

Deep Dive into Database Projects for Fabric Warehouse

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PBIUG ITALY

Supporta il Power BI User Group Italy



Riccardo Perico organizza questa raccolta fondi

352 € raccolti

Obiettivo di 450 € · 19 donazioni



Condividi

Fai una donazione

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Scansiona per donare alla raccolta
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**“Supporta il Power BI User
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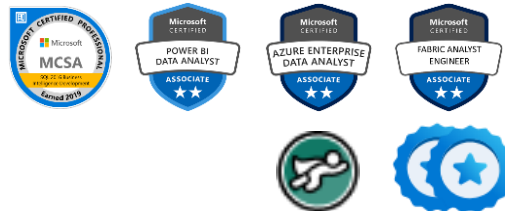
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 medium.com/riccardo-perico



BI & Power BI Engineer @ **Lucient**⁴
ITALIA

+10 years in Microsoft “Data Realm”

Giving my little contribution to the community



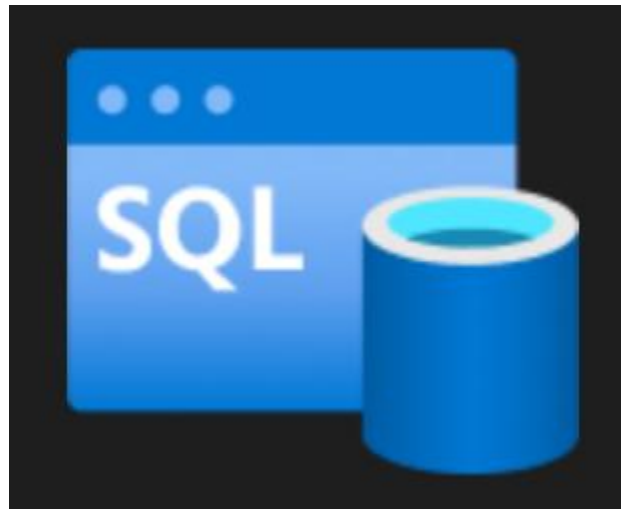
DATA SATURDAYS

Who?



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SQL Database Projects



What?



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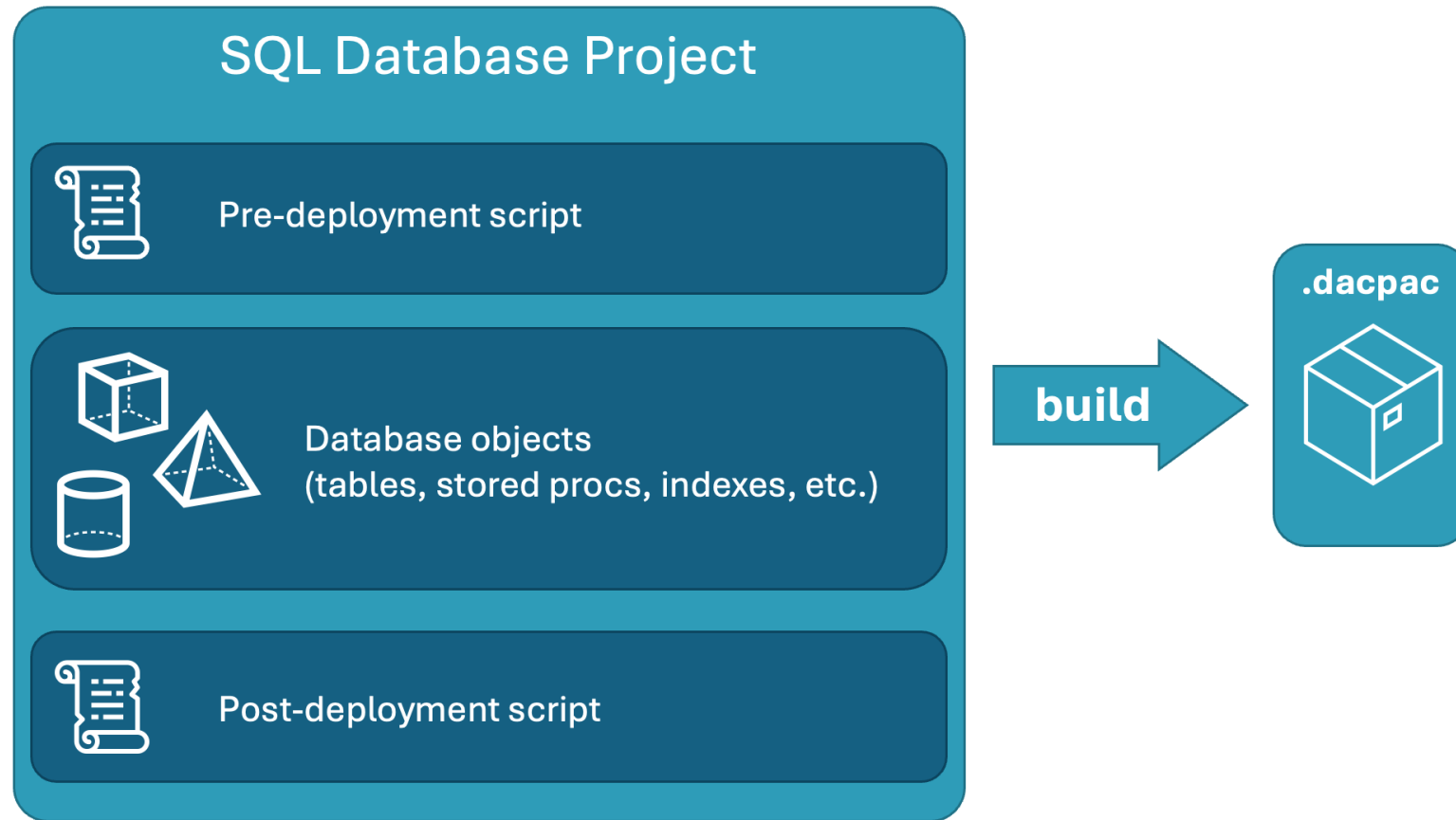
*“A SQL database project is a local **representation of SQL objects** that comprise the schema **for a single database**, such as **tables, stored procedures, or functions**. The development cycle of a SQL database project enables database development to be **integrated into a continuous integration and continuous deployment (CI/CD)** workflows familiar as a development best practice.”*

