

Azure Key Vault, Azure Dev Ops and Azure Synapse Analytics

how do these Azure Services work perfectly
together!

Erwin de Kreuk



@erwindekreuk



<https://erwindekreuk.com>



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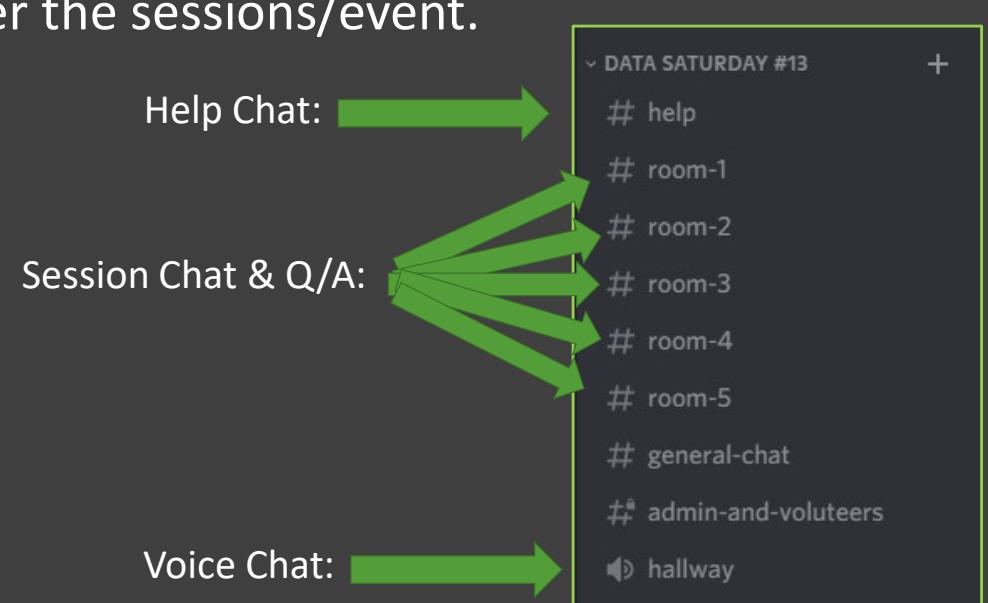
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<https://discord.gg/GajGTFVT28>

- We're using Discord as our background chat and communication platform to augment our Virtual Events. This way you can chat with all attendees and continue the conversation after the sessions/event.
- Note: Change your Nickname to your First & Last Name so it's easier to know who you are.
- Example:



Azure Synapse Analytics

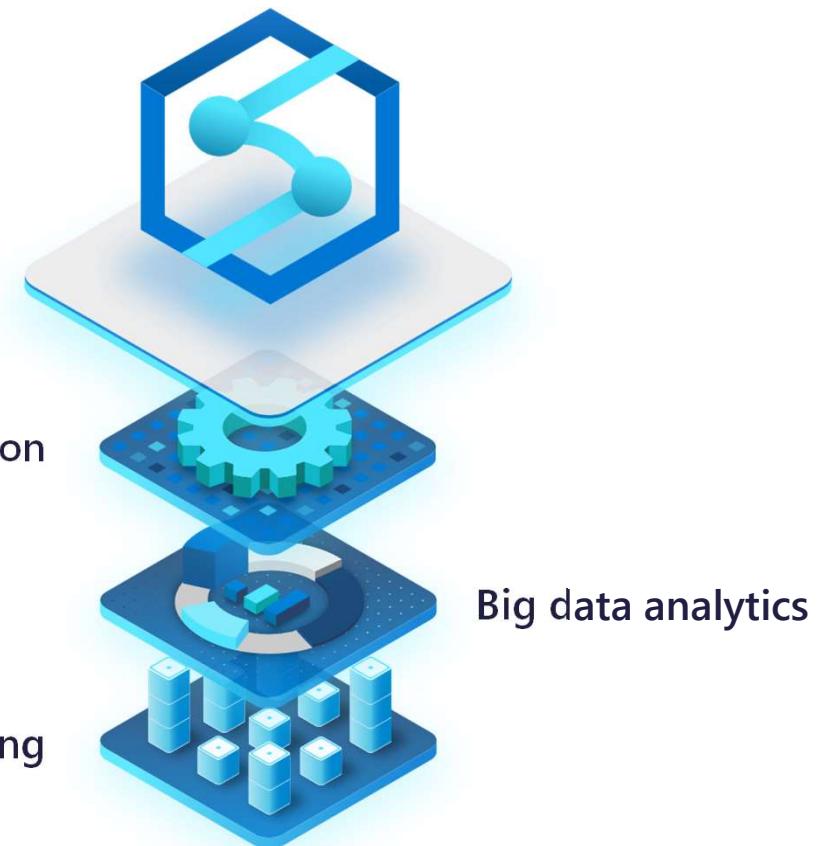
The first unified, cloud native platform for converged analytics

Azure Synapse is the only unified platform for analytics, blending big data, data warehousing, and data integration into a single cloud native service for end-to-end analytics at cloud scale.

Data integration

Data warehousing

Big data analytics



Azure Synapse Analytics

Powered by a new cloud native
distributed SQL engine

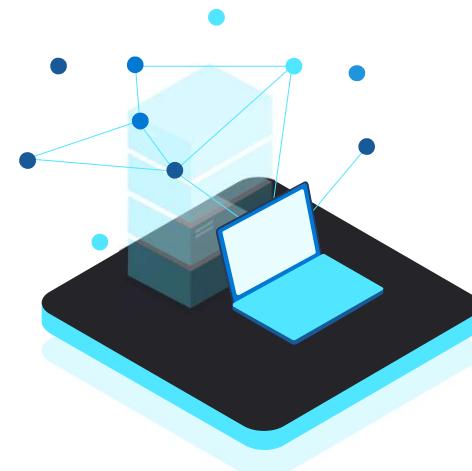


Serverless + dedicated SQL

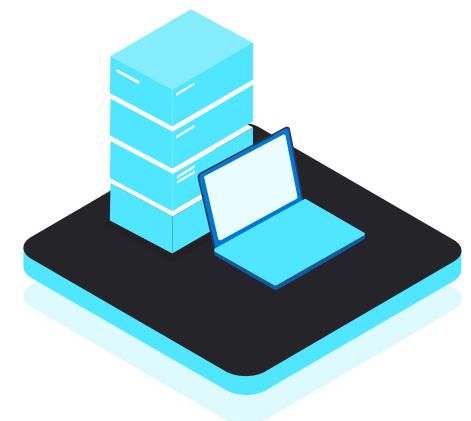
Flexible consumption models

Serverless pay-per-query ideal for ad-hoc data lake exploration and transformation

Dedicated clusters optimized mission-critical data warehouse workloads



Serverless



Dedicated

“DevOps is the union of people, process, and products to enable continuous delivery of value to your end users”

Donovan Brown



What is Azure DevOps?



Azure Boards



Azure Pipelines



Azure Repos



Azure Test Plans



Azure Artifacts

Extensions Marketplace

Extensions for Azure DevOps

Search Azure DevOps extensions 

Featured

 Timetracker 7pace  FREE TRIAL	 Retrospectives Microsoft DevLabs  FREE	 Azure Cost Insights Kees Schollaart  FREE	 Code Quality NDepend ndepend  FREE TRIAL	 Bravo Notes Agile Extensions  FREE TRIAL	 Azure Boards Slack app Microsoft  FREE
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Trending this week

 Cascading Lists Microsoft DevLabs  FREE	 Terraform Microsoft DevLabs  FREE	 DevOps for Azure Data Microsoft DevLabs  FREE	 Replace Text in Source Samayas  FREE	 Twistcli Build and Release Twistlock  FREE	 WinAppDriver Microsoft  FREE
--	---	---	--	--	--



What is Azure Key Vault?

The safehouse to safeguard the cryptographic keys and secrets that are used by your applications, servers and cloud applications

Fully integrated with Azure Active Directory

Secret management: Securely store and tightly control access to tokens, passwords, certificates, API keys, and other secrets.

Key management: Create and control encryption keys that encrypt your data.

Certificate management: Provision, manage, and deploy public and private Secure Sockets Layer/Transport Layer Security (SSL/TLS) certificates for use with Azure and your internal connected resources.



Roles in Azure Key Vault?

Security Operations	Developer	Auditor
Manages Keys Creates a Key Vault in Azure Add keys / secrets to the Key Vault Grants Permission to specific applications to perform specific operations using keys Enables usage logs	Deploys Application Tells the application the URI of the key / secret Configures the application to use key / secret (and may abuse), but never sees the keys	Monitors access to keys Reviews usage logs to confirm proper key use and compliance with data security standards

Creating your Azure Synapse Analytics

Create a Synapse Workspace for every environment

Define naming conventions

`customername-region-environment-azureservice-department`



Set up Code Repository



Set up Code Repository

Repository Settings



Configure a repository

Specify the settings that you want to use when connecting to your repository.

Repository type * ⓘ

Select...

 Azure DevOps Git

 GitHub

Configure a repository

Specify the settings that you want to use when connecting to your repository.

Repository type * ⓘ

 Azure DevOps Git

Azure Active Directory ⓘ

MSDN Erwin ()

Specify the settings that you want to use when connecting to your repository.

Select repository Use repository link

Azure DevOps organization name * ⓘ

erwinedekreuk

Project name * ⓘ

DEMO_DevOps

Repository name * ⓘ

Demo

Collaboration branch * ⓘ

develop

Publish branch * ⓘ

workspace_publish

Root folder * ⓘ

/

Import existing resource

Import existing resources to repository

Import resource into this branch ⓘ

develop

Azure Synapse Analytics

Create linked Services:

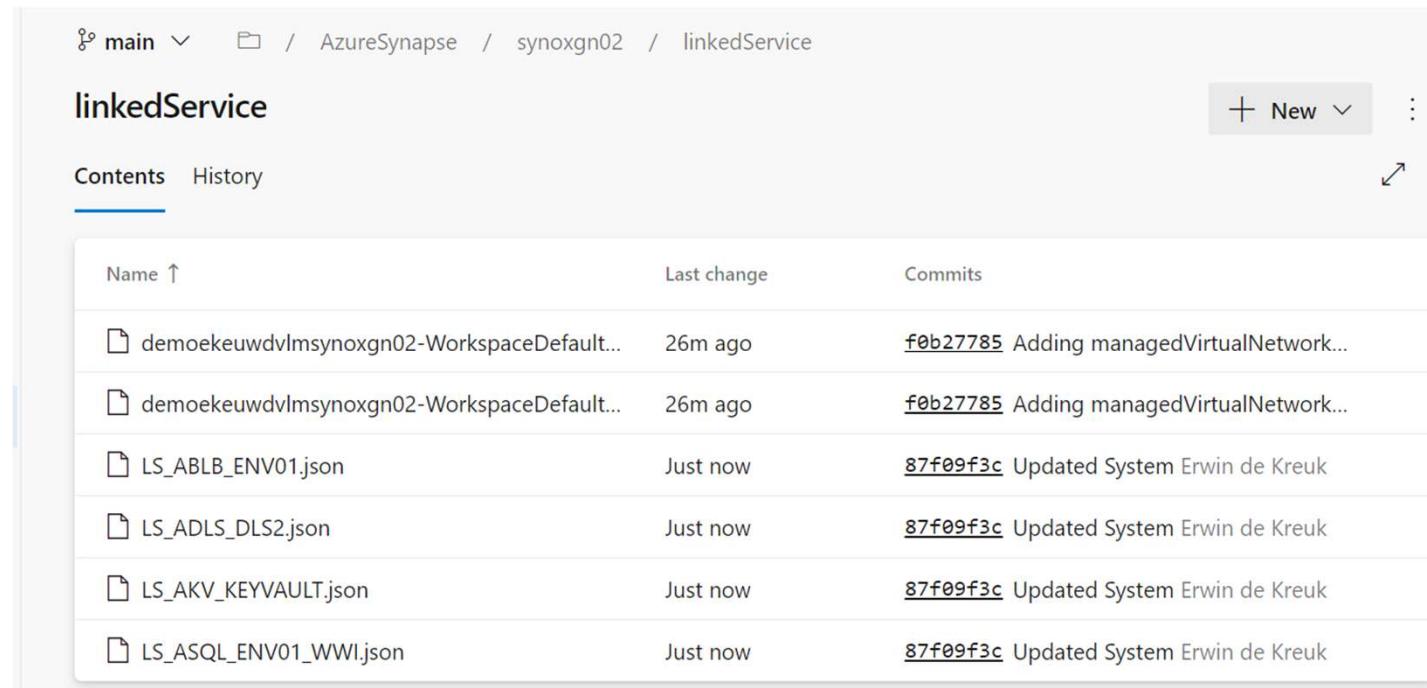
Azure SQL DB

LS_ASQL_ENV01_WWI

Azure Blob Storage

LS_ABLB_ENV01

Directly saved in Azure DevOps !!



