QXchange is a flexible, easy to use, data integration software. It can quickly and easily transfer data between many standard data formats and applications, including MS Access, Excel, Comma delimited flat file, QuickBooks® Desktop and QuickBooks® Online, Salesforce.com, XML, MS SQL Server, My SQL, Xero, Dynamics CRM, Sage Intacct, Sage 50 and others (for the complete list of DAPs visit https://qxchange.com/integration/data-access-plugins.html). It allows simple and clear setup of extraction, transformation and loading instructions to exchange data between different formats. The instructions are stored and managed as profiles.

Architecture

Feature	Description
Extraction	Extraction module allows the specification of various data sources.
Transformation	Transformation allows the conversion of various data items.
Loading	Loading module allows the creation or update of output data items.
Profiles	ETL instructions are coded and saved as profiles for re-execution. Multiple profiles can be bundled together and executed in jobs.
Data Access Plug-ins	QXchange supports access to many different data formats. These data formats can be types of files (fixed length, comma delimited), type of database (Access, MySQL) or type of application (QuickBooks®), CRM (Salesforce.com, Sugar) or any. For every data format supported, there is a separate component called a Data Access Plug-in (DAP). In addition, Unicode data formats can be handled in the application. Please visit https://qxchange.com/integration/data-access-plugins.html to see the complete list of Data Access Plugins supported in QXchange.
Scheduling	Profiles can be established to run at specified times. Scheduled processes can be recurring. Multiple schedules such as daily/weekly can be set up. Scheduling is integrated with Windows Scheduler.
Process Logging	Table objects from source can be extracted from.
Error Logging	Errors during the ETL process are logged. At the end of the process, the errors can be reviewed.
System Variables	System variables such as $Current_Date can make available system level values for the profiles. These values can be set by the user as well. These variables can be used as part of the transformation process and can affect target data items. These variables can be also used on source filter expressions.
Formula Expression	QXchange allows the creation of formula expressions using math, string and logical operators combined with data items, variables, constants and functions. Provides almost any kind of data manipulation.
Installation	This is an on-premises application and runs within the customer firewall.
Bi-Synch	QXchange has the ability to synch the data between tables. Using this feature the user can synch the data between tables. For example when ever there is an account created in Salesforce the same has to reflected in QuickBooks® accounting application

	and vice versa. User can achieve this by using this QXchange feature.
FTP Upload	QXchange now has the ability to upload the output files to FTP. The user can configure the FTP details where the files to be uploaded. Upon completion the output files will be uploaded to the configured FTP.
Error Recycling	With this feature the user can set validation rules so that in case if there are any validation errors the user can correct the data prior to the loading. The validation rules are like column should have only number, date format, length of the column etc. If there is any validation error happens QXchange will show the records with validation error so that user can correct the validation errors and resume the data transfer instead of reinitiating the entire cycle.
Auto Mapping	This feature allows the user to automatically map the matching column to the target. This avoids the overload of mapping each and every column to the target when the source and target has same set of columns.
Email Notification	QXchange has the ability to send notification email after profile execution got completed. The user can configure the Email server details to send the notification. Option provided to configure the notification to be sent for all profiles or only on failure.

Functional Features

Extraction

Feature	Description
Select Source Database	Select the proper source database easily for the given DAP. Specify file name, location and connection information such as user id and password.
Test Connection	Verify that a particular source dataset definition is a working connection.
Encryption Security	Critical information such as User and Password are encrypted with Blowfish 128-bit encryption.
Show full schema	Once source dataset is specified, then the schema of the record set objects and data items are presented in the UI.
Select Dataset	Specific datasets can be selected and data can be mapped to export. Multiple datasets can be selected and data extracted in a single run.
Individual Data item Selection	Specific data items can be selected to be output.
Extract from tables	Extract from Table objects in source
Extract from Views/Queries	Views/Query objects in source can be extracted from.
Extract using SQL	Use local Dynamic SQL to get data from source
Filter Input data	The source data can be limited further by applying filters to the data. The filters can be complex expressions using multiple data items in combination.
View Data	Any dataset object can be selected and the data from that can be immediately viewed in a datasheet view, without actually running the ETL process. The data can be copied and pasted into Excel.

