

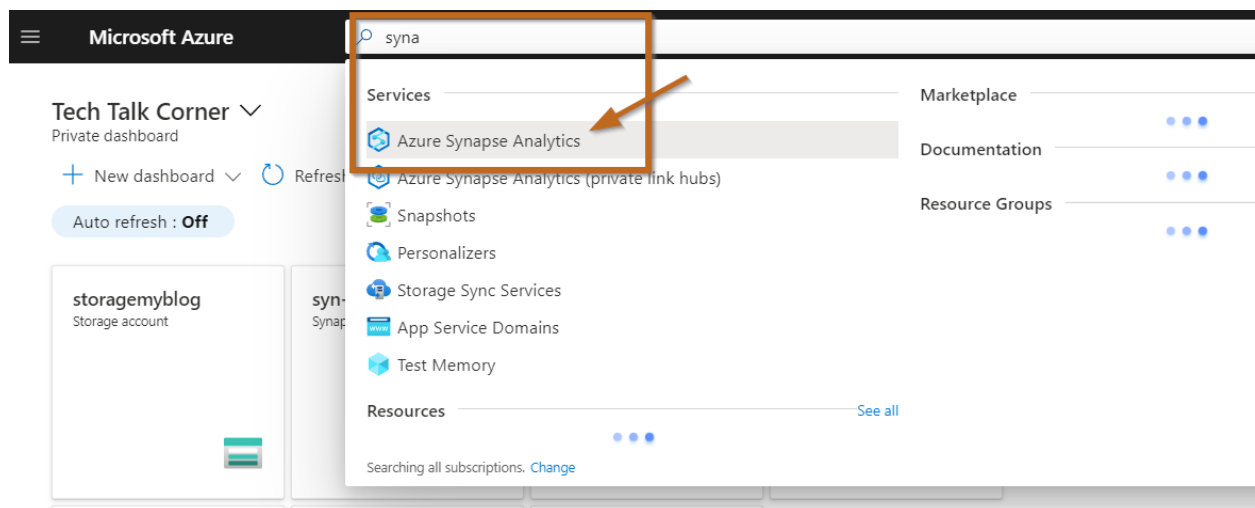
## Pre-requisite 2: Create Azure Synapse Analytics

This exercise outlines the steps to follow to create an Azure Synapse Analytics Workspace using the Azure portal.

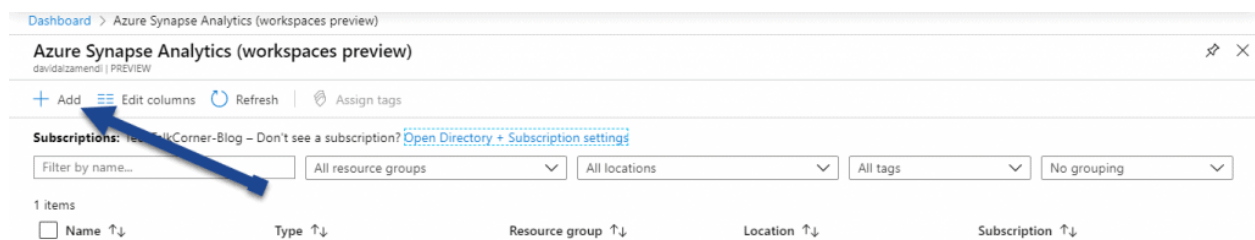
**Duration: 15 minutes**

### Step 1 - Find Azure Synapse Analytics in Azure Portal

Find the service:



Click Add.



## Step 2 - Basic Configuration

### Create Synapse workspace ...

#### Project details

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

Subscription *	TechTalkCorner
Resource group *	(New) course
	<a href="#">Create new</a>
Managed resource group	mg-synapseanalytics

#### Workspace details

Name your workspace, select a location, and choose a primary Data Lake Storage Gen2 file system to serve as the default location for logs and job output.

