

Azure Synapse Analytics

Create a pipeline to migrate data from SQL DB on premise to Azure Synapse Analytics & make it run on shedule (Every Wednesday at 10 AM).

The screenshot displays the Microsoft Azure Data Factory portal interface. The top navigation bar shows the user is logged in as Ashfaq.Pathan@ifi.tech. The main content area is titled 'Details' and shows the configuration and execution details of a pipeline activity.

Activity Details:

- Used DIUs: 4
- Used parallel copies: 1
- Duration: 00:00:04
- Details:
 - Queue: 00:00:02
 - Transfer:
 - Time to first byte: 00:00:00
 - Reading from source: 00:00:00
 - Writing to sink: 00:00:00
- Azure Blob Storage → Azure Synapse Analytics
- Start time: 7/7/21, 6:41:44 PM
- Used DIUs: 2
- Used parallel copies: 1
- Copy method: PolyBase
- Duration: 00:00:10
- Details:
 - Queue: 00:00:06
 - Transfer: 00:00:03
- Data consistency verification: Unsupported

Activity Run Summary:

Activity run id: 14e6c507-9671-4166-b9b1-ff4fab35aeb0

The summary shows a successful migration from an SQL server to Azure Synapse Analytics. The data flow is as follows:

```
graph LR; SQL[SQL server] -- Succeeded --> Blob[Azure Blob Storage Region: West US 2]; Blob -- Succeeded --> Synapse[Azure Synapse Analytics Region: West US 2]
```

Performance Metrics:

- Data read: 58.781 KB
- Rows read: 450
- Peak connections: 1
- Copy duration: 00:00:14
- Throughput: 4.199 KB/s
- Data written: 63.888 KB
- Rows written: 450

Copy Details:

- Copy duration: 00:00:14
- Throughput: 4.199 KB/s
- SQL server → Azure Blob Storage

Microsoft Azure | xyz01adfx

pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Name * Copy data1

Description

Timeout 7:00:00:00

Retry 0

Publish all

You are about to publish all pending changes to the live environment. [Learn more](#)

Pending changes (4)

NAME	CHANGE	EXISTING
Pipelines		
pipeline1	(New)	-
Datasets		
SqlServerTable1	(New)	-
AzureSynapseAnalyticsTab...	(New)	-
Triggers		
trigger1	(New)	-

Publish Cancel

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pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Name * Copy data1

Description

Timeout 7:00:00:00

Retry 0

New trigger

trigger1

Description

Type * Schedule

Start date * 07/07/2021 10:00 AM

Time zone * Chennai, Kolkata, Mumbai, New Delhi (UTC+5:30)

Recurrence * Every 7 Day(s)

Advanced recurrence options

Execute at these times

Hour 10

OK Cancel

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pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Name * Copy data1

Description

Timeout 7:00:00:00

Retry 0

New trigger

Type * Schedule

Start date * 07/07/2021 1:06 PM

Time zone * Chennai, Kolkata, Mumbai, New Delhi (UTC+5:30)

Recurrence * Every 7 Day(s)

Advanced recurrence options

Execute at these times

Hours 10

Minutes 0

Schedule execution times

OK Cancel

Microsoft Azure | xyz01adfx

pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Name * Copy data1

Description

Timeout 7:00:00:00

Retry 0

Add triggers

Choose trigger...

Search

+ New

Close

Microsoft Azure | xyz01adfx

pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Name * Copy data1

Description

Timeout 7:00:00:00

Retry 0

Properties

General Related

Name * pipeline1

Description

Concurrency has moved to the [Settings tab](#).

Annotations

+ New

Microsoft Azure | Synapse Analytics | mywork01xyzabc

Data

Workspace Linked

Filter resources by name

Databases 2

pool01 (SQL)

Tables

dbo.AddressLT

External tables

External resources

Views

Programmability

Schemas

Security

Ashfaqdb01 (SQL)

SQL script 1

SQL script 2

SQL script 3

Run Undo Publish Query plan Connect to pool01

1 SELECT * FROM dbo.AddressLT;

Results Messages

View Table Chart Export results

Search

ice	CountryRegion	PostalCode	rowguid	ModifiedDate
1	United States	98011	268af621-76d7...	2006-07-01 00:...
	United States	60610	61113716-53e4...	2005-11-01 00:...
1	United States	98104	6d6a8e1a-ffd8-...	2005-08-01 00:...
	United States	84098	a04ec332-1120...	2005-09-01 00:...
1	United States	98011	981b3303-aca2...	2007-04-01 00:...

