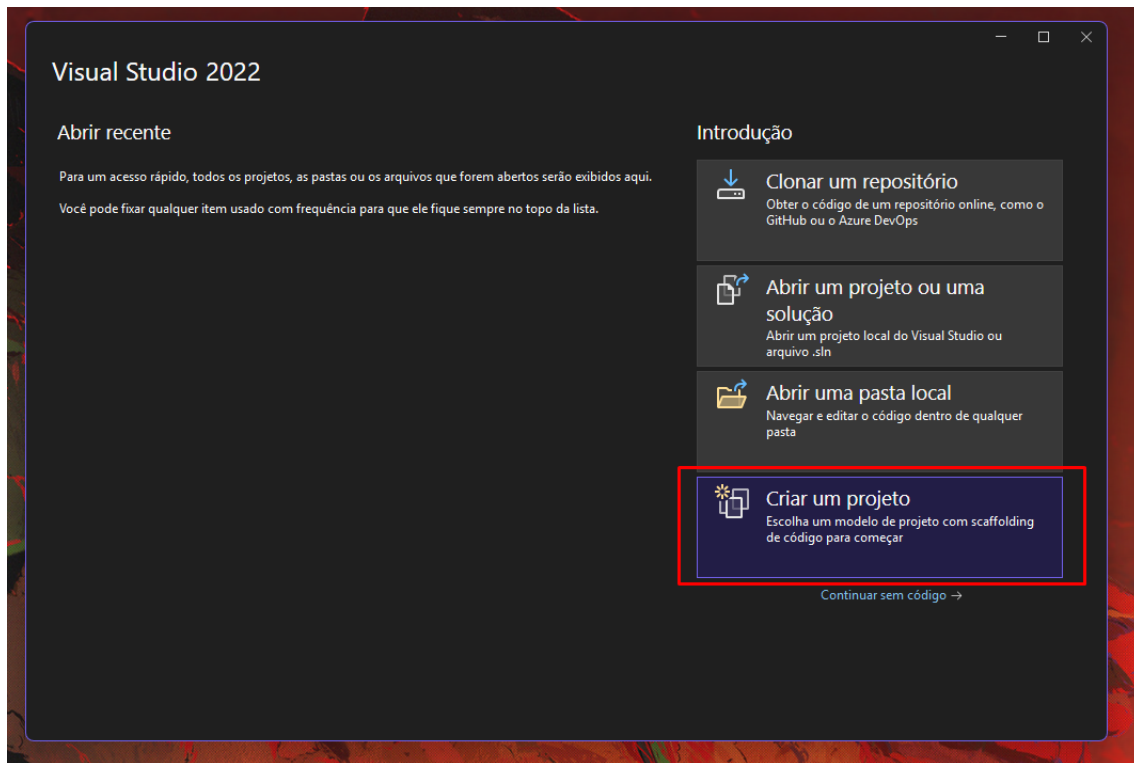
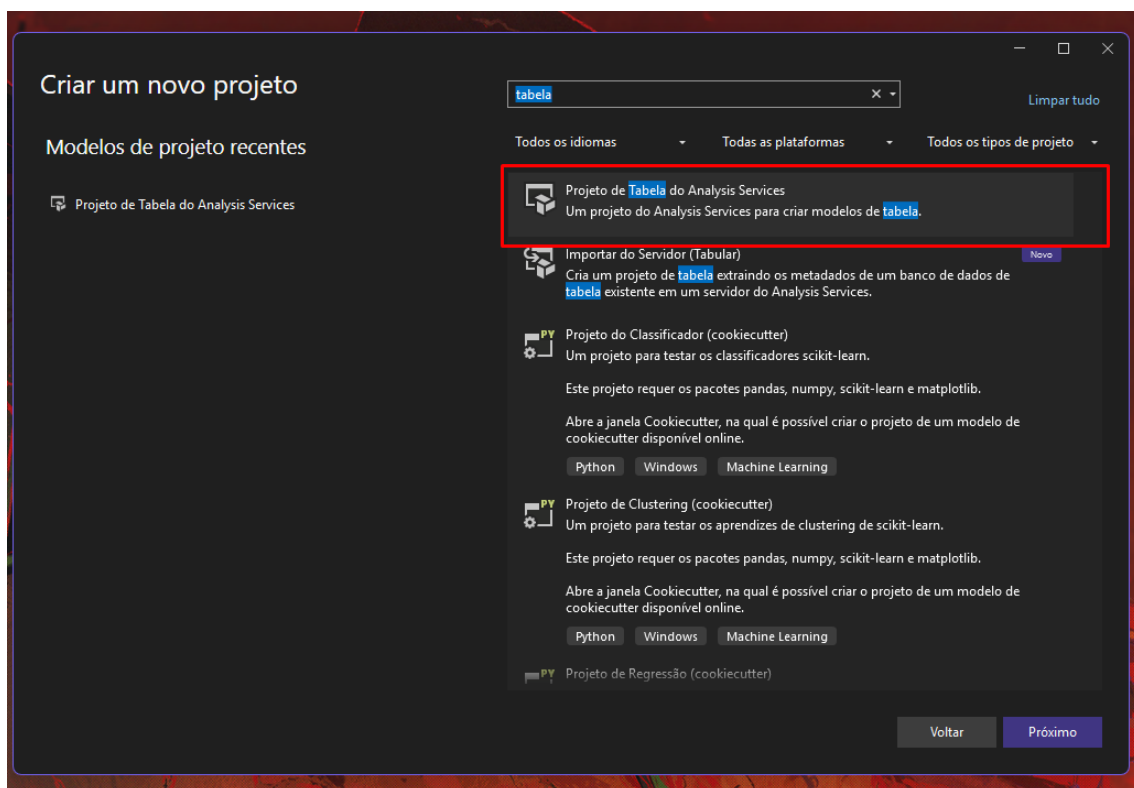


