

Day 1 - Create SSH Key Pair for Azure VM

Overview

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:

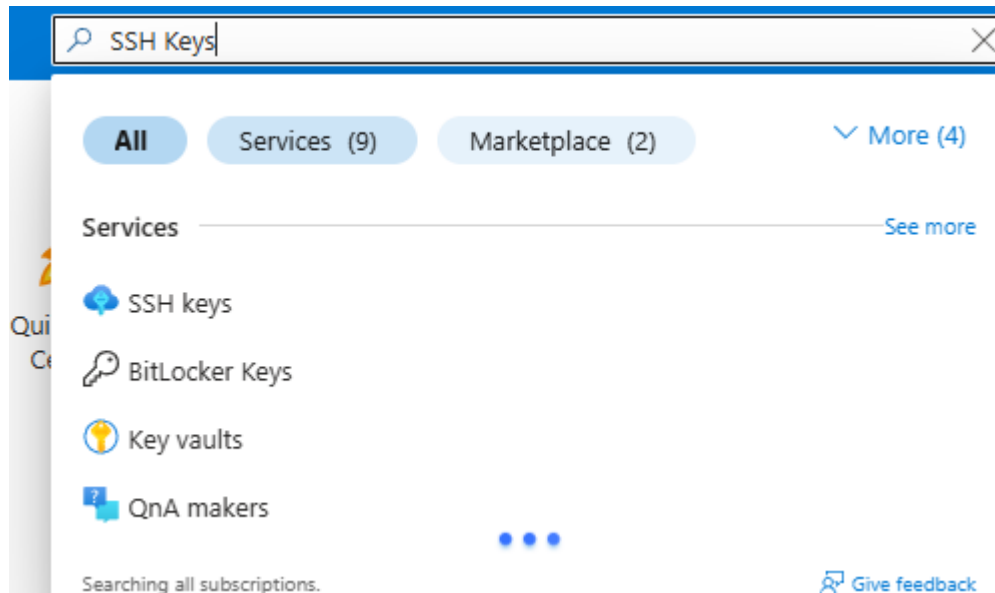
- The name of the SSH key pair should be `xfusion-kp`.
- The key pair `type` must be `rsa`.

What is an Azure SSH Key

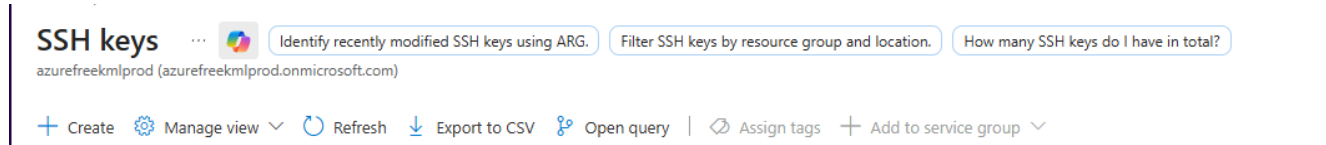
An Azure SSH key is a secure alternative to passwords for accessing cloud servers, working like a digital lock-and-key system where you keep a private key on your computer and place a matching public key on your Azure servers. For the Nautilus DevOps team, creating the `xfusion-kp` SSH key pair provides a foundational security layer that allows engineers to safely access and manage their cloud infrastructure without the risks of traditional password-based authentication.

Solution

First we search for SSH keys in the portal



Now we click on the create button



After we fill out the relevant information in the basics settings:

- **Subscription:** Select your Azure subscription
- **Resource group:** Select an existing resource group or create a new one
- **Region:** Choose your preferred Azure region (e.g., East US, West Europe)
- **Key pair name:** xfusion-kp
- **RSA SSH Format**

A screenshot of the 'Basics' tab in the Azure portal 'SSH keys' page. The page has three tabs: 'Basics', 'Tags', and 'Review + create'. Below the tabs, there is a description: 'Creating an SSH key resource allows you to manage and use public keys stored in Azure with Linux virtual machines.' and a 'Learn more' link. The 'Project details' section contains two dropdown menus: 'Subscription' (set to 'Azure Free Labs') and 'Resource group' (set to 'kml_rg_main-aaafe56610e44c3f'). Below these is a 'Create new' link. The 'Instance details' section contains four fields: 'Region' (set to '(US) West US'), 'Key pair name' (set to 'xfusion-kp' with a green checkmark), 'SSH public key source' (set to 'Generate new key pair'), and 'SSH Key Type' (set to 'RSA SSH Format'). Below the 'SSH Key Type' field, there is a note: '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.'

Now we Review + Create

Once doing this we will get a message "validation pass" and once again we will click create

Create an SSH key

Validation passed

Basics

Tags

Review + create

Basics

Subscription

Resource group

Region

Key pair name

SSH Key format

Azure Free Labs

kml_rg_main-aaafe56610e44c3f

West US

xfusion-kp

RSA

Create

< Previous

Next >

Download a template for automation

A prompt will appear where the key needs to be downloaded.

Generate new key pair


i

An SSH key pair contains both a public key and a private key. **Azure doesn't store the private key.** After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)

Download private key and create resource

Return to create an SSH key resource

After this has been downloaded, we can refresh the portal and see our key has fully been created


SSH keys  How many SSH keys do I have in total? Identify recently modified SSH keys using ARG. List all SSH keys using ARG. ×

azurefreekmlprod (azurefreekmlprod.onmicrosoft.com)

+ Create ⚙️ Manage view ↻ Refresh 📄 Export to CSV 🔗 Open query 🏷️ Assign tags + Add to service group 📊 Group by none

🔔 You are viewing 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

<input type="checkbox"/>	Name ↑	Type	Resource Group	Location	Subscription
<input type="checkbox"/>	 xfusion-kp	SSH key	kml_rg_main-aaafe56610e4...	West US	Azure Free Labs

Security Best Practices

- Store the private key securely and never share it
- Set proper permissions on the private key file: `chmod 600 ~/.ssh/xfusion-kp`
- Back up your private key in a secure location
- Consider using Azure Key Vault for additional key management