

Azure Data Factory Prerequisite (Before HOL)

Exercise : Create Resources

The main task for this exercise are as follows:

1. Setup Azure Data Factory
2. Setup Azure Data Lake Storage Account
3. Setup Azure SQL Database
4. Setup Azure Key Vault

Task 1: Setup Azure Data Factory

Create your data factory: Use the [Azure Portal](#) to create your Data Factory.

1. In Microsoft Edge, go to the Azure portal tab, click on the + **Create a resource** icon, type **data factory**, and then click **Data Factory** from the resulting search, and then click **Create**.
2. In the New Data Factory screen, create a new Data Factory with the following options:

Basic Tab

- **Subscription:** Your subscription
- **Resource group:** adfxx-rg (xx is your initials)
- **Region:** select the location closest to you
- **Name:** adf-xx, where xx are your initials
- **Version:** V2
- Leave other options to their default settings

Git Configuration Tab

- **Check** Configure Git Later

Create Data Factory ...

[Basics](#) [Git configuration](#) [Networking](#) [Advanced](#) [Tags](#) [Review + create](#)

Project details

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

Subscription * ⓘ

Azure Pass - Sponsorship

Resource group * ⓘ

(New) kpmgadfpc

[Create new](#)

Instance details

Region * ⓘ

East US 2

Name * ⓘ

adf-pc-kpmg

Version * ⓘ

V2 (Recommended)

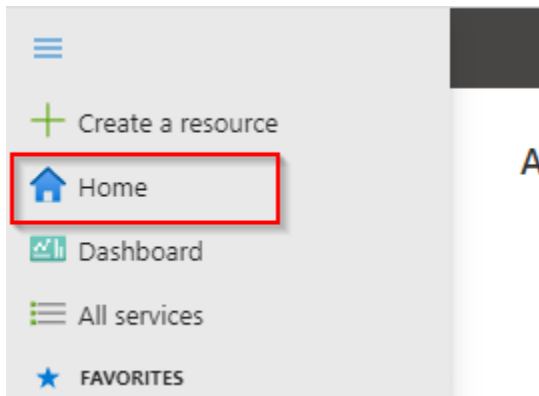
[Review + create](#)

[< Previous](#)

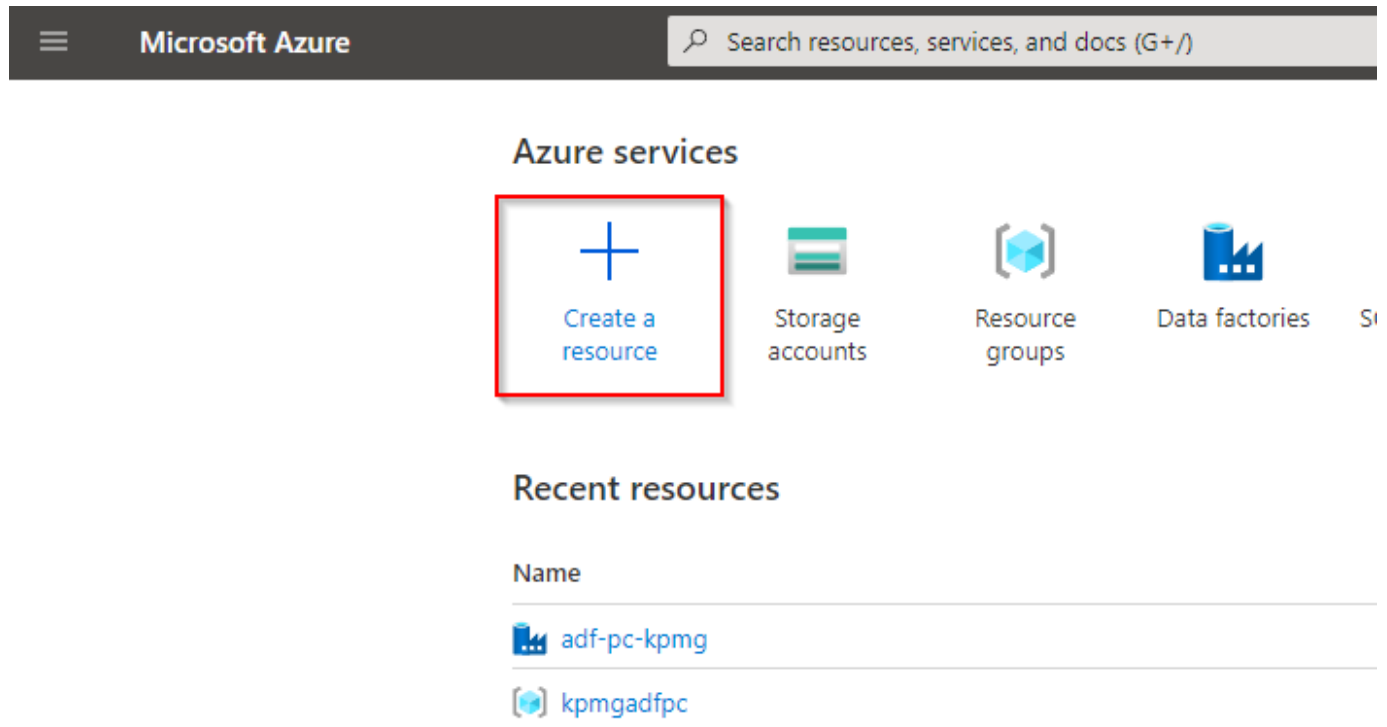
[Next : Git configuration >](#)

