



Integration Appliances: Simplify Software as a Service (SaaS) Integration

By Simon Peel
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Introduction

More companies are adopting Software as a Service (SaaS) applications, fuelled by a fiercely competitive business environment. As the pace of business and technology accelerates, companies need to adapt faster to change and their IT departments must deliver innovative technology solutions rapidly and at a lower cost.

SaaS applications—like salesforce.com, NetSuite, RightNow and Siebel CRM On Demand—are attractive because they meet these needs. They appeal to IT because of the lower number of resources needed for deployment and to business users because they're able to start using the new systems quickly. And everybody likes subscription pricing because it means fewer budgetary issues get in the way of procuring the new application. It's no surprise then that SaaS applications, also known as on-demand applications, are spreading rapidly within companies today.

Deploying SaaS applications comes with a major challenge, however. Many IT departments become frustrated soon after they start using a SaaS application because the critical business information they need is not accessible from the new system. This information exists in highly customized back-end systems. Getting the new SaaS application to access and update these back-end systems becomes a far bigger hurdle than anybody anticipated.

The fact is, application integration has become the Achilles heel in getting the most from SaaS solutions. This paper highlights the integration issues specific to SaaS and explores three integration approaches to solving these problems.

Growth of SaaS Applications

Moving to a SaaS solution minimizes the pain of "owned and operated" applications. The complexities, time and costs associated with implementing on-premise applications—like SAP, PeopleSoft, and others—are well known. Most mid-size companies would prefer simpler, faster and lower-cost solutions. SaaS applications address these needs and provide attractive advantages for IT departments and business users:

- **Rapid implementations.** Since there is no software to install or deploy with a SaaS application, there is less demand on IT resources and this enables faster implementations. Adding users to the application is as simple as assigning a user ID and password for each person, so they can be up and running quickly.
- **Ease-of-use.** By delivering comprehensive functionality within a simple, familiar browser-based interface, SaaS applications are intuitive for users and require minimal training.

- **Low IT impact.** SaaS applications are less of a burden for IT but still deliver high business impact. SaaS doesn't require new IT infrastructure to get started and ongoing management and maintenance requires fewer IT resources than with "owned and operated" systems.
- **Subscription pricing.** SaaS has a much lower upfront cost because companies subscribe to an application by paying a monthly fee based on the number of users. This also makes the SaaS solution very easy to scale as a company grows.
- **Easy to change.** Customizations, workflows and preferences in SaaS applications are performed through configuration, not coding. Changes are easy as well because the application just needs to be reconfigured whenever business needs or processes change.

Despite these attractive benefits, SaaS applications will deliver limited value if the associated integration issues are not considered and resolved upfront. Getting the new SaaS application running is so easy that users expect instant access to all of their business information—about customers, products, orders, and more. If this doesn't happen, they get frustrated. Although SaaS applications are simple, their integration with other systems in a company is critical to realizing the value they offer.

Integration: The Last Barrier to SaaS

At mid-size companies, SaaS applications usually start off at the departmental or workgroup level. It might be the sales department getting a SaaS solution to manage and monitor the progress of sales opportunities through the pipeline. Soon, other departments in the company—or salespeople in other product groups or divisions—become aware of the new SaaS application and want to use it as well. With few IT resources needed for implementation, it's easy for these smaller groups to procure and implement a new system.

Vendors of SaaS applications use these entry points and develop strategies that lead to wider adoption across multiple departments. Many vendors now have customers with subscriptions to several hundred seats of their application. Such customers have a plethora of existing applications, including other on-demand applications in addition to on-premise systems. Integration therefore becomes more critical for these customers.

Since SaaS applications offer the same benefits to all customers, any advantages gained at one company are just as easily available to its competitors. SaaS applications by themselves provide little differentiation unless they are integrated with highly customized back-end applications that are core to a company's operations. Retaining this differentiation and making the enormous quantity of corporate data available to the newer, more cost-effective SaaS systems brings the issue of application integration to the forefront.

While companies of all sizes anticipate easy deployments of SaaS applications, they are overwhelmed by the unexpected complexities of integrating these to their existing systems.