00:00:02 Query executed successfully.

Properties

General Related (0)

Name SQL script 3

Description

Type .sql script

Size 0 bytes

Results settings per query

☒ First 5000 rows (default)

☐ All rows

Microsoft Azure | xyz01adfx

pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Name * Copy data1

Description

Timeout 7:00:00:00

Retry 0

Properties

General Related

Name * pipeline1

Description

Concurrency has moved to the [Settings tab](#).

Annotations

+ New

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pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Degree of copy parallelism

Enable logging

Enable staging

Staging settings

Staging account linked service

Storage Path

Enable Compression

Properties

General Related

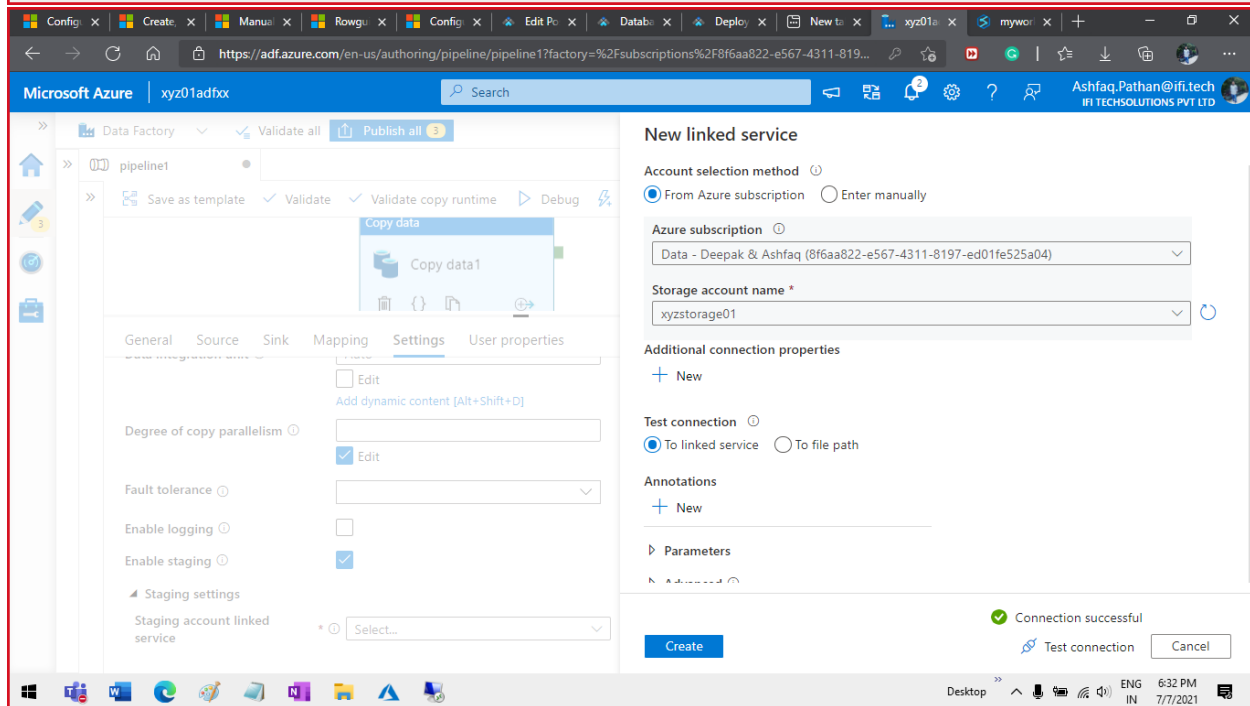
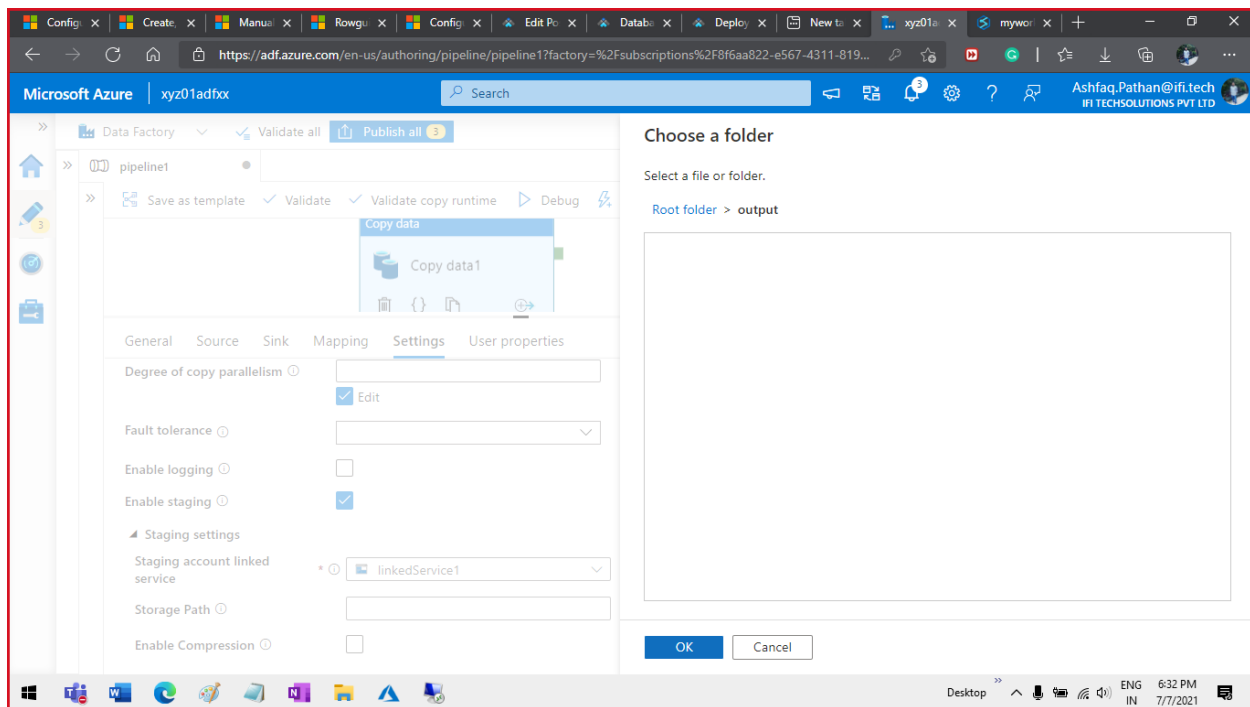
Name * pipeline1