The screenshot shows a file browser interface in Azure DevOps. The path is main / AzureSynapse / synoxgn02 / linkedService. The 'linkedService' folder is selected. A table lists the contents:

Name	Last change	Commits
demoekeudvlmsynoxgn02-WorkspaceDefault...	26m ago	f0b27785 Adding managedVirtualNetwork...
demoekeudvlmsynoxgn02-WorkspaceDefault...	26m ago	f0b27785 Adding managedVirtualNetwork...
LS_ABLB_ENV01.json	Just now	87f09f3c Updated System Erwin de Kreuk
LS_ADLS_DLS2.json	Just now	87f09f3c Updated System Erwin de Kreuk
LS_AKV_KEYVAULT.json	Just now	87f09f3c Updated System Erwin de Kreuk
LS_ASQL_ENV01_WWI.json	Just now	87f09f3c Updated System Erwin de Kreuk

Azure Synapse Analytics

Create linked Services:

Azure SQL DB

LS_ASQ_L ENV01_WWI

Azure Blob Storage

LS_ABLB_ENV01

Azure

	Abbreviation	Linked Service	Dataset
Azure Blob Storage	ABLB_	LS_ABLB_	DS_ABLB_
Azure Cosmos DB SQL API	ACSA_	LS_ACSA_	DS_ACSA_
Azure Cosmos DB MongoDB API	ACMA_	LS_ACMA_	DS_ACMA_
Azure Data Explorer	ADEX_	LS_ADEX_	DS_ADEX_
Azure Data Lake Storage Gen1	ADLS_	LS_ADLS_	DS_ADLS_
Azure Data Lake Storage Gen2	ADLS_	LS_ADLS_	DS_ADLS_
Azure Database for MariaDB	AMDB_	LS_AMDB_	DS_AMDB_
Azure Database for MySQL	AMYS_	LS_AMYS_	DS_AMYS_
Azure Database for PostgreSQL	APOS_	LS_APOS_	DS_APOS_
Azure File Storage	AFIL_	LS_AFIL_	DS_AFIL_
Azure Search	ASER_	LS_ASER_	DS_ASER_
Azure SQL Database	ASQL_	LS_ASQ_L	DS_ASQ_L
Azure SQL Database Managed Instance	ASQM_	LS_ASQM_	DS_ASQM_

More naming conventions check:

<https://erwindekreuk.com/2019/04/azure-data-factory-naming-conventions/>

Azure Synapse Analytics

Create Datasets:

DS_ABLB_ENV01

DS_ASQLENV01_WWI

Pending changes

Publish branch

workspace_publish

▲ Pipelines

PL_TRANS_ASQL_ABLB (New)

▲ Datasets

DS_ABLB_ENV01 (New)

DS_ASQLENV01_WWI (New)

▲ Data flows

▲ Integration runtimes

▲ Linked services

LS_ABLB_ENV01 (New)

The screenshot shows the Azure DevOps interface for a workspace named 'workspace_publish'. The 'Pending changes' section is visible, listing various items under different categories: Pipelines, Datasets, Data flows, Integration runtimes, and Linked services. A red box highlights the 'workspace_publish' branch name. The 'Datasets' category contains two new datasets: 'DS_ABLB_ENV01' and 'DS_ASQLENV01_WWI'. The 'Linked services' category contains one new linked service: 'LS_ABLB_ENV01'. At the bottom of the interface, there is a message indicating an update was made 15 minutes ago, and buttons for 'Create a pull request' and a close button.

AKV_DEMO

demoekeuwvd1msynoxgn02

TemplateForWorkspace.json

TemplateParametersForWorkspace.json

readme.md

workspace_publish

linkedService

Contents

You updated workspace_publish 15m ago

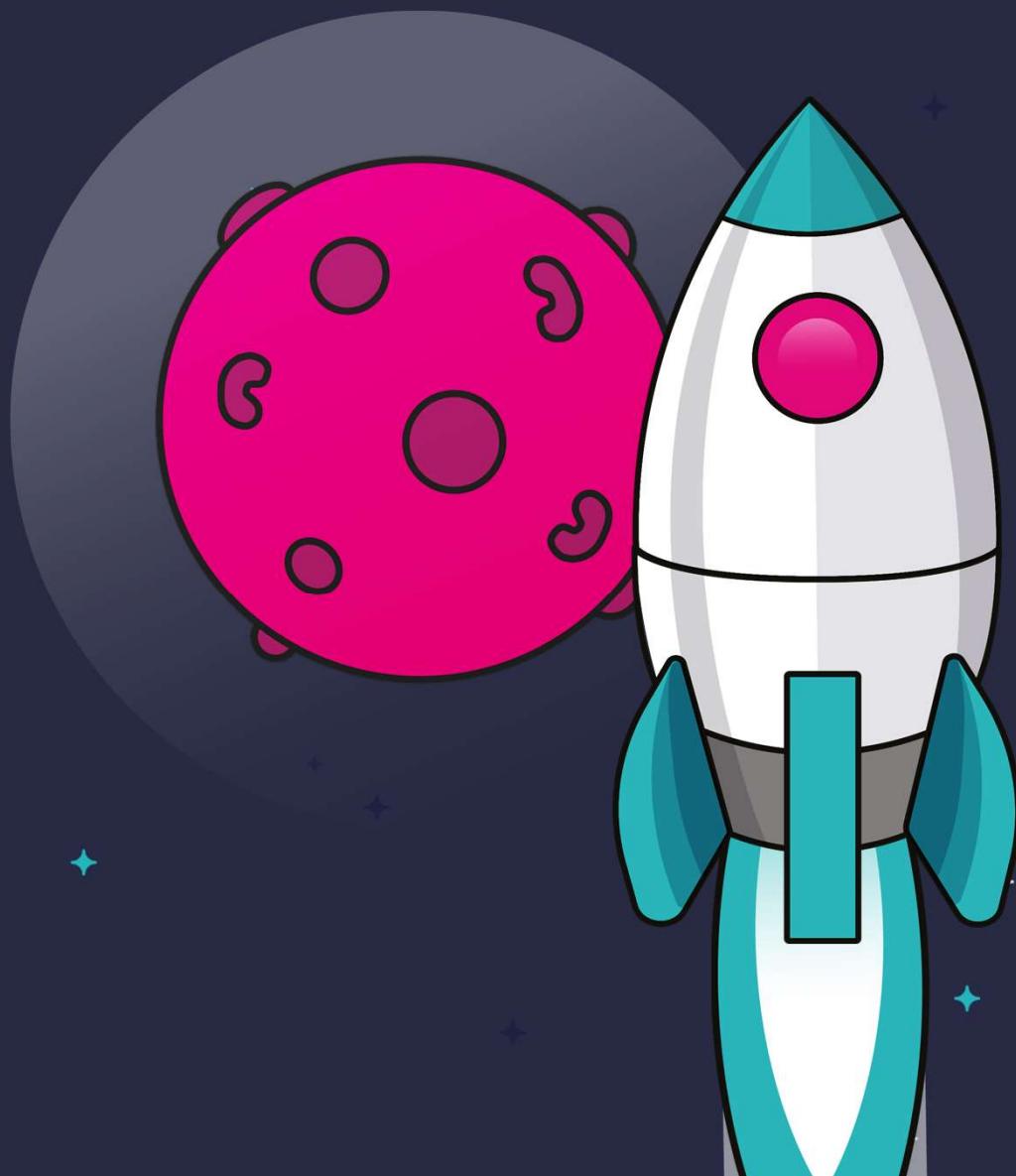
Create a pull request

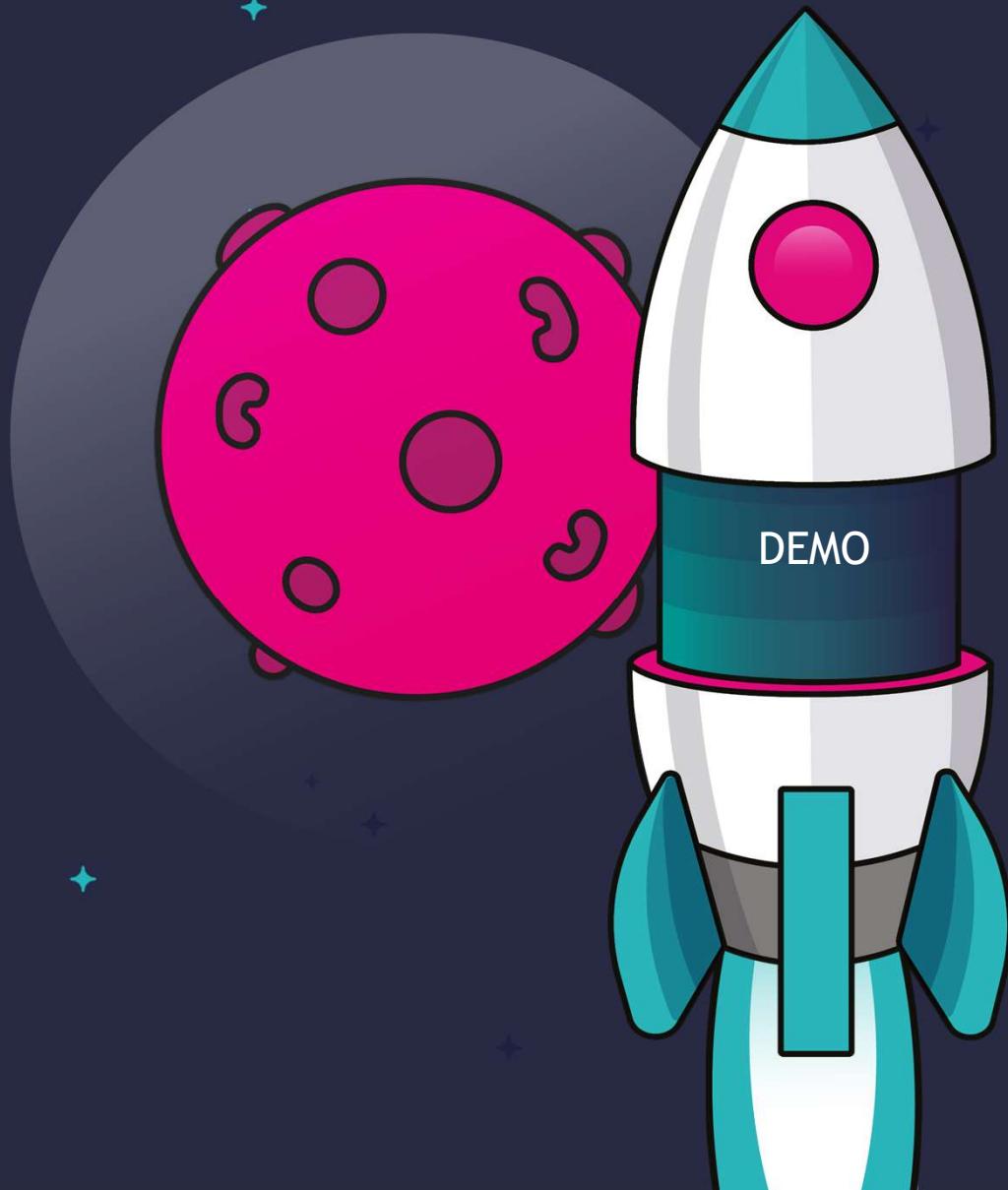
Azure Synapse Analytics

Create Pipeline:

PL_COPY_WWI_ABLB

The screenshot shows the Azure Synapse Analytics pipeline creation interface. A central component is a 'Copy Data' activity named 'Copy_ASQ_ABLB'. Two red circles highlight specific parts of the interface: one around the source dataset name 'DS_AQSL_ENV01_WI' and another around the sink dataset name 'DS_ABLB_ENV01'. Below the component are several icons: a plus sign (+), a minus sign (-), a lock icon, a magnifying glass, a refresh symbol, and a gear icon. A horizontal menu bar below the icons includes tabs for General, Source, Sink, Mapping, Settings, and User Properties. The 'General' tab is currently selected. In the bottom left, there is a 'Name' field containing 'Copy_ASQ_ABLB' with a red asterisk indicating it is required. To the right of the name field is a checked checkbox labeled 'Documentation'. A large teal arrow graphic is positioned on the left side of the slide.

