

Connect notebook using synapse workspace

First, we have to generate Access token in Data bricks

For that we have to go to profile -> settings -> user -> Developer -> Access token -> Manage

The screenshot shows the Microsoft Azure Databricks interface. On the left, there's a sidebar with various options like Workspace, Recents, Catalog, Workflows, Compute, Marketplace, SQL Editor, Queries, Dashboards, Genie, Alerts, Query History, SQL Warehouses, Data Engineering, Job Runs, Data Ingestion, and Pipelines. A red box highlights the 'New' button. The main area has a 'Settings' sidebar with sections for Workspace admin, Appearance, Identity and access, Security, Compute, Development, Notifications, and Advanced. Under 'User', 'Developer' is selected. The main content area is titled 'Developer' with the sub-section 'Access tokens'. It says 'Manage your development settings' and 'Set up secure authentication to Databricks API using access tokens'. There's a 'Manage' button. Below it is the 'SQL query snippets' section, which says 'Configure SQL query snippets. Note: SQL query snippets will be moving to the SQL editor dropdown menu.' and has a 'SQL Editor' button. The bottom section is titled 'Editor settings' with 'General' and two toggle switches: 'Spark tips' (On) and 'Databricks Advisor' (On).

Manage -> Generate new token.

The screenshot shows the 'Access tokens' page under 'User settings > Developer'. The title is 'Access tokens'. It says 'Personal access tokens can be used for secure authentication to the [Databricks API](#) instead of passwords.' Below this is a blue 'Generate new token' button. Further down are fields for 'Comment' (with 'Connecting to synapse'), 'Creation' (with a calendar icon), and 'Expiration'.

Generate new token X

Comment

Connecting to synapse

Lifetime (days)

1

Cancel

Generate

Copy token: xxx

Need to copy token immediately.

User settings > Developer >

Access tokens

Personal access tokens can be used for secure authentication to the [Databricks API](#) instead of passwords.

[Generate new token](#)

| Comment | Creation | Expiration |
|-----------------------|-------------------------|-------------------------|
| Connecting to synapse | 2025-04-14 11:05:22 EDT | 2025-04-15 11:05:22 EDT |

Now we have to create a secret key for access token in key vault

Go to key vault -> Objects -> Secrets -> Generate/ Import

Home > Key vaults > deepthikv

deepthikv | Secrets

Key vault

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Access policies

Resource visualizer

Events

Objects

Keys

Secrets

Certificates

Settings

Monitoring

Automation

Help

Search

Generate/Import

Refresh

Restore Backup

Manage deleted secrets

View sample code

| Name | Type | Status | Expiration date |
|-------------|------|-----------|-----------------|
| Accesskey | | ✓ Enabled | |
| blobkey | | ✓ Enabled | |
| pswd | | ✓ Enabled | |
| sqlurl | | ✓ Enabled | |
| sqlusername | | ✓ Enabled | |

Add or remove favorites by pressing **Ctrl+Shift+F**

Give feedback

Home > Key vaults > deepthikv | Secrets >

Create a secret

Upload options: Manual

Name *: databricksaccesstoken

Secret value *:

Content type (optional):

Set activation date:

Set expiration date:

Enabled: Yes

Tags: 0 tags

Create **Cancel**

Home > Key vaults > deepthikv

deepthikv | Secrets

Key vault

Activity log Access control (IAM) Tags Diagnose and solve problems

Generate/Import Refresh Restore Backup Manage deleted secrets View sample code

The secret 'databricksaccesstoken' has been successfully created.

| Name | Type | Status | Expiration date |
|-----------------------|------|-----------|-----------------|
| databricksaccesstoken | | ✓ Enabled | |

Creating the secret 'databricksaccesstoken'. The secret 'databricksaccesstoken' has been successfully created.

Now we have to create linked services for both Key vault and data bricks.