There are three key issues to consider:

- ❑ **Getting information into a SaaS system.** Back-end systems contain some of the most valuable corporate assets in a company as they often represent many decades of business knowledge and operational experience. For the SaaS system to be useful from the start, the information contained in back-end systems must be migrated to the new SaaS solution.
- ❑ **Synchronizing information between SaaS and back-end systems.** Back-end systems are most likely to be the systems of record for critical corporate information about customers, products, orders and more. SaaS solutions need to synchronize information with the systems of record so the company can have a single, accurate and real-time view of customers and products. While dealing with different data formats and complex workflows is challenging, these integrations also must be secure, reliable and provide complete visibility.
- ❑ **Extracting information from a SaaS system.** Most companies generate a wide variety of operational and business intelligence (BI) reports based on data from multiple systems. While SaaS solutions offer reporting capability, this functionality is limited. Therefore, information from the new SaaS application must be easily transferable into existing reporting and BI applications.

Given these issues, application integration becomes critical to the success of SaaS solutions.

Traditional Integration Approaches: A Poor Fit for SaaS

Traditionally, companies had just two choices for solving application integration problems—use complex software platforms or write custom code. The platform approach evolved to meet the needs of large enterprises and provides complex functionality to solve BPM, BAM and EAI problems. But this rich functionality makes these platforms very expensive to procure, install, deploy and maintain.

As a consequence, most companies opted to develop custom code for integration, which has become the most widely used integration solution. While custom code provides an immediate fix at a seemingly lower cost, companies quickly realize that maintaining custom code is a labor-intensive and time-consuming process and that their “hidden costs” go well beyond the initial coding. Custom code also requires specialized skills that most IT organizations lack or cannot find easily. Finally, custom code requires upfront investments in time and resources that will delay the benefits of using a SaaS application.

Solving integration problems with either of these software-based approaches produces results that contradict the benefits expected by companies when they choose a SaaS solution. These integration solutions substantially undermine the value of choosing a SaaS solution, and frustrate users who expect quick results. The poor fit between traditional integration approaches and the requirements of a SaaS environment have created the need for a new type of integration solution.

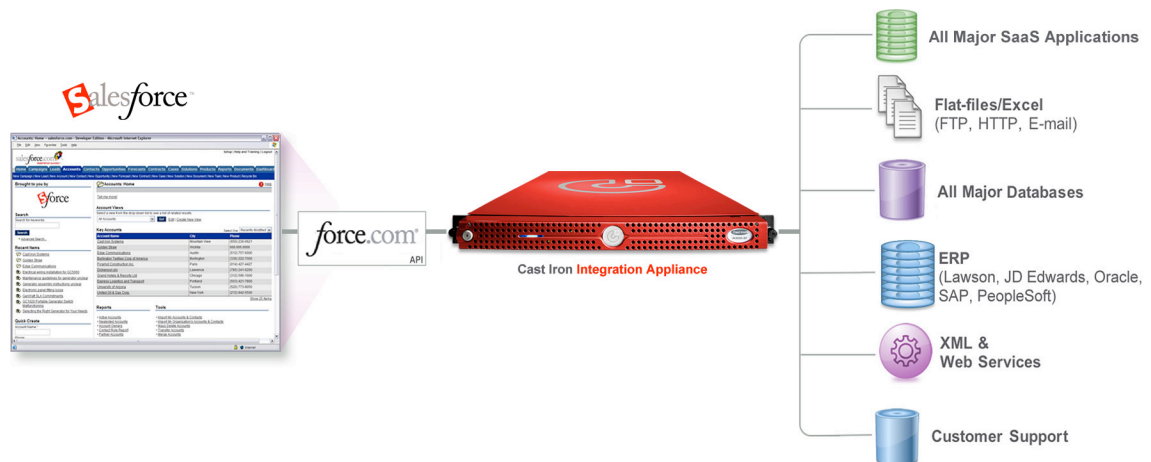
Integration Appliances: A Better Choice for SaaS

Integration appliances are plug-and-play devices designed from the ground up to remove the complexity and the overhead associated with traditional integration solutions. Integration appliances are gaining in popularity because they result in more efficiency and lower costs when used to solve integration problems with SaaS applications.

