

# 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.

The screenshot shows a mobile application interface with a dark theme. At the top, there is a navigation bar with the word "Task" on the left and a timer icon with "58:20" on the right. The main content area contains the following text:

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`.

At the bottom of the card, there is a note: "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

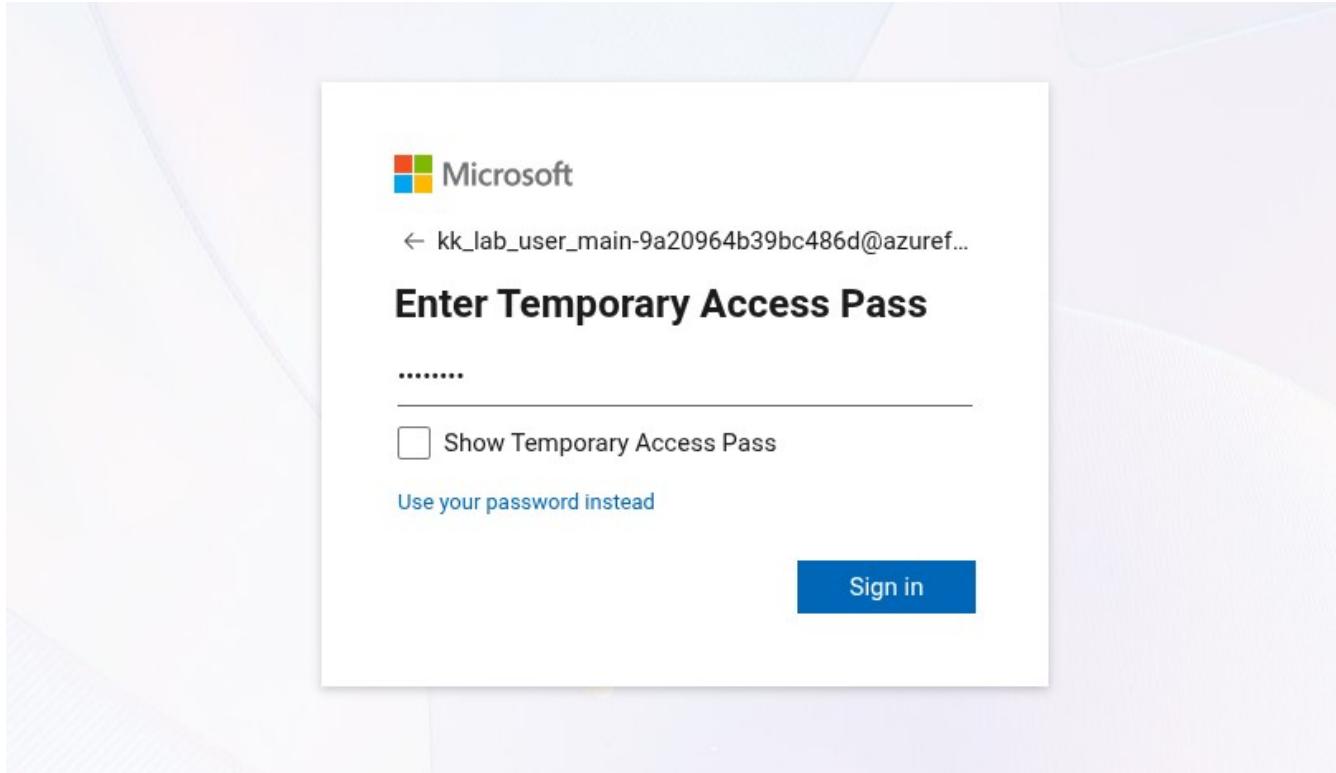
SSH keys improve security and are a best practice for cloud environments.

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## Implementation (Azure Portal)

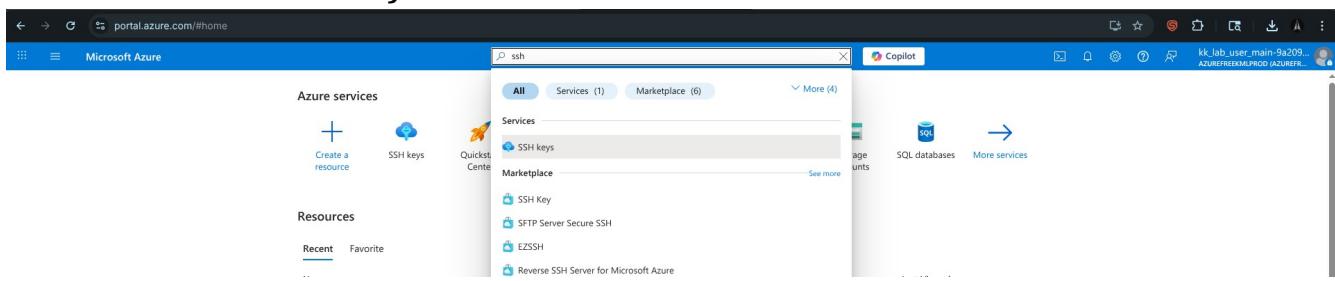
### Step 1: Log in to Azure Portal

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



## Step 2: Navigate to SSH Keys Service

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



## Step 3: Create a New SSH Key Pair

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

Home >

**SSH keys** ...

azurerefkmlprod (azurerefkmlprod.onmicrosoft.com)

+ Create Refresh Assign tags

Create new SSH key [a new version of Browse experience. Click here to access the old experience.](#)

Filter for any field... Subscription equals all Resource Group equals all Location equals all + Add filter

## 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

Home > SSH keys >

Create an SSH key ...

Basics Tags Review + create

Creating an SSH key resource allows you to manage and use public keys stored in Azure with Linux virtual machines.  
Learn more

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \*

Resource group \*   
Create new

Instance details

Region

Key pair name \*

SSH public key source

SSH Key Type

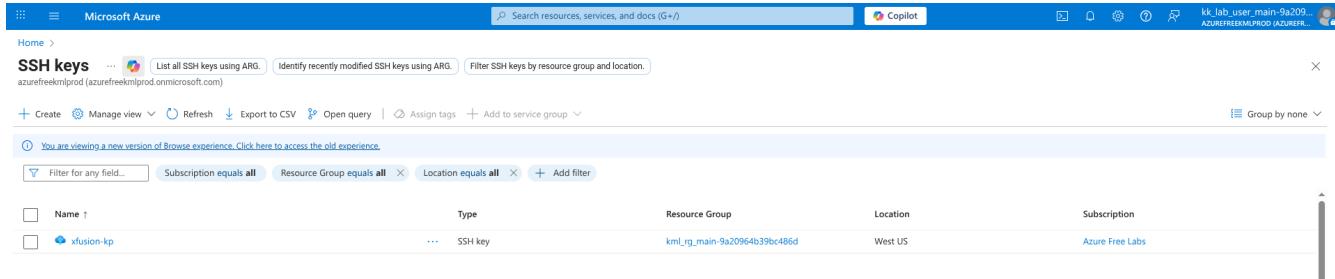
RSA SSH Format  
 Ed25519 SSH Format

Ed25519 provides a fixed security level of no more than 128 bits for 256-bit key, while RSA could offer better security with keys longer than 3072 bits.

**Review + create**

## Step 5: Review and Create

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



Name	Type	Resource Group	Location	Subscription
xfusion-kp	SSH key	kml_rg_main-9a20964b39bc486d	West US	Azure Free Labs

## 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

## 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

## 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.

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