Workspace name *	synwsanalytics
Region *	Australia East
Select Data Lake Storage Gen2 *	<input checked="" type="radio"/> From subscription <input type="radio"/> Manually via URL
Account name *	dlsdataaudev
	<a href="#">Create new</a>
File system name *	(New) dlsfs
	<a href="#">Create new</a>

**i** We will automatically grant the workspace identity data access to the specified Data Lake Storage Gen2 account, using the [Storage Blob Data Contributor](#) role. To enable other users to use this storage account after you create your workspace, perform these tasks:

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

#### Project Details

Select the subscription, the resource group where you'd like to create an Azure Synapse Analytics Workspace and the managed resource group that is created automatically by Microsoft.

#### Workspace Details

- **Workspace name:** surprisingly you cannot use the naming convention highlighted by [Microsoft](#) (syn-), so you will stick with synws (Synapse Workspace).
- **Region:** select the region where you want to host your service.
- **Select Data Lake Storage Gen2:** use an existing account in your subscription, external subscription or create a new one. After the creation of an Azure Synapse Analytics Workspace, it will add permissions directly to the storage account.

## Step 3 - Security

Create SQL Server credentials for the SQL pools (we will not use these credentials in the course but they are required).

## Create Synapse workspace ...

### SQL administrator credentials

Provide credentials that can be used for administrator access to the workspace's SQL pools. If you don't provide a password, one will be automatically generated. You can change the password later.

SQL Server admin login * ⓘ	<input type="text" value="sqladminuser"/>
SQL Password ⓘ	<input type="password" value="....."/> ✓
Confirm password	<input type="password" value="....."/> ✓

### System assigned managed identity permission

Select to grant the workspace network access to the Data Lake Storage Gen2 account using the workspace system identity.  
[Learn more](#) ↗

- ☐ Allow network access to Data Lake Storage Gen2 account. ⓘ
- ⓘ The selected Data Lake Storage Gen2 account does not restrict network access using any network access rules, or you selected a storage account manually via URL under Basics tab. [Learn more](#) ↗

### Workspace encryption

⚠ Double encryption configuration cannot be changed after opting into using a customer-managed key at the time of workspace creation.

Choose to encrypt all data at rest in the workspace with a key managed by you (customer-managed key). This will provide double encryption with encryption at the infrastructure layer that uses platform-managed keys. [Learn more](#) ↗

Double encryption using a customer-managed key ☐ Enable ☒ Disable

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


## Step 4 - Networking


Lastly, configure the Networking section as follow.

[\\* Basics](#) [\\* Security](#) **[Networking](#)** [Tags](#) [Review + create](#)


Configure networking options for your workspace.

### Managed virtual network


Choose whether to set up a dedicated Azure Synapse-managed virtual network for your workspace. [Learn more](#) 

Managed virtual network 

☐ Enable ☒ Disable

 To control public network access to your Synapse workspace, you must enable managed virtual network.


### Firewall rules

 Azure Synapse Studio and other client tools will only connect to the workspace endpoints if this setting is selected. Connections from specific IP addresses or all Azure services can be allowed or disallowed after the workspace is provisioned.

Allow connections from all IP addresses to your workspace's endpoints. You can restrict these permissions to just Azure datacenter IP addresses and/or specific IP address ranges after creating the workspace.

☒ Allow connections from all IP addresses

### Encrypted connections

Azure Synapse Analytics applies TLS1.2 encryption protocol for all network connections. [Learn more](#) 

Minimum TLS version

TLS 1.2



[Review + create](#)

[< Previous](#)

[Next: Tags >](#)

## Step 5 - Tags

Make sure you create/include some tags that facilitate the administration.

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

Dashboard > Create Synapse workspace

## Create Synapse workspace

Basics \* Security + networking \* **Tags** Summary

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [learn more](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name ⓘ	Value ⓘ	Resource	
Environment	: Test	Synapse workspace	🗑️ ...
Created By	: David A	Synapse workspace	🗑️ ...
	:	Synapse workspace	

**Review + create** < Previous Next: Summary >

Waiting for login.microsoftonline.com...