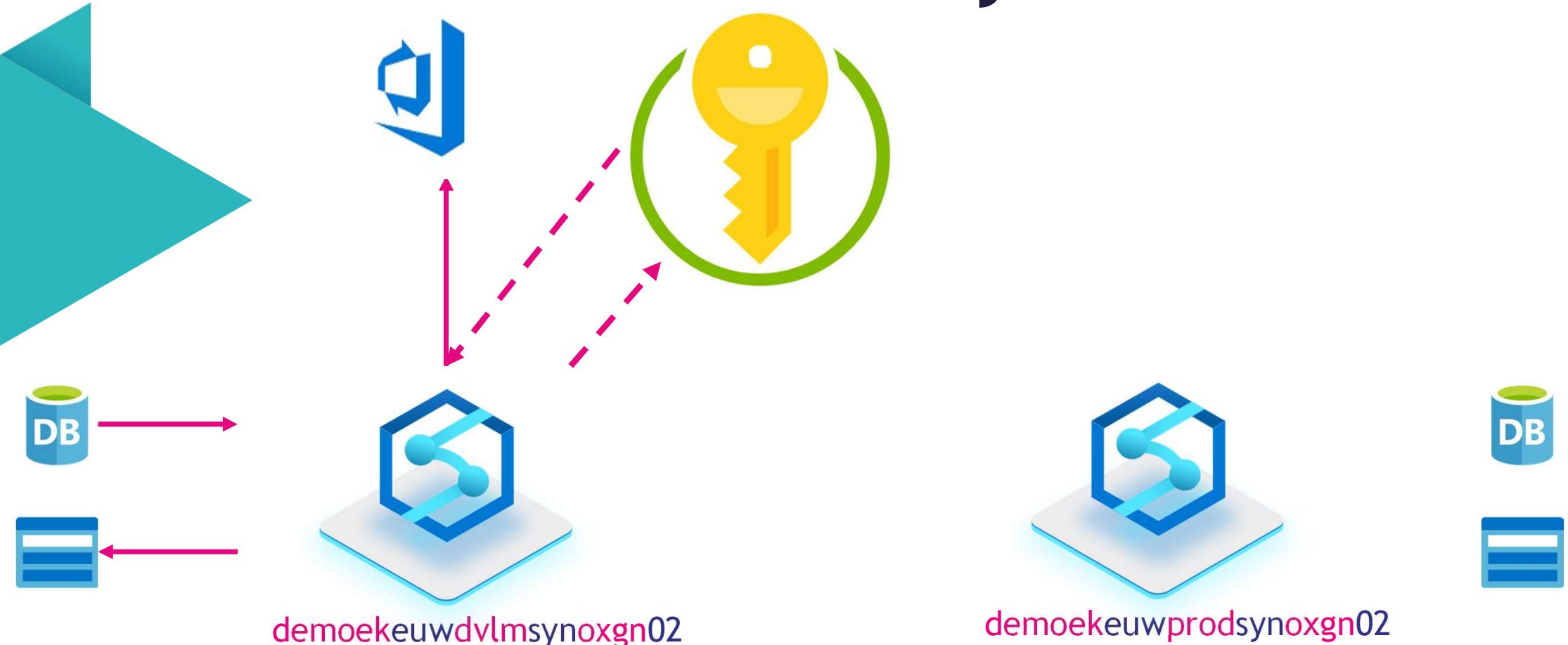




Innovate to accelerate

DEMO

Creating your Azure Key Vault



Creating your Azure Key Vault

Demoedkazudtapkeyvault01

* Subscription
└─ * Resource group

Visual Studio Enterprise – Erwin

DEMO-EUW-DTAP-RG-ENVIRONMENT

[Create new](#)

Instance details

* Key vault name ⓘ

demoedkazudtapkeyvault01

* Region

West Europe

* Pricing tier ⓘ

Standard

```
$SubscriptionName = "XXXXXXXXXXXXXXXXXXXX"  
$ResourceGroupName = "DEMO-EUW-DTAP-RG-ENVIRONMENT"  
$KeyVaultName="Demoedkazudtapkeyvault02"  
$Location="West Europe"
```

```
Connect-AzAccount
```

```
Select-AzSubscription -SubscriptionName $SubscriptionName  
New-AzKeyVault -Name $KeyVaultName -ResourceGroupName $ResourceGroupName -Location $Location
```



Connecting Azure Key Vault in Synapse

Create a new Linked Service

← New Linked Service (Azure Key Vault) X

Name *

Description

Azure key vault selection method

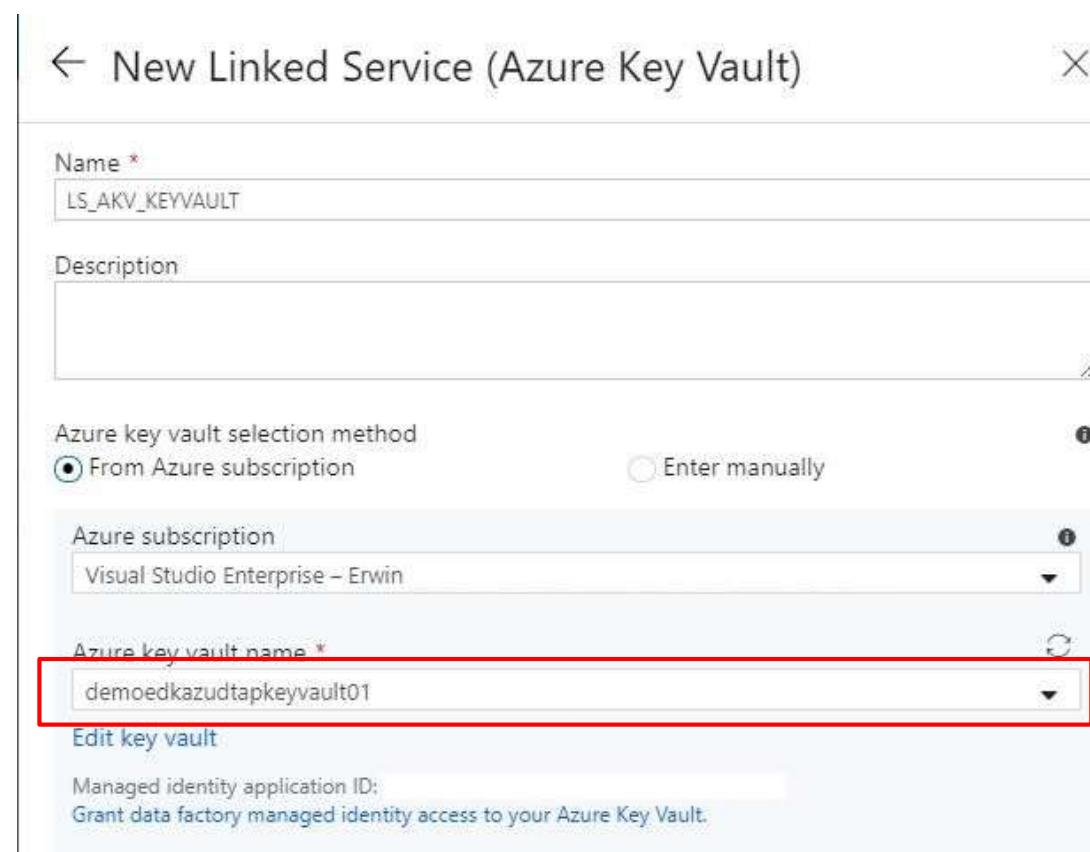
From Azure subscription Enter manually

Azure subscription

Azure key vault name *

Edit key vault

Managed identity application ID:
Grant data factory managed identity access to your Azure Key Vault.



Connecting Azure Key Vault in Synapse

Grant the Azure Synapse access to your Azure KeyVault.

The screenshot shows the 'Add access policy' interface in the Azure portal. The top navigation bar includes 'Dashboard', 'demoedkazudtapkeyvault01 - Access policies', and 'Add access policy'. The main form has the following fields:

- Configure from template (optional)**: A dropdown menu showing a single item.
- Key permissions**: A dropdown menu showing '0 selected'.
- Secret permissions**: A dropdown menu with a red border around the 'Get' option, indicating it is selected.
- Certificate permissions**: A dropdown menu showing '0 selected'.
- Select principal**: A list box containing 'demoedkazudvlmadfbicc01' with a red asterisk (*) next to it, and a green dashed border around the list box.
- Authorized application**: A section with a lock icon and the text 'None selected'.

At the bottom left is a blue 'Add' button.

