Leading email marketing services firm ClickRSVP deploys expressor in less than a week

ClickRSVP provides email marketing, email campaign tools, and email list management solutions for financial institutions, all within a secure and centralized platform. Since 2001, ClickRSVP has delivered thousands of campaigns and service notifications for financial institutions ranging from $100 million to more than $60 billion in assets.

business requirements and situational overview

ClickRSVP serves a large number of financial institutions, providing various forms of email communications and campaigns to the financial institution's customers. Each institution submits its own customer file to ClickRSVP, each in a different format. ClickRSVP must validate, normalize, and import the data in each customer file into its SQL Server 2005 database before campaigns can be run. The company operates on tight timeframes, executing multiple campaigns for a range of clients across multiple time zones.

Initially, this data import process was done with the company's proprietary email marketing system. According to Kevin De Gray, VP of IT for ClickRSVP, "our original system had a manual mapping system that made it very cumbersome to import the data." As a result, ClickRSVP next implemented a custom coded solution written in Microsoft's C# programming language to speed and automate the import process.

But the custom coded solution was very rigid. Since new mappings and transformations were required for each new customer and campaign, "development was very slow, and maintenance was a nightmare," according to Kevin. Moreover, the company has seven employees that can function as analysts, but only one developer. So the C# solution did not scale as each new customer and campaign required development effort that could not be performed by the analysts. "We just would not have been able to meet the customer demand with our existing systems. The process was not sustainable. We needed a better way to do it," remarked Kevin.

What the company needed was a flexible environment that allowed the analysts to quickly customize the application for new customers and campaigns.

The company evaluated four different products as part of its evaluation process. expressor software was selected because of its functional capabilities, its simplicity, and its total cost and superior return on investment.

application overview

As part of the evaluation, an application was quickly created with expressor Studio that populates and updates the ClickRSVP production database with input files from ClickRSVP's various clients. The application is modeled on the Type 4 Slowly Changing Dimensions pattern, in which production tables are used to store the current customer information, and history tables are used to keep all of the deprecated records.

A flexible, generic application was built to input flat files, perform validation and error handling, map and transform the data in the incoming files to the schema in the production tables, add new records to the production table (or merge the data in the incoming file with the existing record if the customer record already exists), and write the prior records to a history table.

The application uses a Semantic Type representation for Subscriber. Semantic Types are an internal representation of data within expressor applications. expressor automatically creates these types for all data that is mapped into the system by default. Users also have the ability to modify these types, or create their own more meaningful types that can be reused throughout the application. The benefit to users is that any conversions necessary in moving data from one database to another are automatically taken care of. This Semantic Type is comprised of Atomic Types for Subscriber Name, a date field, an ID, Email Address, and Site Key. Semantic Constraints (field validation rules) are included in the Semantic Type. By utilizing a Semantic Type for Subscribers, it exists as a reusable and extensible business-level object.

The company's analysts are able to accommodate new customers or campaigns that use different formats for the input files using a graphical environment that requires no coding or compiling, allowing them to easily map new file formats to the common Semantic Type for Subscriber, and all logic, including transformations, field validations, and error handling are automatically maintained. This process does not require the involvement of the company's developer.

