



Enzo Unified – Adapter User Guide

SharePoint

Version 1.7

Last Updated On June 19th 2017

Contents

Pre-Requisites	1
Configure the SharePoint Adapter with Enzo Manager.....	1
Introduction	1
Configuration	2
Commands Overview	3
Virtual Tables	3
Shapsnot	5
Data Synchronization	6
Creating Central Connection Strings.....	7

Pre-Requisites

In order to successfully install any adapter you must install Enzo Unified first. The installation wizard allows you to select the adapter(s) you want to install. You will also need to have an active subscription with SharePoint Online, or SharePoint 2013 or higher.

Configure the SharePoint Adapter with Enzo Manager

Introduction

This adapter provides access to SharePoint and allows you to perform the following functions:

- Query SharePoint lists and folders from SQL Server Management Studio
- Modify SharePoint list items
- Locally cache SharePoint data with automatic refresh
- Synchronize SharePoint lists to SQL Server tables

- Access SharePoint list items through Linked Server

Configuration

Configuring the adapter to communicate with SharePoint can be done using SQL commands or through Enzo Manager. The following configuration settings are required to communicate with SharePoint:

Parameter Name	Type	Comment
UserName	string	A SharePoint user name with enough rights to query list items and list metadata, such as fields.
Password	string	Password for the SharePoint user.
URL	string	The SharePoint site URL to connect to.

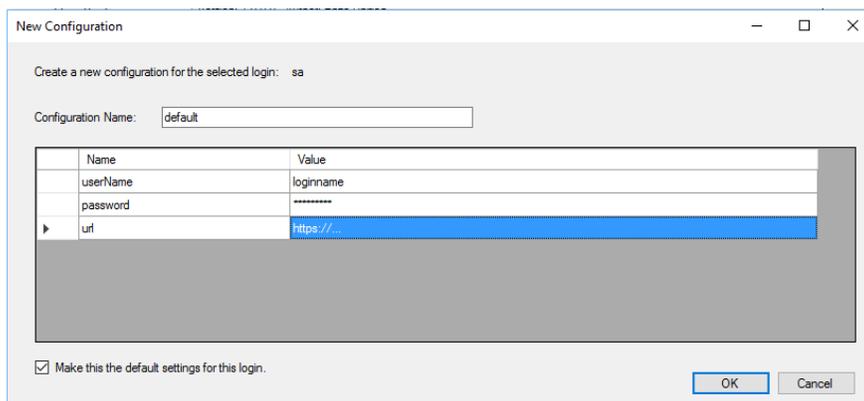
To configure the adapter using a SQL command, follow these steps:

- Open SQL Server Management Studio (SSMS)
- Connect to Enzo Unified using the 'sa' account
 - o If Enzo Unified is running on the same machine and was installed with the default settings, the Server name is: localhost,9550
- Run this command to configure the adapter:

```
EXEC SharePoint._configCreate 'default', 1, 'userid', 'password', 'https://...teamsiteurl'
```

You can also use Enzo Manager to configure your adapter. Enzo Manager (EnzoManager.exe) is found in the **EnzoManager** directory where Enzo Unified is installed. To use Enzo Manager, follow these steps:

- Start Enzo Manager
- Login to Enzo Unified using the 'sa' account
 - o If Enzo Unified is running on the same machine and was installed with the default settings, the Server name is: localhost,9550
- Click on the SharePoint adapter in the list of adapters
- Click on New Config
- Enter your SharePoint settings
 - o Make sure to check the "Make this the default settings"



- Click OK

Commands Overview

Once configured, you can use SSMS to interact with your SharePoint site. The following represents a subset of the available commands available. To view all available commands, run this command:

EXEC SharePoint.help

Each operation can accept a number of parameters; to obtain further details on the available parameters for the GetFields command, run this SQL:

EXEC SharePoint GetFields help

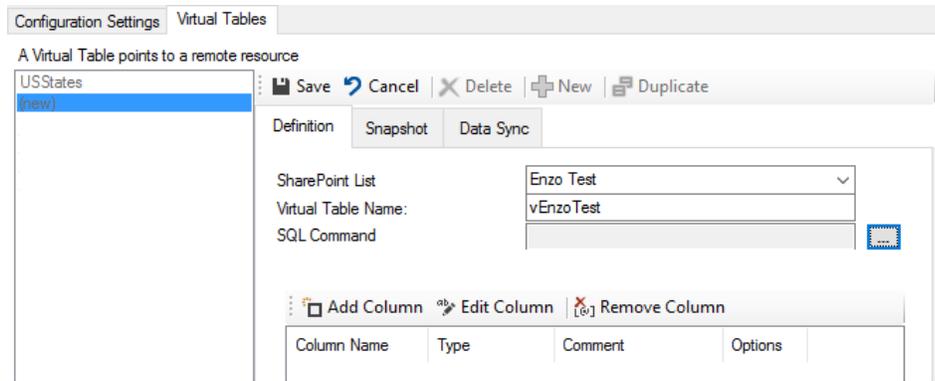
Operation	SQL Command
Query a Table	SELECT * FROM SharePoint.[list@list name]
List all SharePoint lists	SELECT * FROM SharePoint.lists
List all fields of a SharePoint list	EXEC SharePoint.GetFields 'list name'
View all changes to SharePoint list items	EXEC SharePoint.GetListChanges 'list name'

Virtual Tables

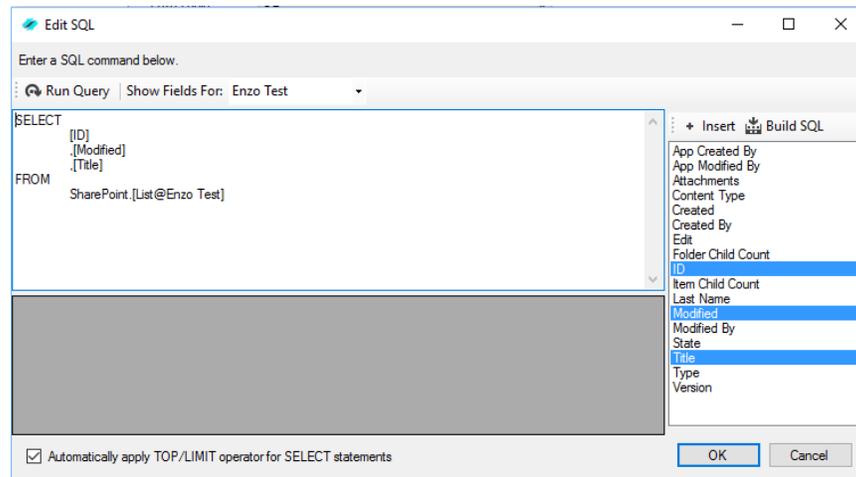
This adapter allows you to create Virtual Tables to simplify SharePoint queries. Virtual Tables are also the basis for enabling local cache of SharePoint data, and for data synchronization between a SharePoint list and a SQL Server table.

You can create Virtual Tables using Enzo Manager, or by using SQL commands. The following gives you information on how to create a Virtual Table using Enzo Manager; for information on how to use SQL commands, contact Enzo support:

- Start Enzo Manager
- Login to Enzo Unified using the 'sa' account
 - o If Enzo Unified is running on the same machine and was installed with the default settings, the Server name is: localhost,9550
- Click on the SharePoint adapter in the list of adapters
- Click on the Virtual Tables tab
- Click on New
- Enter the following information:
 - o Virtual Table name: the name for your virtual table
 - o SharePoint List: the name of the SharePoint list; a dropdown is available to choose from



- SQL definition: click on the ellipses to enter the SQL command (...)
 - The list of columns for the selected table is automatically provided
 - You can either type a valid SQL command or select the fields you want on the right and click on **Build SQL**
 - NOTE: Always include the ID and Modified columns to a Virtual Table if you want to create a Data Sync on it
 - Click on RunQuery to try the command to validate the data being returned



- Click OK when ready
- Click Save to create the Virtual Table

Once the Virtual Table has been created, you can query it immediately through SSMS. Run the following command (assuming the name of the Virtual Table is 'vPosts')

```
SELECT * FROM SharePoint.vPosts
```

```
SELECT * FROM SharePoint.VPosts WHERE Title ID > 100
```