Go to synapse -> Manage -> Linked services -> New

Microsoft Azure | Synapse Analytics > deepthiworkspace

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Synapse live Validate all Publish all

Accept Reject More options

Linked services

Linked services are much like connection strings, which define the connection information needed for Azure Synapse Analytics to connect to external resources. Learn more ▾

+ New

Filter by name Annotations : Any

Showing 1 - 3 of 3 items

| Name | Type | Related | Annotations |
|--|------------------------------|---------|-------------|
| AzureDataLakeStorage1 | Azure Data Lake Storage Gen2 | 2 | |
| deepthiworkspace-WorkspaceDefaultSqlServer | Azure Synapse Analytics | 0 | |
| deepthiworkspace-WorkspaceDefaultStorage | Azure Data Lake Storage Gen2 | 0 | |

Once we click on new, search for Azure key vault as we have to first create linked services for Azure key vault.

The screenshot shows the Microsoft Azure Synapse Analytics interface. On the left, there's a sidebar with various options like 'Synapse live', 'Validate all', 'Publish all', 'Linked services', 'New', 'Filter by name', and 'Annotations: Any'. Below that is a list of existing linked services: 'AzureDataLakeStorage1', 'deepthiworkspace-WorkspaceDefaultSqlServer', and 'deepthiworkspace-WorkspaceDefaultStorage'. On the right, a modal window titled 'New linked service' is open, with the search bar set to 'Azure key'. It shows a single result: 'Azure Key Vault', which is highlighted with a yellow icon. At the bottom of the modal are 'Continue' and 'Cancel' buttons.

Once you select this option, we have provided all the details, about subscription, what key vault we have to use and then test connection.

This screenshot shows the 'New linked service' configuration page for an 'Azure Key Vault'. The 'Azure key vault name' is set to 'deepthikv'. Under 'Authentication method', it is configured to 'System-assigned managed identity'. The 'Test connection' section shows that the connection is successful. At the bottom, there are 'Create', 'Back', 'Test connection', and 'Cancel' buttons.

New linked service
Azure Key Vault

Azure subscription (1)
Azure subscription 1 (9ff46af1-ef40-400b-a702-80d0a6f9ae2b)

Azure key vault name *
deepthikv

Edit key vault

Authentication method
System-assigned managed identity

Managed identity name: **deepthiworkspace**
Managed identity object ID: **49d14bb7-6653-47a5-aa9e-d4ed2a7fca7f**
Grant workspace service managed identity access to your Azure Key Vault. [Learn more](#)

Test connection
 To linked service To secret

Annotations
+ New

> **Parameters**

> **Advanced** ⓘ

✓ Connection successful
Create Back Test connection Cancel

Once connection is successful, create the linked service.

Microsoft Azure | Synapse Analytics > deepthiworkspace

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Accept | Reject | More options | X

Synapse live | Validate all | Publish all 1

Linked services

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+ New

Filter by name Annotations : Any

Showing 1 - 4 of 4 items

| Name ↑↓ | Type ↑↓ | Related ↑↓ | Annotations ↑↓ |
|--|------------------------------|------------|----------------|
| AzureDataLakeStorage1 | Azure Data Lake Storage Gen2 | 2 | |
| AzureKeyVault | Azure Key Vault | 0 | |
| deepthiworkspace-WorkspaceDefaultSqlServer | Azure Synapse Analytics | 0 | |
| deepthiworkspace-WorkspaceDefaultStorage | Azure Data Lake Storage Gen2 | 0 | |

External connections

Analytics pools

SQL pools

Apache Spark pools

Data Explorer pools (prev...)

