

SOA: A Legacy Integration Strategy for Edfinancial Services

Web-enablement with Verastream Host Integrator gives customers real-time access



Edfinancial Services is a top-ten provider of student loan services, administering a loan volume in excess of \$6.4 billion. Headquartered in Knoxville, Tenn., Edfinancial partners with banks and state agencies to provide customized financial solutions in the education sector.

No Real-Time Customer Access

College financial aid offices had been using web-based translations of 3270 screens to access Edfinancial data, which resided on a third-party mainframe. This process was unsatisfactory, according to Brian Adkins, vice president of e-business solutions at Edfinancial, because it did not provide real-time results.

The system was also awkward to use. Frequent changes to student data (such as address, enrollment status, or loan amount) required financial aid staffs to navigate a web application and fill out a form that linked to a green-screen procedure.

"In other words, it took lots of clicks to get a change accomplished," said Matt Timbs, senior software engineer at Edfinancial. The process was so cumbersome in fact that people inevitably wound up phoning in their changes instead. That put undue strain on Edfinancial's call center.

Identifying the Technical Challenges

Up to this point, according to Adkins, "lack of programmatic access had been a major inhibitor to progress." And because Edfinancial's mainframe system was outsourced, they needed a solution that was neither host-resident nor invasive. The ideal tool would also have to be easily learned by developers in their .NET shop.

The Edfinancial IT staff, long-time satisfied users of Attachmate Reflection® terminal emulation software, knew that Attachmate Verastream® Host Integrator provided strong support for the Microsoft .NET infrastructure. When Attachmate came on site to perform a proof of concept, Edfinancial saw how easily legacy applications can be transformed into SOA assets.

A Solution That Said Yes

"The Attachmate staff was able to come in to our system, pull up our screens, create models, and produce a simple web UI, inside the morning of the first day," said Adkins. "And instead of using a demo system back at Attachmate, they did it with our data and our applications."

QUICK VIEW

Problem

Customers needed real-time access to mainframe-based loan data.

Solution

Used Verastream Host Integrator to create services for a new online loan-management application.

Results

- Easy 24x7 access for internal and external users.
- More efficient use of customer call center.
- Integration with BizTalk Orchestrations for automatic updates.
- Typical six-screen navigation reduced to one integrated interface.

Adkins said that it's typical for the information on a given loan to exist on multiple pages, so "we tried to throw the Attachmate guys some curves," he said. "But their answer kept being yes. We weren't able to stump them or Verastream." That's when he decided to move forward with Verastream.

Timbs, who did the requirements gathering for the project, admitted, "I couldn't believe that I didn't have to write code because that's what I'm used to." Once he accepted the Verastream paradigm, Timbs began by creating a business object model behind the mainframe application and mapping specific data. He set up a process in which a data tier web service would call Verastream and provide the raw data from the data set working with the objects in C#.

To deliver the initial application, the Edfinancial IT team had to capture data from both the loan origination system and loan servicing system housed on the mainframe. "We were sometimes hitting 20 screens from different systems to get to the details for a single loan," said Adkins. Verastream's point-and-click design tools quickly abstracted salient data from those multiple sources to build Edfinancial's new loan management application.

Mainframe Integration, Simplified

With the Verastream solution in place, Edfinancial staff can change whatever they want, whenever they want. Direct read-write

access to mainframe data means that internal and external users can make immediate edits (while not bypassing the existing mainframe business logic). And Edfinancial can easily customize the web application to correspond with the needs or skills of users.

Verastream Host Integrator exposes legacy functions as reusable services that can be accessed by Microsoft BizTalk. At Edfinancial, Verastream-generated services are incorporated into BizTalk Orchestrations for managed business processes and workflow. If one of the campus offices has to make a loan change, Verastream captures the data and packages it into BizTalk. Then BizTalk decides if that change should automatically update in other records across the enterprise.

More Updates in Half the Time

Timbs said that before Verastream Host Integrator, a pre-disbursement loan cancellation could take up to three minutes to complete. "Now a cancellation, plus two additional changes, can be made in less than half that time," he said. And thanks to Verastream's programmatic approach, a task that previously required navigation of six green-screen translations now requires only one integrated interface.

Since creating its loan management application, Edfinancial has rolled out additional applications with Verastream Host Integrator. Those solutions are being used by several different groups in the organization, including call center, loan origination, loan processing, and loan servicing staffs. The number of internal and external users is now approaching 150.

A Platform for Rapid Application Development

In fact, Verastream services have flourished at Edfinancial Services. When the company began implementing new phone and IVR systems, Verastream provided the flexibility to integrate across the board in a way that will keep

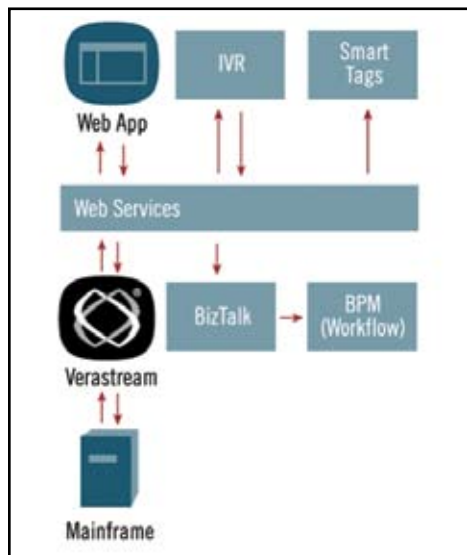
their options open. "For our evolutionary process, an SOA approach definitely made sense," said Adkins. "Although it's not a magic bullet for every IT problem, SOA was a successful strategy for us because it let us pick and choose as we went along."

Instead of taking an all-or-nothing approach to their challenges, the Edfinancial IT team built small-scale versions of both the user interface and back end. They've been incrementally adding functionality to the model ever since. "Save yourself the pain of building a new infrastructure because you can do that part, out of the box, with Verastream," advised Adkins. "Then, you can spend your time and resources building the actual solution to your problem."

Optimal Performance Under High-Transaction Volumes

Because there is a such a heavy demand for the improved applications, the Edfinancial team implemented Verastream Host Integrator load balancing. "We expected it to be hit pretty hard," said Timbs, "but the Verastream solution ran so well, we wondered if our monitoring software was working right."

They also thought the implementation might drain their computing resources. But Verastream incurs less operational overhead than other integration technologies. "The good news is that we don't have to request new hardware capacity going into next year," said Adkins, "because there's lots of headroom available."



With the Verastream solution in place, Edfinancial is no longer dependent on the service provider in terms of time or functionality.

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— Matt Timbs
Senior Software Engineer
Edfinancial Services



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