

# Day 1 – Create SSH Key Pair for Azure Virtual Machine (Azure)

## Challenge

### 100 Days of Cloud – Azure Track

#### Day 1 – Azure Fundamentals

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## Objective

Create an **SSH key pair** in Microsoft Azure that will be used for secure authentication when accessing Azure Virtual Machines.

This task establishes the foundation for secure VM access and validates understanding of Azure identity and resource organization concepts.

**Task** 58:20

The Nautilus DevOps team is strategizing the migration of a portion of their infrastructure to the Azure 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 an SSH key pair with the following requirements:

- The name of the SSH key pair should be `xfusion-kp`.
- The key pair `type` must be `rsa`.

Use below given **Azure Credentials**: (You can run the `showcreds` command on the `azure-client` host to retrieve these credentials)

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## Task Requirements

Requirement	Value
SSH Key Name	xfusion-kp
Key Type	RSA
Cloud Platform	Microsoft Azure

## Concept Overview

An **SSH key pair** is used in Azure to securely authenticate users to Linux-based virtual machines without using passwords.

- **Public Key** → Stored in Azure and associated with the VM
- **Private Key** → Downloaded by the user and kept secure

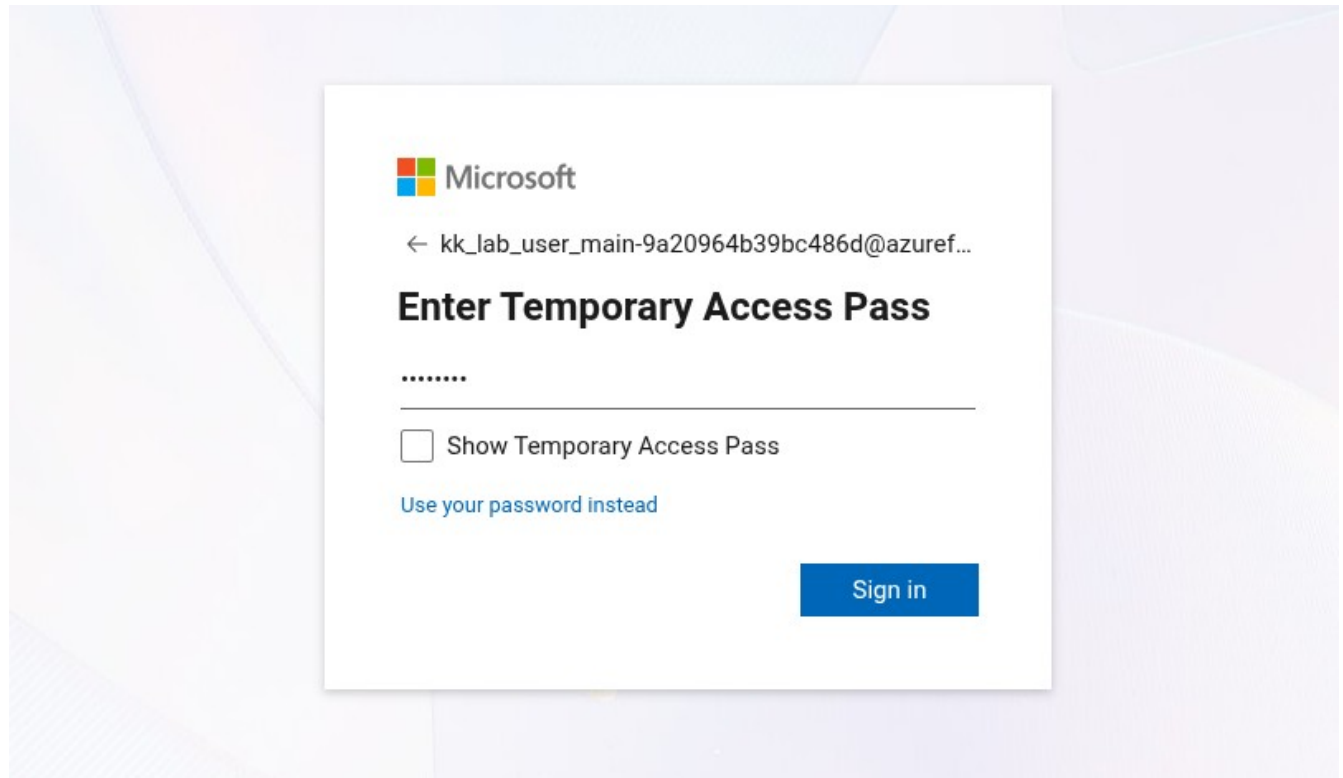
SSH keys improve security and are a best practice for cloud environments.