Integration

Triggers

Integration runtimes

Security

Access control

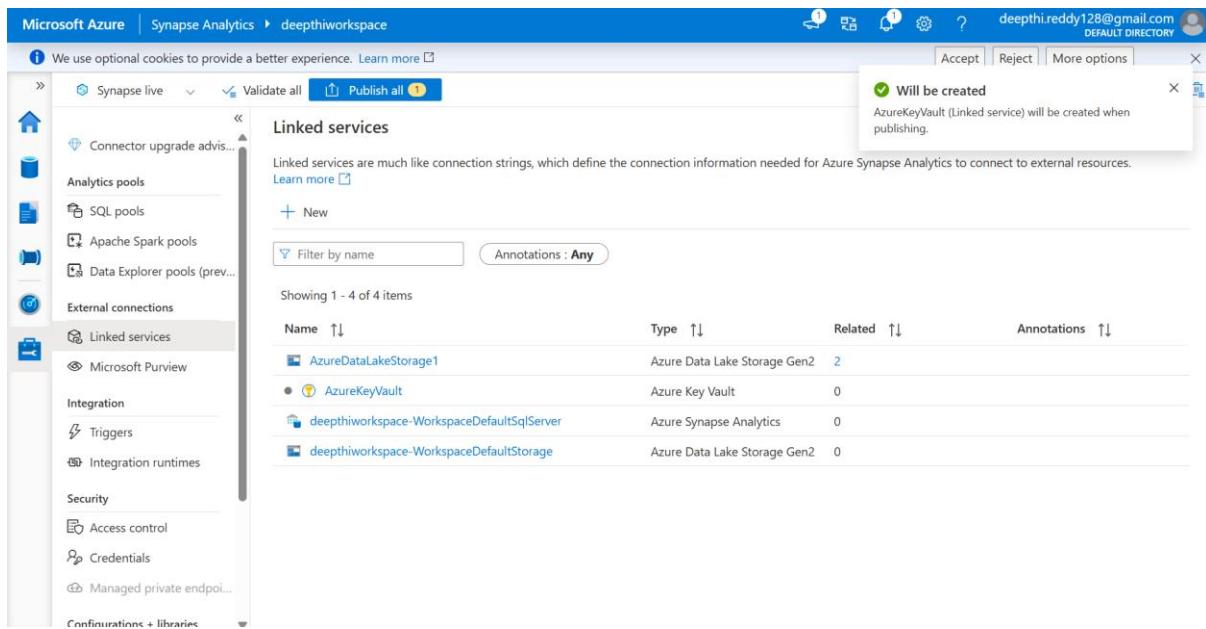
Credentials

Managed private endpoints

Configurations + libraries

Will be created

AzureKeyVault (Linked service) will be created when publishing.



Once it is created publish the changes for it to be saved

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Publish all

You are about to publish all pending changes to the live environment. Learn more ▾

Pending changes (1)

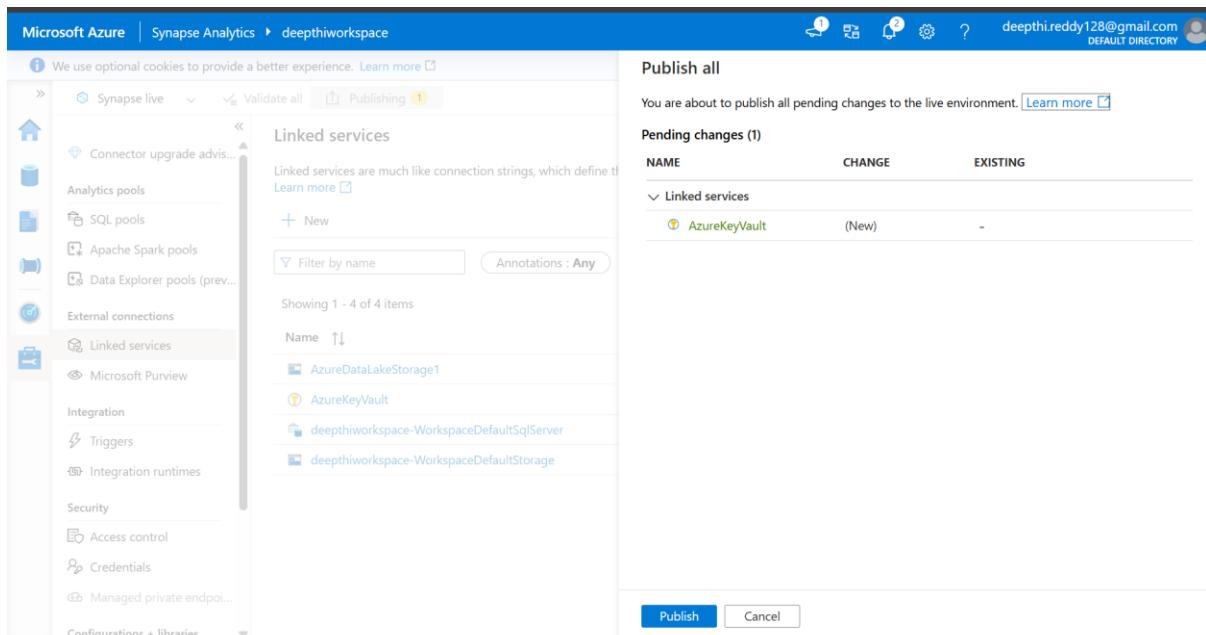
| NAME | CHANGE | EXISTING |
|---------------|--------|----------|
| AzureKeyVault | (New) | - |