Transformation

Feature	Description
Data Item Mapping	Data items can be mapped from any source recordset to target recordset. While mapping the data item names do not have to be the same.
Data conversion	Data can be converted from one format to a different format, such as from text to number and vice versa.
Data combination	Data from multiple data items can be combined together.
Constant data	Constant data items can be assigned to target data items.
Lookup Value	Lookup data from additional dataset objects for specific record and data item values and use the resulting values in the target.
Formula Builder	Build a formula using math, string operations to create target data item. Use functions as part of these formulas.
Function	Use a complete set of data conversion functions, including string, data and financial functions to affect the target data item. Use multiple source data items in these expressions.

Loading

Feature	Description
Create dataset	For some dataset formats such as Excel and Text files, create a brand new file. Replace the file if it exists, optionally. Create all the data items and complete schema necessary.
Clean Insert	Existing data can be cleaned out before loading new data in recordsets.
Update Insert and Upsert	Data can be put into target recordsets in three ways. Insert expects the data loading to be new records and update expects the records to exist already. Errors are logged otherwise. Upsert, tries to insert first and if not successful then updates the record.
Data Item Mapping	Data items can be mapped from any source recordset to target recordset. While mapping the data item names do not have to be the same.
Check for errors	Log update and other errors as part of the loading process.

Functions

Feature	Description
Standard functions	QXchange has a full complement of pre-built excel-like functions to apply against data items. This provides very sophisticated data manipulation activities. The following type of functions are included: -Mathematical and Trigonometric Functions -String Functions -Date & Time Functions -Logical and Conversion Functions -Financial Functions -Statistical Functions -Conversion Functions
Formula Expression	QXchange allows the creation of formula expressions using math, string and logical operators combined with data items, variables, constants and functions. Provides almost any kind of data manipulation.
Constants	Constant values (values that are not available in the incoming data) or very standard values can be defined and used in data manipulation or just setting a target data item.

	E.g. String example: "USA"
	      Logical example: False
	      Math example: 50

Operators	A comprehensive set of operators are included to be used in Formula expressions: Unary plus (+) and minus (-) Percentage (%) Bitwise Not (~) Bitwise And (&) Bitwise Implication (^~), Equivalence (^&) and Exclusive Or (^|) Bitwise Or (|) Power (^) Multiplication (*), Division (/) and Safe Division (//) Addition (+) and Subtraction (-) Comparison Operators (<, <=, >, >=, =, <>) Logical Not (Not), Logical And (And), Logical Or (Or)
Variables	Temporary variables can be defined and used in the expressions. E.g. Comm_Percent_Var
Formula Builder	Build a formula using math, string operations to create target data item. Use functions as part of these formulas.
String Functions	There are many standard string functions. Here are a few samples: Left, Mid, Right: to extract portions of strings Len: to get length of a string Concatenate: to join strings Proper: to capitalize strings Search: to find strings within strings Value: to convert to a number
Math Functions	There are many standard math functions. Here are a few samples: ABS: to remove sign from a number Round: to round values Rand: to generate random numbers Sum: to add up a set of numbers
Date and Time Functions	There are many standard date and time functions. Here are a few samples: Date value: to convert a string to a date Day: to extract day value from a date Month: to extract month value from a date Year: to extract year value from a date Hour: to extract hour from a date time
Logical Functions	It is possible to setup an If clause to do conditional actions while manipulating data. IF
Query	It is now possible to set a query as a source for the formula. QXchange can execute the query and get the results and populate the target data.

Data Access Plug-Ins

Feature	Description
Data Access Plug-ins	QXchange supports access to many different data formats. These data formats can be types of files (fixed length, comma delimited), type of database (Access, MySQL) or type of application (QuickBooks®, Dynamics CRM). For every data format supported,