[What are SQL database projects? - SQL Server | Microsoft Learn](#)

Developing a database solution

- (optionally) do stuff before db creation
- Create database
- Create tables to store data
- Create views to expose data
- Create functions and stored procedures to manage data
- (optionally) do stuff to after db creation

It is what it is



Where?



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Where SQL is



Why?



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It gives you

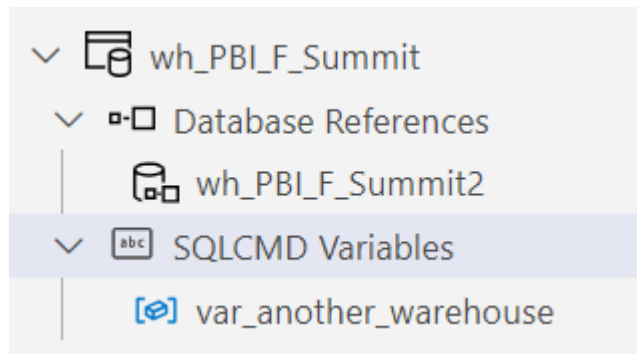
- Better development
 - Validation
 - Database solution versioning
 - Improved co-operation
 - Decoupling development and physical db
 - Offline development
- Improved reliability with DB compare and packaged version
- Improved stability with managed CI/CD processes
- Improved segregation of duties

Demo



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```
CREATE VIEW [dbo].[ViewPointingToAnotherWarehouse]
AS
SELECT
*
FROM [$(var_another_warehouse)].Trip as T;
```



Add database reference

Referenced Database Type

- ☐ Project
☐ System database
☒ Data-tier application (.dacpac)
☐ Published data-tier application (.nupkg)

Data-tier application (.dacpac)

c:\Users\rperico\Downloads\wh_PBI_F_Summit2.dacpac

Location

Different database, same server

Database name *

wh_PBI_F_Summit2

Database variable

var_another_warehouse

Server name

Server variable

Example Usage

SELECT * FROM [\$(var_another_warehouse)].[Schema1].[Table1]

Something went wrong



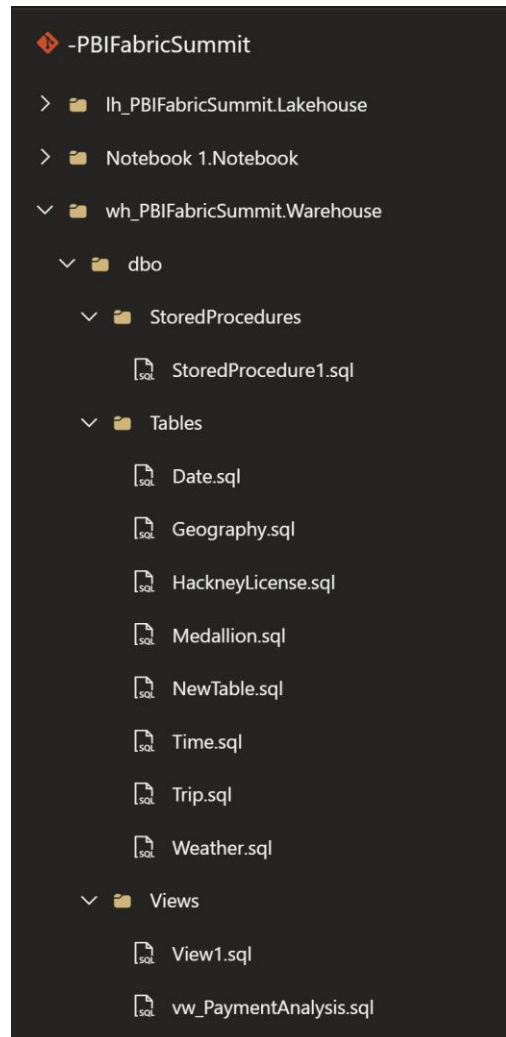
Please check the technical details for more information. If you contact support, please provide these details.



wh_PBIFabricSummit

Hide details ^

Workload Error Message Error occurred during import database for the Datawarehouse '3f525e83-7a8d-4c95-a4fb-b31ca55db373@6f199e90-f465-4c29-8e37-8a7787993180'. File: dbo/Views/View1.sql, Error: Invalid object name '\$(db2).dbo.Geography'.
Time Sun Jan 12 2025 13:28:20 GMT+0100 (Central European Standard Time)



Geography.sql

[Contents](#) [History](#) [Compare](#) [Blame](#)