Creating secrets in Azure Key Vault

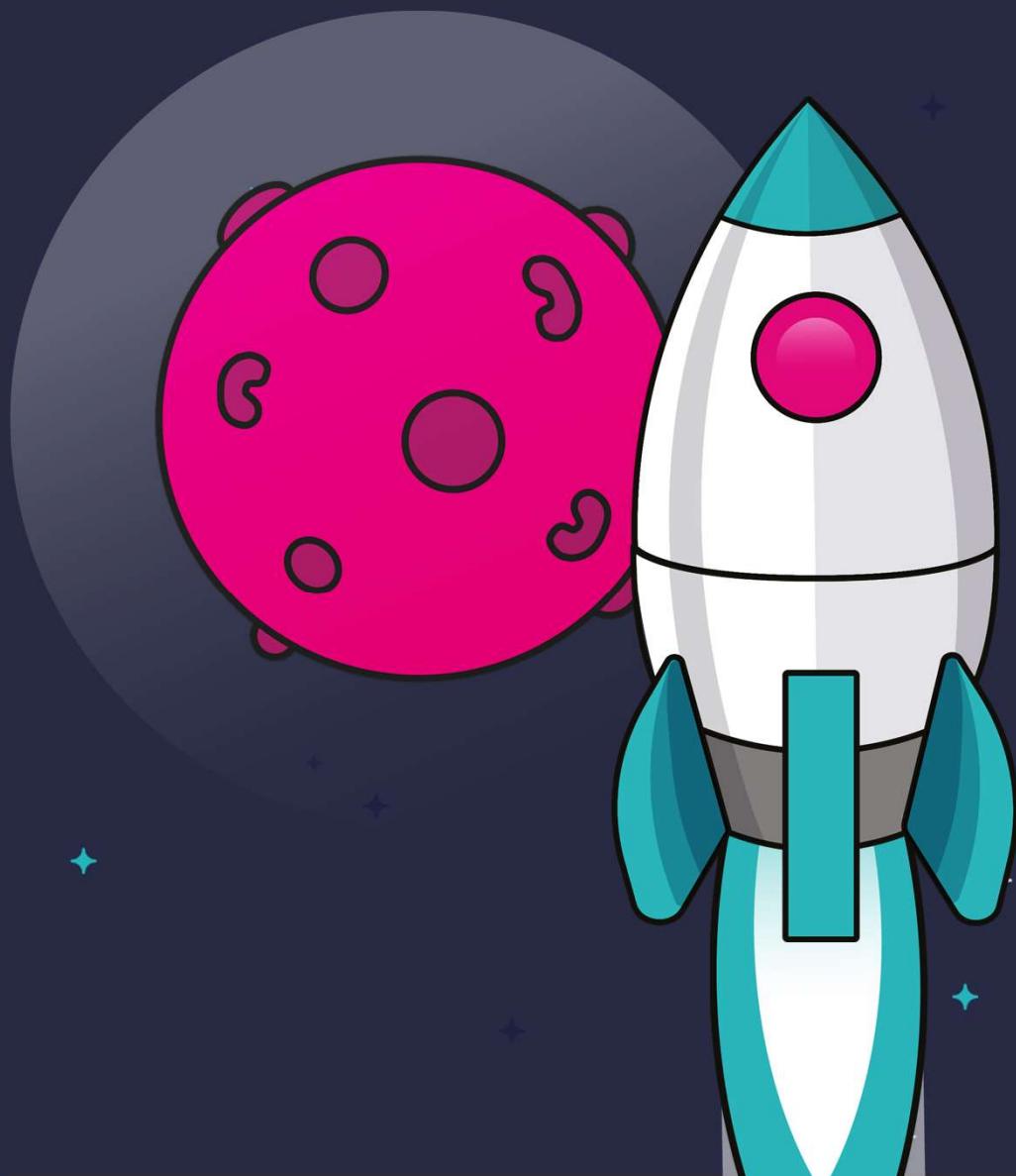
DVLM-ABLB-ENV01

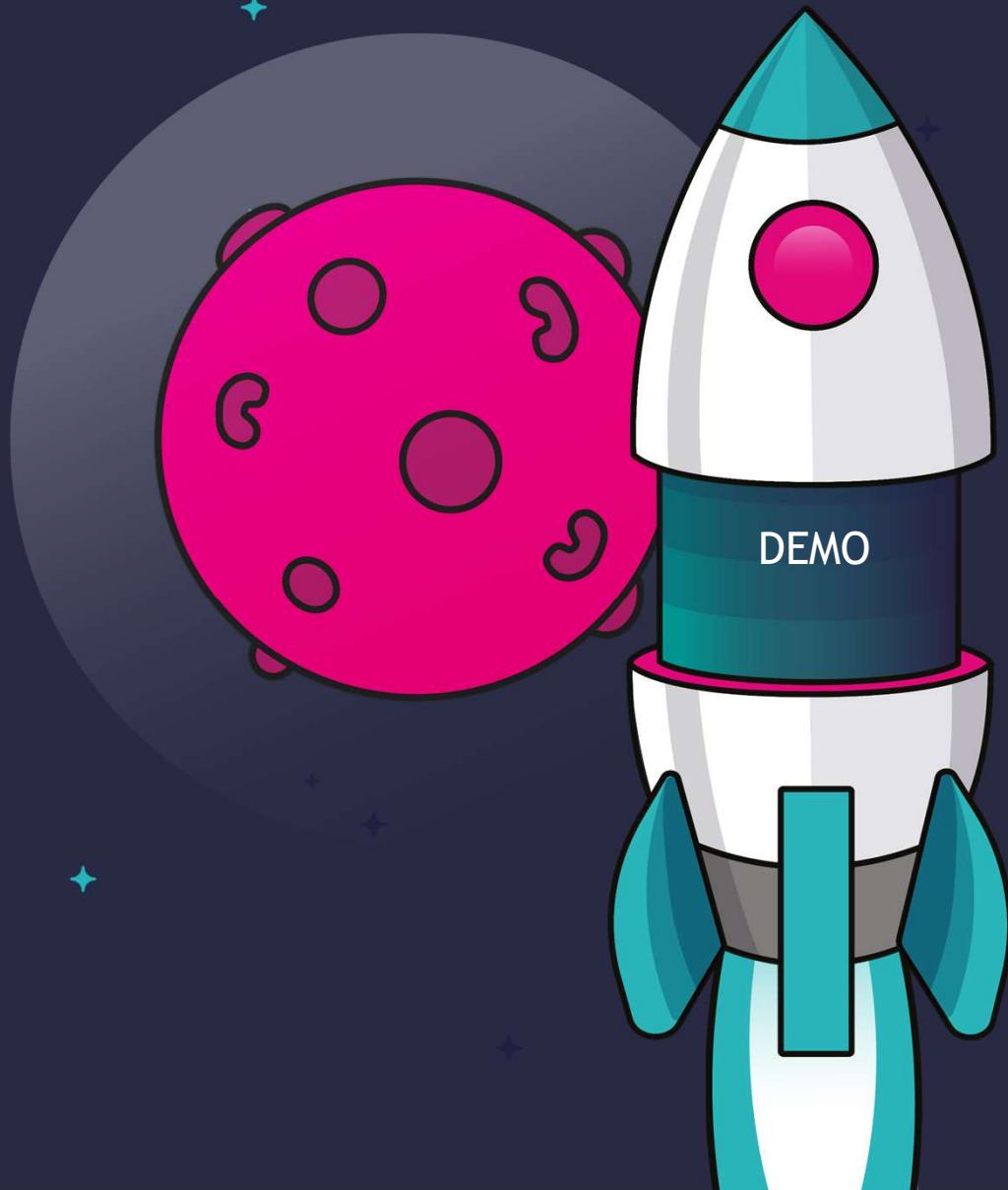
PROD-ABLB-ENV01

ASQL-ENV01-WWI

The use of naming conventions ensures that we can
configure everything more dynamically in the
release process later on !

ENVIRONMENT-CONNECTION-REFERENCE	
Environment	
Development	DVLM
Test	TEST
Acceptance	ACPT
Production	PROD
Linked Service	
Azure Blob Storage	ABLB
Azure Cosmos DB SQL API	ACSA
Azure Cosmos DB MongoDB API	ACMA
Azure Data Explorer	ADEX
Azure Data Lake Storage Gen1	ADLS
Azure Data Lake Storage Gen2	ADLS
Azure Database for MariaDB	AMDB
Azure Database for MySQL	AMYS
Azure Database for PostgreSQL	APOS
Azure File Storage	AFIL
Azure Search	ASER
Azure SQL Database	ASQL
Azure SQL Database Managed Instance	ASQM
Azure SQL Data Warehouse	ASDW
Azure Table Storage	ATBL
SQL Server	MSQL
Reference	
DatabaseConnection	LogicalServer(Short)-DatabaseName
Storage	StorageName like Audit/SSIS/Staging/DataLake

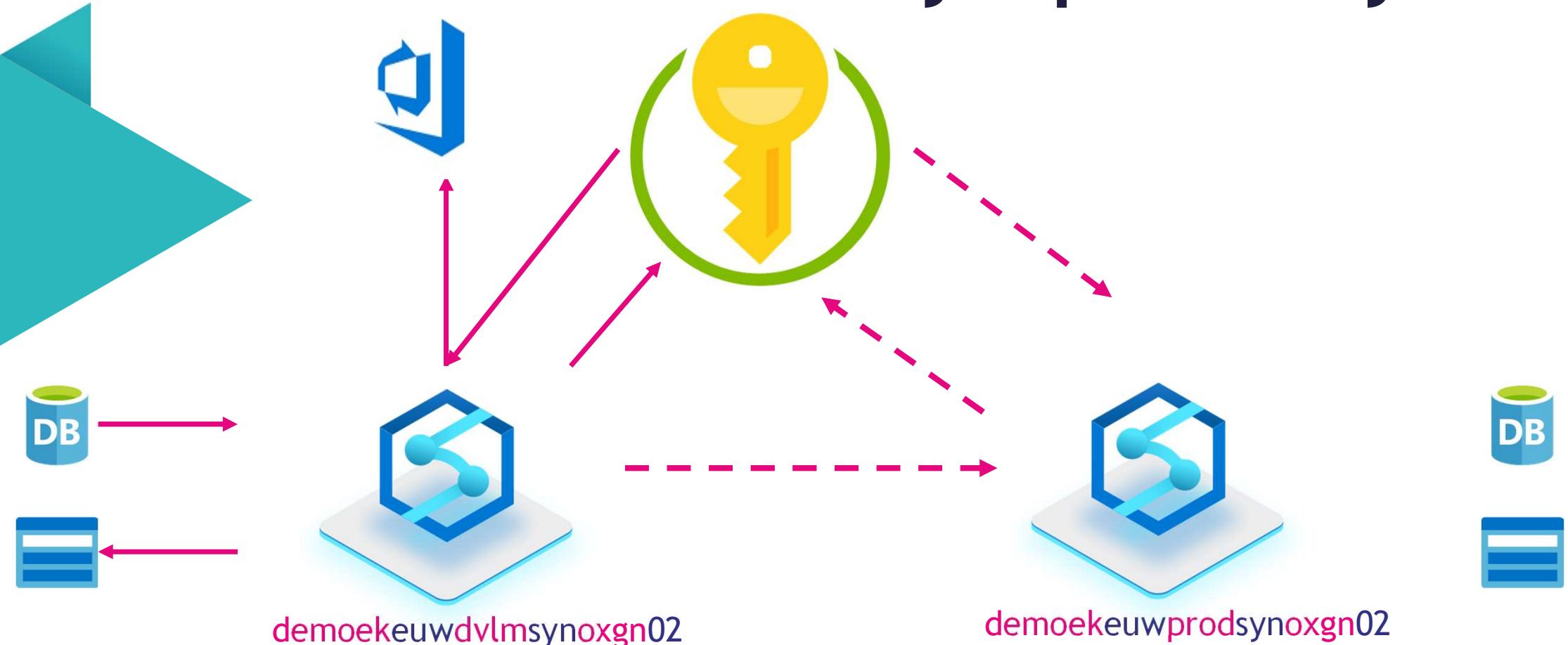




Innovate to accelerate

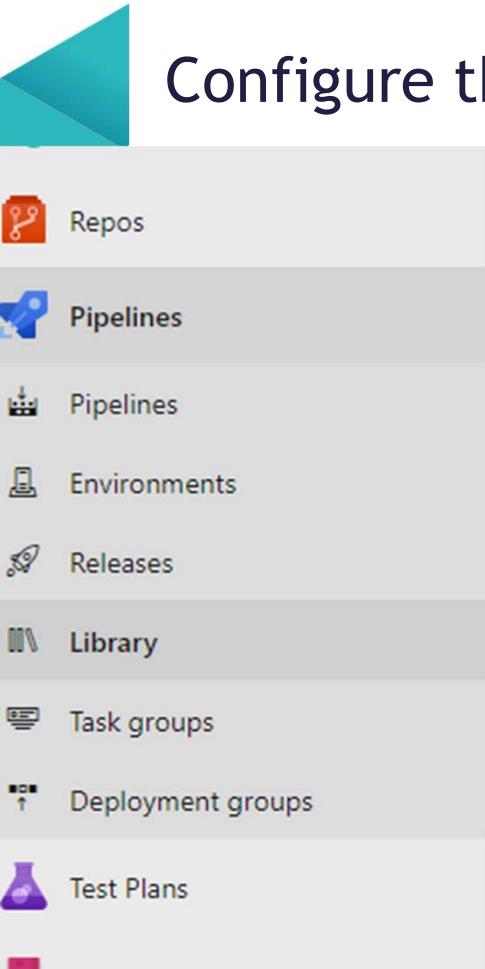
DEMO

Creating your Azure Synapse Analytics



Creating library in Azure DevOps

Configure the correct values



Variable group name
Production Environment

Description

Link secrets from an Azure key vault as variables (i)

Variables

Name ↑	Value
ADFResourceGroupName	DEMOEK-EUW-PRODUCTION-OXYGEN-RG
DTAP	PROD

The screenshot displays the 'Variable groups' section of the Azure DevOps Library. It shows a list of environment names: 'Acceptance Environment', 'Production Environment', and 'Test Environment', which are all enclosed in a red rectangular box. Below this, the 'Variables' section is shown with two entries: 'ADFResourceGroupName' set to 'DEMOEK-EUW-PRODUCTION-OXYGEN-RG' and 'DTAP' set to 'PROD', both also enclosed in a red rectangular box.

Extensions in Azure DevOps

Add Synapse Workspace Deployment Extension



Azure DevOps

**Synapse workspace deployment has been
successfully updated**

The extension [Synapse workspace deployment by Microsoft](#) has been updated successfully on erwindekreuk. No additional action is required.

[View extensions](#)



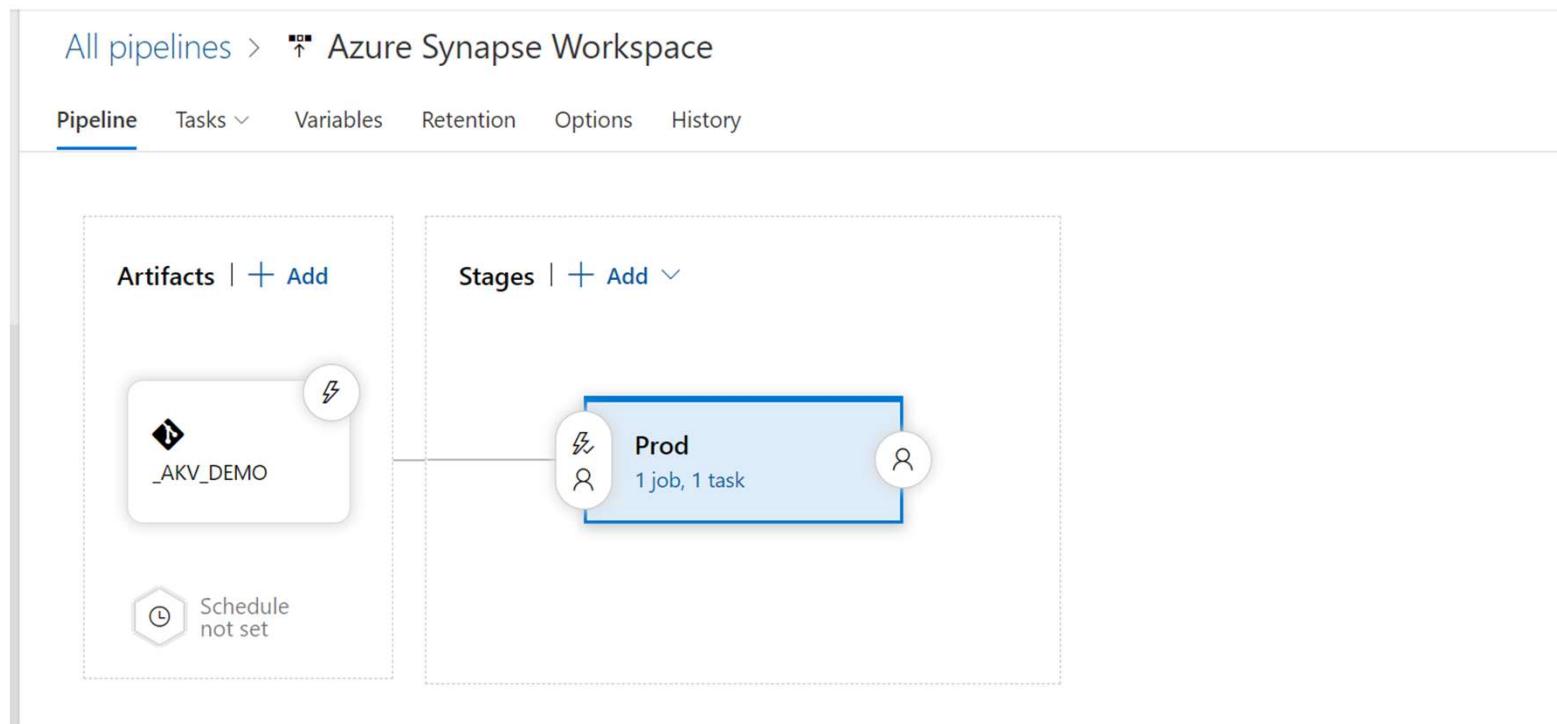
About this extension

Synapse workspace deployment by Microsoft

Deployment task for synapse workspace.

