify the credentials as **labsuser** and click **Next**

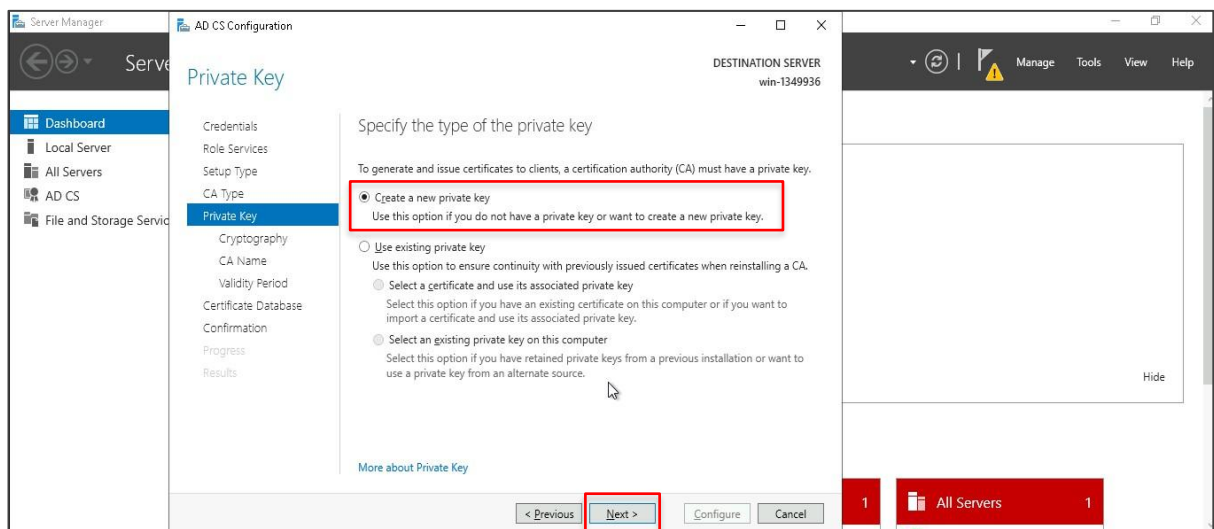2.3 Select the **Certification Authority** option and click **Next**

