ActiveBatch®

The Retail Equation Finds the Key to Script-Free Datacenter Integration

Company: The Retail Equation
Industry: Retail Services
Customer Site: Irvine, California, United States

Brief Company Overview:
The Retail Equation, headquartered in Irvine, California, optimizes retailers' revenue and margin by shaping behavior in every customer transaction. The company's solutions use predictive analytics to turn each individual shopper visit into a more profitable experience. This yields immediate financial payback, increasing store comps by as much as two percent, with significant return on investment. The Software-as-a-Service applications operate in more than 27,000 stores in North America, supporting a diverse retail base of specialty apparel, footwear, hard goods, department, big box, auto parts and more.

The Retail Equation

The Datacenter: The Heart of Production Processes

More than 10% of all general merchandise retail sales are processed through return optimization solutions from The Retail Equation. To service the 27,000 retail stores that rely on The Retail Equation for analysis of point-of-return and point-of-sale transactions, is a datacenter that supports the company's production processes.

As senior director of IT for The Retail Equation, Ray Kelly understands the value that automation brings to the management and timely execution of the production processes within this datacenter, including file system operations, SQL Server database process types including backups and log shipping, FTP operations and many more.

Script-Driven Schedulers Were Not the Answer

Prior to ActiveBatch, The Retail Equation leveraged a series of script-driven scheduling tools for the automation of its datacenter workflows and batch processes. First was Windows Task Scheduler, which provided only limited date/time scheduling for the execution of scripts and provided no cross-platform scheduling abilities.

Next, the company implemented a job scheduling solution, but quickly faced a myriad of limitations that hampered The Retail Equation's ability to manage its datacenter processes. This job scheduler lacked any form of dashboard or reporting to provide the IT organization a high-level, 360-degree view of its processes, including the ability to view jobs scheduled to run in the future. This lack of forecasting presented problems for the datacenter team, which required the ability to schedule server maintenance windows around batch processes.

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>
> - Fray Kelly, Senior Director of IT, The Retail Equation

To overcome this limitation, the IT organization customized each job to write key job statistics to a database. Ray then created an ASP .NET webpage to display the data, but it was far from ideal. "It was time consuming and not 100% accurate," he says. "There were a lot of holes in the reporting metrics."

Moreover, this Band-Aid solution didn't address the forecasting issue. In an attempt to solve the problem, Ray would manually keep statistics about job performance, such as average job runtime, and based on that information, calculate how long the next instance of that job should take. "We would look at those numbers and take our best guess as to when we should schedule server maintenance."

In addition, the competitive job scheduler lacked an event automation framework, such as the ability to trigger jobs based on the arrival of a file. Lastly, it was a script-driven solution that added complexity to the automation of file system operations. For example, to auto-

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mate a workflow that would rename an incoming file, parse it and process it required 131 individual steps. A more capable solution was required. "We needed a job scheduling solution that would make it easier to create and manage our batch processes moving forward," Ray says. "These processes are dynamic, constantly changing. Using a script-driven solution added a lot of man hours to building and managing these workflows."

Drag-and-Drop Automation

Realizing a new solution was required, the datacenter team went to market in the autumn of 2012 and implemented ActiveBatch® Workload Automation from Advanced Systems Concepts. For the automation and management of the datacenter batch processes, the datacenter team uses ActiveBatch's Integrated Jobs Library, which provides over 130 production-ready Job Steps for common IT tasks and functions, applications, databases, platforms and more.
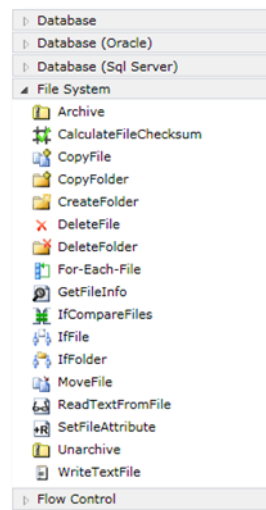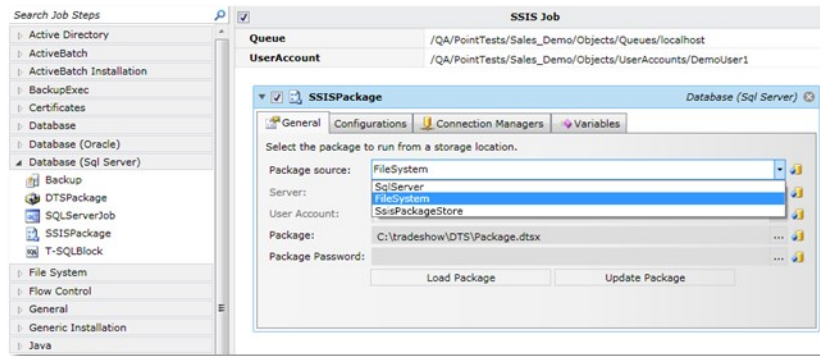
One example of a datacenter process that supports The Retail Equation's transaction analysis business is the nightly SFTP/FTPS file system processes that are automated via ActiveBatch. The Retail Equation receives nightly file transfers from retailers containing POS data, which the company's Analytics department loads into statistical analysis software for complex analysis and reporting.

To build and automate these workflows in ActiveBatch, the datacenter team uses a series of SQL Server Database, Networking and File System Job Steps within the Integrated Jobs Library, which Ray drags and drops into a workflow and uses auto-populating drop-down menus to define key job criteria and variables. These Job Steps include the *FTP* Job Step, which provides a single Job Step that supports all FTP protocols including FTP, SFTP or MFT, the *Backup* Job Step for SQL Server and File System Job Steps such as *CopyFile*, *DeleteFile*, *MoveFile*, *For-Each -File* and *IfFile*.