Task 2: Setup Azure Data Lake Storage Account

1. In the Azure portal, at the top left of the screen, click on the **Home** hyperlink



2. In the Azure portal, click on the **+ Create a resource** icon.



3. In the New screen, click in the **Search services and marketplace** text box, and type the word **storage account**. Click **Storage account** in the list that appears.

Microsoft Azure

Search resources, services, and docs (G+/)

Home >

Create a resource

Get started

Recently created

Categories

- AI + Machine Learning
- Analytics
- Blockchain

Storage Account

- Storage account
- ioMoVo Storage Add-On
- QuantaStor Virtual Storage Appliance (VSA)
- LOAMICS AlgoEngine
- R&S® Trusted Gate Storage Encryption Solution ...

Getting Started?

4. In the **Storage account** screen, click **Create**.


Microsoft Azure

Search resources, services, and docs

Home > Create a resource >

Storage account

Microsoft

 **Storage account** [Add to Favorites](#)

Microsoft

★ 4.2 (1748 Azure ratings)

Create

5. From the **Create a storage account** screen in the **Basics** tab, create the first storage account with the following settings:
- Under the project details, specify the following settings:
 - Subscription:** the name of the subscription you are using in this lab
 - Resource group:** **adfx-rg**, where **xx** are your initials.
 - Under the Instance details, specify the following settings:

- **Storage account name:** datalakexx, where xx are your initials.
- **Region:** the name of the Azure region which is closest to the lab location.
- **Performance:** Standard.
- **Redundancy:** Locally-redundant storage (LRS)
- Select **Make read access to data available in the event of regional unavailability.**

Microsoft Azure

Search resources, services, and docs (G+/)

Home > Create a resource > Storage account >

Create a storage account

Basics | Advanced | Networking | Data protection | Encryption | Tags | Review + create

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription * Azure Pass - Sponsorship

Resource group * kpmgadfpc
[Create new](#)

Instance details

If you need to create a legacy storage account type, please click [here](#).