2.4 Select **Standalone CA** which should be the default, then click **Next**
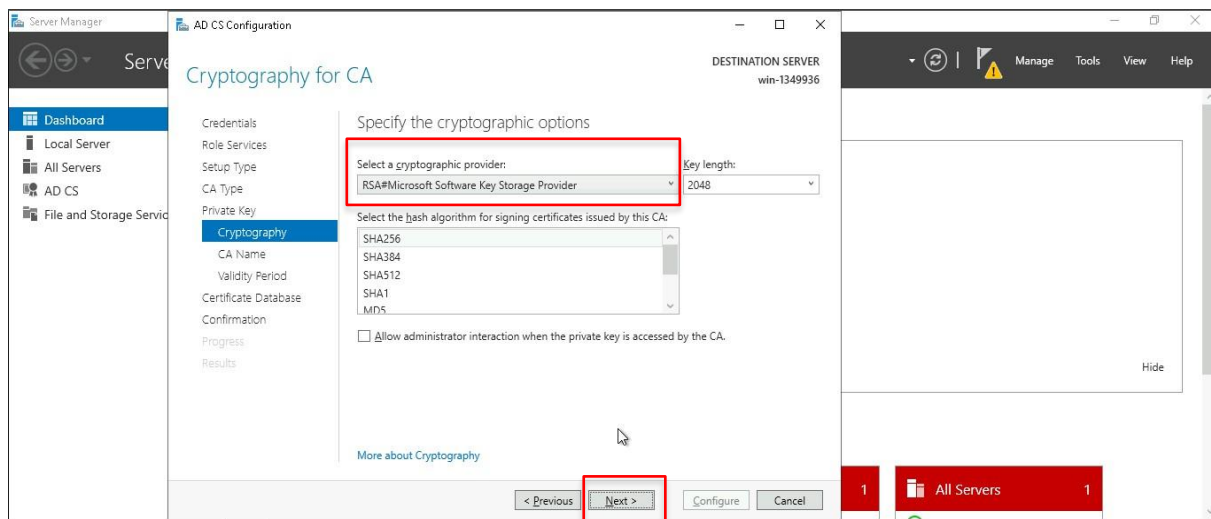
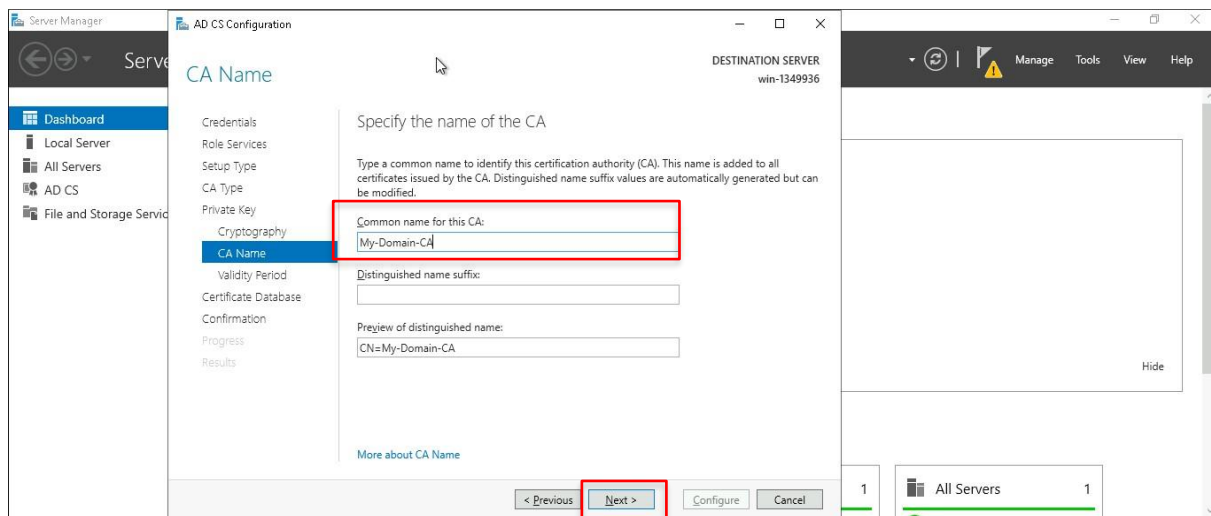## 2.5 Select the **Root CA** option and click **Next**

