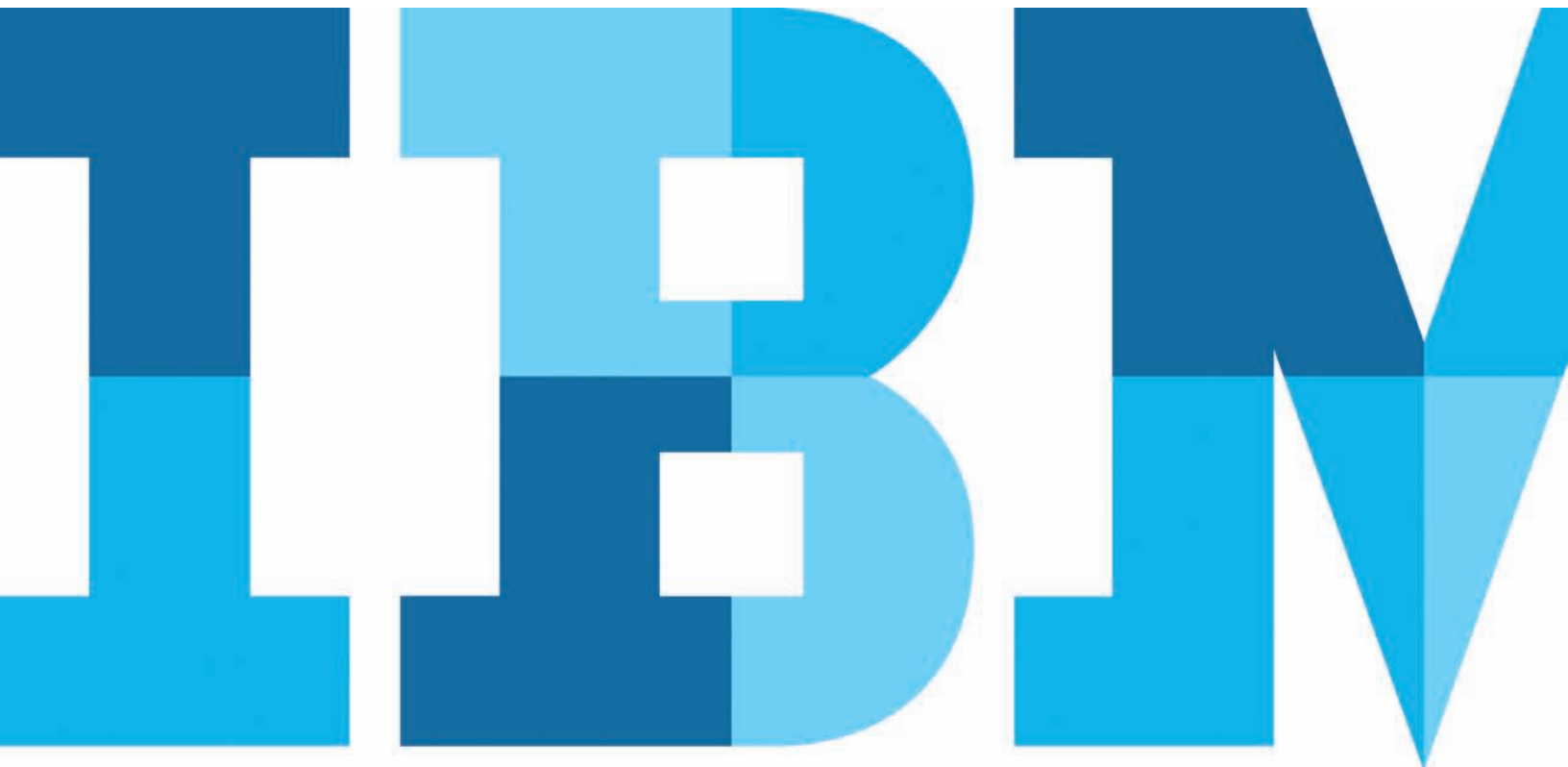# Rapidly integrate SAP with cloud applications in days with WebSphere Cast Iron Cloud integration
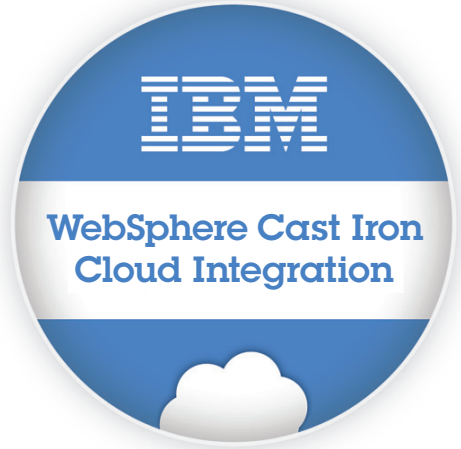
By: Vidya Chadaga