[Learn more](#)

Create release in Azure DevOps



Create release in Azure DevOps

Create a Release based on an Empty Job

Select a template

Or start with an  [Empty job](#)

Featured

[Azure App Service deployment](#)

Deploy your application to Azure App Service. Choose from Web App on Windows, Linux, containers, Function Apps, or WebJobs.

[Deploy a Java app to Azure App Service](#)

Deploy a Java application to an Azure Web App.

[Deploy a Node.js app to Azure App Service](#)

Deploy a Node.js application to an Azure Web App.

[Deploy a PHP app to Azure App Service and Azure Database for MySQL](#)

Deploy a PHP application to an Azure Web App and database to Azure Database for MySQL.

[Deploy a Python app to Azure App Service and Azure database for MySQL](#)

Deploy a Python Django, Bottle, or Flask application to an Azure Web App and database to Azure Database for MySQL.

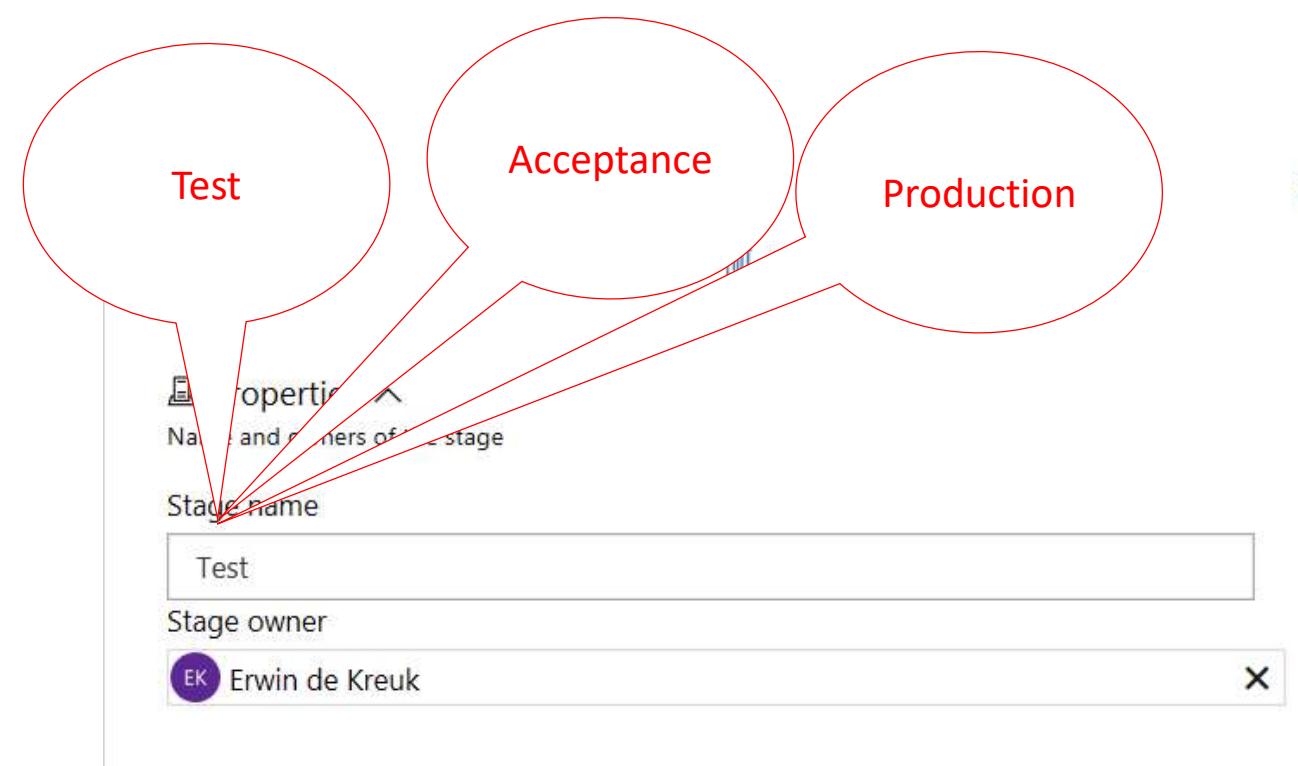
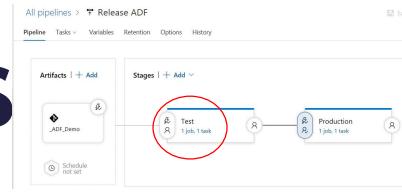
[Deploy to a Kubernetes cluster](#)

Deploy, configure, update your containerized applications to a Kubernetes cluster.

Create release in Azure DevOps

Create a Release based on an Empty Job

Create a Stage for each Environment



Create release in Azure DevOps

Create a Release based on an Empty Job

Add an artifact

Create a Stage for each Environment

Source type



5 more artifact types ▾

Project * ⓘ

DEMO_DevOps

Source (repository) * ⓘ

AKV_DEMO

Default branch * ⓘ

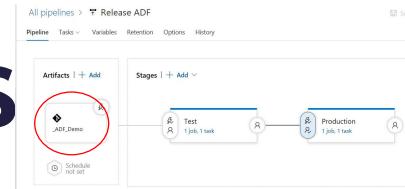
workspace_publish

Default version * ⓘ

Latest from the default branch

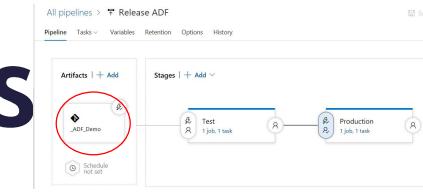
Checkout submodules ⓘ

Checkout files from LFS ⓘ



Add an Artifact

Create release in Azure DevOps



Create a Release based on an Empty Job

Create a Stage for each Environment

Add an Artifact

Enable Continuous Deployment

Continuous deployment trigger

Git: _DEMOADFV2

Disabled

(i) Enabling the trigger will create a new release every time a Git push happens to the selected repository.

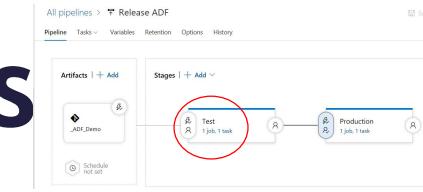
Pull request trigger

Git: _DEMOADFV2

Disabled

(i) Enabling this will create a release every time a selected artifact is available as part of a pull request workflow

Create release in Azure DevOps



Create a Release based on an Empty Job

Create a Stage for each Environment

Add an Artifact

Enable Continuous Deployment

Continuous deployment trigger

Git: _AKV_DEMO

Enabled

Creates a release every time a Git push occurs in the selected repository.

Branch filters (i)

Type	Branch
Include	workspace_publish

Create task in release

Define an Agent

Agent job ⓘ

Display name *

Agent job

Agent selection ^

Agent pool ⓘ | Pool information | Manage ↗

Azure Pipelines

Agent Specification *

vs2017-win2016

macOS-10.13

macOS-10.14

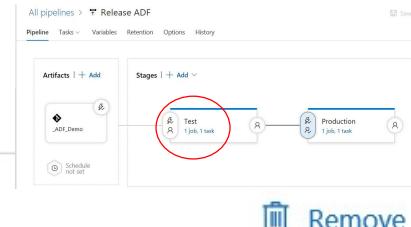
ubuntu-16.04

vs2015-win2012r2

vs2017-win2016

win1803

windows-2019



Create task in release

Define an Agent

Add the task



The screenshot shows the 'Add tasks' interface in Azure DevOps. At the top, there's a search bar labeled 'Search'. Below it, there are tabs for 'All', 'Build', 'Utility', 'Test', 'Package', 'Deploy', 'Tool', and 'Marketplace'. The 'All' tab is selected. In the main area, there's a card for the 'Synapse workspace deployment' task. It features a blue icon with a hexagonal pattern, the task name 'Synapse workspace deployment', a description 'Deployment task for synapse workspace.', the developer information 'by Microsoft Corporation', and a large blue 'Add' button. There's also a 'Learn more' link with an info icon.

Create task in release

Define an Agent

Select a file or folder

- ▶ ■ Linked artifacts
 - ▶ ■ AKV DEMO (Azure Repos Git)
 - ▶ ■ demokeuwdvlmsynoxqn02
 - TemplateForWorkspace.json
 - TemplateParametersForWorkspace.json
 - readme.md

Synapse workspace deployment ⓘ

Task version 1.0.0

View YAML Remove

Display name *

Synapse deployment task for workspace: demokeuwdvlmsynoxgn01

Template *

`$(System.DefaultWorkingDirectory)/_AKV_DEMO/demokeuwdvlmsynoxgn02/TemplateForWorkspace.json`

Template parameters *

`$(System.DefaultWorkingDirectory)/_AKV_DEMO/demokeuwdvlmsynoxgn02/TemplateParametersForWorkspace.json`

Synapse workspace connection type * ⓘ | Manage ↗

sp-insprk-oxgn-deployment

Synapse workspace resource group *

DEMOEK-EUW-PRODUCTION-OXYGEN-RG

Synapse workspace name *

demokeuwdvlmsynoxgn01

Delete Artifacts Not In Template ⓘ

OverrideParameters ⓘ

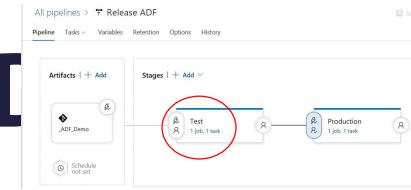
Create task in release in Azure DevOps

Define an Agent

Add the task

Configure the task

Override the Template Parameters



OverrideParameters

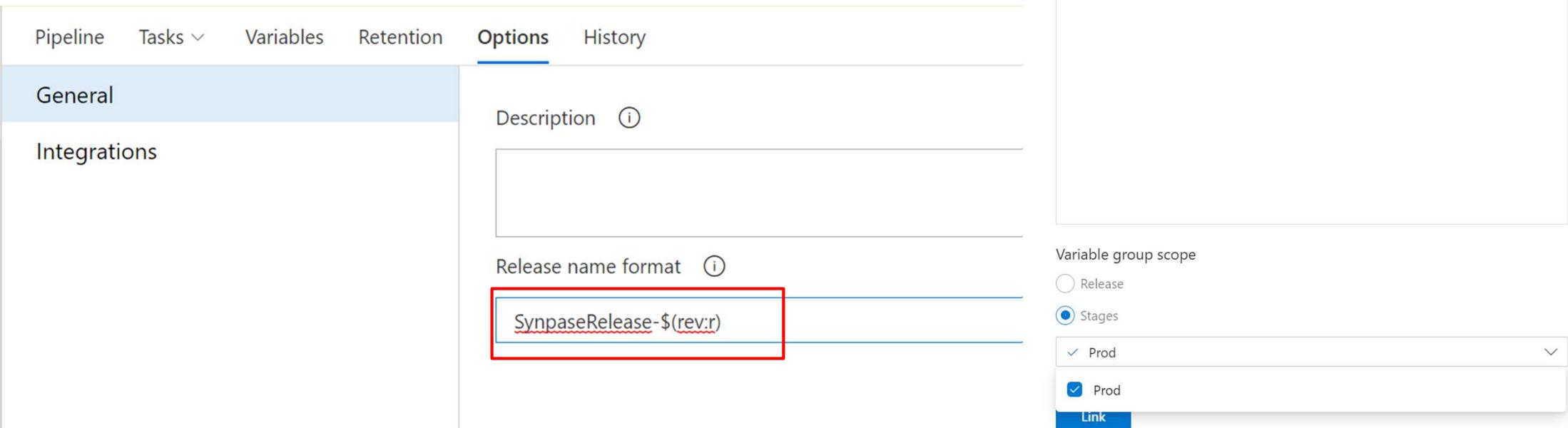
Name	Value
LS_AKV_KEYVAULT_properties...	https://demokeeuwdtapvaul toxgn01.v...
LS_ABLB_ENV01_properties...	\$(DTAP)-ABLB-ENV01
LS_ASQLENV01_WWI_pro...	ASQL-ENV01-WWI

+ Add

Release in Azure Dev Op

Connecting Library

Release name format



The screenshot shows the 'Options' tab of a pipeline configuration in Azure DevOps. On the left, there's a sidebar with 'General' and 'Integrations' sections. The main area has tabs for 'Pipeline', 'Tasks', 'Variables', 'Retention', 'Options' (which is selected), and 'History'. In the 'Options' section, there's a 'Description' input field and a 'Release name format' input field containing the value 'SynapseRelease-\$(rev:r)'. This 'Release name format' field is highlighted with a red rectangular border. To the right, there's a sidebar for linking variable groups. It includes a search bar at the top, a list of environments (Acceptance Environment, AzureDataBricks, DVLM Environment, Environment, Global, Production Environment, Test Environment), and a 'Variable group scope' section where 'Stages' is selected. Under 'Stages', 'Prod' is listed with a checked checkbox, and a 'Link' button is visible.