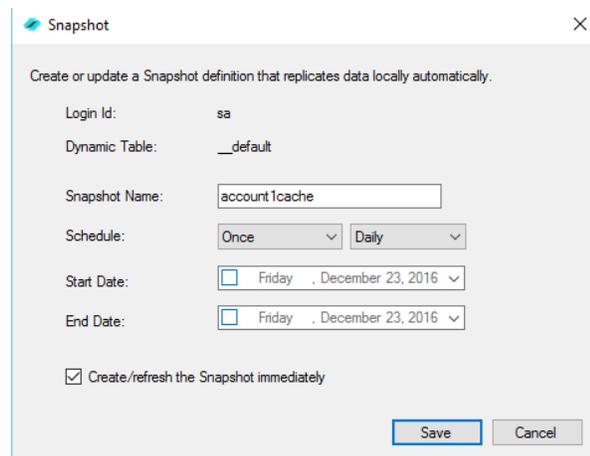
You can also execute DELETE, UPDATE and INSERT operations on a virtual table to modify SharePoint lists.

Shapsnot

Once a virtual table has been created, you can use it to create a local cache of SharePoint data (called a Snapshot), with automatic refresh. A snapshot is maintained within Enzo Unified directly; it is not replicated to SQL Server. Once created, it is possible to access Snapshots from SQL Server, reports or applications to improve performance of queries.

The snapshot can be created using Enzo Manager or an SQL command; the following shows how to use Enzo Manager.

- Start Enzo Manager
- Login to Enzo Unified using the 'sa' account
 - o If Enzo Unified is running on the same machine and was installed with the default settings, the Server name is: localhost,9550
- Click on the SharePoint adapter in the list of adapters
- Click on the Virtual Tables tab
- Select a virtual table you want to cache in Enzo Unified
- Click on the Snapshot tab
- Click New
- Enter the following information:
 - o Name of the Snapshot
 - o A schedule (this can be daily, weekly, monthly, yearly, or using a Cron job)
 - o Start/End dates for the refresh operations (optional)
 - o Create Snapshot Immediately (check this box to create the snapshot now)



- Click Save

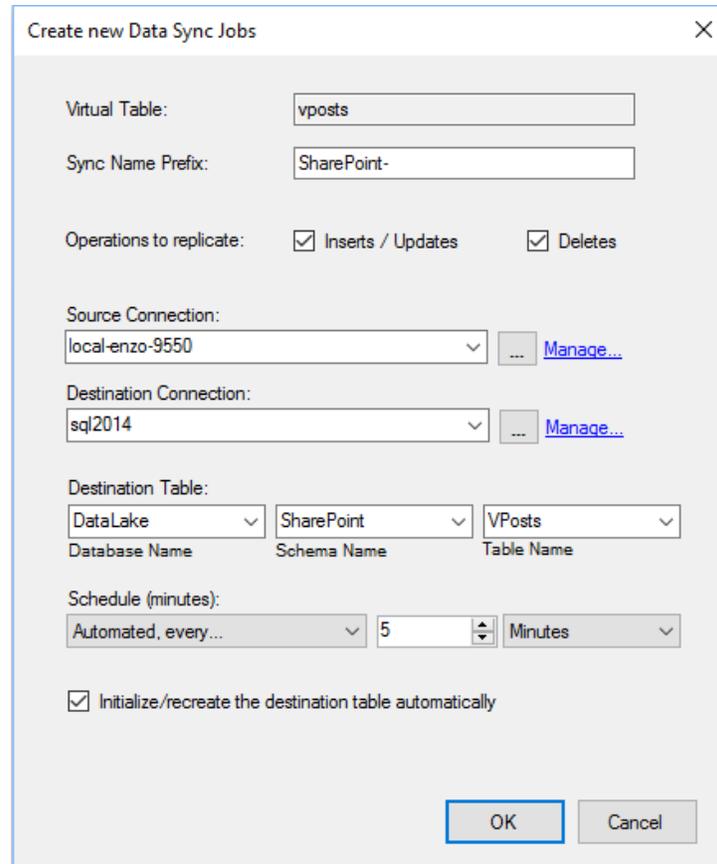
Assuming the snapshot name is called 'sPosts', the snapshot data can be accessed using this command:

EXEC SharePoint.AsyncResult 'sPosts'

Data Synchronization

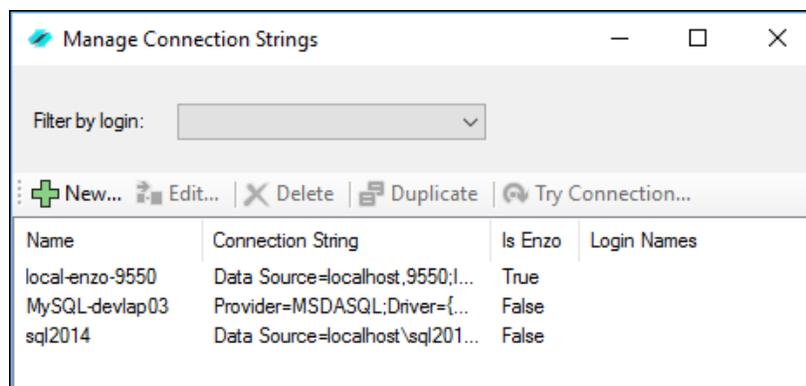
You can copy a SharePoint list to a SQL Server table and keep the data synchronized on a schedule using Enzo Manager. When the initial synchronization completes, updates, inserts and delete operations on SharePoint lists can optionally be synchronized as well. To create a new data sync, follow the steps below:

- Start Enzo Manager
- Login to Enzo Unified using the 'sa' account
 - o If Enzo Unified is running on the same machine and was installed with the default settings, the Server name is: localhost,9550
- Click on the SharePoint adapter in the list of adapters
- Click on the Virtual Tables tab
- Select a virtual table you want to cache in Enzo Unified
- Click on the Data Sync tab
- Click New
- Enter the following information:
 - o Sync Name Prefix: you can leave the default value; the name of the virtual table and the operation will be added to this name
 - o Operations to Replicate: Check Inserts/Updates if you would like to keep changes replicated; check Deletes if you would like to replicate delete operations. If neither option is selected, the data will be replicated once.
 - o Source Connection: Select a connection string that points to Enzo Unified. If you have not created one yet, click on Manage (see How to Add Connection Strings section).
 - o Destination Connection: Select a connection string that points to a SQL Server database where the data will be replicated.
 - o Destination Table: Select or enter the database name, schema and destination table in SQL Server. The schema and destination do not need to exist; however it is highly recommended to create the destination database manually for better performance.
 - o Schedule: Enter a schedule for replicating Insert, Update and Delete operations
 - o Initialize/Recreate: Check this box if this is the destination table does not already exist.
 - o Click OK



Creating Central Connection Strings

You must create at least two connection strings to manage data replication: one for the local Enzo Unified server and another for the destination SQL Server database. To manage these connection strings, select Configuration -> Manage Connection Strings from Enzo Manager, or click on the Manage link from within the Create New Data Sync Jobs window. A list of existing database connection strings will be displayed, if any.

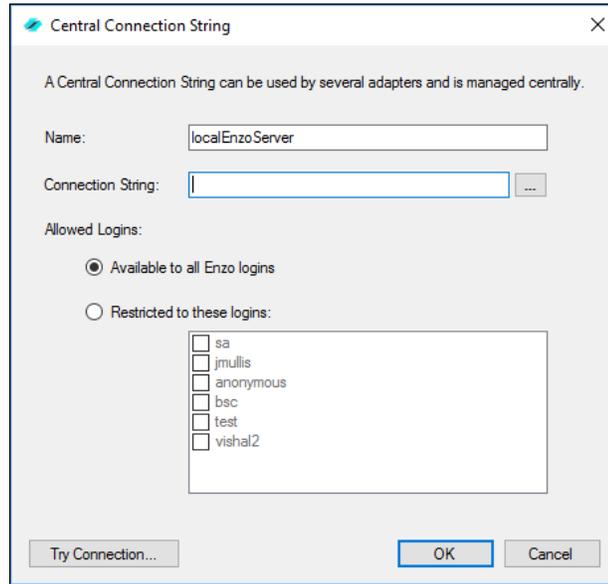


Name	Connection String	Is Enzo	Login Names
local-enzo-9550	Data Source=localhost,9550;l...	True	
MySQL-deviap03	Provider=MSDASQL;Driver={...	False	
sql2014	Data Source=localhost\sql201...	False	