2.6 Select the **Create a new private key** option, then click **Next**
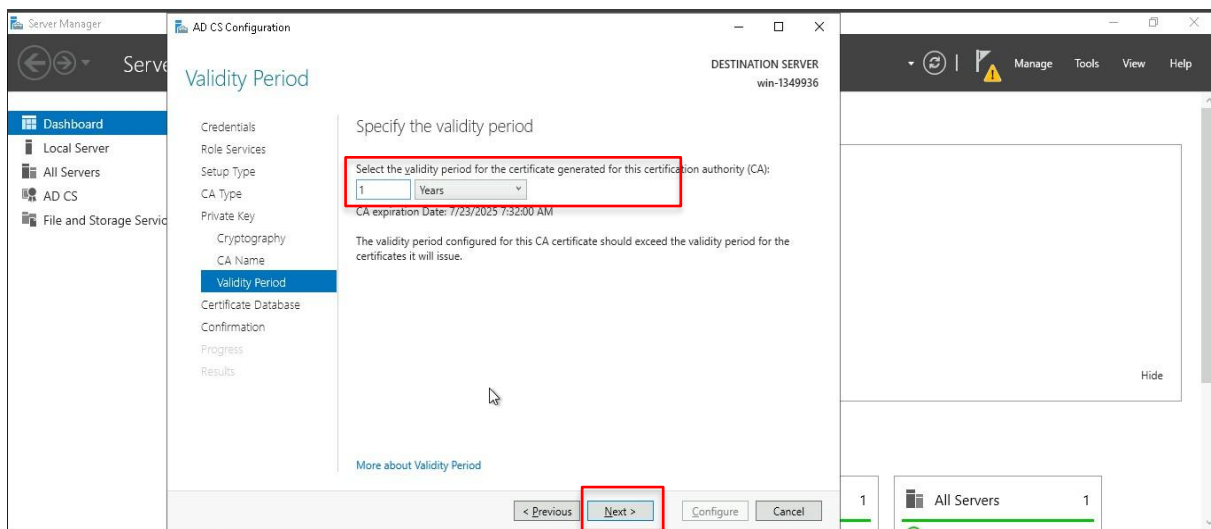
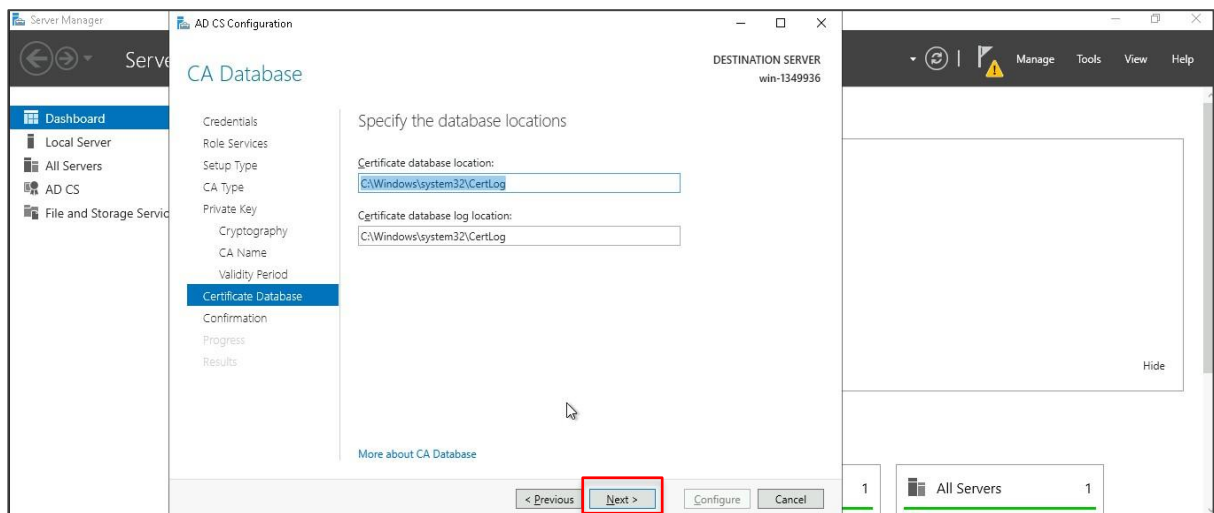## 2.7 Select the cryptographic provider of your choice and click **Next**