Linked services

Showing 1 - 4 of 4 items

| Name ↑↓ | Type ↑↓ | Related ↑↓ | Annotations ↑↓ |
|--|------------------------------|------------|----------------|
| AzureDataLakeStorage1 | Azure Data Lake Storage Gen2 | 2 | |
| AzureKeyVault | Azure Key Vault | 0 | |
| deepthiworkspace-WorkspaceDefaultSqlServer | Azure Synapse Analytics | 0 | |
| deepthiworkspace-WorkspaceDefaultStorage | Azure Data Lake Storage Gen2 | 0 | |

Publish Cancel



Microsoft Azure | Synapse Analytics > deepthiworkspace

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Accept | Reject | More options | X

Synapse live | Validate all | Publish all

Linked services

Linked services are much like connection strings, which define the connection information needed for Azure Synapse Analytics to connect to external resources. Learn more ▾

+ New

Filter by name Annotations : Any

Showing 1 - 4 of 4 items

| Name ↑↓ | Type ↑↓ | Related ↑↓ | Annotations ↑↓ |
|--|------------------------------|------------|----------------|
| AzureDataLakeStorage1 | Azure Data Lake Storage Gen2 | 2 | |
| AzureKeyVault | Azure Key Vault | 0 | |
| deepthiworkspace-WorkspaceDefaultSqlServer | Azure Synapse Analytics | 0 | |
| deepthiworkspace-WorkspaceDefaultStorage | Azure Data Lake Storage Gen2 | 0 | |

External connections

Analytics pools

SQL pools

Apache Spark pools

Data Explorer pools (prev...)

Integration

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Integration runtimes

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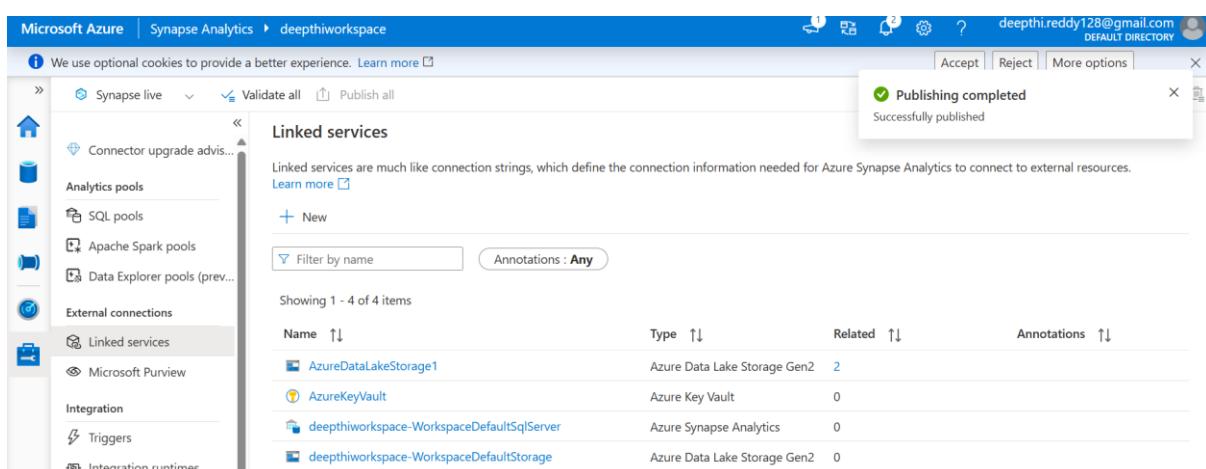
Credentials