Integration appliances *reduce complexity* by doing only what's needed—connectivity, transformation, workflow and management—to rapidly integrate two or more applications. By distilling application integration problems into these four steps, integration appliances deliver simplicity and eliminate the need to write any code to implement integration projects.

Integration appliances are completely *self-contained* and include everything needed to complete integrations in one place. Integration appliances make no distinction between local and remote applications because they establish connectivity to the end points via native application protocols. The advantage of this approach is that no adapters are required and there is nothing to install or change at the end points. This is significant for integrating with SaaS applications because these applications exist in a remote location.

Integration appliances are *flexible, scalable and reusable*. They can be used for multiple integration projects for solving problems between any combination of SaaS and on-premise applications. Orchestrations and transformations created for one project can be easily reused for another project. Integration appliances maintain the benefits of SaaS applications while providing the robust integrations needed by larger organizations.



Integration Appliances: Aligned with SaaS

The ease of using an integration appliance matches the simplicity delivered by a SaaS application. Both eliminate the need to write any code, do not require installation or deployment of software and provide configuration capability. The benefits of integration appliances line up well with companies' expectations of a SaaS environment:

- ❑ **Integration in days.** Integration appliances are plug-and-play devices that enable companies to integrate in days, instead of weeks or months. This aligns with the rapid provisioning benefit of a SaaS application, as users can access critical business information quickly.
- ❑ **Ease-of-use through configuration, not coding.** Integration appliances are designed to complete integrations without the need to write any code. Simply plug in the appliance and configure the integrations. This mirrors the “no coding” experience of a SaaS solution.
- ❑ **Low IT impact.** The integration appliance is a completely self-contained device with nothing else for IT to add or buy. Appliances do not require complex coordination or

specialized IT skills for deployment. Ongoing management and maintenance of an appliance imposes minimal requirements on IT.

- **Subscription pricing.** Integration appliances are offered with monthly subscription pricing plans. By eliminating upfront costs, the integration appliance delivers the same type of economic benefit that leads companies to choose SaaS solutions.
- **Easy to change.** An integration appliance allows IT to change connectivity, revise transformations and modify workflows using point-and-click functions in a visual user interface. Easy changes enable integrations to better serve the evolving needs of the business.

Since integration appliances connect equally well to local and remote applications, the physical hardware itself need not be located near the application. With the *remote management* capability of integration appliances, customers can monitor, maintain and upgrade appliances in distributed geographic locations.

Conclusion

SaaS applications—like salesforce.com, NetSuite, RightNow and Siebel CRM On Demand—offer tremendous benefits including rapid implementations, ease-of-use, low IT requirements, subscription pricing and easy changes. As SaaS adoption increases, the need to integrate between SaaS and back-end applications is critical.

Back-end systems that companies have made significant investments in over time provide key differentiation advantages. It is not practical to replicate all of this investment—in time and money—in a new application. It is far simpler to provide a way for the new SaaS system to access the information in existing back-end systems and further leverage the investments made in those systems.

It's clear that IT environments in the future will include a mix of SaaS and on-premise applications. Different companies will select various combinations of these systems to maintain true differentiation and be responsive to the needs of the business.

To realize the full benefit of SaaS applications, integration must be dramatically simplified. Companies need a solution that can run anywhere, connect applications anywhere, be managed from anywhere and require no specialist integration skills or IT infrastructure. These solutions must be easily configurable, flexible and scalable—which means no coding. And, the integration solution must implement projects within days, not weeks or months.

Fortunately, integration appliances provide these benefits today. By taking advantage of the simplicity of integration appliances, companies can obtain the full benefits of their SaaS applications in just days.

About the Author

Simon Peel is SVP of Marketing and Strategy at Cast Iron Systems. He has more than 16 years experience in strategy, product management and marketing of enterprise-level solutions. Before joining Cast Iron Systems, Peel was Vice President of Marketing at Peakstone Corporation, where he devised the company's go-to-market strategy, trained and re-tooled the sales team and led the company to surpass its ambitious new customer pipeline goals. Prior to Peakstone, Peel was Vice President of Marketing at Mainssoft Corporation. There, he directed all marketing and

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