## Step 6 - Summary

Below is the last screen before you create an Azure Synapse Analytics Workspace!

Dashboard &gt; Create Synapse workspace

## Create Synapse workspace

✓ Validation succeeded

Basics \* Security + networking \* Tags Summary

### Product Details

Azure Synapse Analytics workspace  
by Microsoft  
[Terms of use](#) | [Privacy policy](#)

SQL On-demand est. cost/TB ⓘ  
**6.87 AUD**

### Terms

By clicking Create, I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see [Azure Marketplace Terms](#).

### Basics

Subscription	TechTalkCorner-Blog
Resource group	rg-blog
Region	Australia East
Workspace name	(new) synwsanalytics
Account Name	https://dlsstorageaccount.dfs.core.windows.net
File system	dlsfs

### Security + networking

Admin username	sqladminuser
Password	*****
Grant CONTROL to the workspace's managed identity on all SQL pools and SQL on-demand.	Yes
Managed virtual network	No
Allow connections from all IP addresses	No

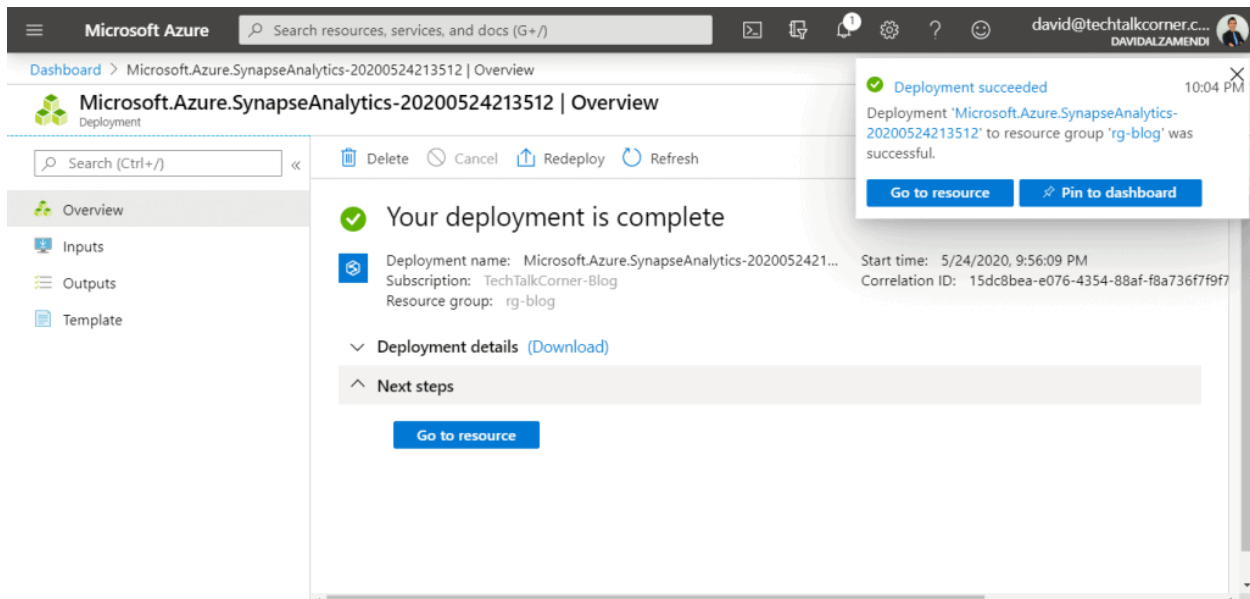
### Tags

Environment	Test (Synapse workspace)
Created By	David A (Synapse workspace)

[Create](#)

&lt; Previous

Next &gt;

[Download a template for automation](#)

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

Dashboard > Microsoft.Azure.SynapseAnalytics-20200524213512 | Overview

**Microsoft.Azure.SynapseAnalytics-20200524213512 | Overview**

Deployment

Search (Ctrl+/)