Description

Concurrency has moved to the [Settings tab](#).

Annotations

+ New



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pipeline1

Copy data

Copy data1

General Source Sink Mapping **Settings** User properties

You will be charged # of used DIUs * copy duration * \$0.25/DIU-hour. Local currency and separate discounting may apply per subscription type. [Learn more](#)

Data integration unit ☐ Edit

Degree of copy parallelism ☒ Edit

Fault tolerance

Enable logging ☐

Enable staging ☒

Staging settings

Properties

General Related

Name *

Description

Concurrency has moved to the [Settings tab](#).

Annotations

+ New

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pipeline1

Copy data

Copy data1

General Source Sink **Mapping** Settings User properties

Import schemas Preview source + New mapping Clear Reset Delete

Source	Type	Destination
<input type="text" value="AddressID"/>	int	<input type="text" value="AddressID"/>
<input type="text" value="AddressLine1"/>	nvarchar	<input type="text" value="AddressLine1"/>
<input type="text" value="AddressLine2"/>	nvarchar	<input type="text" value="AddressLine2"/>
<input type="text" value="City"/>	nvarchar	<input type="text" value="City"/>
<input type="text" value="StateProvince"/>	nvarchar	<input type="text" value="StateProvince"/>

Properties

General Related

Name *

Description

Concurrency has moved to the [Settings tab](#).