Introduction

Businesses are looking to cut costs while achieving better results. Companies have turned to cloud applications that are an attractive alternative to traditional on-premise applications because they allow organizations to rapidly meet the changing needs of the business while being cost effective. As the adoption of cloud applications explodes, many companies now have a hybrid world of cloud and on-premise applications—making integration critical.

Corporate technology leaders face a really complex problem—how to integrate their key applications in a way that keeps risks low, costs down and schedules short. Companies on a growth path don't have the IT resources they need, nor do they have the financial slack to invest in risky, complicated integration tools. Nevertheless, they must have integration to accelerate the ROI of new applications.

You've invested in SAP as the platform for your business. You also now own other cloud and on-premise applications. If you are in charge of application integration for SAP solutions, the challenge is how to simplify their integration.

- Will you assign a team of skilled programmers to create and maintain custom code with each new application or partner?
- Will you invest in expensive and complex software-based integration platforms?
- Will you look for another approach?

The answer depends upon the kind of integration project you're dealing with. Most SAP customers would agree that more than 90 percent of their application integration needs are straightforward: move data from one application to another, in real time, according to set business rules. Some especially intricate integration problems will always exist, but most integration projects are relatively simple. Does it make sense, then, to use a complex platform when a simple and rapid solution will do? Probably not. It's more likely that you want a technology that takes care of the vast number of straightforward integration projects in a quick, simple, cost-effective manner.

For SAP customers, application integration has proven even more difficult because SAP solutions are connected with such a wide variety of existing applications that businesses already have in production. SAP customers are looking to integrate their existing SAP applications with other cloud and home-grown applications in just days to get the full benefit of an integrated enterprise.

SAP application integration—traditional choices

There are three ways to integrate SAP solutions with other applications. First, through custom coding. Second, with On Demand integration tools. The third through traditional middleware solutions, having overcome the challenges and barriers of the first two approaches for many companies. Let's look at each.

Custom code

The default option for any company facing an integration project between SAP solutions and other cloud applications is to write the data transformation and workflow mapping code from scratch using ABAP, Java-based languages, or some other scripting language. However, writing custom code poses problems for IT managers such as:

- *Custom code monopolizes specialist skills.* By writing ABAP custom code for straight-forward application integration projects, companies must commit their scarce programmers, and therefore lose the ability to create new value-added applications and functions that support their core business.

- *Custom code is not reusable*. Integration code usually cannot be reused because functionality is idiosyncratic to the underlying project.
- *Custom code is not scalable and inflexible*. Integration code is brittle and when it is written for a specific, one-off purpose. It is very difficult to scale up as the business grows.
- *Custom code is expensive*. Most companies do not have adequate testing and version control systems in place, which leads to expensive maintenance later on.

On Demand integration tools

These tools come with rudimentary capabilities and functionality to complete simple cloud-to-cloud integration scenarios. However, they lack the sophisticated capability required to integrate SAP with cloud and other customized on-premise applications and to harmonize integration processes across this hybrid application landscape. As a result, they have mainly been adopted by small companies needing low-cost integration options.