```
1 CREATE TABLE [dbo].[Geography] (  
2  
3     [GeographyID] int NOT NULL,  
4     [ZipCodeBKey] varchar(10) NOT NULL,  
5     [County] varchar(50) NULL,  
6     [City] varchar(50) NULL,  
7     [State] varchar(50) NULL,  
8     [Country] varchar(50) NULL,  
9     [ZipCode] varchar(50) NULL,  
10    [newcol] varchar(100) NULL  
11 );  
12  
13
```

View1.sql

[Contents](#) [History](#) [Compare](#) [Blame](#)

```
1 CREATE VIEW [dbo].[View1]  
2 AS SELECT * FROM [wh_PBIFabricSummit2].dbo.Geography
```

Modify a project cloned locally

The screenshot displays the SQL Server Enterprise Developer interface. On the left, the 'SOURCE CONTROL' pane is active, showing a commit message input field with the placeholder text 'Message (Ctrl+Enter to commit on "main")' and a blue 'Commit' button. Below this, the 'Changes' section lists a file 'TableCreatedViaCommit.sql' under the path 'dbo\Tables', with a circular badge indicating one change. On the right, the query editor shows a SQL script to create a table. The toolbar includes 'Run', 'Cancel', 'Disconnect', and 'Change' buttons, along with a database dropdown set to 'wh_PBIFabricSummit' and an 'Estimated Plan' button. The script content is as follows:

```
1 CREATE TABLE [dbo].[TableCreatedViaCommit]
2 (
3     [Id] INT
4 )
5
```

[+ New item](#) [New folder](#) [Upload](#)[Source control](#) 1

Filter by keyword

Filter



You have pending updates from Git. We recommend you update the incoming changes and then continue working.

	Name	Git status	Type	Task	Owner	Refreshed	Next refresh	Endorsement
	lh_PBIFabricSummit	✓ Synced	Lakehouse	—	Riccardo Perico	—	—	—
	lh_PBIFabricSummit	—	Semantic model ...	—	PBI-Fabric Summit	1/12/2025, 12:21:15...	N/A	—
	lh_PBIFabricSummit	—	SQL analytics en...	—	PBI-Fabric Summit	—	N/A	—
	Notebook 1	✓ Synced	Notebook	—	Riccardo Perico	—	—	—
	wh_PBIFabricSummit	• Update Required	Warehouse	—	Riccardo Perico	—	N/A	—
	wh_PBIFabricSummit	—	Semantic model ...	—	PBI-Fabric Summit	1/11/2025, 3:16:56 ...	N/A	—
	wh_PBIFabricSummit2	✓ Synced	Warehouse	—	Riccardo Perico	—	N/A	—
	wh_PBIFabricSummit2	—	Semantic model ...	—	PBI-Fabric Summit	1/12/2025, 11:36:57...	N/A	—

Source control



Current branch: main

Changes Updates 1

Item	Status
wh_PBIFabricSummit	🔄

Deploy through environments

The screenshot shows a deployment interface with two stages: Development and Production. The Development stage is labeled 'PBI-Fabric Summit' and the Production stage is labeled 'PBI-Fabric Summit PROD'. A green arrow points from Development to Production. Below the stages, there is a 'Deploy' button with a '1' icon. To the right of the button is a 'Select related' link. Below this is a table with the following columns: 'Selected stage item', 'Type', 'Compared to source', and 'Source stage item'.

Selected stage item	Type	Compared to source	Source stage item
✓ —	Warehouse (Preview)	+ Only in source	wh_PBIFabricSummit

Fabric is fast evolving platform, some of the content you're seeing can be changed.

DISCLAIMER

Limitations

- Preview feature
- Bugs are present
- Alter Table may cause table rebuild
- Limited “Cross Warehouses” integration
- Not 100% production ready

Resources to study more


- [The Reality of ALTER TABLE... in Fabric Warehouses](#)
- [Table Relationships in Fabric Warehouses: Impact on the Semantic Model](#)
- [Primary, foreign, and unique keys - Microsoft Fabric | Microsoft Learn](#)
- [Source control with Warehouse \(preview\) - Microsoft Fabric | Microsoft Learn](#)

Thank you

- Connect to me at:

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 [linkedin.com/in/riccardo-perico](https://www.linkedin.com/in/riccardo-perico)

 github.com/R1k91

 [medium.com/riccardo-perico](https://medium.com/<u>riccardo-perico</u>)

Useful links

[Limitations](#)

[Push it to the limit](#)



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Q&A



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Thanks!