Pipeline Tasks Variables Retention Options History

General

Integrations

Description ⓘ

Release name format ⓘ

SynapseRelease-\$(rev:r)

Link variable group ⓘ

Acceptance Environment (3)

AzureDataBricks (2)

DVLM Environment (4)

Environment (4)

Global (4)

Production Environment (3)

Test Environment (4)

Variable group scope

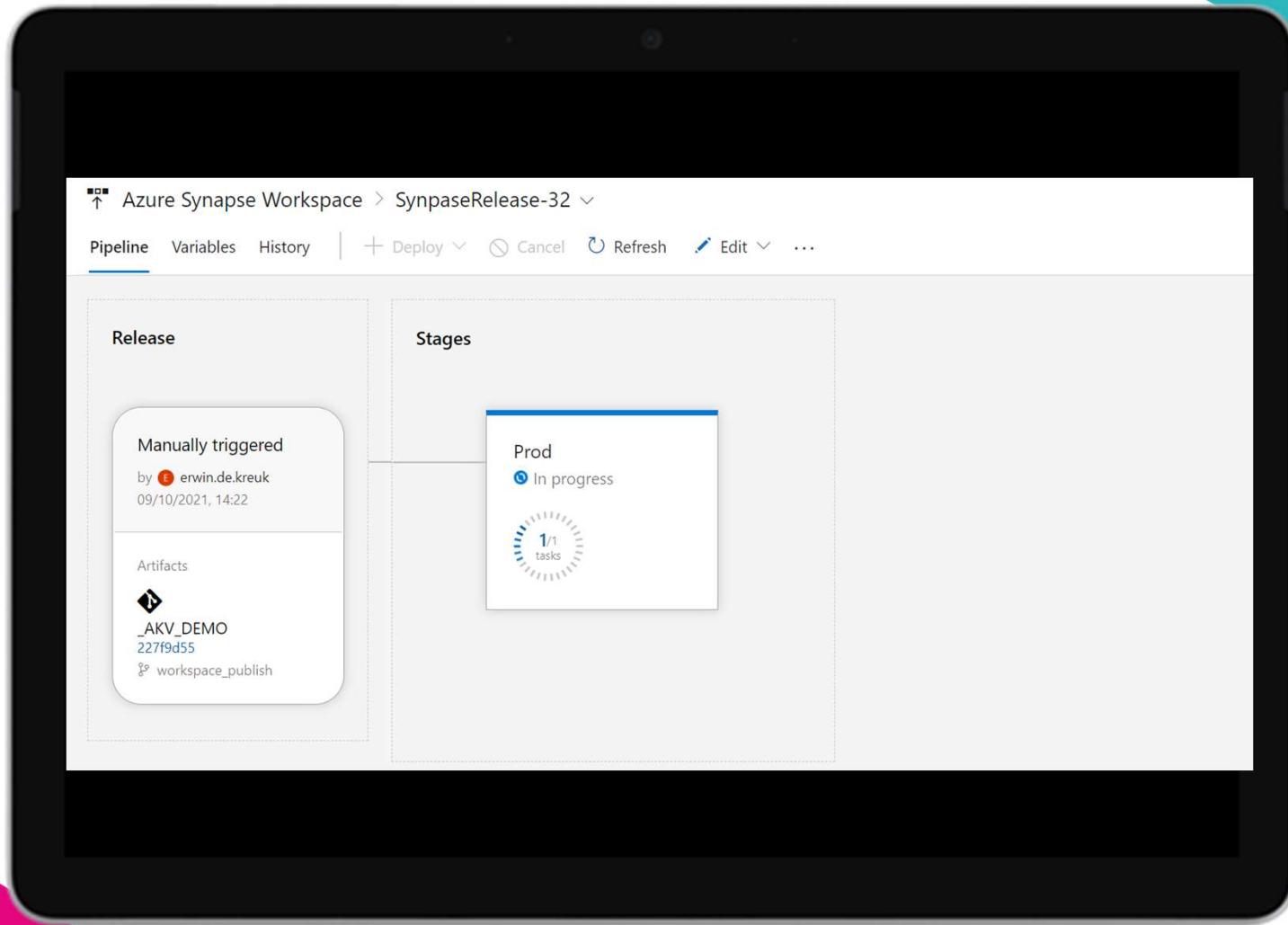
Release

Stages

Prod

Prod

Link



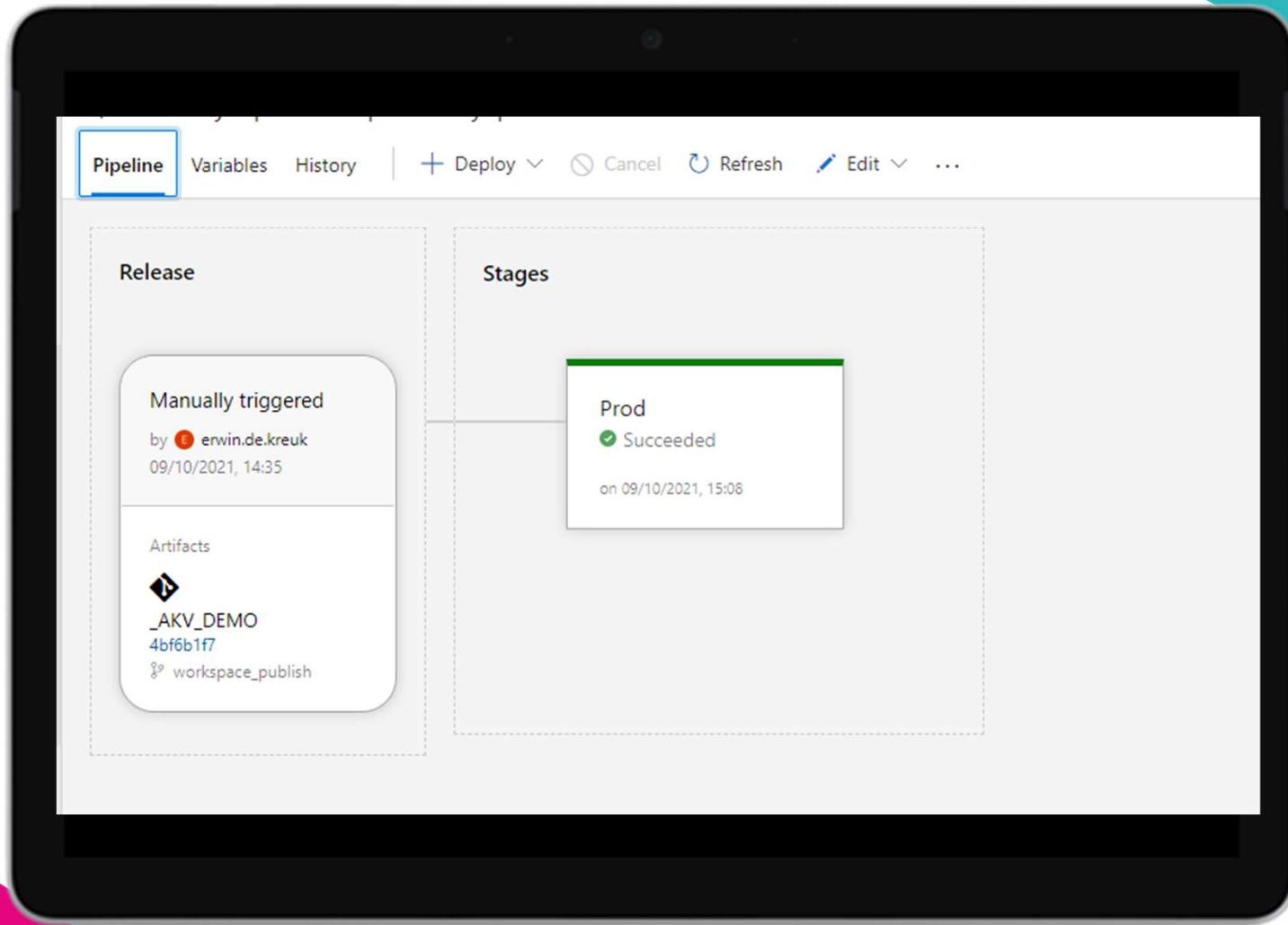
⌚ Synapse deployment task for workspace: demoekeuwprodsynochn02