Storage account name ⓘ * datastoragepc1

Region ⓘ * (US) East US

Performance ⓘ * ☒ Standard: Recommended for most scenarios (general-purpose v2 account)

[Review + create](#) [< Previous](#) [Next : Advanced >](#)

- Select **Advanced** tab in create storage account
 - Under Data Lake Storage Gen2 details
 - Enable **hierarchical namespace**: mark is Select

Microsoft Azure

Search resources, services, and docs (G+)

[Home](#) > [Create a resource](#) > [Storage account](#) >

Create a storage account

Basics

Advanced

Networking

Data protection

Encryption

Tags

Review + create

Minimum TLS version ⓘ

Version 1.2

Data Lake Storage Gen2

The Data Lake Storage Gen2 hierarchical namespace accelerates big data analytics workloads and enables file-level access control lists (ACLs). [Learn more](#)

Enable hierarchical namespace ☒

SSH File Transfer Protocol (SFTP)

Enables the SSH File Transfer Protocol for your storage account that allows users to access blobs via an SFTP endpoint. Local users need to be created before the SFTP endpoint can be accessed. [Learn more](#)

Enable SFTP ⓘ ☐

ⓘ

You must opt-in on a per subscription basis to enable SFTP for hierarchical namespace accounts.

Blob storage

Review + create

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Next : Networking >

6. In the **Create storage account** screen, click **Review + create**.

Review + create

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Next : Review + create >

7. After the validation of the **Create storage account*** screen, click **Create**.

Create a storage account ...

✓ Validation passed

Basics Advanced Networking Data protection Encryption Tags Review + create

Basics

Subscription	Azure Pass - Sponsorship
Resource Group	kpmgadfpc
Location	eastus
Storage account name	datastoragepc1
Deployment model	Resource manager
Performance	Standard
Replication	Locally-redundant storage (LRS)

Advanced

Secure transfer	Enabled
Allow storage account key access	Enabled
Allow cross-tenant replication	Disabled
Default to Azure Active Directory authorization in the Azure portal	Disabled
Blob public access	Enabled

Create

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[Download a template for automation](#)

8. **Note:** The creation of the storage account will take approximately 90 seconds while it provisions the disks and the configuration of the disks as per the settings you have defined.
9. Once the storage account created create click on **Go to resource**, under **Data storage** blade click on **Containers** then click on **+ Container** and give name **data** then click on Create button.

Home > Storage accounts > datastoragepc1

Storage accounts

Default Directory

Create

Manage view

Filter for any field...

Name

↑

datablobpc

...

datastoragepc1

...

sqlvamqzombfvha5w

...

datastoragepc1 | Containers

Storage account

+ Container

Change access level

Restore containers

Refresh

Delete

Search (Ctrl+/)

Search containers by prefix

Name	Last modified	Public access level
<input type="checkbox"/> \$logs	3/1/2022, 1:28:34 PM	Private

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser (preview)

Data storage

Containers

File shares

Queues

Tables

Security + networking

Networking

Access keys

Shared access signature

Encryption

Security

<

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>

of 1

New container

Name *

data

Public access level

Private (no anonymous access)

Advanced

Create

Discard

Task 3: Create and Configure an Azure SQL Database.

1. In the Azure portal, navigate to the + **Create a resource** blade.
2. In the New screen, click the **Search services and marketplace** text box, and type the word **SQL Database**. Click **SQL Database** in the list that appears.
3. In the **SQL Database** screen, click **Create**.
4. From the **Create SQL Database** screen, create an Azure SQL Database with the following settings:
 - Click the **Basics** tab once this has been done.
 - In the Project details section, type in the following information
 - **Subscription:** the name of the subscription you are using in this lab
 - **Resource group:** **adfx**, where **xx** are your initials.
 - In the Database details section, type in the following information
 - Database name: type in **SQLDB**
 - Server: Create a new server by clicking **Create new** with the following settings and click on **OK**:
 - **Server name:** **sqlserverxx**, where **xx** are your initials
 - **Location:** choose a **location** near to you.
 - **Authentication Method:** Select **SQL Authentication**
 - **Server admin login:** **sqladmin**
 - **Password:** **Pa55w.rd**
 - **Confirm Password:** **Pa55w.rd**
 - click on **OK**

Home > SQL databases > Create SQL Database >

Create SQL Database Server ...