Traditional middleware solutions

The on-premise middleware platforms evolved to meet integration needs in large enterprises, and they provide sophisticated functionality to solve Business Process Management (BPM), Extract, Transform and Load (ETL) and Enterprise Application Integration (EAI) problems. But this rich functionality can also equate to additional costs in procurement, deployment and maintenance; which might be otherwise unnecessary for simple cloud integration projects. Furthermore, they often lack integrated support, native connectivity and API expertise for the specific cloud applications that companies may be adopting.

WebSphere Cast Iron Cloud integration: the rapid, flexible and simple solution

WebSphere® Cast Iron® Systems, now a part of IBM, is the leading Software as a Service (SaaS) and cloud application integration provider. With Cast Iron, SAP customers can expect fast and flexible SaaS and cloud application integration in the space of days and achieve lower cost and higher return on investment in cloud and SaaS models (Figure 1). Unlike traditional choices, Cast Iron provides a single robust solution, designed from the ground-up to deliver everything needed for SAP and Cloud application integration.

Figure 1: Connecting SAP to the Cloud

The product delivers the following differentiating sets of capabilities:

- Deployment flexibility
- Complete reusability
- Extensive connectivity
- Complete cloud integration scenarios

Deployment flexibility

WebSphere Cast Iron Cloud integration is a single product that offers SAP customers three different form factors for deployment (Figure 2):

- Cast Iron Live, a multi-tenant cloud service
- A physical appliance built on market-leading IBM technology that can be installed and managed within a local data center
- A virtual appliance that can be installed on a customer's existing servers using virtualization technology

All three deployment options (see Figure 2) provide the same user experience for developing and managing the integrations, and users have the unmatched flexibility of seamlessly transitioning between these options. The advantage to SAP customers is the ability to choose the right solution for their needs, rather than being limited by vendor offerings that often take a "one size fits all approach".

Figure 2: Three deployment options—Cloud, physical and virtual appliance

Complete reusability

WebSphere Cast Iron Cloud integration includes hundreds of reusable Template Integration Processes (TIPs) that are searchable with a single click in an online library. This online library contains templates for all of the most common SAP-to-cloud integration scenarios. These templates provide a question-and-answer based wizard that walks users through a common integration scenario. For example, a TIP might take all the information needed to transform an opportunity in a CRM system into an order in the SAP system. The product gives SAP customers the benefit of previous successes and best-practices available through our community of customers and partners.

IBM customers and partners can create their own wizard-driven, reusable templates with the point-and-click TIP Development Kit and make them instantly available to the entire WebSphere Cast Iron user community. Figure 3 shows an example TIP connecting SAP to salesforce.com.
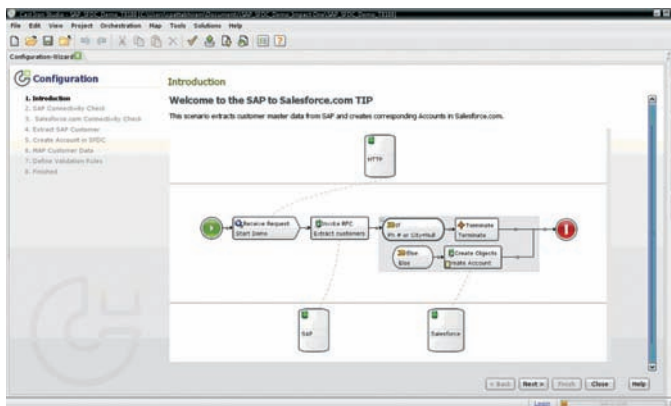

Figure 3: Example SAP TIP

Extensive connectivity

WebSphere Cast Iron Cloud integration comes with built-in connectivity to hundreds of cloud, packaged and proprietary on-premise applications, including SAP, other ERP, CRM, data-bases, web services and flat files. It is completely self-contained and includes everything needed to complete integrations in one place. This progressive approach to integration makes no distinction between local and remote applications because they establish connectivity to the end points via native application protocols. The advantage is that no additional adapters are required, and there is nothing to install or change at the end points.