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## Implementation (Azure Portal)

### Step 1: Log in to Azure Portal

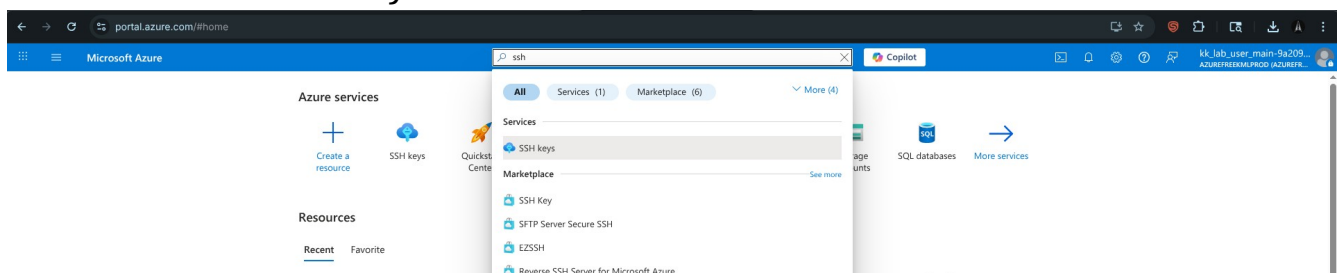
- Accessed the Azure Portal using the credentials provided for the lab environment.



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## Step 2: Navigate to SSH Keys Service

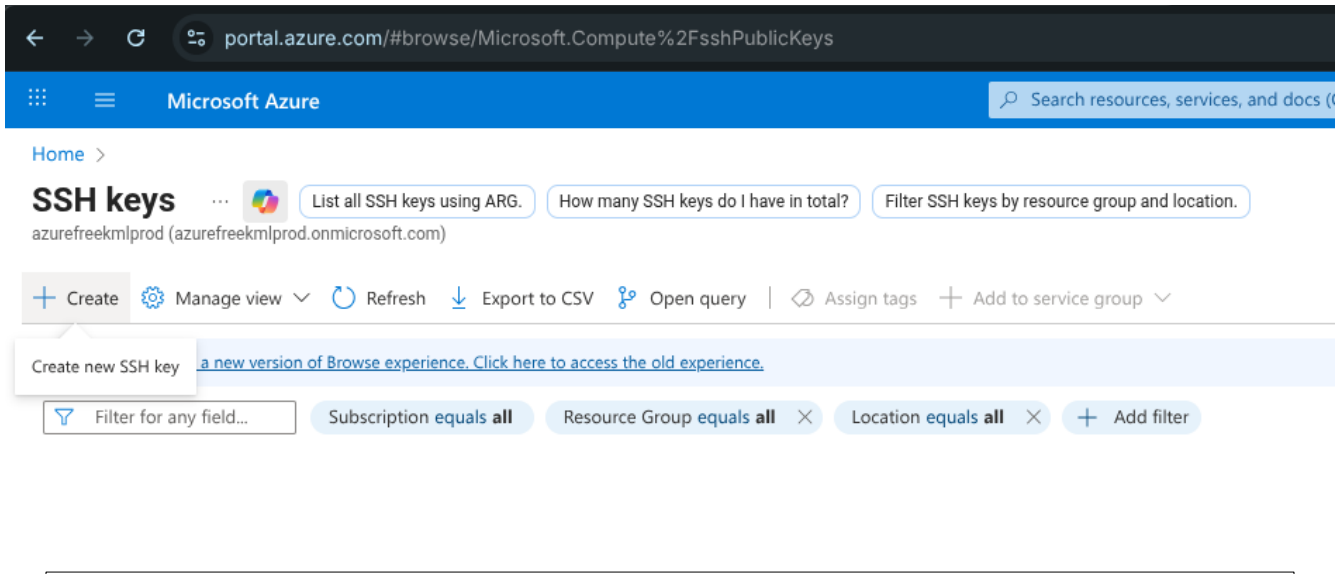
- Used the Azure Portal search bar
- Searched for **SSH keys**
- Selected **SSH keys** under the Services section