Microsoft

Server details

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

Server name *

sqlservicepc ✓

.database.windows.net

Location *

(US) East US ✓

Authentication

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication [Learn more](#) using an existing Azure AD user, group, or application as Azure AD admin [Learn more](#), or select both SQL and Azure AD authentication.

Authentication method

☒ Use SQL authentication

☐ Use only Azure Active Directory (Azure AD) authentication

☐ Use both SQL and Azure AD authentication

Server admin login *

pcsqladmin ✓

Password *

..... ✓

Confirm password *

..... ✓

OK

- Compute + storage: Select Service tier **Basic**

Compute + storage * ⓘ

General Purpose

Gen5, 2 vCores, 32 GB storage, zone redundant disabled

[Configure database](#)

Microsoft Azure Search resources, services, and docs (G+)


Home > SQL databases > Create SQL Database >

Configure

Feedback

Service and compute tier

Select from the available tiers based on the needs of your workload. The vCore model provides a wide range of configuration controls and offers Hyperscale and Serverless to automatically scale your database based on your workload needs. Alternately, the DTU model provides set price/performance packages to choose from for easy configuration. [Learn more](#)


Service tier Basic (For less demanding workloads) 

[Compare service tiers](#)

DTUs [What is a DTU?](#)

5 (Basic)

Data max size (GB)

 2

Apply

- Then Select **Apply**
- In Backup Storage redundancy select: Locally-redundant backup storage

Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is available when geo-redundant storage is selected.

Backup storage redundancy ⓘ

☒ Locally-redundant backup storage

☐ Zone-redundant backup storage

☐ Geo-redundant backup storage

- Next click the **Networking** tab.
- In the Network detail section: Select **public endpoint**

- In the Firewall rules:
 - Set Allow Azure services and resources to access this server: **Yes**
 - Set Add current client IP address: **yes**

Microsoft Azure

Home > SQL databases >

Create SQL Database

Microsoft

Network connectivity

Choose an option for configuring connectivity to your server via public endpoint or private endpoint. Choosing no access creates with defaults and you can configure connection method after server creation. [Learn more](#)

☐ No access
☒ Public endpoint
☐ Private endpoint

Connectivity method *

Firewall rules

Setting 'Allow Azure services and resources to access this server' to Yes allows communications from all resources inside the Azure boundary, that may or may not be part of your subscription. [Learn more](#)

Setting 'Add current client IP address' to Yes will add an entry for your client IP address to the server firewall.

Allow Azure services and resources to access this server *

Add current client IP address *

Connection policy

Configure how clients communicate with your SQL database server. [Learn more](#)

Connection policy ☐ Default - Uses Redirect policy for all client connections originating inside of Azure and Proxy for all client connections originating outside Azure
☐ Proxy - All connections are proxied via the Azure SQL Database gateways
☐ Redirect - Clients establish connections directly to the node hosting the

