Stratus Uses the AppExchange API to Integrate Salesforce and Oracle Financials On Time and Under Budget

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—Scott Melick  
Senior Systems Analyst

Stratus Technologies took the long road to on-demand CRM. Before deploying Salesforce, the company wrestled with an on-premises Siebel CRM system that the sales staff never embraced. After two frustrating years, with ROI and cost containment headlining its agenda, the company scrapped the system and turned in-house, developing a homegrown application that focused on forecasting.

“We play in an extremely demanding, no-nonsense market,” explains Larry Humphreys, CRM manager for Stratus, a Maynard, Massachusetts-based firm that, for more than 25 years, has produced enterprise servers and provided system integration and other consulting services for organizations such as 911 dispatch centers, police and fire departments, stock exchanges, airline operations, and manufacturing firms. “It’s critical to have timely and accurate information throughout our sales and production process. It’s the basis for how well we compete.”

But the homegrown application wasn’t integrated globally. Stratus’ Oracle Financials ERP system held the hardware customer information, but Stratus’ service customers were invoiced in another system. Meanwhile, partner information was in a partner database and support data was in another homegrown system. Although the forecasting application tried to roll up these silos into a single view, reports revealed conflicting numbers. Weekly forecasting meetings often degenerated into sessions in which executives wasted time deciphering inconsistent figures—time that was intended for discussing strategy, key opportunities, and support needs.

It was time for the global solutions provider, which bills itself as “the world’s most trusted provider of computer products, services, and technologies,” to find a trusted solution of its own.

“We want ‘one synchronized machine,’ so we can capitalize on revenue opportunities and service customers with the same standard with which they service their own,” explains Humphreys. “We needed to tie our business processes together. We had silos of information throughout the sales regions, and the fragmentation undermined the efficiency we were striving for in the field. We needed one integrated, sales-focused business system.”

Benefits of a Flexible System

In June 2004, Humphreys and a small engineering team led by Scott Melick, senior systems analyst for IS applications at Stratus, set out to implement a new CRM solution. The executive team wanted a system implemented within 60 days. It had to be cost-effective, user-friendly, and intuitive—three requirements the Siebel CRM—now owned by Oracle—had failed to meet. The solution also had to integrate with back-office systems, particularly the company’s Oracle ERP applications.

Stratus considered solutions from salesforce.com, Siebel, NetSuite, and SalesNet. It wanted an on-demand model, and salesforce.com’s Salesforce emerged as the top choice, because of its ability to merge every aspect of the sales process into what Humphreys calls “one real-time instrument panel.”

Improving forecasting capabilities was the fundamental driver of the integration project between the Oracle applications and Salesforce. On the one hand, Stratus’ finance department wanted to be able to base its forecasts and resource allocations on the actual pipeline information that salespeople were entering into the Salesforce CRM system. On the other hand, sales management wanted to use Salesforce primarily to manage the sales teams themselves.

The project requirements were straightforward:

- To improve forecasting accuracy, the finance department had to have a version of the Salesforce pipeline data that it could reorder according to its own territory and market segmentation hierarchies.
- To increase sales efficiency, salespeople had to have visibility from within Salesforce into the existing order information in the Oracle Financials system and an integrated opportunity-to-quote-to-order system.
The AppExchange Solution

Stratus’ solution was to replicate the Salesforce Opportunities data into a local, on-premises database. Financial information from Oracle Financials was then appended to this Salesforce data. This effectively created a unified data model based on Opportunities that finance could use for forecasting and which would also be available to the homegrown order management system known as ftQuote. Once an order is approved, the system updates and locks down the information in both Salesforce and the Oracle system.

Stratus built the integration with Adobe ColdFusion (formerly Macromedia). “Everything is seamless,” says Melick. “Our integration is at the order opportunity level. We pass opportunity information to ftQuote, our ColdFusion-based quoting tool. When the order is submitted, this information is passed on to the Oracle ERP applications. Then, when the order number is created, it is passed back to Salesforce.”

The key to Salesforce’s integration capabilities is the AppExchange application programming interface (API), a Web services interface that provides direct, low-level access to all data stored in Salesforce. Based on open Internet standards, the AppExchange API allows developers to access Salesforce from within virtually any programming language, development environment, or integration tool. Using the AppExchange API, customers can import and export data from Salesforce to ERP systems, deliver real-time sales and support information to company portals, and populate critical business systems with customer information. (For additional technical details of the Oracle ERP applications/Salesforce integration, see the “Salesforce/Oracle ERP Integration” sidebar.)

Salesforce exceeded expectations from the start. “The first version of the integration was written in just under two weeks,” notes Melick, whose team beat the implementation deadline by eight days, with only four IT professionals. “We delivered the deployment well under our budget and right on time. Salesforce cost us one-third of the cost of a similar Siebel deployment, and we get additional modules without the incremental cost.”