Managed private endpoints

Configurations + libraries

Publishing completed

Successfully published



Now create Data bricks linked service

Click on new and search for Databricks.

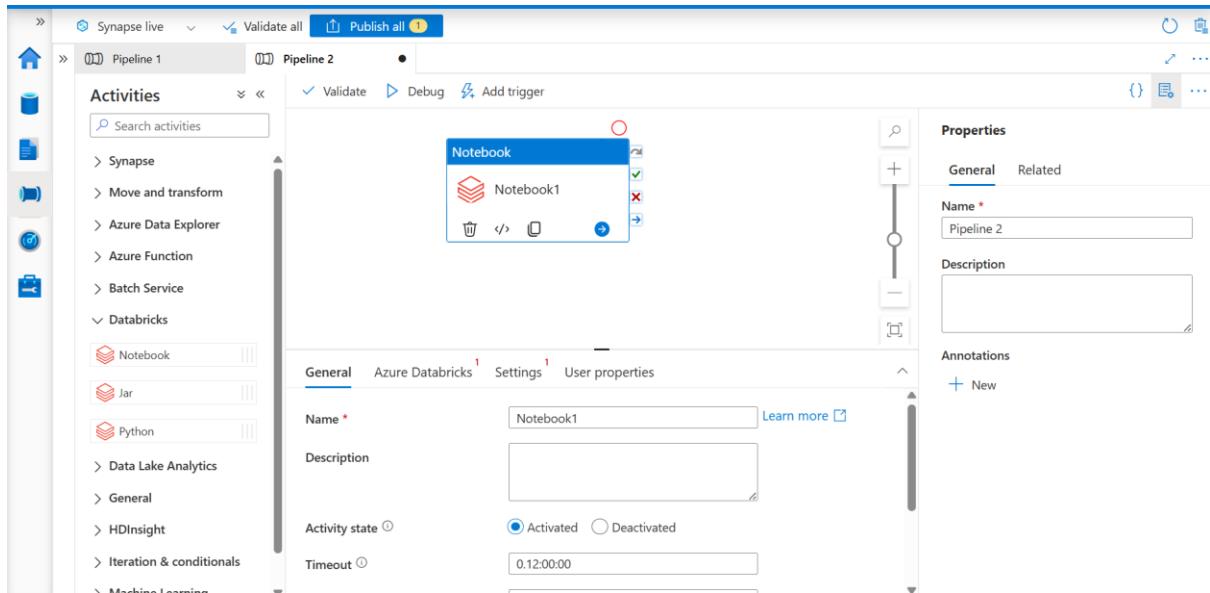
The screenshot shows the Azure portal interface. On the left, there's a sidebar with various service icons like Home, Analytics pools, SQL pools, etc. The 'External connections' section is expanded, and 'Linked services' is selected. In the main area, the title is 'New linked service'. A search bar at the top right contains the text 'Databricks'. Below it, tabs for 'All', 'Azure', 'Compute', 'Database', 'File', and 'Gen' are shown, with 'All' being active. Two options are listed: 'Azure Databricks Delta Lake' (with a blue triangle icon) and 'Azure Databricks' (with a red stacked blocks icon). At the bottom right of the dialog are 'Continue' and 'Cancel' buttons.