> "Our original system had a manual mapping system that made it very cumbersome to import customer data. Development was very slow, and maintenance was a nightmare and we needed a better way to do it. We evaluated four different ETL products and expressor software was selected because of its functional capabilities, simplicity, and total cost and superior return on investment."   - Kevin C. De Gray, VP of IT at ClickRSVP.
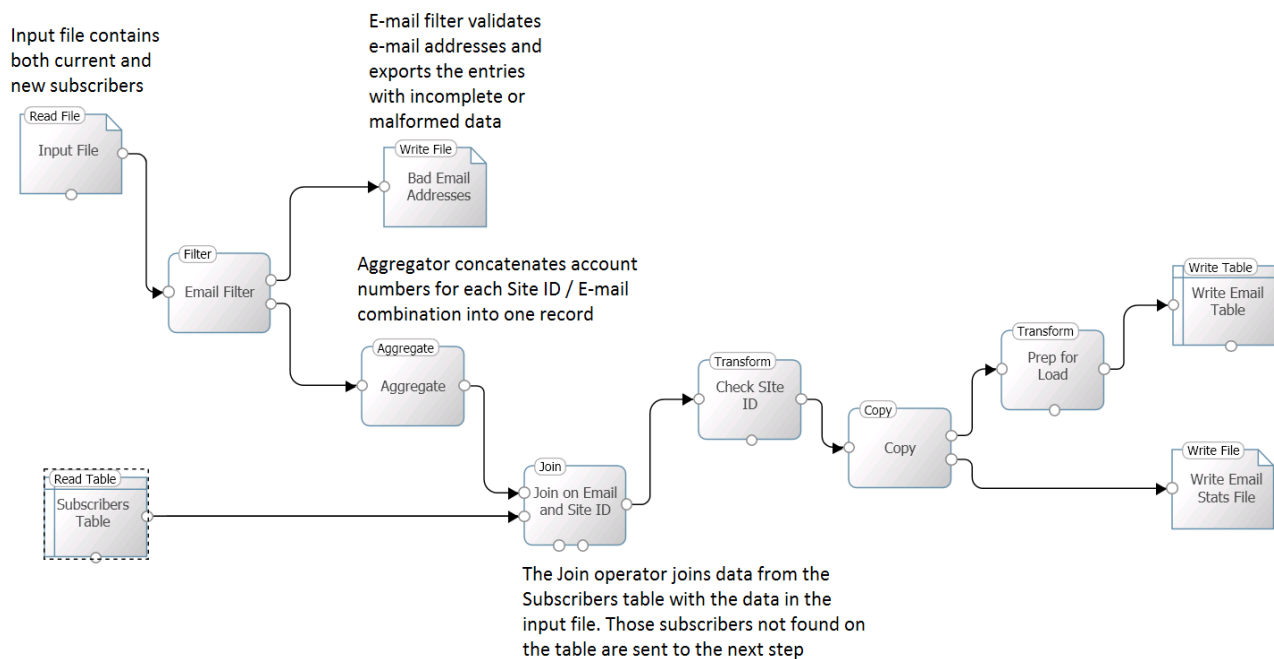
Production processes are scheduled in advance and automatically executed according to a predefined schedule. Change management is handled through the use of the expressor repository.

application details

ClickRSVP receives an input file from a client, containing both current and new customers, or "Subscribers." Field validation is performed to make certain that specific fields such as the Subscriber's email address are populated and conform to specific validation rules. Records that do not pass the field validation step are written to an error file on disk.

An aggregator operator looks for multiple input records with the same email address, which represent Subscribers with multiple accounts, and concatenates the multiple account numbers for each Subscriber to create a single record.

The contents of the input file are compared with the contents of the production Subscribers table using an inner join operator to distinguish between new and existing Subscribers. As incoming records match an existing record in the production database, the existing record in the production table is written to a history table that contains all of the deprecated records, and the existing record is updated with the new data in the production table.

Input file contains both current and new subscribers

E-mail filter validates e-mail addresses and exports the entries with incomplete or malformed data

Aggregator concatenates account numbers for each Site ID / E-mail combination into one record

The Join operator joins data from the Subscribers table with the data in the input file. Those subscribers not found on the table are sent to the next step

An expressor Dataflow illustrating transformation and join operations on a flat file and database table sources.

For new Subscribers that do not already exist in the database, the application performs a quality check on the SiteID field to ensure the ID for the financial institution of the Subscriber is accurate, the date fields are updated, and the record is written to the table with a unique ID.

benefits

Speed of development. The company's prior C# application required 80 hours to develop. In contrast the expressor software application, built using expressor Studio's graphical, drag-and-drop, color-coded interface was built **four times faster**. Applications built in the Studio application are then **deployed remotely** via the server components of the expressor platform.

Ease of maintenance; accessible by a wider range of skill-sets. With the C# application, each new customer or campaign required a new mapping, which took 8 hours of the developer's time. With expressor and the use of Semantic Types, the new mappings are easily created through expressor Studio's graphical development environment. The new mappings automatically maintain the existing Semantic Constraints, are **created eight times faster**, and are **created by analysts**, freeing the developer to work on more critical tasks.

next steps

With expressor software now in its arsenal, ClickRSVP sees the opportunity to offer new value-added services. For example, whenever an email containing an e-statement bounces, the financial institution must contact the customer and correct the email address and re-send, or switch the customer to paper delivery. ClickRSVP's analysts can use expressor's software to report on the data in the database on a per campaign basis and send the information to the financial institution via SFTP to speed and simplify compliance.

The company is also planning to offer a variety of additional value-added services that automatically integrate external, personalized data, such as the actual home price for each customer into its email campaigns.

expressor®

redefining data integration