Annotations

+ New

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Set properties

Name: AzureSynapseAnalyticsTable1

Linked service *: AzureSynapseAnalytics1

Table name: dbo.AddressLT

Import schema: ☒ From connection/store ☐ None

Advanced

OK Back Cancel

Desktop 6:29 PM 7/7/2021

Microsoft Azure | xyz01adfx

New linked service (Azure Synapse Analytics)

Data - Deepak & Ashfaq (8f6aa822-e567-4311-8197-ed01fe525a04)

Server name *: mywork01xyzabc (Synapse workspace)

Database name *: pool01

Authentication type *: SQL authentication

User name *: ashfaq

Password Azure Key Vault

Password *:

Additional connection properties

+ New

Create Test connection Cancel

Connection successful

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https://adf.azure.com/en-us/authoring/pipeline/pipeline1?factory=%2Fsubscriptions%2F8f6aa822-e567-4311-819...

pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Sink dataset * Select...

New linked service (Azure Synapse Analytics)

Data - Deepak & Ashfaq (8f6aa822-e567-4311-8197-ed01fe525a04)

Server name * mywork01xyzabc (Synapse workspace)

Database name * pool01

Authentication type * SQL authentication

User name * ashfaq

Password * Add dynamic content (Alt+Shift+D)

Additional connection properties + New

Create Test connection Cancel

Microsoft Azure | Synapse Analytics | mywork01xyzabc

https://web.azuresynapse.net/en-us/authoring/explore/workspace/sqlscripts/SQL%20script%20?workspace=%2Fsubscriptions%2F8f6aa822-e567-4311-8197-ed01fe525a04

Synapse live

Data

Workspace Linked

Filter resources by name

Databases 2

- pool01 (SQL)
 - Tables
 - External tables
 - External resources
 - Views
 - Programmability
 - Schemas
 - Security
 - Ashfaqdb01 (SQL)

SQL script 1 SQL script 2

Run Undo Publish Query plan Connect to pool01

```
1 CREATE TABLE AddressLT(
2 AddressID nvarchar(256),
3 AddressLine1 nvarchar(256),
4 AddressLine2 nvarchar(256),
5 City nvarchar(256),
6 StateProvince nvarchar(256),
7 CountryRegion nvarchar(256),
8 PostalCode nvarchar(256),
9 rowguid nvarchar(256),
10 ModifiedDate nvarchar(256)
11 );
```

Results Messages

6:27:28 PM Started executing query at line 1

Received 0 record

Total execution time: 00:00:03.444

00:00:03 Query executed successfully.

Properties

General Related (0)

Name SQL script 2

Description

Type .sql script

Size 0 bytes

Results settings per query

First 5000 rows (default)

All rows

Microsoft Azure

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

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Home >

mywork01xyzabc
Synapse workspace

Search (Ctrl+I)

+ New dedicated SQL pool + New Apache Spark pool + New SCOPE pool Refresh Reset SQL admin password Delete

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

SQL Active Directory admin

Properties

Locks

Analytics pools

SQL pools

Apache Spark pools

SCOPE pools

Security

Encryption

Firewalls

Managed identities

Getting started

Open Synapse Studio
Start building your fully-integrated analytics solution and unlock new insights.
Open

Read documentation
Learn how to be productive quickly. Explore concepts, tutorials, and samples.
Learn more

Analytics pools

Search to filter items...

Name	Type	Size
SQL pools		
Built-in	Serverless	Auto
pool01	Dedicated	DW100c
Apache Spark pools		
No pools provisioned		
SCOPE pools		
No pools provisioned		

Microsoft Azure

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

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Home > TRSQL > mywork01xyzabc >

Create dedicated SQL pool

* Basics * Additional settings Tags Review + create

Customize additional configuration parameters including collation & data source.

Data source

Start with a blank dedicated SQL pool, restore from a backup or leverage a restore point to populate your new dedicated SQL pool.