	there is a separate component called a Data Access Plug-in (DAP). This allows sophisticated data format specific operations to be done. The DAPs are also optimized for the underlying data structures. The DAPs also enforce the security required by the underlying data structure.
MS Dynamics CRM	Allows extract/load data from/to Dynamics CRM system.
MS Dynamics AX	Allows extract/load data from/to Dynamics AX system.
MS Dynamics GP	Allows extract/load data from/to Dynamics GreatPlains accounting system
Text File	This DAP allows access to text files. Text files can be fixed length or delimited. Header labels can be used with these files.
Excel	This DAP allows access to Excel files. Individual worksheets within an Excel spreadsheet can be accessed. Header labels can be used.
XML	This DAP supports the XML data format.
FLAT/CSV	CSV is a simple file format used to store tabular data, such as a spreadsheet or database.
MS Access	This DAP supports the Microsoft Access database. Tables and query objects can be accessed. New Tables can be created.
MySQL	This DAP supports the MySQL database format.
MS SQL Server	This DAP supports the MS SQLServer database format.
QuickBooks®	This DAP supports the QuickBooks® Desktop and Online edition. It uses the vendor supplied QuickBooks® SDK to do all the access and hence is compatible with all versions supported by the SDK. Secure access to the environment is maintained.
Salesforce.com	This DAP supports the Salesforce.com hosted environment. It uses the vendor supplied AppExchange SDK and API to do all the access and hence is compatible with all versions supported by the vendor. Secure access to the hosted environment is maintained. Standard and custom salesforce.com objects can be accessed.
ODBC	This DAP supports the use of ODBC connections. This will allow access to any data format supported by an ODBC driver.
Sage MAS500	This DAP supports the Sage MAS500 application format. It accesses the underlying MS SQL Server database. Secure access to the environment is maintained using SQL Server authentication.
Accounting Seed	This DAP allows to read/write data from/to Accounting Seed opportunities, accounts, products and other custom objects.
ACORD	This DAP is having the ability to read the ACORD objects from the deployed instance.
CCCOne	This DAP is having the ability to read and write the data from/to CCC ONE
ConnectWise	Allows extract/load data from/to ConnectWise helpdesk system.
EFIRadius	This DAP is having the ability to read and write the data from/to EFIRadius.
Sage Intacct	This DAP allows extract/load data from/to Sage Intacct.
Magento	This DAP allows to read and write the e-commerce data from/to Magento.
Mantis-BT	Allows get/put data from/to Mantis Bug Tracker. It can read Issues, Categories, Status and other objects.
MaxBlox	This DAP allows to read/write data from/to MaxBlox application development platform.

NetSuite	DAP allows to read/write data from/to NetSuite invoices, accounts, products and other custom objects
Oracle Fusion CRM	DAP allows to read/write data from/to Oracle Fusion CRM, Oracle's newest customer relationship management solution, to manage its global sales.
PayPal	This DAP can communication with your PayPal account and it can read/create customers, and transactions.
Peachtree	Allows extract/load data from/to Peachtree accounting system.
QCommission	The DAP can communicate with QCommission application and able to read/write the data from/to QCommission.
Sage 50	DAP allows to read/write data from/to Sage 50 Customers other objects.
SugarCRM	Allows to extract/load data from/to Sugar CRM system.
SuiteCRM	DAP allows to read/write data from/to SuiteCRM, SuiteCRM is a software fork of the popular CRM system from SugarCRM.
Tally	This DAP supports to extract/load data from/to ledger, groups, stock and other objects.
WebKPI	Allows extract/load data from/to webKPI BI tool. It can upload report data to the system and it can be extracted also.
Xero	This DAP can talk with Xero and able to retrieve/create data.
AgencyWorks	AgencyWorks is a life insurance application. This DAP allows to read and write data to the AgencyWorks life insurance application. It uses the underlying SQLServer database to read and data.
DearInventory	DearInventory is a cloud based inventory management application. This DAP allows the user to read and write data to the DearInventory inventory management system hosted in cloud. It uses the REST API provided by the vendor to read and write data.
Keap(Infusionsoft)	Keap(Infusionsoft) is a CRM application. The Infusionsoft is developed to communicate with Infusionsoft to read and write data. It uses the REST API provided by the Infusionsoft.
Netchex	Netchex is a cloud-based human resource (HR) and payroll management solution designed for midsize and large enterprises. The Netchex DAP is developed to pull the employees information and their time entry details and export the payout to the Netchex. It uses the underlying REST API provided by the vendor.
OneSourceHCMS	The OneSourceHCMS is a human capital resource management system. This DAP is designed to pull the employee information from the system and export the payroll data to the system. It uses the underlying REST API provided by the vendor.
Report(PDF)	This DAP allows the user to read the data from PDF document. Using QXchange the user can convert the extracted data from PDF to excel or any other target by setting the transformation rules.
ServiceTitan	The ServiceTitan is a service management software. This DAP is developed to pull data from ServiceTitan. It uses the underlying REST API provided by the vendor for communication.
Zoho CRM	The Zoho CRM is a cloud-based CRM application. This DAP allows the user to read and write data to the Zoho CRM. It uses the REST API provided by Zoho for communication.
Shopify	Shopify is an e-commerce application. This DAP is developed to extract and load data to the Shopify application. It uses the underlying REST API for communication.