Complete cloud integration scenarios

The WebSphere Cast Iron Cloud integration solution provides three complete integration products in one (Figure 4):

- **Cloud data migration**
  Data handling using the product's data cleansing and data migration capabilities enables SAP's customers to expedite their adoption of SaaS and cloud applications. This approach to data integration enables companies to cleanse, enrich and migrate data from SAP systems to cloud applications in real time.
- **Cloud data synchronization**
  WebSphere Cast Iron Cloud integration provides connectivity, workflow and transformation features enabling SAP customers to coordinate or orchestrate integration processes across multiple applications in real time. Now, SaaS and cloud users can immediately view data hidden away in applications, minimize any duplicate entry and maximize their own decision making and productivity.
- **Cloud user interface (UI) mashups**
  Often, information from disparate sources needs to be brought together and displayed within the native user interface of a single application. WebSphere Cast Iron Cloud can mashup that data to present a single unified view, without taking the data out of one application and putting it into another.
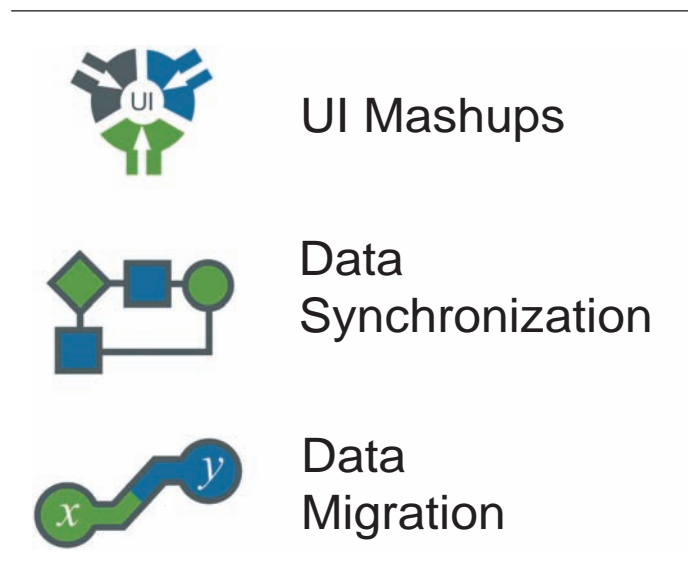

UI Mashups

Data Synchronization

Data Migration

Figure 4: All integration projects—One solution

What is the business value of Cast Iron Cloud integration?

WebSphere Cast Iron Cloud integration adds value to your business in various ways with its simple and rapid cloud integration solution. SAP owners who use WebSphere Cast Iron Cloud for their integration projects note four key business benefits:

- **Faster delivery with integration in days.** WebSphere Cast Iron Cloud integration's TIP (Template Integration Processes) library enables companies to integrate in just days, instead of weeks or months. This approach aligns with the deployment timelines of cloud applications and enables users to expedite their project timeframes.

- **Low TCO leading to significant cost savings.** Cast Iron's "configuration, not coding" approach to integration has helped SAP customers slash integration costs compared to traditional approaches. In addition, these companies have reduced ERP licensing costs by eliminating the need for cloud users to login to back office applications. Also, due to the term licensing pricing options available, companies have slashed their up-front capital expenditure costs.
- **Enhanced IT innovation with no ABAP skills needed.** WebSphere Cast Iron Cloud integration is delivered via either an on-premise appliance or as a service in the cloud with nothing else for IT to add or buy. Both approaches do not require complex coordination or specialized ABAP skills for deployment. Due to the simplicity of the solution, IT executives can now reallocate senior resources to more innovation-oriented projects.
- **Power of the ecosystem with key partnerships.** IBM is a strategic partner for all leading cloud companies such as: salesforce.com, Google, Taleo, Oracle CRM, Cisco Webex, ADP and Success Factors. As a result, IBM works with the respective product teams to be up-to-date on any API or functionality changes. Customers no longer have to spend months updating their custom-coded integrations with any new API changes.