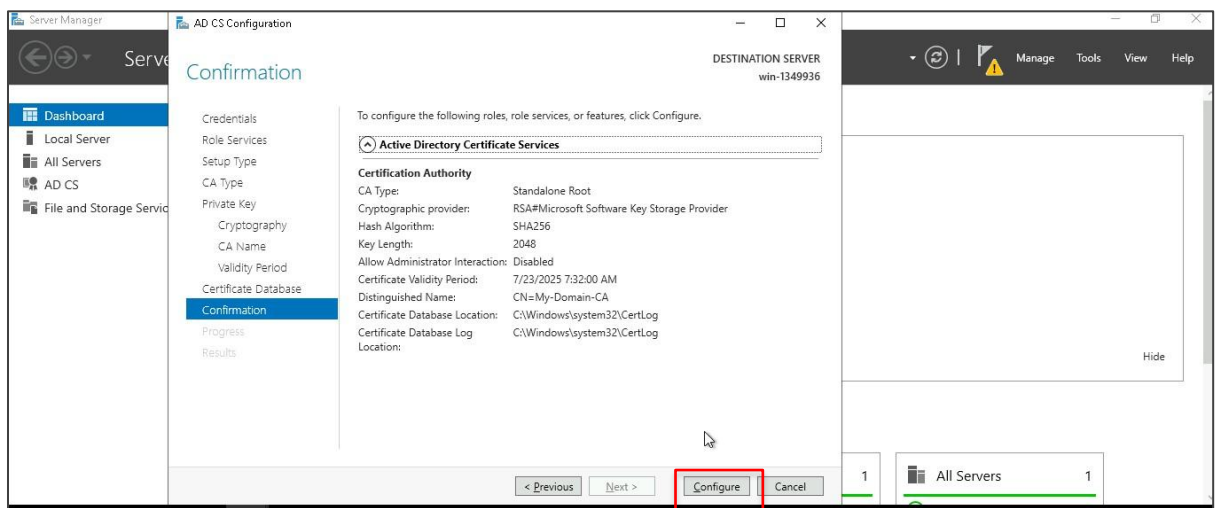## 2.8 Enter the desired **CA** name and click **Next**

2.9 Change the validity period from 5 Years to 1 Years and click **Next**
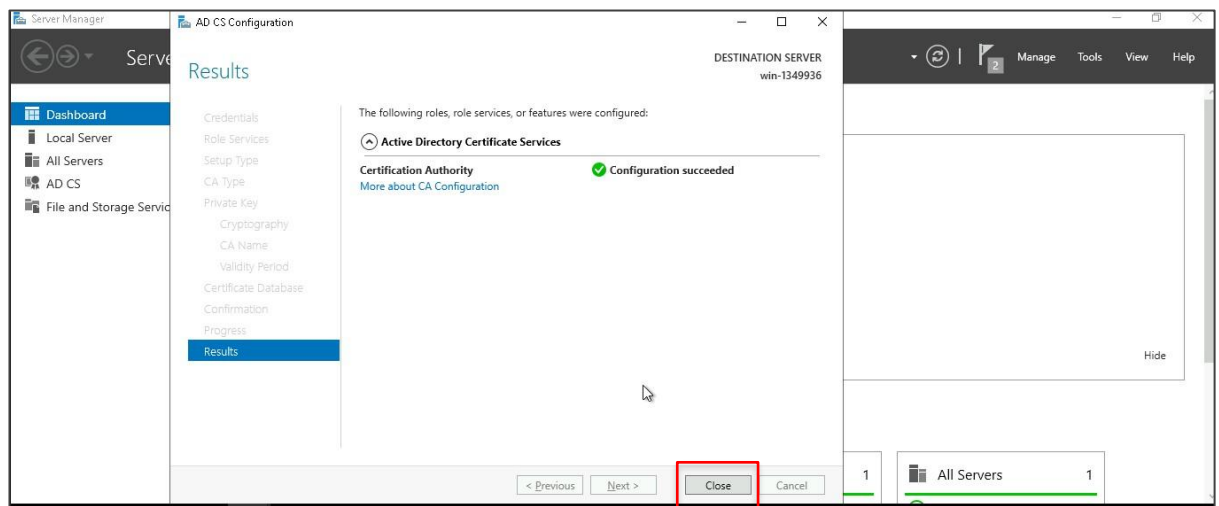

2.10 Keep the default database location settings and click **Next**

2.11 Review to confirm your configuration selections and click **Configure**

2.12 After the configuration is successful, click **Close**

Following these steps, you have successfully installed and configured Active Directory Certificate Services on your Windows Server 2022. This setup forms the backbone of your organization's PKI, enabling secure and encrypted communications.