Delete Cancel Redeploy Refresh

✓ Your deployment is complete

Deployment name: Microsoft.Azure.SynapseAnalytics-2020052421...  
Subscription: TechTalkCorner-Blog  
Resource group: rg-blog

Start time: 5/24/2020, 9:56:09 PM  
Correlation ID: 15dc8bea-e076-4354-88af-f8a736f7f9f7

Deployment details (Download)

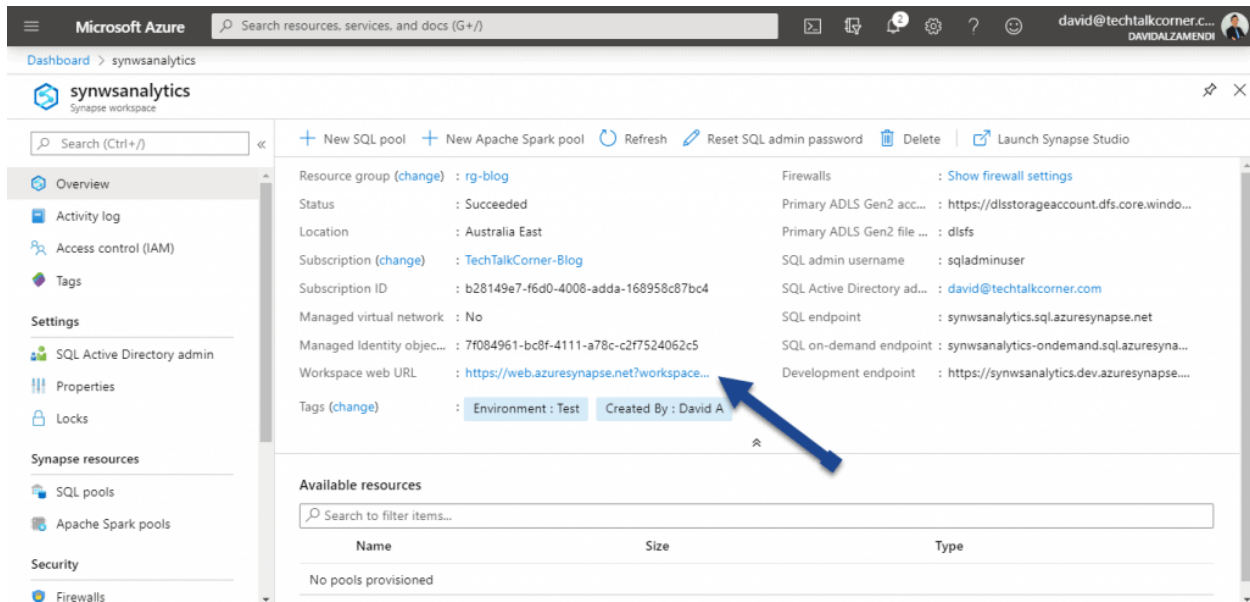
Next steps

Go to resource

Deployment succeeded 10:04 PM  
Deployment 'Microsoft.Azure.SynapseAnalytics-20200524213512' to resource group 'rg-blog' was successful.  
Go to resource Pin to dashboard

## Step 7 – Access

Now, if you access the link for Azure Synapse Analytics Workspaces, you will have full access.



Microsoft Azure | Search resources, services, and docs (G+/J) | david@techtalkcorner.c... DAVIDALZAMENDI

Dashboard > synwsanalytics

**synwsanalytics**  
Synapse workspace

Search (Ctrl+/)

+ New SQL pool + New Apache Spark pool Refresh Reset SQL admin password Delete Launch Synapse Studio

**Overview**

- Activity log
- Access control (IAM)
- Tags
- Settings**
- SQL Active Directory admin
- Properties
- Locks
- Synapse resources**
- SQL pools
- Apache Spark pools
- Security**
- Firewalls

Resource group (change) : rg-blog

Status : Succeeded

Location : Australia East

Subscription (change) : TechTalkCorner-Blog

Subscription ID : b28149e7-f6d0-4008-adda-168958c87bc4

Managed virtual network : No

Managed Identity objec... : 7f084961-bc8f-4111-a78c-c2f7524062c5

Workspace web URL : <https://web.azuresynapse.net/workspace...>

Tags (change) : Environment : Test Created By : David A

Firewalls : Show firewall settings

Primary ADLS Gen2 acc... : https://disstorageaccount.dfs.core.windo...