Hot on-ramp and off-ramp to SAP NetWeaver with WebSphere Cast Iron

IBM WebSphere Cast Iron Cloud integration is built from the ground-up for cloud integration. It is not designed to solve complex integration scenarios enabled by SAP NetWeaver Process Integration (PI), ETL and ESB solutions. Where time and cost are the top priorities for rapid and simple integration, WebSphere Cast Iron is the perfect fit. Customers have used WebSphere Cast Iron Cloud integration for cloud to on-premise integration and for point-to-point packaged business application integration in various industries.

WebSphere Cast Iron Cloud integration is used to augment SAP NetWeaver PI solutions with targeted cloud integration capabilities. For instance, a number of large companies use SAP NetWeaver PI as their integration backbone coupled with WebSphere Cast Iron Cloud to integrate specific cloud applications. Together, they enable a range of cloud and on-premise integration scenarios. In this context, the SAP NetWeaver PI is the enterprise integration highway and WebSphere Cast Iron Cloud integration is the solution that integrates the cloud applications to SAP NetWeaver PI.

Ultimately, IBM WebSphere Cast Iron brings flexibility and agility to application integration by unlocking the IT shop for SAP customers so that they are not tied to any one application architecture, coding language or vendor for their integration needs.

Case study

This section covers a customer example with the integration challenges, options evaluated, solution chosen and results seen.

Siemens Energy

In the United States, the Fortune 500 company, Siemens consists of three sectors—Energy, Healthcare, and Industry—with three to six divisions in each. Six of the six divisions of Siemens Energy—Fossil Power Generation, Renewable Energy, Oil and Gas, Service Rotating Equipment, Power Transmission, and Power Distribution—are using IBM WebSphere Cast Iron Cloud integration to connect their public, cloud-based salesforce.com customer relationship management (CRM) application and on-premise SAP enterprise resource planning (ERP) system. Salesforce.com is distributed across 640 seats in six divisions and is used by Siemens Energy's North American sales force. SAP is Siemens Energy's worldwide back-office standard for order management, financials, purchasing and the sector's system of record for testing and diagnostics in the U.S.

Major challenges faced

1. Siemens Energy had made significant progress in standardizing its business processes between SAP and salesforce.com, but the platform consolidation was incomplete partially due to the unique reporting needs of individual businesses.

2. Although a business warehouse is part of Siemens Energy's IT roadmap, it was not yet in place. It would allow for some aggregate reporting but initially not enough customization to meet the needs of the various divisions.

3. The need and demand for reporting key business performance data from SAP was very high. Internal customers wanted to be able to display and view business results in customized dashboards.

4. In-house developer support was limited to SAP, and two of the divisions have no development staff for IT projects.

The divisions' goal was to integrate SAP and salesforce.com, making the data in the ERP system available in the CRM application without writing code. Specifically, they wanted complete visibility of the forecast pipeline, including orders, shipments and invoices in one place within salesforce.com with dynamic reporting.

Figure 5: Example: Siemens Energy: Need sales order and invoice visibility

Options evaluated

Siemens Energy initially considered developing the integration in-house, but writing custom code, although quick, was too programming intensive and they lacked programming resources. It was also too difficult to modify as their business needs changed. The divisions also considered traditional EAI middleware but concluded that it was too costly, posed too steep a learning curve and offered no native salesforce.com connectivity. When the company brought IBM WebSphere Cast Iron in to do a live demo, they were impressed by the simplicity of its configuration-based approach to real-time, bidirectional integration and built-in salesforce.com and SAP connectivity. Not wanting to maintain code or servers, Siemens Energy opted to lease the WebSphere Cast Iron Cloud integration appliance on a monthly basis, which includes full 24/7 support.

Results

In less than three weeks, Siemens Energy's IT staff completed Phase 1 of the first project, providing greater visibility into salesforce.com, which resulted in faster adoption by the sales team. The simplified user interface and reusability of WebSphere Cast Iron Cloud integration provided Siemens Energy with a platform for all future integration projects, and was subsequently used to enable the use of salesforce.com's newest offering, Chatter, to provide real-time updates from SAP.