Use existing data *
None Backup Restore point

Dedicated SQL pool collation

Collation defines the rules that sort and compare data, and cannot be changed after dedicated SQL pool creation. The default collation is SQL_Latin1_General_CP1_CI_AS. [Learn more](#)

Collation *
SQL_Latin1_General_CP1_CI_AS

Review + create < Previous Next: Tags >

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

Home > TRSQL > mywork01xyzabc >

Create dedicated SQL pool

*Basics *Additional settings Tags Review + create

Create a dedicated SQL pool with your preferred configurations. Complete the Basics tab then go to Review + Create to provision with smart defaults, or visit each tab to customize. [Learn more](#)

Dedicated SQL pool details

Name your dedicated SQL pool and choose its initial settings.

Dedicated SQL pool name *

Performance level ☐ DW100c

Estimated price ☐ **Est. Cost Per Hour**
86.45 INR
[View pricing details](#)

[Review + create](#) [Next: Additional settings >](#)

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Home > TRSQL >

mywork01xyzabc

Synapse workspace

Search (Ctrl+/) << + New dedicated SQL pool + New Apache Spark pool + New SCOPE pool Refresh Reset SQL admin password Delete

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
 - SQL Active Directory admin
 - Properties
 - Locks
- Analytics pools
 - SQL pools
 - Apache Spark pools
 - SCOPE pools
- Security
 - Encryption
 - Firewalls

Resource group (change)	: TRSQL	Firewalls	: Show firewall settings
Status	: Succeeded	Primary ADLS Gen2 acco...	: https://ashfaq.dfs.core.windows.net
Location	: West US 2	Primary ADLS Gen2 file s...	: file01
Subscription (change)	: Data - Deepak & Ashfaq	SQL admin username	: ashfaq
Subscription ID	: 8f6aa822-e567-4311-8197-ed01fe525a04	SQL Active Directory ad...	: Ashfaq.Pathan@ifi.tech
Managed virtual network	: No	Dedicated SQL endpoint	: mywork01xyzabc.sql.azuresynapse.net
Managed Identity object ...	: 297ca835-c554-4199-b3c7-efa4b5f53782	Serverless SQL endpoint	: mywork01xyzabc-ondemand.sql.azuresynapse.net
Workspace web URL	: https://web.azuresynapse.net?workspace=%2fsubs...	Development endpoint	: https://mywork01xyzabc.dev.azuresynapse.net
Tags (change)	: Click here to add tags		

Getting started

Open Synapse Studio
Start building your fully-integrated analytics solution and unlock new insights.
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Learn how to be productive quickly. Explore concepts, tutorials, and samples.
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Analytics pools

Search to filter items...

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https://adf.azure.com/en-us/authoring/pipeline/pipeline1?factory=%2Fsubscriptions%2F8f6aa822-e567-4311-819...

pipeline1

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Sink dataset * Select...

New dataset

In pipeline activities and data flows, reference a dataset to specify the location and structure of your data within a data store. [Learn more](#)

Select a data store

sy

All Azure Database File Generic protocol NoSQL Services and apps

Azure Synapse Analytics

Continue Cancel

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https://web.azuresynapse.net/en-us/authoring/explore/workspace/sqlscripts/SQL%20script%201?workspace=%2Fsubscriptions%2F8f6aa822-e567-4311-819...

Synapse live

Data

Workspace Linked

Filter resources by name

Databases 1

Ashfaqdb01 (SQL)

New SQL script > Empty script

Refresh

Delete

SQL script 1

Run Undo Publish Query plan Connect to Built-in

Properties

General Related (0)

Name SQL script 1

Description

Type .sql script

Size

Overall, how useful is Azure Synapse Analytics in your work?

★★★★★

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SQL script 1

Run Undo Publish Query plan Connect to Built-in

1

Data

Workspace Linked

Filter resources by name

Databases 1

- Ashfaqdb01 (SQL)
 - External tables
 - External resources
 - Views
 - Schemas
 - Security

Properties

General Related (0)

Name SQL script 1

Description

Type .sql script

Size

Overall, how useful is Azure Synapse Analytics in your work?

★★★★★

Microsoft Azure | Synapse Analytics | mywork01xyzabc

Create SQL database

Create database to organize your workload into databases and database objects.