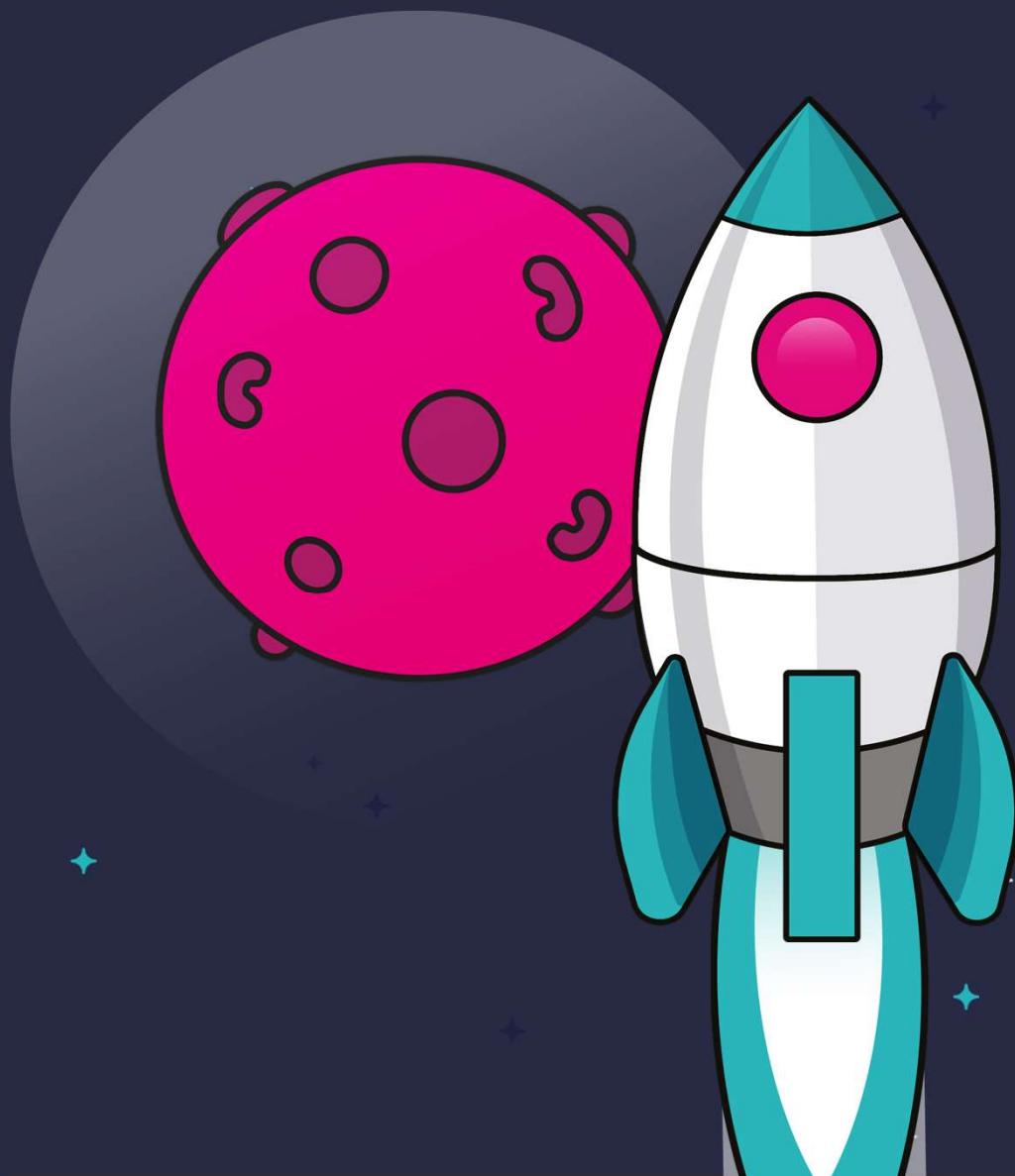
↑ Previous task ↓ Next task | X

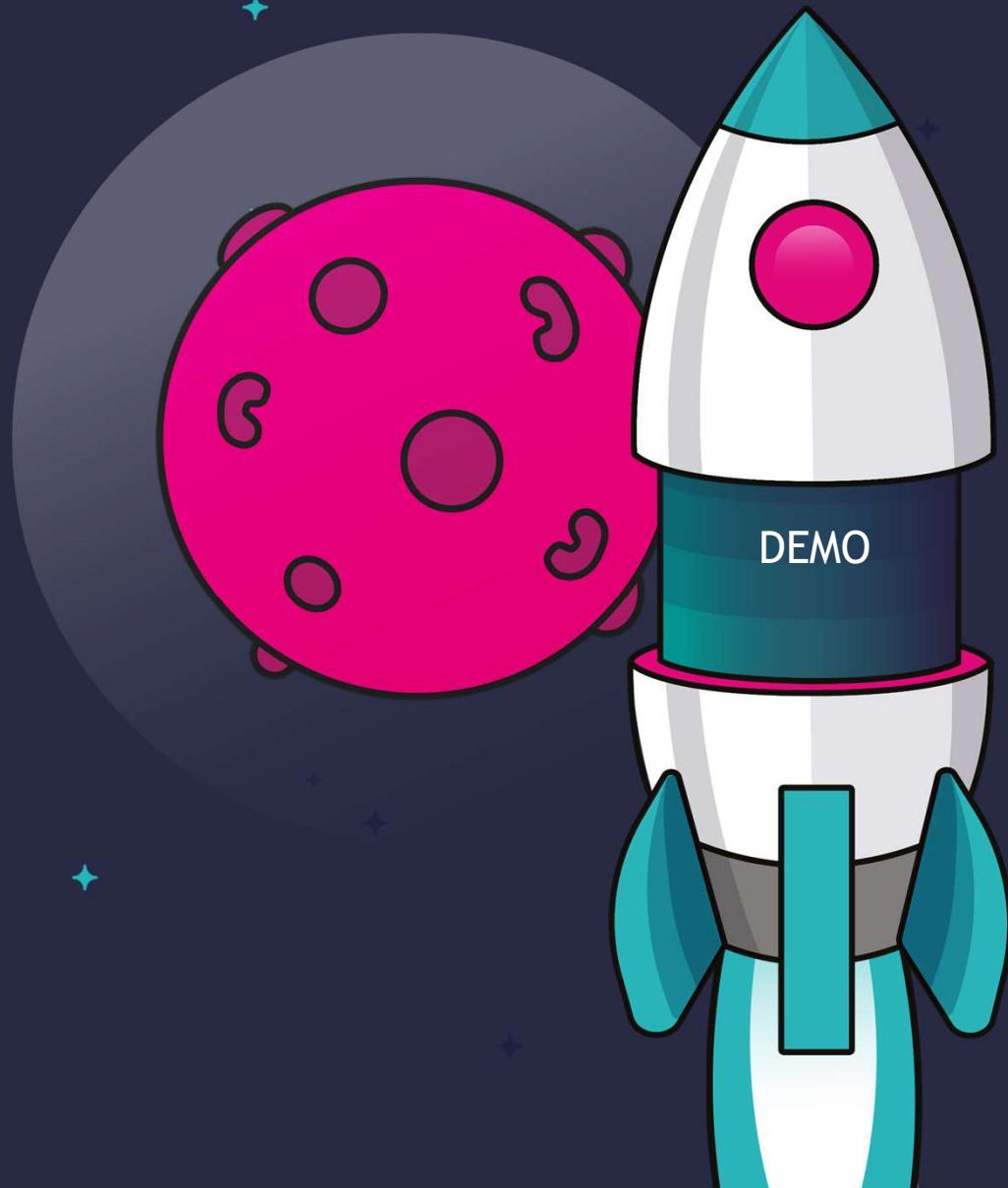
```

1 2021-10-14T11:56:38.914874Z #[section]Starting: Synapse deployment task for workspace: demoekeuwprodsynochn02
2 2021-10-14T11:56:38.971629Z =====
3 2021-10-14T11:56:38.971720Z Task : Synapse workspace deployment
4 2021-10-14T11:56:38.971791Z Description : Deployment task for synapse workspace.
5 2021-10-14T11:56:38.971824Z Version : 1.8.0
6 2021-10-14T11:56:38.971881Z Author : Microsoft Corporation
7 2021-10-14T11:56:38.972034Z Help : Displays the name of your extension.
8 2021-10-14T11:56:38.972086Z =====
9 2021-10-14T11:56:40.4624824Z downloadPath D:\var\la
10 2021-10-14T11:56:40.4630663Z targetWorkspaceName demoekeuwprodsynochn02
11 2021-10-14T11:56:40.4634691Z DeletedArtifactsNotInTemplate=false
12 2021-10-14T11:56:40.4638242Z environment prod
13 2021-10-14T11:56:40.4869108Z Workspace info url: https://management.azure.com/subscriptions/432ab660-2b24-421c-ae88-47a63a1533c/resourcegroups/DEMO-EUW-PRODUCTION-OXYGEN-RG/providers/Microsoft.Synaps
14 2021-10-14T11:56:41.3960250Z Workspace info response: {"type": "Microsoft.Synapse/workspaces", "properties": {"encryption": {"doubleEncryptionEnabled": false}, "defaultDataLakeStorage": {"accountUrl": "https://di
15 2021-10-14T11:56:41.3970597Z Workspace location: westeurope
16 2021-10-14T11:56:41.3971895Z Begin replacement of parameters in the template
17 2021-10-14T11:56:41.3972825Z Complete replacement of parameters in the template
18 2021-10-14T11:56:41.3979751Z Begin replacement of variables in the template
19 2021-10-14T11:56:41.3980540Z Complete replacement of variables in the template
20 2021-10-14T11:56:41.3983689Z Begin getting Artifacts From Template
21 2021-10-14T11:56:41.3984327Z Found Artifact of type Microsoft.Synapse/workspaces/pipelines
22 2021-10-14T11:56:41.3987696Z Found Artifact of type Microsoft.Synapse/workspaces/datasets
23 2021-10-14T11:56:41.3989314Z Found Artifact of type Microsoft.Synapse/workspaces/datasets
24 2021-10-14T11:56:41.3981857Z Found Artifact of type Microsoft.Synapse/workspaces/linkedServices
25 2021-10-14T11:56:41.3983941Z Found Artifact of type Microsoft.Synapse/workspaces/linkedServices
26 2021-10-14T11:56:41.3985462Z Found Artifact of type Microsoft.Synapse/workspaces/linkedServices
27 2021-10-14T11:56:41.3986792Z Will be skipped as its a default resource.
28 2021-10-14T11:56:41.3987628Z Found Artifact of type Microsoft.Synapse/workspaces/linkedServices
29 2021-10-14T11:56:41.3988498Z Will be skipped as its a default resource.
30 2021-10-14T11:56:41.3989344Z Found Artifact of type Microsoft.Synapse/workspaces/integrationRuntimes
31 2021-10-14T11:56:41.3989266Z Found Artifact of type Microsoft.Synapse/workspaces/credentials
32 2021-10-14T11:56:41.3983491Z Will be skipped as its a default resource.
33 2021-10-14T11:56:41.3984393Z Found Artifact of type Microsoft.Synapse/workspaces/linkedServices
34 2021-10-14T11:56:41.3985177Z Iteration 1 Figured out deployment order for 3 / 10 Artifacts for Dependancies.
35 2021-10-14T11:56:41.3986882Z Iteration 2 Figured out deployment order for 7 / 10 Artifacts for Dependancies.
36 2021-10-14T11:56:41.3986828Z Iteration 3 Figured out deployment order for 9 / 10 Artifacts for Dependancies.
37 2021-10-14T11:56:41.3987512Z Iteration 4 Figured out deployment order for 10 / 10 Artifacts for Dependancies.
38 2021-10-14T11:56:41.3988892Z Start deploying artifacts from the template.
39 2021-10-14T11:56:41.3989144Z Deploy AutoResolveIntegrationRuntime of type integrationRuntime
40 2021-10-14T11:56:42.0300994Z For Artifact: AutoResolveIntegrationRuntime: ArtifactDeploymentTask status: 202; status message: Accepted
41 2021-10-14T11:56:42.0300994Z For Artifact: AutoResolveIntegrationRuntime: Checkstatus: 202; status message: Accepted
42 2021-10-14T11:56:42.0485808Z Skipping deployment of WorkspaceSystemIdentity as its a default workspace resource.
43 2021-10-14T11:56:42.0486285Z Deploy LS_AKV_KEYVAULT of type linkedService
44 2021-10-14T11:56:42.24741123Z For Artifact: LS_AKV_KEYVAULT: ArtifactDeploymentTask status: 202; status message: Accepted
45 2021-10-14T11:56:42.3497103Z For artifact: AutoResolveIntegrationRuntime: Checkstatus: 202; status message: Accepted
46 2021-10-14T11:57:13.2552933Z For artifact: AutoResolveIntegrationRuntime: Checkstatus: 200; status message: OK
47 2021-10-14T11:57:13.2556015Z Artifact: AutoResolveIntegrationRuntime deployed successfully.
48 2021-10-14T11:57:13.5592489Z For artifact: LS_AKV_KEYVAULT: Checkstatus: 200; status message: OK
49 2021-10-14T11:57:13.5596463Z Artifact LS_AKV_KEYVAULT deployed successfully.
50 2021-10-14T11:57:13.5598270Z Deploy LS_ABLB_ENV01 of type linkedService
51 2021-10-14T11:57:13.5906023Z For Artifact: LS_ABLB_ENV01: ArtifactDeploymentTask status: 202; status message: Accepted
52 2021-10-14T11:57:13.5976077Z Deploying LS_ABLB_ENV01
53 2021-10-14T11:57:13.5976077Z Done! 1C ASIN: FMS01 WAD: 0f4f8e11-1d6b-4c1a-941a-000000000000

