Description

Database: AdventureworksDW2019

This SQL script creates two views: a standard view (newview) and a materialized view (materialized_view). The purpose of these views is to provide structured access to product-related information by joining tables containing product details, subcategories, and categories.

1. Standard View (newview)

The newview is a **virtual** table that does **not** store data **physically** but retrieves it dynamically upon querying. It joins three tables:

- DimProduct (containing product details)
- DimProductSubcategory (containing product subcategory details)
- DimProductCategory (containing product category details)

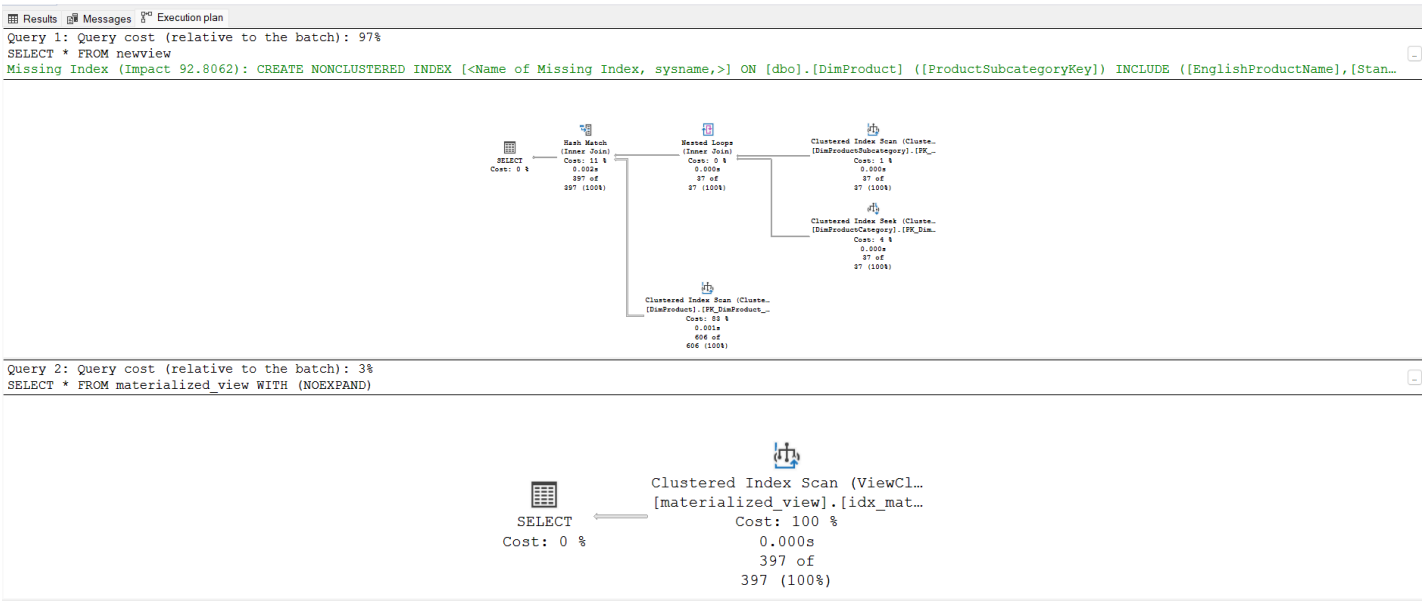
The query extracts fields such as ProductKey, EnglishProductName, StandardCost, Color, ListPrice, Size, ProductLine, EnglishProductCategoryName, and EnglishProductSubcategoryName.

2. Materialized View (materialized_view)

The materialized_view stores data **physically**, improving query performance. It uses WITH SCHEMABINDING to ensure table integrity and prevent schema modifications that would invalidate the view. Additionally, a unique clustered index (idx_materialized_view) is created on ProductKey to optimize retrieval speed.

Query Execution Plan

To analyze query execution plans, SET SHOWPLAN_ALL ON is enabled before selecting from both views. SHOWPLAN_ALL provides execution details without running the queries. The WITH (NOEXPAND) hint is used while querying materialized_view, ensuring that the optimizer uses the indexed view instead of expanding the underlying query.



Summary

This script demonstrates how to create and optimize views for efficient data retrieval. 97% for standard view toward 3% of materialized view. The standard view provides flexibility without storage overhead, while the materialized view enhances performance by precomputing results and indexing them.