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## Step 3: Create a New SSH Key Pair

- Clicked **Create** to add a new SSH key resource



## Step 4: Configure SSH Key Details

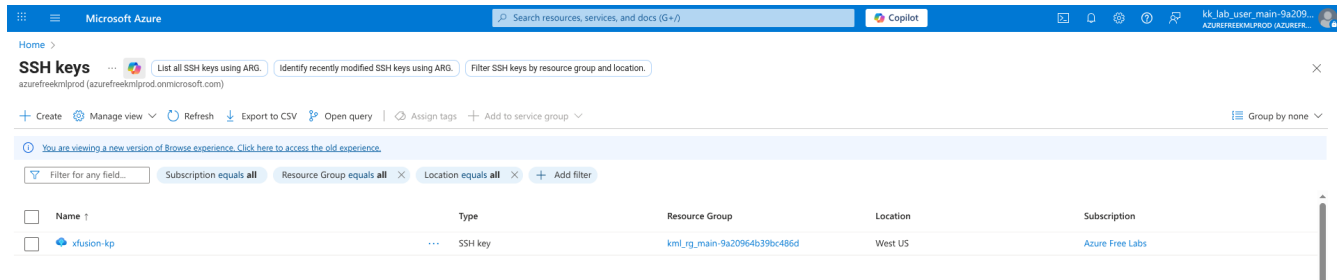
Entered the following configuration: - **Subscription:** Selected the active subscription provided for the task - **Resource Group:** Selected an existing resource group to logically organize Azure resources and simplify management - **Key Pair Name:** xfusion-kp - **Key Type:** RSA

The screenshot shows the 'Create an SSH key' form in the Microsoft Azure portal. The form is divided into two main sections: 'Project details' and 'Instance details'. In the 'Project details' section, the 'Subscription' is set to 'Azure Free Labs' and the 'Resource group' is set to 'kml\_rg\_main-9a20964b39bc486d'. In the 'Instance details' section, the 'Region' is set to '(US) West US', the 'Key pair name' is 'xfusion-kp', the 'SSH public key source' is 'Generate new key pair', and the 'SSH Key Type' is 'RSA SSH Format'. The form also includes a 'Review + create' button and navigation links for 'Previous' and 'Next: Tags'.

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## Step 5: Review and Create

- Reviewed the configuration
- Clicked **Create** to generate the SSH key pair
- Downloaded the private key securely



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## Outcome

- Successfully created an RSA-based SSH key pair named xfusion-kp
- SSH key is now available for use when creating or accessing Azure Virtual Machines

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## Key Takeaways

- SSH keys are the preferred authentication method for Azure Linux VMs
- Proper resource group selection helps with organization and access control
- Secure storage of private keys is critical for cloud security

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## Proof of Work

This task demonstrates hands-on experience with: - Azure Portal navigation - Azure SSH key management - Secure VM authentication setup

Screenshots included provide visual verification of real Azure console work.

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**Next:** Day 2 – Create an Azure Virtual Machine