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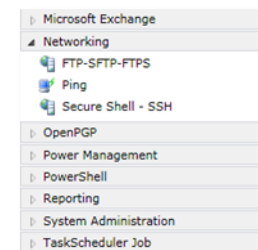>
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ActiveBatch® SQL Server Database *Integrated Jobs Library Job Steps*

ActiveBatch® File System *Integrated Jobs Library Job Steps*

ActiveBatch® Networking *Integrated Jobs Library Job Steps*

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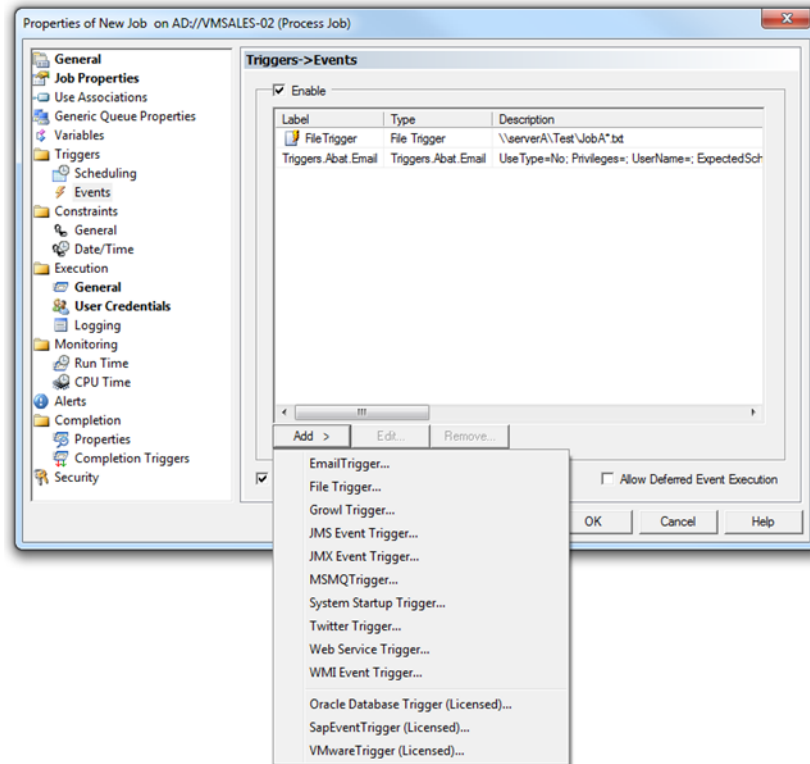
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To automate these processes in the competitive job scheduler took 131 individual steps. In ActiveBatch, they're automated using four or five of the above mentioned Job Steps within the Integrated Jobs Library.

To trigger these workflows as the files arrive, the data center team leverages the File Trigger within ActiveBatch's event automation framework, which recognizes when the file has been received to trigger the workflow in real-time, as opposed to using static date/time scheduling. Other common event automation triggers within ActiveBatch include Email, WMI or Web Service Triggers, Database Triggers, JMS/JMX and more.

Because many of these workflows share common Job Steps, Ray says the datacenter team also makes use of ActiveBatch Reference Jobs, which allows a user to use a single Job within ActiveBatch as a template to be "referenced" by multiple Jobs, allowing a user to make a change at the "template level" and the changes are automatically passed down to each of the referenced Jobs. "We have over 50 Jobs in ActiveBatch that automate the nightly files we receive from retailers. While each Job is different based on the retailer, they all share common steps. For those common steps, we've built Reference Jobs." Ray says. "When we get a new client, we use the Reference Jobs to create the new workflow, make a few tweaks that are specific to that retailer, and then I have a brand new workflow for that client. It's a big timesaver for building new workflows and making updates to existing ones."

Lastly, Ray makes heavy use of ActiveBatch's dashboards, such as the Daily Activity View and Operations View, which provides a dashboard to view Jobs by past, present and future. The dashboards have allowed The Retail Equation to eliminate the cumbersome ASP .NET web page it had to maintain when using the previous job scheduler. In addition, the ability to look ahead and view processes that are going to run has allowed the datacenter team to identify bottlenecks in advance, such as being able to more efficiently schedule datacenter maintenance windows.

ActiveBatch® Event Triggers

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ActiveBatch®

The Retail Equation IT Automation Success Story

Success Through Automation

The Retail Equation runs approximately 350,000 jobs a year via ActiveBatch, and since making the transition to ActiveBatch has seen batch success rates improve to 99%. Improved reporting, alerting and visibility into error and log files means that when an issue does occur, the time to resolution has been shortened. Most importantly, staff productivity has improved by reducing the reliance on coding and by replacing custom development and maintaining dashboards with out-of-the-box functionality. The department now spends less than 5% of its total time on batch job creation and maintenance.

350,000 jobs a year via ActiveBatch at an improved success rate of 99%

Improved

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- Alerting
- Visibility Into Errors and Log Files
- Staff Productivity

- Reducing Reliance on Coding
- Replacing Custom Development
- Maintaining Dashboards

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Ray is confident in Advanced Systems Concepts and the support he'll receive moving forward. "Technical support is fantastic; timely and knowledgeable," he says. "During the POC phase, we encountered an issue with testing some of the ActiveBatch Jobs due to a network issue. Advanced Systems Concepts' technical support provided the expertise to overcome the issue. Support was one of the biggest reasons we selected ActiveBatch."

"ActiveBatch is a bulletproof solution," Ray says. "Moving forward, we'll continue to build our datacenter automation strategy around ActiveBatch."

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