In the future, Siemens Energy plans to expand its integration capabilities across departments to enhance supply chain visibility so that customers can see where their order is at any point. This includes going "mobile" for reps and agents and by driving customers to a portal to access their order status.
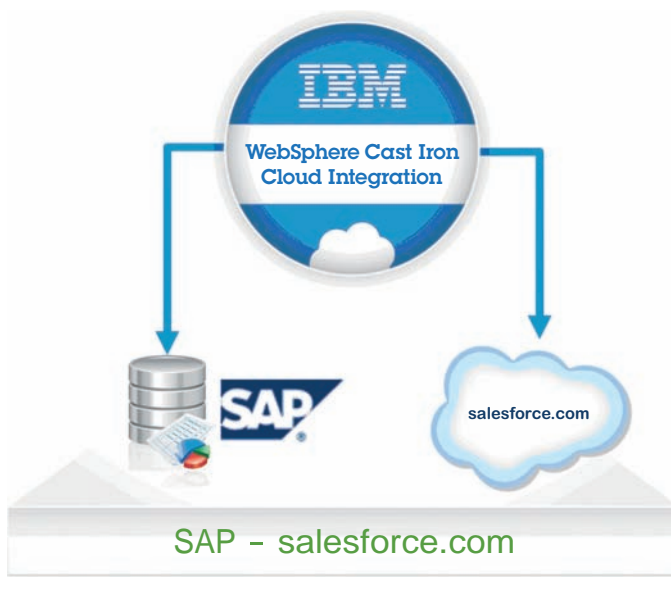

Figure 6: Example: Siemens Energy: Real-time integration in days

Lessons learned

Siemens Energy learned that its integration strategy was very similar to its CRM platform strategy:

- **Make simplicity a must-have:** no software and no development, just rapid deployment, low maintenance and the flexibility to easily make changes.
- **Choose simple solutions, not build-it-yourself tools:** WebSphere Cast Iron Cloud integration provided simplicity and complete functionality.
- **Clearly define and agree to the business and technical requirements up front:** This is the key to rapid deployment.
- **Start simple to deliver quick results:** Build on initial experience and success.

Summary

Cloud applications offer tremendous benefits including rapid implementations, ease-of-use, low IT requirements, subscription pricing and ease of change. As their adoption rate increases, the need to integrate cloud applications and SAP systems is critical to rapidly realize the full benefits of the solution.

Custom coding and other traditional approaches are useful for especially complex and large problems, but most SAP integration projects are straightforward and do not need such massive efforts. Companies need a solution that provides the simplicity to implement projects in days, not weeks or months. At the same time, the solution needs the sophistication required to harmonize business processes across multiple cloud and on-premise applications. The integration solution should run anywhere, connect applications deployed anywhere, be managed from anywhere, and require limited specialist integration skills or IT infrastructure. These solutions must be easily configurable, flexible and scalable, with no coding required. Also, the integration solution must provide a reusable framework for new customers to leverage the best practices of earlier implementations and further reduce their integration costs.

IBM WebSphere Cast Iron Cloud integration provides these benefits today. By taking advantage of this solution, SAP customers can obtain the full benefit of cloud applications in just days.

For more information

To learn more about IBM WebSphere Cast Iron for SAP, contact your IBM marketing representative or IBM Business Partner, or visit the following website:
http://www.castiron.com/integration-solutions/sap/index.html

Additionally, financing solutions from IBM Global Financing can enable effective cash management, protection from technology obsolescence, improved total cost of ownership and return on investment. Also, our Global Asset Recovery Services help address environmental concerns with new, more energy-efficient solutions. For more information on IBM Global Financing, visit:
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About the author

Vidya Chadaga is a Senior Product Manager at IBM in the WebSphere Connectivity and Integration team. She drives various product management and marketing activities ranging from corporate messaging, product positioning, sales and channel enablement to leading product launches, pricing, direct and partner sales and marketing activities. With over 12 years of experience, Vidya has held roles in Product Marketing, Product Management and Engineering for various Cloud and ERP companies like Cast Iron Systems, Oracle & SAP Labs. She holds an MBA in Marketing and Strategy from the Haas School of Business, UC Berkeley and a Bachelors of Engineering in CSE from MIT, India.