Gone are the days of information silos and disjointed systems. Salesforce and the Oracle applications synchronize data every 15 minutes around the clock, and real-time sales activity is constantly integrated with marketing campaigns, supply chain management, production, and Stratus’ finance and legal operations. “The fact that the AppExchange API is so clean and intuitive made the Oracle integration painless,” says Melick.

ROI and the Future

Since deploying Salesforce, Humphreys says, Stratus’ sales cycle has shortened. Lead conversion, which used to take weeks to months, now takes as little as a day. Sales reps get a jump-start on an account within hours, and because the sales process is tied into every key element of the company’s operations, executing deals is quicker and more efficient.

User adoption was almost instantaneous, even before global sales training concluded. As the company leveraged the AppExchange to execute additional phases of integration, such as synchronizing Salesforce with professional services and legal functions, user acceptance expanded. Today, the company utilizes 170 seats, and almost half are occupied by nonsales professionals.

Melick says that Stratus continues to rely on the AppExchange to tie critical functions into Salesforce. For example, the company has integrated all of the forms on its Web site with the AppExchange API, allowing it to place forms in front of assets such as white papers and then feed this activity into Salesforce without creating duplicate records. The ability to integrate with Salesforce is now a standard requirement for all new business applications that Stratus purchases.

“Having one integrated instrument panel validates our efforts every step of the way,” Humphreys says. “Salesforce gives us constant visibility into our sales process. We know where we’re getting leads, how quickly we’re closing deals, and how efficiently we’re executing orders. We know if we’re spending money wisely.”

— Larry Humphreys, CRM Manager

For More Information

Contact your account executive to learn how we can help you accelerate your CRM success.
Stratus’ integration of Salesforce data begins by batch-moving it to a local database (LOD), hosted on premises at Stratus. The batch job is written in ColdFusion and runs on a hosted, dedicated Microsoft Windows 2003 box. There are two steps during this phase:

1. The script runs a SOQL query against the AppExchange API to pull objects from Salesforce
   - Account
   - Account team member
   - User
   - User role
   - Price book entry
   - Product2
   - Opportunity
   - Opportunity line item
   These all get written to the LOD.

2. The LOD audits the “last changed” time stamps for the new records against the “last changed” time stamp for the same old records in the LOD.
   - If the record has no time stamp in the LOD (if it is a brand new record, for example), then the record is put in a new table within the LOD.
   - If the time stamp of the new record is more recent than the existing one in the LOD, the script calls Salesforce again, pulling over the object and all associated objects and updating the local record with the new information.
   - Finally, the last modified data for each object is overwritten in the LOD.

*Impact:* This amounts to replicating the Salesforce data model to the LOD.

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A SQL query against Oracle ERP system pulls
- Territory information
- Market segment information
- Orders

The values are appended to the Opportunities record in the LOD.

*Impact:* A unified view of all Opportunities-relevant data in a single location. The Stratus Finance department can now run reports based on the expected close data with Salesforce, but segmented using its own hierarchy from the Oracle Financials ERP system.

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1 Stratus has introduced a couple of exceptions to this replication process to ensure that Opportunities that have been successfully closed are not accidentally deleted from the system. If an opportunity line item gets “deleted” in Salesforce, it is not actually deleted from the LOD table during replication. Instead, the record is flagged in LOD as “deleted.” These flagged opportunity line items are then compared to an email audit record from Stratus’ Oracle ERP system that shows which opportunity line items have an associated sales order number. If an opportunity line item with an associated sales order number has been flagged as “deleted,” a script fires an email notification to a Stratus CRM manager, indicating that he or she should manually restore the opportunity line item within Salesforce. The opportunity line item will then reappear in the LOD during the next batch operation.

2 The script also logs which records get updated, as well as a total record count—how many were updated and how many were inserted. This log is useful for troubleshooting and tracking discrepancies.
An XML/SOAP package writes the LOD values that have been called from the Oracle ERP system back into a custom field within Salesforce.

*Impact:* Sales reps can see market segment and order information from within the Salesforce user interface, without having to log in to the Oracle system.

When a sales rep is ready to turn a quote into an order, that person logs into another ColdFusion-based application, a custom quoting tool called ftQuote.

1. The rep retrieves the opportunity from Salesforce and enters it into ftQuote.
2. ftQuote calls the LOD for the opportunity line items and returns them to the rep.
3. The rep chooses which opportunity line items the customer will be purchasing.
4. The rep chooses the configuration (product, quantity, and price) and enters the “bill to” and “ship to” information for the order.
5. When the rep hits Submit, ftQuote routes the order to the Order Admin desk for approval.

*Impact:* Quote-to-order happens on a near-real-time system that offers redundancy for both Oracle ERP and Salesforce.

1. When the Order Admin approves the quote, the parts, quantity, and selling price fields in ftQuote get locked down.
2. Using a direct database call, the LOD routes into the descriptive flex fields in the Oracle system:
   a. The opportunity ID and five other fields from Salesforce
   b. The parts, quantity, selling price specified in ftQuote

*Impact:* The Oracle ERP system and Salesforce are completely synchronized with respect to opportunities and orders.