To create a new connection string, follow these steps:

- Click New

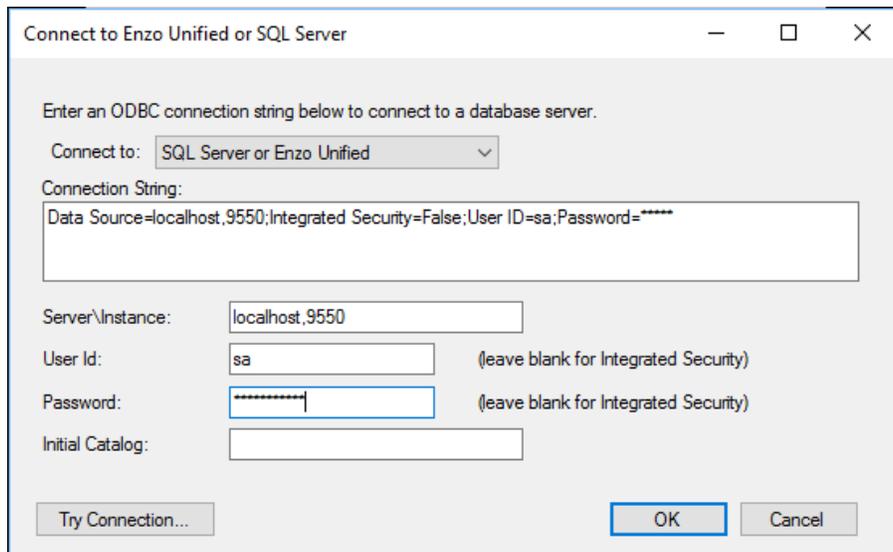
- In the new Connection String window, enter a name for this connection



The dialog box is titled "Central Connection String" and contains the following fields and options:

- Name:** A text box containing "localEnzoServer".
- Connection String:** An empty text box with an ellipsis button to its right.
- Allowed Logins:** Two radio buttons: "Available to all Enzo logins" (selected) and "Restricted to these logins:". Below the second option is a list box containing the following logins with checkboxes:
 - sa
 - jnullis
 - anonymous
 - bsc
 - test
 - vishal2
- Buttons:** "Try Connection...", "OK", and "Cancel".

- Click on the ellipses to build the connection string and enter the connection information for Enzo Unified or the database server. When entering the connection string for your Enzo Unified server, you can use localhost,9550 as the server name (assuming you are using the default port as specified during the installation steps of Enzo). Click on Try Connection to make sure the information is correct.



The dialog box is titled "Connect to Enzo Unified or SQL Server" and contains the following fields and options:

- Connect to:** A dropdown menu set to "SQL Server or Enzo Unified".
- Connection String:** A text box containing "Data Source=localhost,9550;Integrated Security=False;User ID=sa;Password=*****".
- Server\Instance:** A text box containing "localhost,9550".
- User Id:** A text box containing "sa" with the instruction "(leave blank for Integrated Security)".
- Password:** A text box containing "*****" with the instruction "(leave blank for Integrated Security)".
- Initial Catalog:** An empty text box.
- Buttons:** "Try Connection...", "OK", and "Cancel".

IMPORTANT

You must specify as used Id and Password when creating a connection string to an Enzo Unified instance.

Connection strings to a SQL Server database do not require a user id and password; however if you do not specify a user id or password for a SQL Server connection, the logged in user credentials will be used. In addition, the Windows Service that runs Enzo Unified must have enough access on SQL Server to create database objects.