Provide all required details and test connection

The screenshot shows the 'Edit linked service' dialog for 'Azure Databricks'. The left sidebar is identical to the previous screenshot. The main area has a title 'Edit linked service' with 'Azure Databricks' selected. Under 'Account selection method', 'AutoResolveIntegrationRuntime' is checked. The 'Databrick Workspace URL' field contains the value 'https://adb-4390551724307171.11.azuredatabricks.net'. The 'Authentication type' dropdown is set to 'Access Token'. The 'Access token' field is filled with a redacted password. Under 'Select cluster', 'Existing interactive cluster' is selected, and the 'Existing cluster ID' dropdown contains the value '0329-172950-hyyjkhc'. There's also an 'Annotations' section with a '+ New' button. At the bottom are 'Save' and 'Cancel' buttons, and a 'Test connection' button on the right.

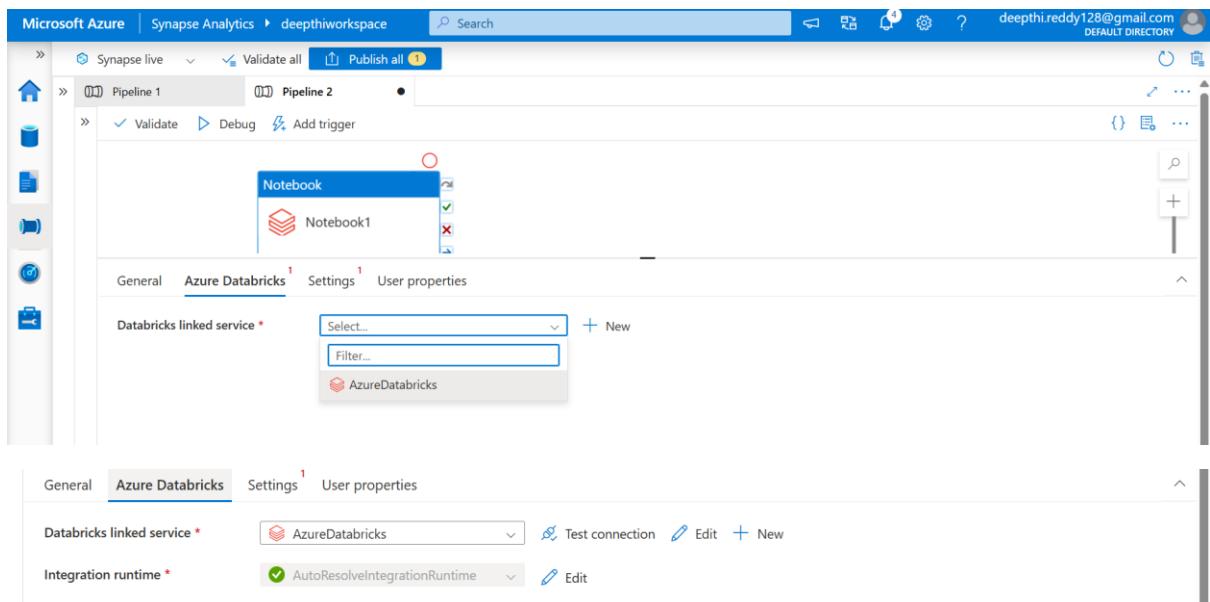
After linked services are created, create a pipeline, to run the notebook.

Go to Integrate -> new Pipeline -> drag and drop notebook from data bricks



Now go to Azure data bricks section and choose linked service.

As we already created a linked service, we can directly use it.



Now go to settings and choose which note book we want to run.

Validate and run pipeline.

If cluster is on it will take less time, but if cluster is off first, cluster will start and once it is up and running then it will run the notebook.

| Activity name | Activity st... | Activit... | Run start | Duration | Integration runtime | User prop... | Act |
|---------------|----------------|------------|------------------------|----------|--|--------------|-----|
| Notebook1 | Succeeded | Notebook | 4/14/2025, 11:57:09 AM | 24s | AutoResolveIntegrationRuntime (Canada Central) | | 66! |

Pipeline ran successfully.