Optimized SharePoint Data Retrieval for Power BI

Project Overview

In today's data-driven world, timely and efficient access to information is crucial for making informed decisions. This project focuses on optimizing the data retrieval process from a SharePoint list using Power BI, a powerful business analytics tool. The primary goal is to enhance the performance and reliability of the dataset refresh in Power BI service, ensuring that the connection to the SharePoint list remains active throughout the refresh process.

# Problem Statement

Previously, the SharePoint list was merged with the on-premises SQL Server using the SharePoint connector in Power BI. Due to the complexity and size of the dashboard's data model, the on-premises SQL Server required more than one hour to refresh the dataset in Power BI service. Consequently, the SharePoint connection expired after one hour, leading to a failure in refreshing the dataset and resulting in data loss.

# Solution

To address this issue, the SharePoint REST API was utilized, significantly reducing the refresh time in Power BI service. This solution ensures that the connection remains active during the refresh process. As a result, even if the on-premises SQL database takes more than one hour, the SharePoint list connection remains active, and the dashboard refreshes without any data loss.

# Implementation Details

## Steps

1. **Enter your SharePoint path**: Specify the URL of your SharePoint site.

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1. **Enter the SharePoint list name**: Provide the name of the SharePoint list you want to retrieve data from.

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1. **Add your field names in the**“InitialURL”**step**: Edit the fields highlighted in green and list the column names separated by commas.

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1. **Convert the list into a table**: When you click on the “allItems” step, you will get a full list of records. Use the "To Table" option to convert the list into a table.

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1. **Result**

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## Key Features

* Efficient Data Retrieval: The code uses pagination to fetch items from the SharePoint list, ensuring quick and efficient data retrieval.
* Stable Connection: By using the API connection, the solution maintains a stable connection to the SharePoint list during the refresh process.
* Reduced Refresh Time: The optimized code significantly reduces the refresh time in Power BI service, ensuring timely updates to the dashboard.

This document provides a comprehensive overview of the project, detailing the problem, the implemented solution, and its key features. The approach ensures that the data retrieval process is efficient, the connection remains stable, and the refresh times are reduced, thereby enhancing the overall performance and reliability of the Power BI dashboards.