Modern Approach: Azure Synapse Link for D365 F&O

Azure Synapse Link is the recommended modern approach for exporting data from D365 F&O for reporting and analytical purposes. It addresses many of the limitations of OData and BYOD methods by providing a seamless and scalable solution for data integration with Azure Synapse Analytics.

Before looking at the modern approach let's review the existing legacy approaches:

- OData
- BYOD

OData

OData is one of the legacy ways to extract data from D365 F&O. It allows Power BI to directly connect to D365 F&O for reporting purposes.

Pros:

- **Direct Connection:** Directly connects to D365 F&O, ensuring real-time data access.
- **Low Cost:** Requires little to no additional infrastructure costs.

Cons:

- **Performance Impact:** Direct connection can significantly impact D365 F&O performance, potentially disrupting operations.
- **No Transformation Layer:** All data transformations need to be done within Power BI, which can lead to duplicated efforts across multiple reports.
- **Entities vs. Tables:** Uses entities instead of tables, which are highly denormalized and can be complex. Entities like the Customer entity can consist of over 30 tables, some containing sensitive PII data.
- **Technical Complexity:** Mapping data from entities to tables can be complicated. Any changes to tables may necessitate changes to entities, which can be technically challenging.
- **Power BI Performance:** High-volume datasets can lead to refresh timeouts and less responsive reports.
- **Dependency on Development Cycles:** Creating or updating entities requires D365 F&O development skills. Deploying these changes involves significant time and effort, as D365 F&O deployments are infrequent due to their complexity and impact on operations.
- **Maintenance Challenges:** Initial report building might be easy, but long-term maintenance becomes difficult due to the complexity and performance issues.