```



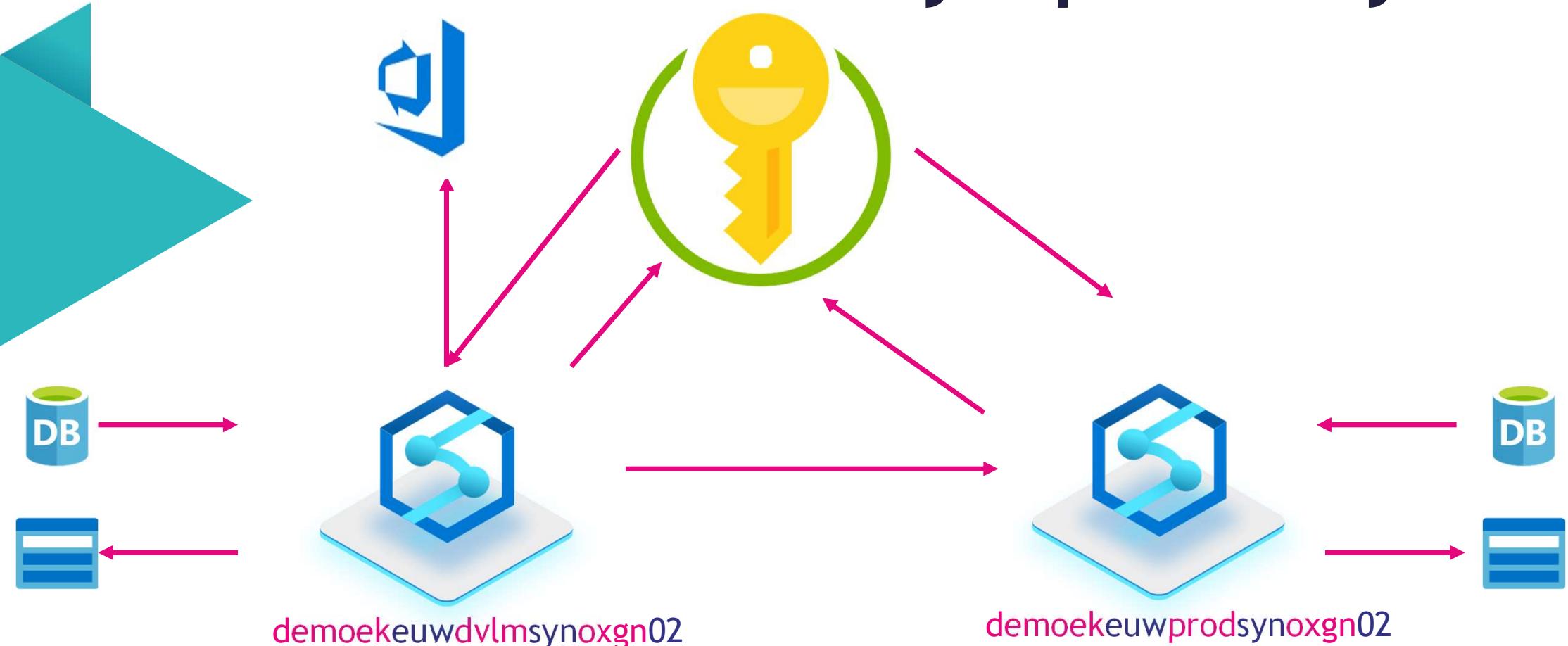




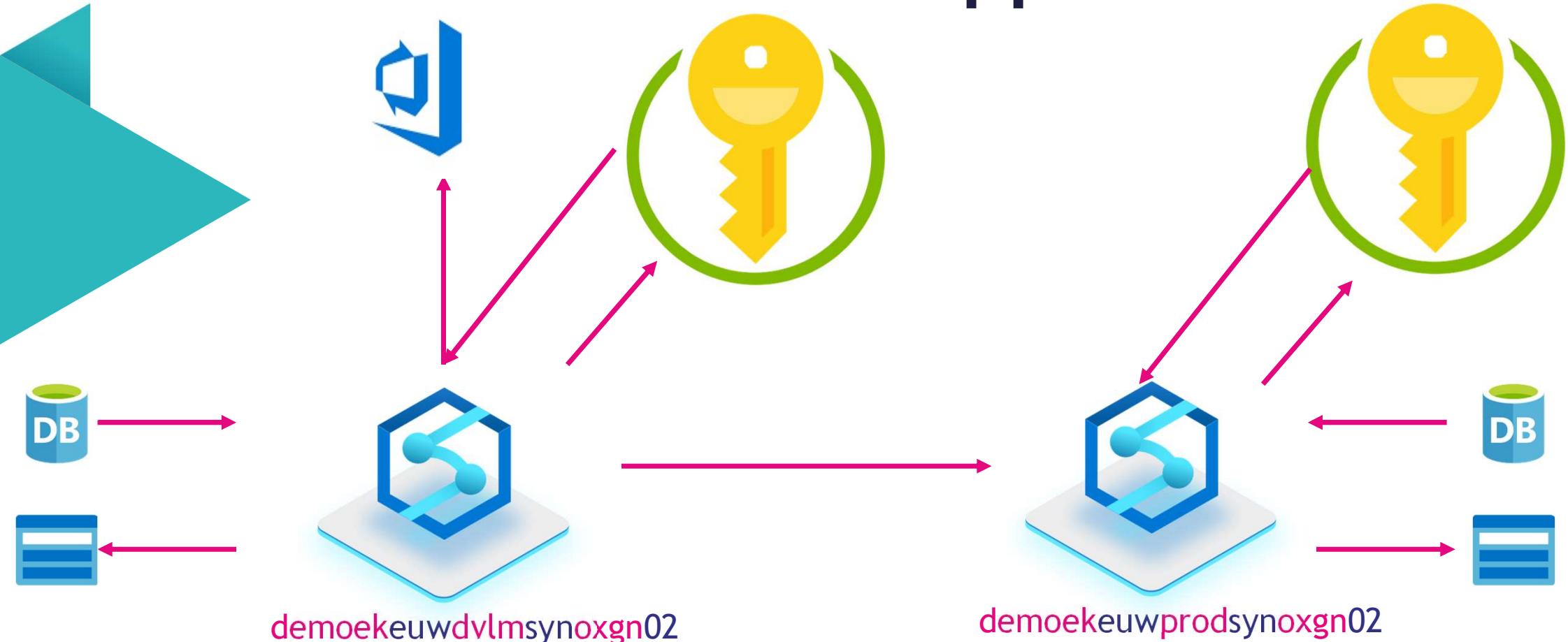
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DEMO

Creating your Azure Synapse Analytics



An even more secure approach



Custom parameters

Not all the properties have parameters by default.

template-parameters-definition.json

Adding accountkey for DataLake

with secrets from Azure Key Vault “accountkey”: “|”,

- = means keep the current value as the default value for the parameter.
- means don't keep the default value for the parameter.
- | is a special case for secrets from Azure Key Vault for connection strings or keys.

```
"Microsoft.Synapse/workspaces/linkedServices": {  
    "*": {  
        "properties": {  
            "typeProperties": {  
                "accountName": "=",  
                "username": "=",  
                "userName": "=",  
                "accountKey": "|",  
                "accessKeyId": "=",  
                "servicePrincipalId": "=",  
                "userId": "=",  
                "clientId": "=",  
                "clusterUserName": "=",  
                "clusterSshUserName": "=",  
                "hostSubscriptionId": "=",  
                "clusterResourceGroup": "=",  
                "subscriptionId": "=",  
                "resourceGroupName": "=",  
                "tenant": "=",  
                "dataLakeStoreUri": "-",  
                "baseUrl": "=",  
                "database": "=",  
                "serviceEndpoint": "=",  
                "batchUri": "=",  
                "databaseName": "=",  
                "systemNumber": "=",  
                "server": "=",  
                "url": "-"  
            }  
        }  
    }  
}
```

More info can be found here:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/cicd/continuous-integration-delivery#create-custom-parameters-in-the-workspace-template>

Remarks

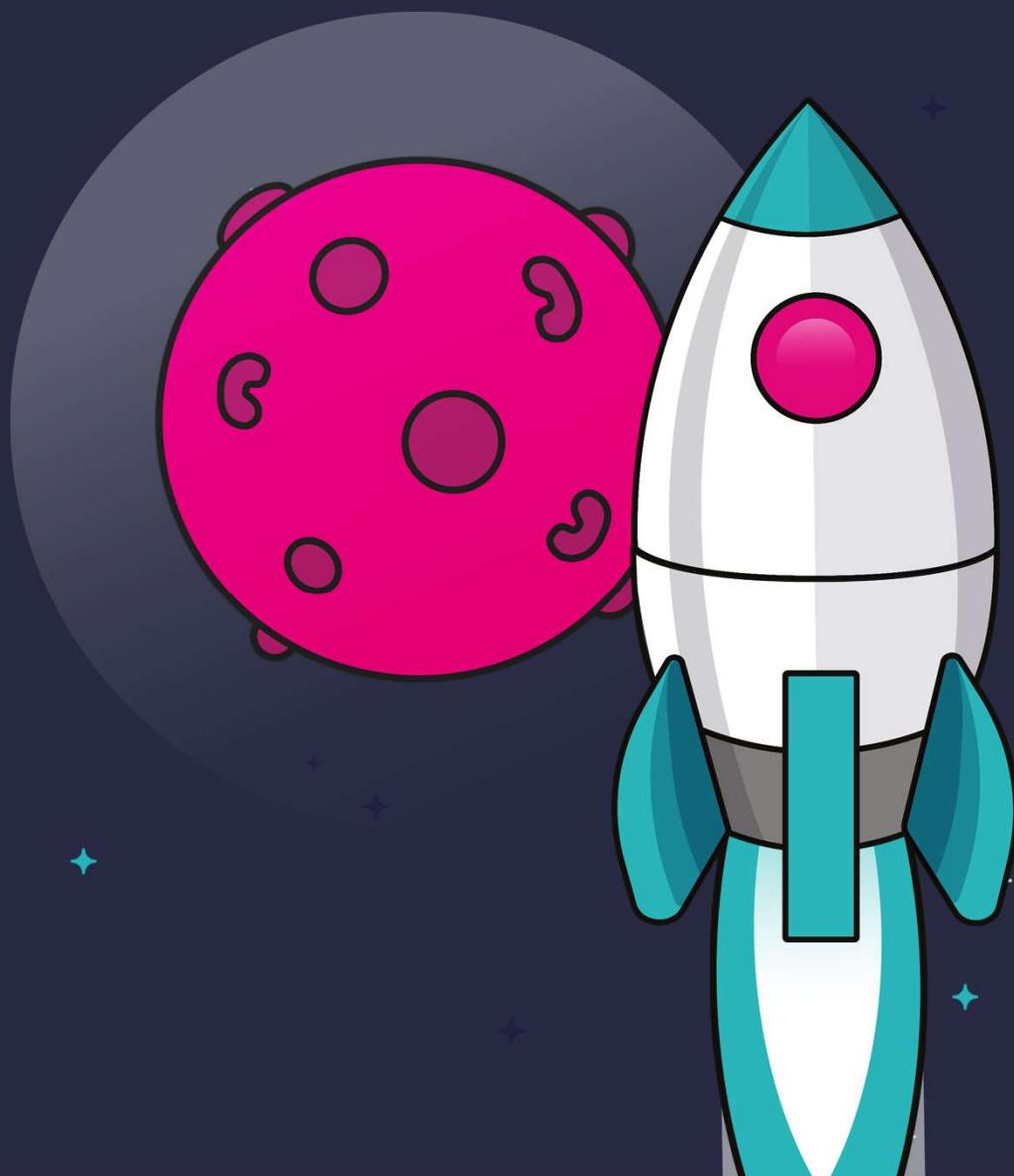
You cannot publish while SSIS Integration Runtime is running(currently only ADF)

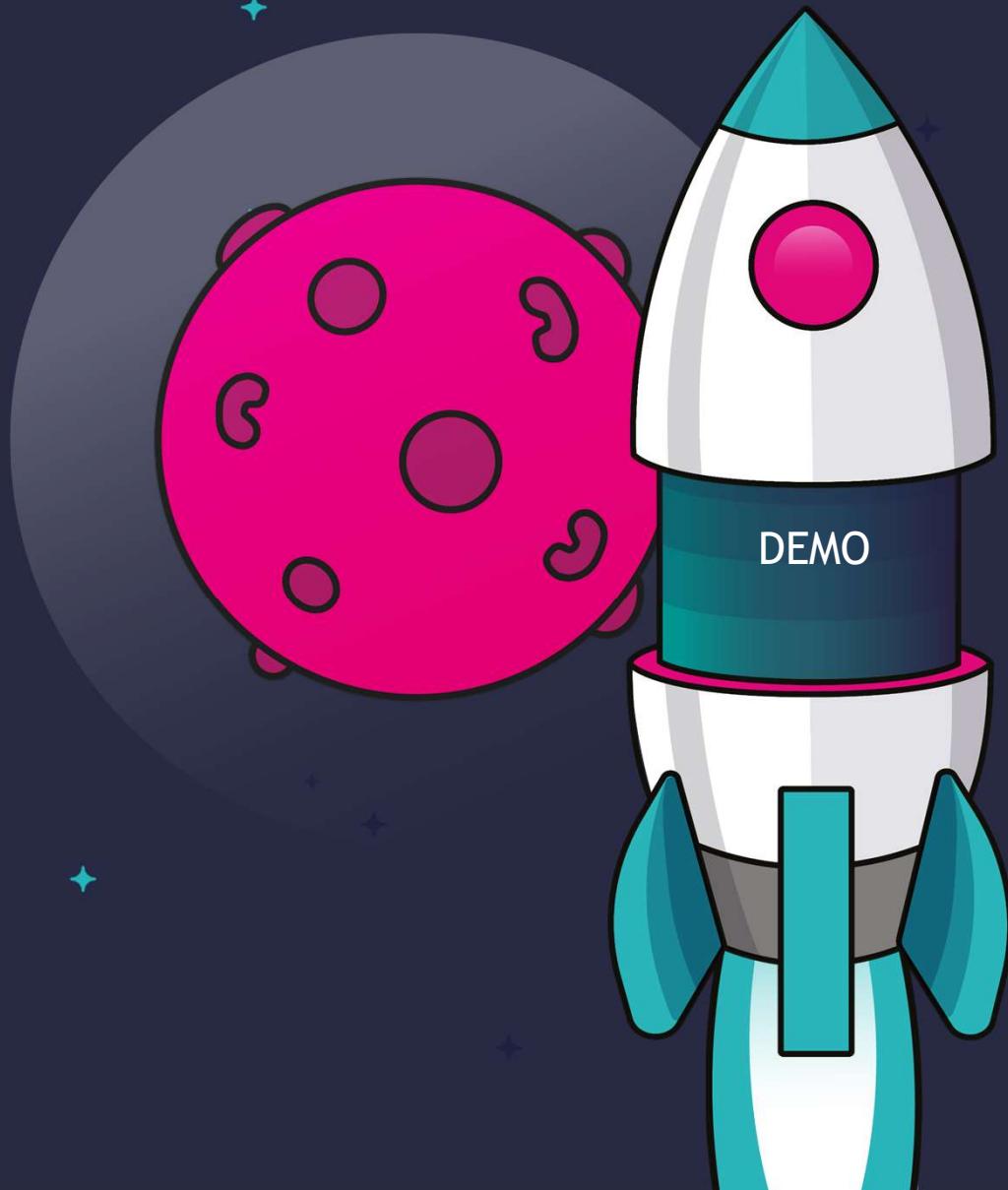
Triggers needs to be disabled and enabled afterwards (Synapse Extension)

Every time you change something to your connection you need to update the Template parameter

Deletes are handled manually or through (Synapse Extension)







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Questions?



@erwindekreuk



A business card template with a black header and footer bar. The central white area contains a circular profile picture of a man, the name "Erwin de Kreuk", the title "Principal Consultant | Lead Data and AI | Data Platform MVP | Publ...", and a QR code.

Erwin de Kreuk
Principal Consultant | Lead Data and AI | Data Platform MVP | Publ...



<https://erwindekreuk.com>