Select SQL pool type *

☒ Serverless ☐ Dedicated

Database * Ashfaqdb01

Create Cancel

Select an item

Use the resource explorer to select or create a new

Microsoft Azure | xyz01adfx

Preview data

Linked service: SqlServer1

Object: SalesLT.Address

AddressID	AddressLine1	AddressLine2	City	StateProvince	CountryRegion	PostalCode	rowguid
9	8713 Yosemite Ct.		Bothell	Washington	United States	98011	268af621-76d7-4c78-9441-144fd139821a
11	1318 Lasalle Street		Bothell	Washington	United States	98011	981b3303-aca2-49c7-9a96-fb670785b269
25	9178 Jumping St.		Dallas	Texas	United States	75201	c8df3bd9-48f0-4654-a8dd-14a67a84d3c6
28	9228 Via Del Sol		Phoenix	Arizona	United States	85004	12ae5ee1-fc3e-468b-9b92-3h970h169774

General Source

Source dataset *

Open +

Use query

Query timeout (m)

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Related

ncy has moved to the [Settings tab.](#)

Desktop 6:13 PM 7/7/2021

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Set properties

Name: SqlServerTable1

Linked service *: SqlServer1

Table name: SalesLT.Address

☐ Edit

Import schema: ☒ From connection/store ☐ None

Advanced

OK Back Cancel

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Source dataset * Select...

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Desktop 6:13 PM 7/7/2021

Microsoft Azure | xyz01adfx

Search

Validate all Publish all

pipeline1

Save as template Validate Validate copy runtime Debug

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Source dataset * Select...

New linked service (SQL server)

Connection string Azure Key Vault

Server name *
51.143.2.115

Database name *
AdventureWorksLT2016

Authentication type
SQL authentication

User name *
ashfaq

Password *
.....

Always encrypted ☐

Additional connection properties

Create Testing connection... Cancel

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Search

Validate all Publish all

pipeline1

Save as template Validate Validate copy runtime Debug

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Source dataset * Select...

New dataset

In pipeline activities and data flows, reference a dataset to specify the location and structure of your data within a data store. [Learn more](#)

Select a data store

sql

All Azure Database File Generic protocol NoSQL Services and apps

Azure SQL Database Azure SQL Database Managed Instance MySQL

PostgreSQL SQL server

Continue Cancel

Microsoft Azure | xyz01adfx

Search

Validate all Publish all 1

pipeline1

Save as template Validate Validate copy runtime Debug

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Source dataset * Select...

New dataset

In pipeline activities and data flows, reference a dataset to specify the location and structure of your data within a data store. [Learn more](#)

Select a data store

Search

All Azure Database File Generic protocol NoSQL Services and apps

Amazon Marketplace Web Service Amazon Redshift Amazon S3

Continue Cancel

Microsoft Azure | xyz01adfx

Search

Validate all Publish all 1

pipeline1

Save as template Validate Validate copy runtime Debug Add trigger

Copy data

Copy data1

General Source Sink Mapping Settings User properties

Properties

General Related

Name * pipeline1

Description

Concurrency has moved to the [Settings tab](#).

Annotations

+ New

Microsoft Azure

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

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Home > TRSQL >

xyz01adfx

Data factory (V2)

Search (Ctrl+/)

Delete

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Diagnose and solve problems

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Networking

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Locks

Getting started

Quick start

Monitoring

Alerts

Metrics

Diagnostic settings

Logs

Essentials

Resource group (change) : TRSQL

Status : Succeeded

Location : West US 2

Subscription (change) : Data - Deepak & Ashfaq

Subscription ID : 8f6aa822-e567-4311-8197-ed01fe525a04

Type : Data factory (V2)

Getting started : [Quick start](#)

JSON View

Getting started

Open Azure Data Factory Studio

Start authoring and monitoring your data pipelines and data flows.

[Open](#)

Read documentation

Learn how to be productive quickly. Explore concepts, tutorials, and samples.

[Learn more](#)

Monitoring

PipelineRuns

ActivityRuns

Taskbar icons: Edge, Word, PowerPoint, Excel, Outlook, File Explorer, VS Code, etc.

Desktop

ENG IN 5:11 PM 7/7/2021