Primary ADLS Gen2 file ... : disfs

SQL admin username : sqladminuser

SQL Active Directory ad... : david@techtalkcorner.com

SQL endpoint : synwsanalytics.sql.azuresynapse.net

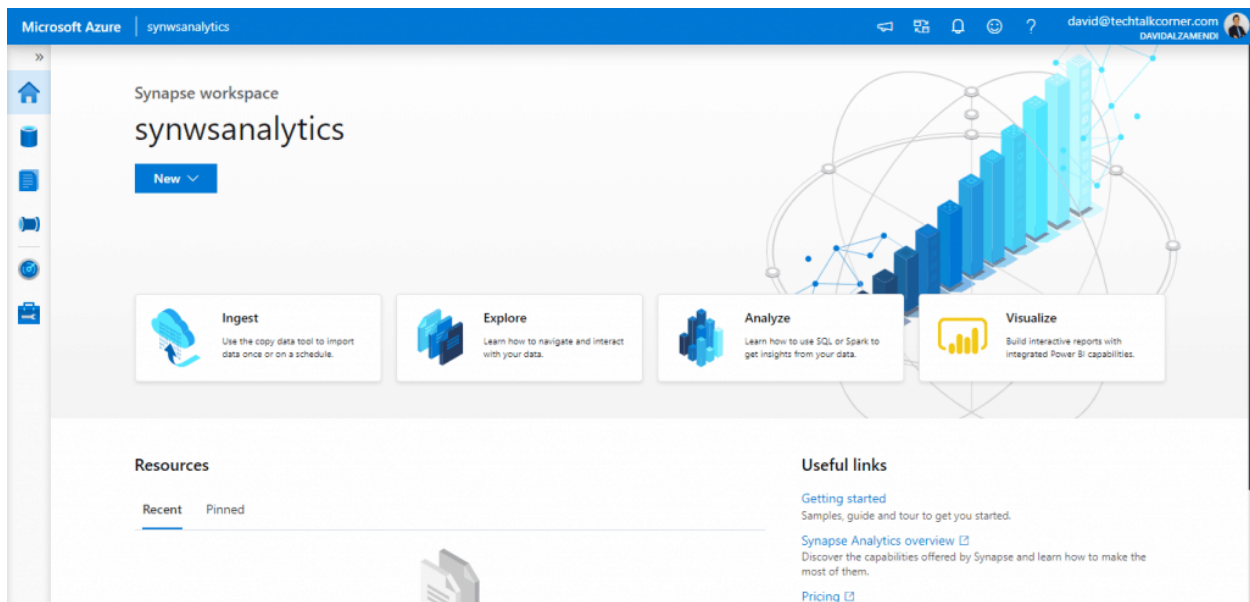
SQL on-demand endpoint : synwsanalytics-ondemand.sql.azuresyna...

Development endpoint : https://synwsanalytics.dev.azuresynapse....

**Available resources**

Search to filter items...

Name	Size	Type
No pools provisioned		



Microsoft Azure | synwsanalytics | david@techtalkcorner.com DAVIDALZAMENDI

Synapse workspace

**synwsanalytics**

New

**Ingest**  
Use the copy data tool to import data once or on a schedule.

**Explore**  
Learn how to navigate and interact with your data.

**Analyze**  
Learn how to use SQL or Spark to get insights from your data.

**Visualize**  
Build interactive reports with integrated Power BI capabilities.

**Resources**

Recent Pinned

**Useful links**

- Getting started  
Samples, guide and tour to get you started.
- Synapse Analytics overview  
Discover the capabilities offered by Synapse and learn how to make the most of them.
- Pricing