5. In the **Create SQL Database** blade, click **Review + create**.

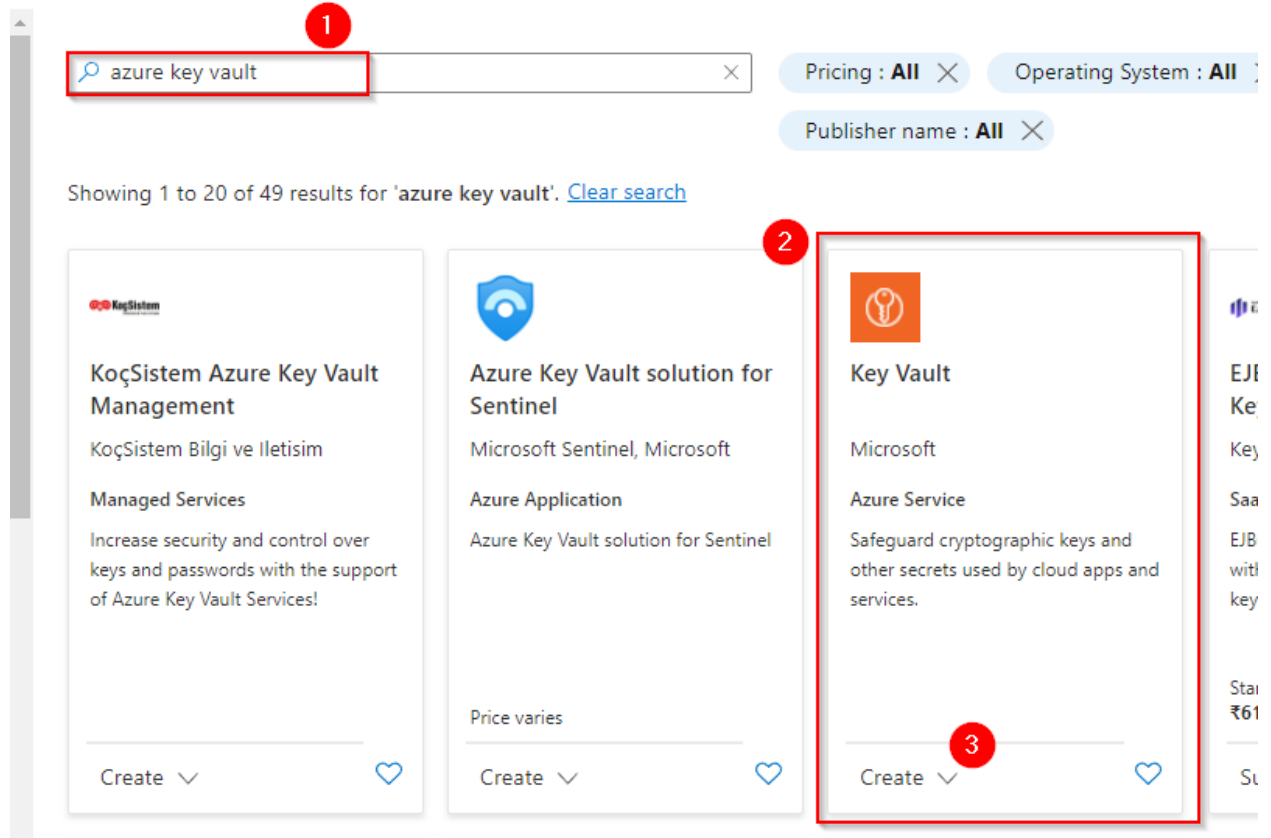
6. After the validation of the **Create SQL Database*** blade, click **Create**.

Note: The provision will takes approximately 4 minutes.

Result: After you completed this exercise, you have an Azure SQL Database instance

Task 4: Setup Azure Key Vault

1. In the Azure portal, navigate to the **+ Create a resource** blade.
2. In the New screen, click the **Search services and marketplace** text box, and type the word **Key Vault**. Click **Key Vault** in the list that appears.
3. In the **SQL Database** screen, click **Create**.



4. In Basic Tab fill the following details:
 - a. Resource Group: adfxx-rg
 - b. Key vault name: akvxx
 - c. Region: same as the resource group
 - d. Pricing Tier: Standard
 - e. Click on Review + create and then create

Project details

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

Subscription *

MSDN Platforms Subscription

Resource group *

ADF-RG

[Create new](#)

Instance details

Key vault name * ⓘ

akv34x

Region *

Central India

Pricing tier * ⓘ

Standard

Recovery options

Soft delete protection will automatically be enabled on this key vault. This feature allows you to recover or permanently delete a key vault and secrets for the duration of the retention period. This protection applies to the key vault and the secrets stored within the key vault.

To enforce soft delete protection, you need to select the retention period for the key vault. The retention period is the duration of time that the key vault and its secrets are protected from deletion.

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Review + create