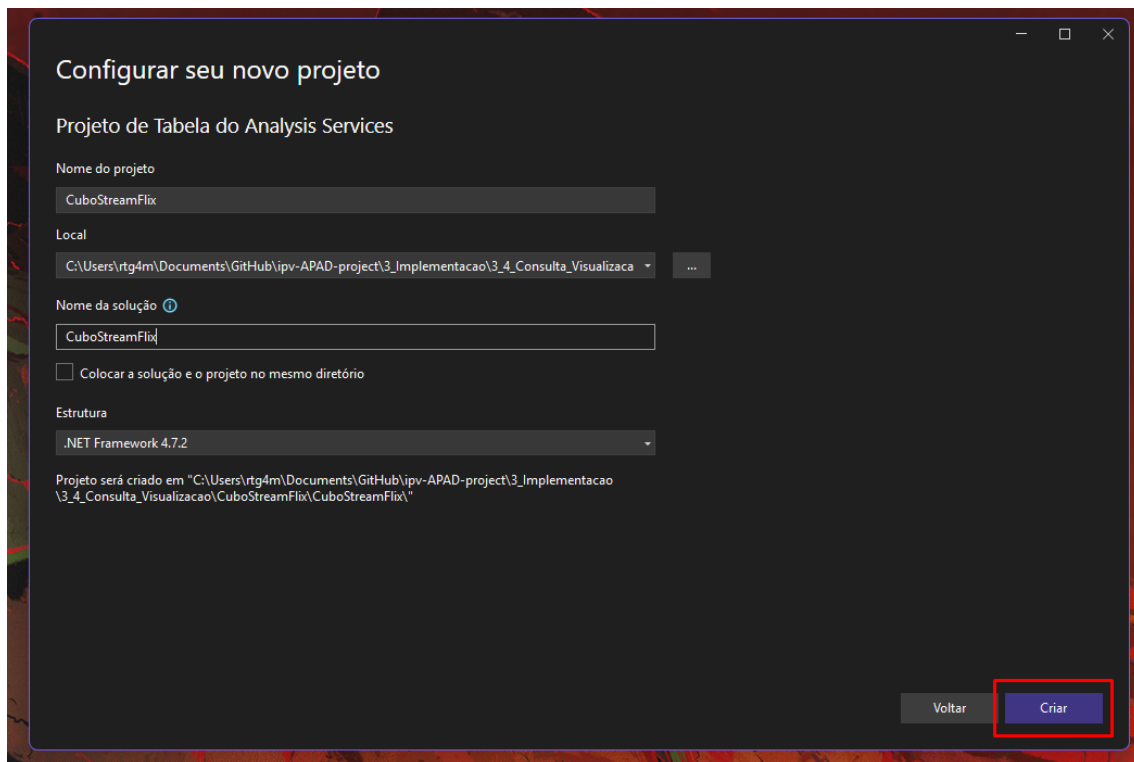
Começa-se pela criação de um novo projeto:



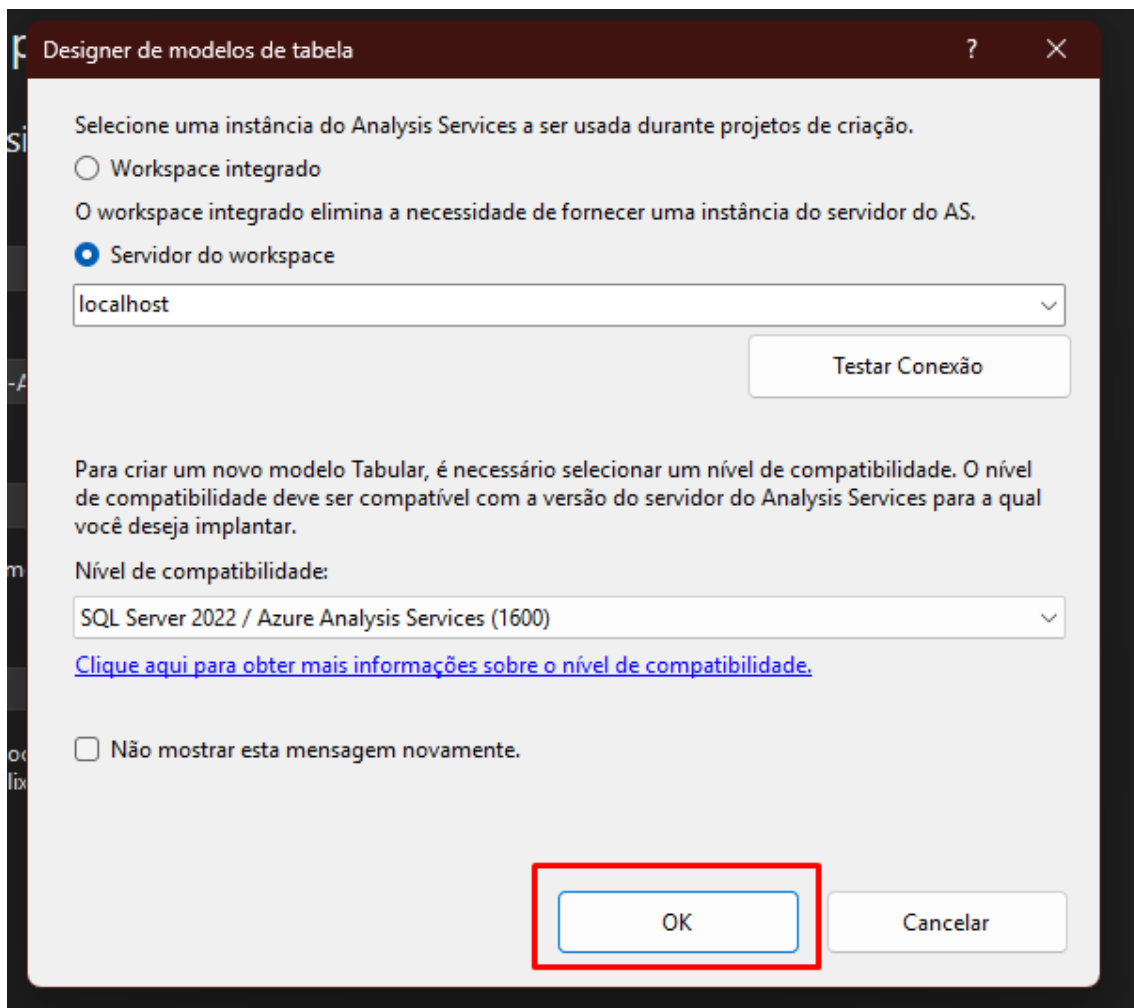
Seleciona-se “Projeto de Tabela do Analysis Services”:



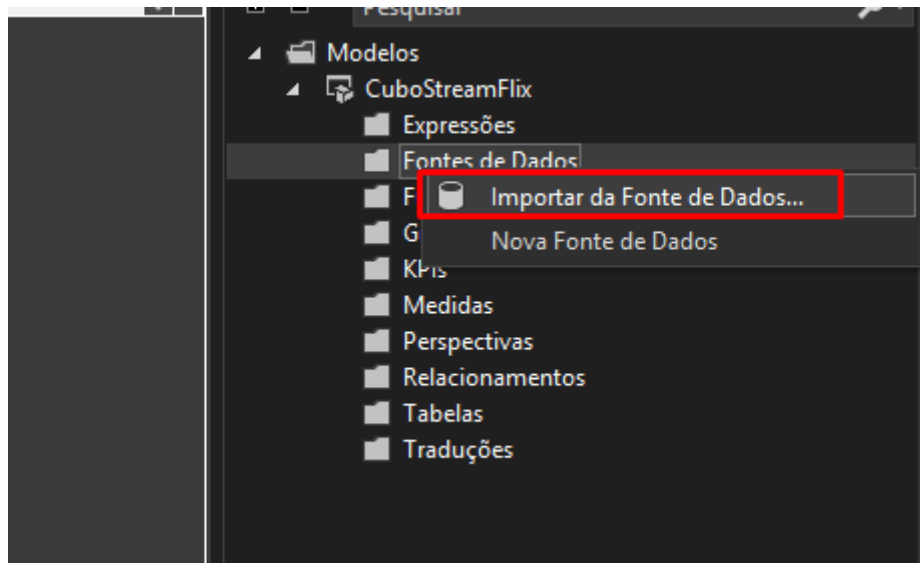
Escolhe-se o nome do projeto “CuboStreamFlix” e o seu local:



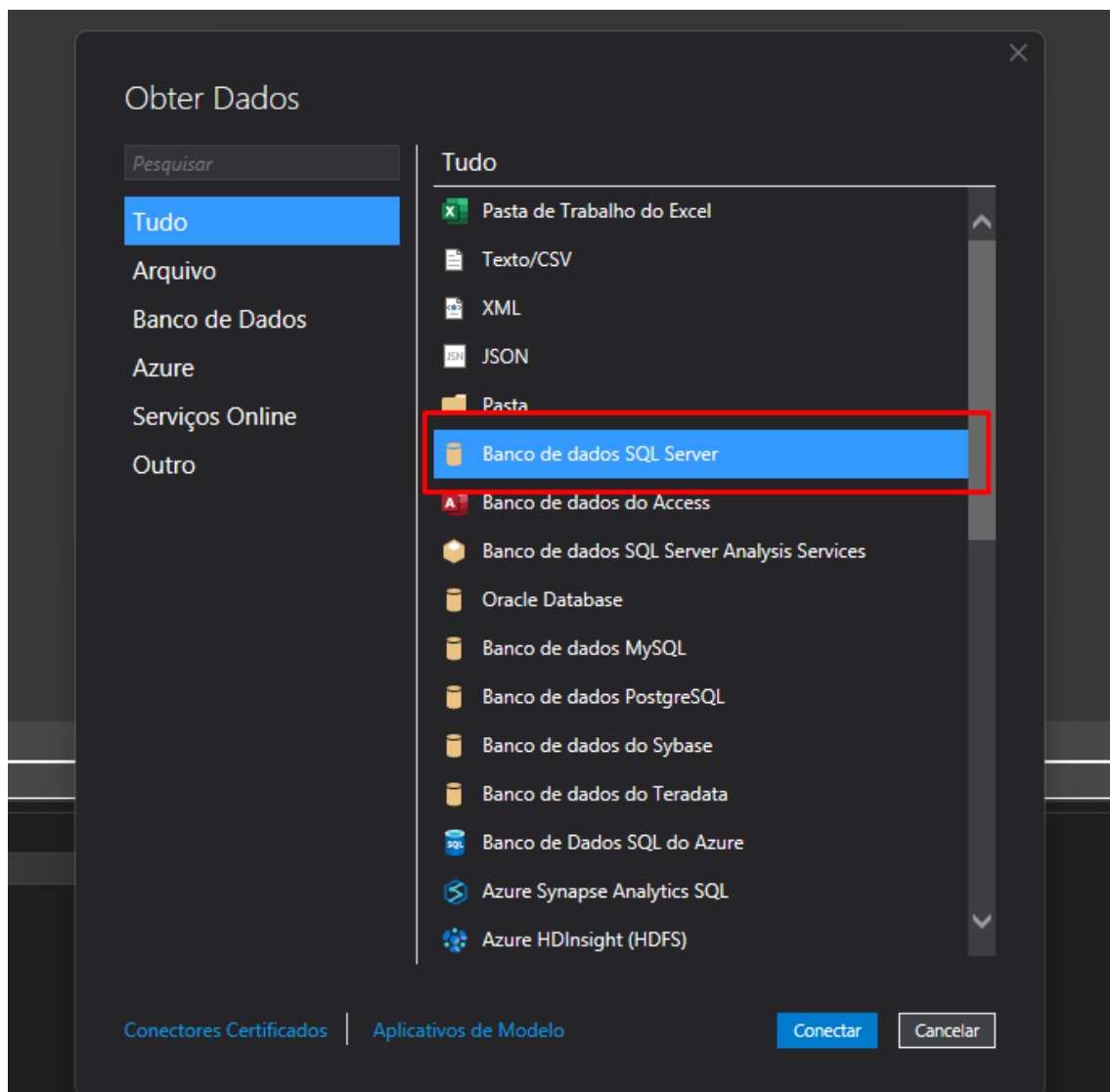
Seleciona-se a instância do Analysis Services a correr em “localhost”:



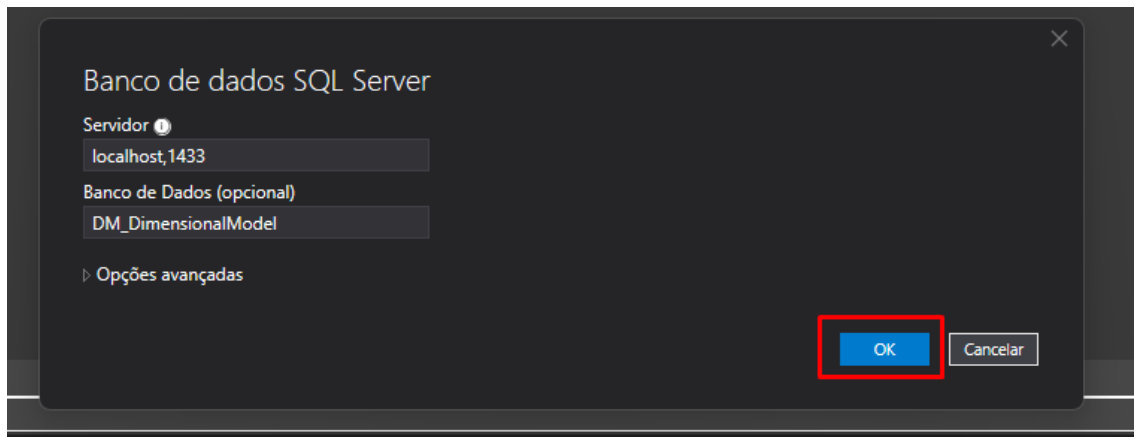
Após a criação do projeto, vai-se importar da fonte de dados:



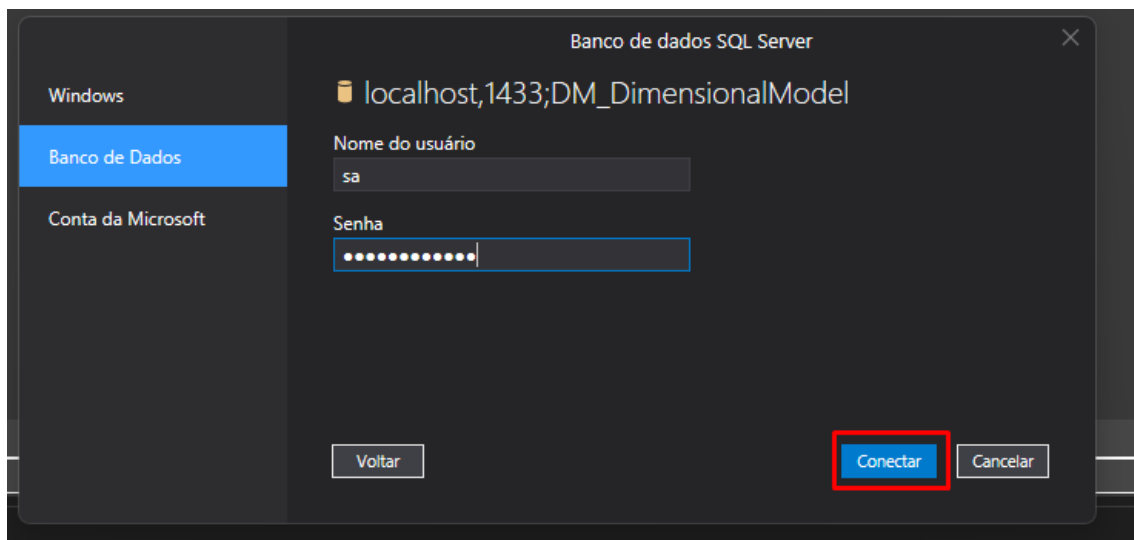
Escolhe-se a opção de base de dados do SQL Server:



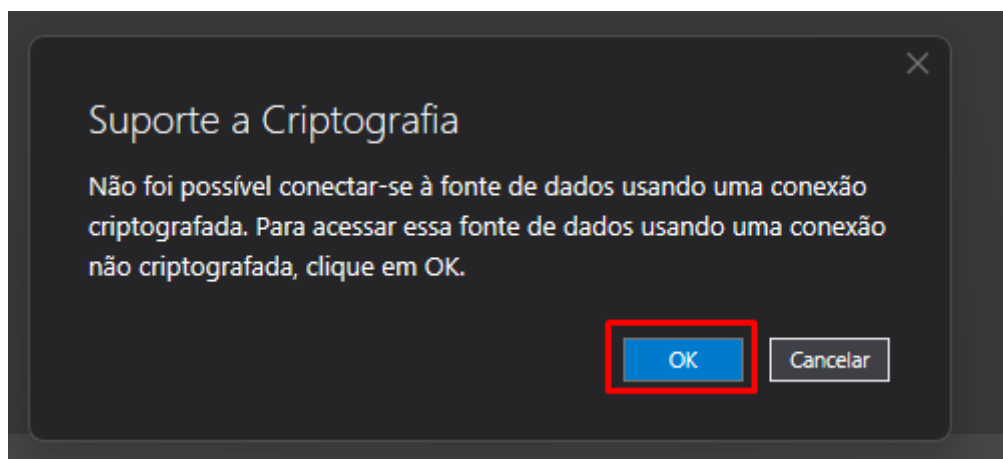
Introduzem-se as credenciais da base de dados SQL Server (que está a correr dentro do container docker):



E escolhe-se a autenticação da base de dados, inserindo a palavra-passe definida no ficheiro docker-compose ("Password123!"):



Reconhece-se que se vai utilizar uma conexão não criptografada:



E carregam-se então os dados:

Após isso, vai-se selecionar a dimensão “users” e adicionar uma coluna com a fórmula “USERS[USER_CODE] & " - " & USERS[SOURCE]” (esta coluna vai servir para que se consigam agrupar todos os registos de um certo utilizador, derivados do tratamento de SCD do tipo 2.3):

UP	GENDER	SIGNUP_DATE	SUBSCRIPTION_STATUS	COUNTRY	DISTRICT	CITY	POSTAL_CODE	STREET_ADDRESS	INITIAL_DATE	FINAL_DATE	ACTIVE	Adicionar Coluna
1	Male	25/05/2023 00:...	Active	Canada	West Virginia	West ...	64984	6496 Bruce Stream	29/05/2025 23:...		TRUE	
2	Male	01/12/2024 00:...	Active	Canada	Arizona	Kellyb...	51174	1831 Suzanne Roads	29/05/2025 23:...		TRUE	
3	Male	24/04/2025 00:...	Active	United King...	Washington	East K...	29150	50272 Hopkins Trail	29/05/2025 23:...		TRUE	
4	Male	11/04/2023 00:...	Active	United King...	Florida	Mday...	51246	9162 Jordan Summit...	29/05/2025 23:...		TRUE	
5	Male	12/09/2024 00:...	Active	Brazil	Mississippi	Aaron...	71252	978 Stewart Isle	29/05/2025 23:...		TRUE	
6	Male	01/07/2021 00:...	Active	Germany	Utah	Sandr...	52788	8488 Wolf Manor	29/05/2025 23:...		TRUE	
7	Male	01/11/2023 00:...	Active	Brazil	Pennsylvania	Brenn...	98409	95334 Victor Manors	29/05/2025 23:...		TRUE	
8	Male	23/02/2023 00:...	Active	Spain	Massachus...	Balleys...	24240	79500 Barbara Skyw...	29/05/2025 23:...		TRUE	
9	Male	16/02/2023 00:...	Active	United States	Vermont	South ...	12160	0023 Frank Pines	29/05/2025 23:...		TRUE	
10	Male	06/08/2021 00:...	Active	Italy	New Hamps...	South ...	34081	115 Thomas Meadows	29/05/2025 23:...		TRUE	
11	Male	11/10/2023 00:...	Active	Germany	Illinois	East 1...	94859	282 Kaufman Pass A...	29/05/2025 23:...		TRUE	
12	Male	10/06/2024 00:...	Active	Netherlands	Illinois	West ...	53724	13031 Jonathan Co...	29/05/2025 23:...		TRUE	
13	Male	21/04/2025 00:...	Active	Portugal	Mississippi	East C...	86328	71708 Spencer Corn...	29/05/2025 23:...		TRUE	
14	Male	20/02/2025 00:...	Active	Netherlands	Mississippi	Garcia...	50292	87218 Ryan Villages	29/05/2025 23:...		TRUE	
15	Male	25/11/2022 00:...	Active	United King...	Ohio	Port T...	42257	582 Mack Avenue	29/05/2025 23:...		TRUE	
16	Male	12/01/2021 00:...	Active	Canada	West Virginia	Julestad	4626	1936 Baker Mill	29/05/2025 23:...		TRUE	
17	Male	24/04/2023 00:...	Active	Italy	New Hamps...	West 1...	32996	866 Morales Track	29/05/2025 23:...		TRUE	
18	Male	17/08/2022 00:...	Active	Brazil	South Dakota	Shelle...	71835	9780 McDowell Prati...	29/05/2025 23:...		TRUE	

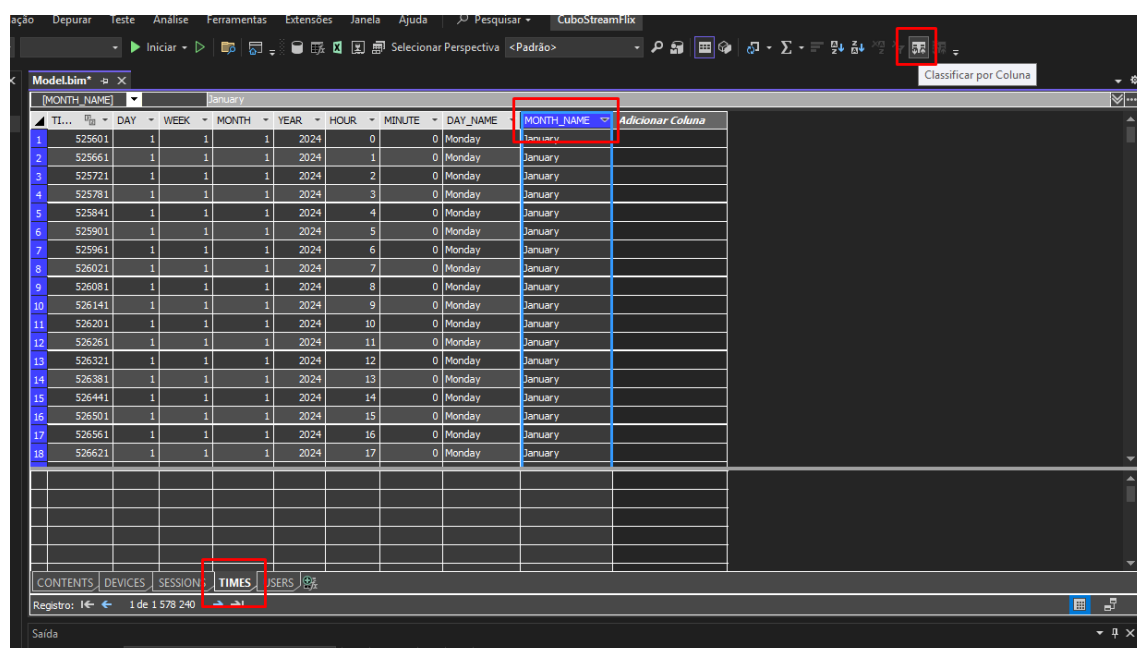
Dá-se o nome “UserSourceKey” à coluna:

Coluna Calculada 1
USER_00000000007 - pos
USER_00000000010 - pos
USER_00000000013 - pos
USER_00000000018 - pos
USER_00000000020 - pos
USER_00000000021 - pos
USER_00000000026 - pos
USER_00000000026 - pos
USER_00000000027 - pos
USER_00000000034 - pos
USER_00000000036 - pos
USER_00000000040 - pos
USER_00000000048 - pos
USER_00000000050 - postgresql1
USER_00000000055 - postgresql1
USER_00000000060 - postgresql1
USER_00000000061 - postgresql2
USER_00000000063 - postgresql2

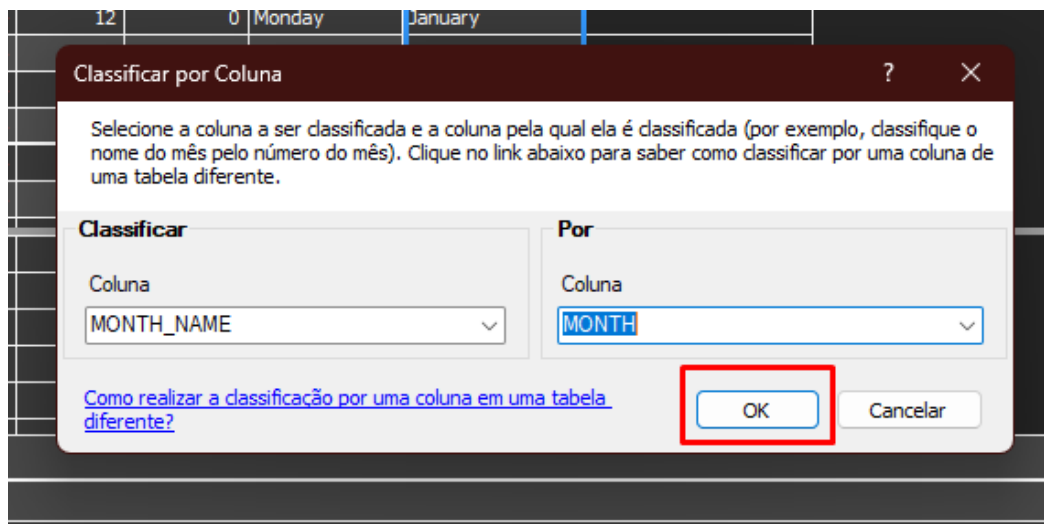
IVE	UserSourceKey	Adiciona
RUE	USER_0000000007 - postgresql1	
RUE	USER_0000000010 - postgresql2	
RUE	USER_0000000013 - postgresql2	
RUE	USER_0000000018 - postgresql2	
RUE	USER_0000000020 - postgresql1	
RUE	USER_0000000021 - postgresql2	
RUE	USER_0000000026 - postgresql1	
RUE	USER_0000000026 - postgresql2	
RUE	USER_0000000027 - postgresql2	
RUE	USER_0000000034 - postgresql2	
RUE	USER_0000000036 - postgresql2	
RUE	USER_0000000040 - postgresql1	
RUE	USER_0000000048 - postgresql1	
RUE	USER_0000000050 - postgresql1	
RUE	USER_0000000055 - postgresql1	
RUE	USER_0000000060 - postgresql1	
RUE	USER_0000000061 - postgresql2	
RUE	USER_0000000063 - postgresql2	

Vai-se fazer a mesma coisa para a dimensão “contents”, mas o nome da coluna será desta vez “ContentSourceKey” e a fórmula “CONTENTS[CONTENT_CODE] & " - " & CONTENTS[SOURCE]”.

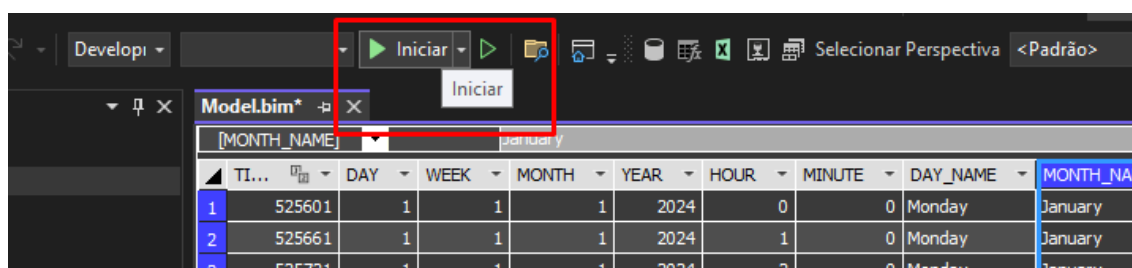
Quanto à coluna “MONTH_NAME” da dimensão “times”, a mesma vai ser classificada em função da coluna “MONTH”, para que os registos fiquem por ordem:



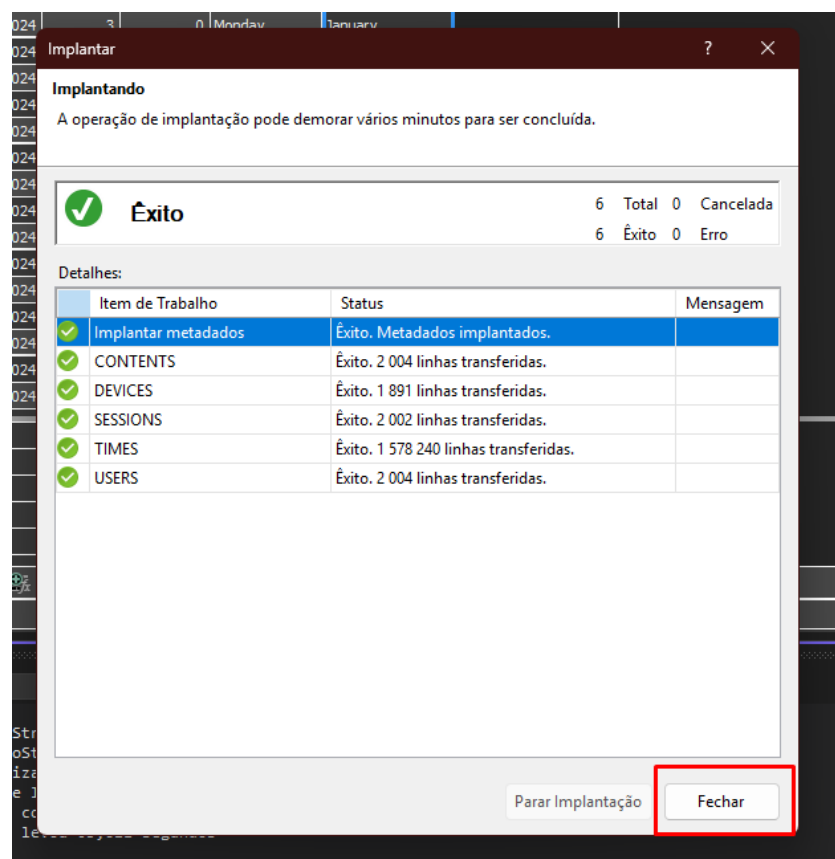
The screenshot shows the CuboStreamlix application interface. At the top, there's a menu bar with options like 'Iniciar', 'Depurar', 'Teste', 'Análise', 'Ferramentas', 'Extensões', 'Janela', 'Ajuda', and 'Pesquisar'. Below the menu, there's a toolbar with various icons. The main area displays a data table with columns: TL..., DAY, WEEK, MONTH, YEAR, HOUR, MINUTE, DAY_NAME, and MONTH_NAME. The 'MONTH_NAME' column is highlighted with a red box. Below the table, there's a tabbed interface with tabs for 'CONTENTS', 'DEVICES', 'SESSIONS', 'TIMES', and 'USERS'. The 'TIMES' tab is highlighted with a red box. The status bar at the bottom shows 'Registro: 1 de 1 578 240'.



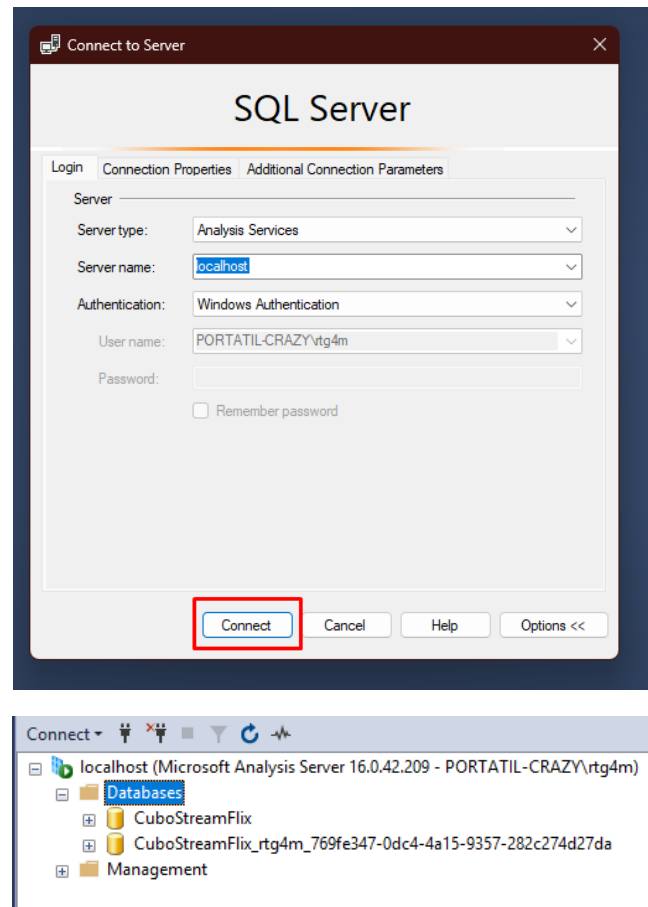
Pode-se então proceder à implantação:



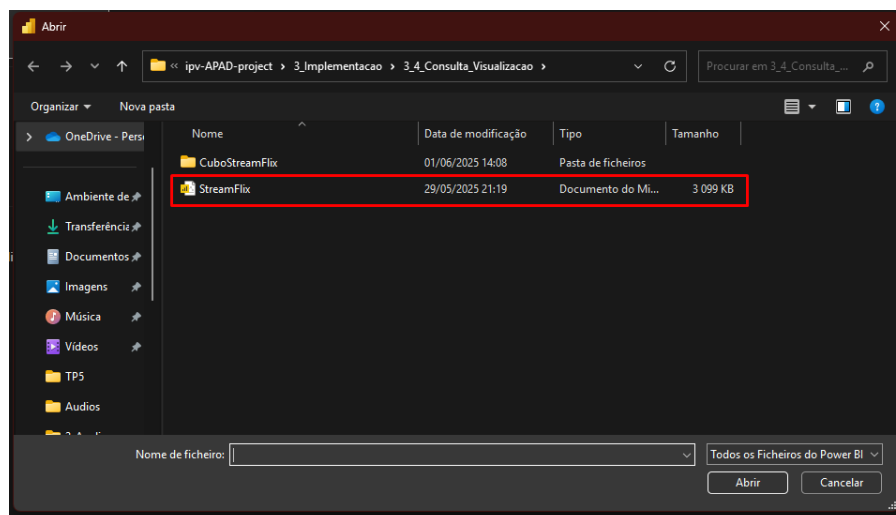
Verifica-se que a operação é concluída sem problemas:

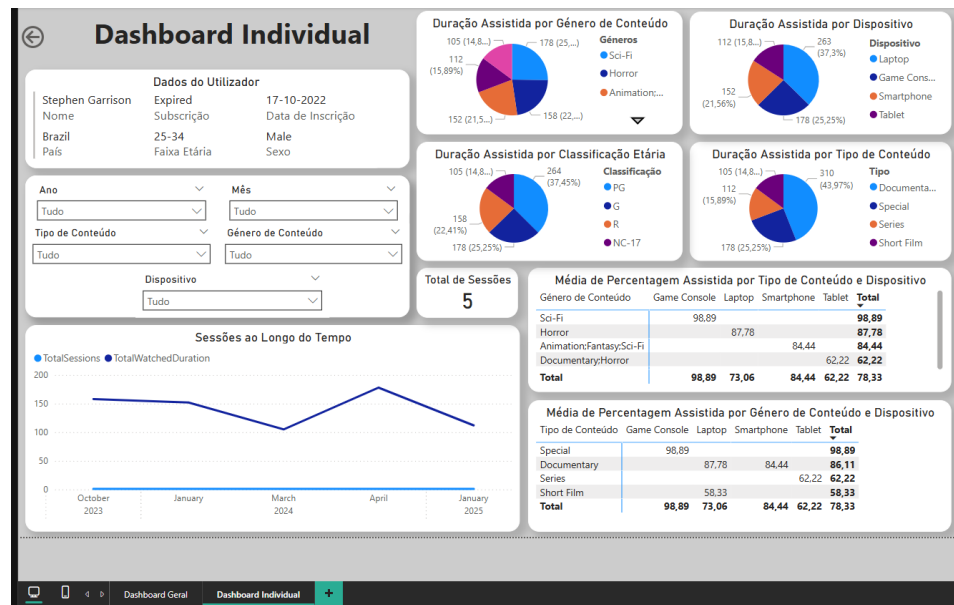
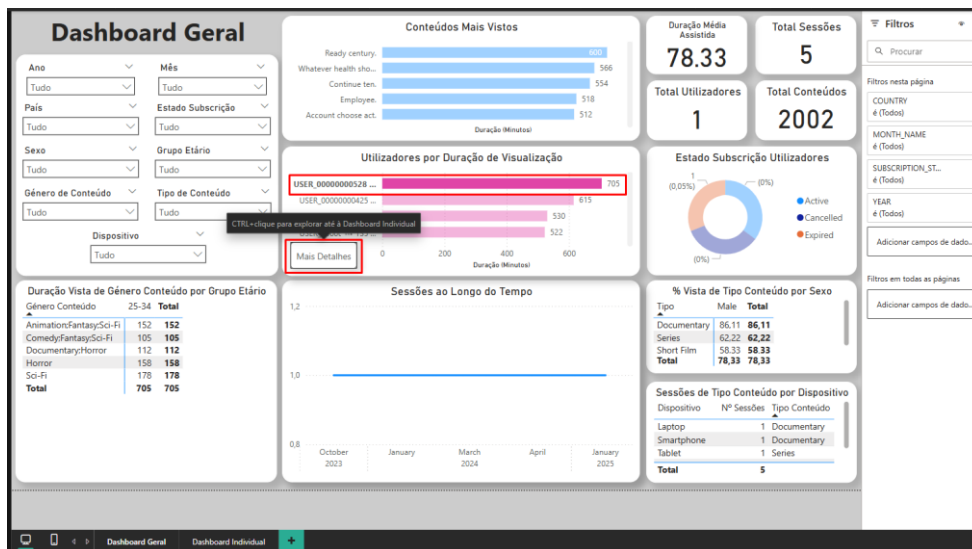
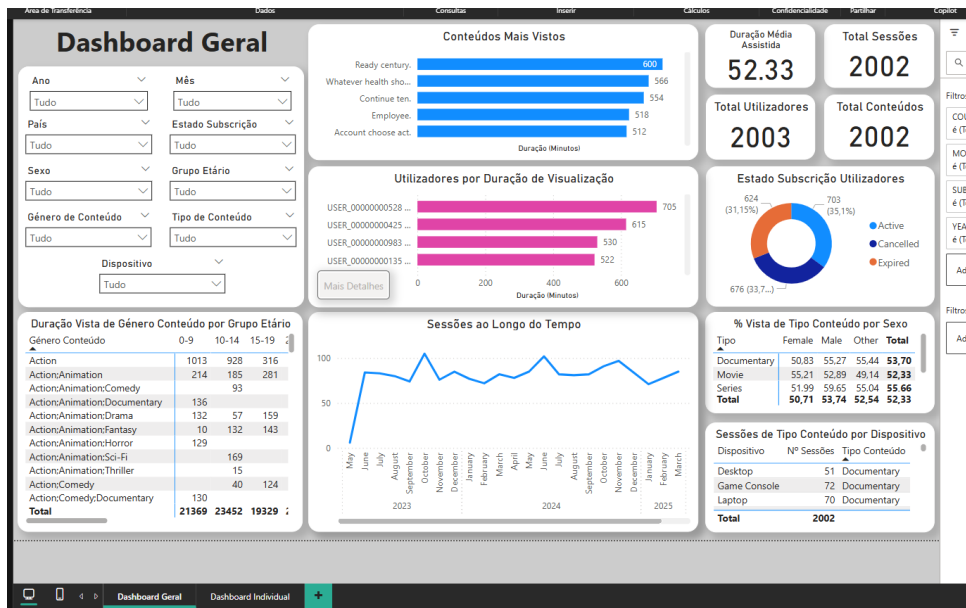


É possível aceder ao servidor do Analysis Services, através do SQL Server Management Studio, para confirmar que o cubo foi criado com sucesso:



Com isto, só falta agora abrir o ficheiro do Power BI relativo à StreamFlix para que se possam consultar as dashboards:





Situações típicas de erro:

- Servidor SSAS inativo: É necessário verificar que o Analysis Services está a correr em localhost;
- Nome do cubo incorreto: O cubo deve ter o nome “CuboStreamFlix”, caso contrário, deve ser selecionado manualmente no Power BI;
- Extensão em falta no VS: A extensão “Microsoft Analysis Services Projects 2022” deve estar instalada no Visual Studio 2022;
- Tratamento incorreto de campos: Os campos UserSourceKey e ContentSourceKey têm de ser criados corretamente e a coluna MONTH_NAME deve estar ordenada por MONTH.