



Cast Iron Integration Solution: Deliver Application Integration Projects in Days

Think Integration Requires Complex Software?
Think Again!
January 2009

Introduction

In today's economy, doing more with less, cutting costs while achieving the same amount of output or more, is critical to success. As a result, companies are turning to Software as a Service (SaaS) and cloud-based applications to decrease costs and drive productivity. These new cloud-based applications need to be connected in real time with each other and with applications that continue to reside on premise, in order to realize their full value.

Recent analyst studies by Gartner, Saugatuck Technology and IDC predict the explosive growth of SaaS at a 30% compound average growth rate with revenues exceeding \$20 billion by 2012. According to Forrester and Saugatuck Technology, integration issues are the main barriers to SaaS adoption.

As a result, many software-based application integration solutions have recently emerged to address the needs of midsize companies. Most, if not all, of these are repackaged or relabeled versions of the enterprise-level platforms offered by the same vendors. These have consistently proven to be too complex for midsize companies that do not have the resources to learn and implement middleware platforms. Therefore, most midsize companies use home-grown, custom code alternatives which solve integration problems in the short-term but lead to higher costs over time due to the lack of scalability and reusability.

IT shops today are under constant pressure to respond faster to their business' integration needs, and simultaneously reduce their spending on integration projects. Therefore, the crucial issue facing them is, "How can we best achieve these conflicting objectives involving time and costs?"

Categories of Integration

The first step in understanding how to deliver integration projects faster and reduce integration costs at the same time is to examine the types of integration problems faced by your company today, and then select an integration solution that specifically addresses the type of problem you have. Integration problems can be classified into three broad categories:

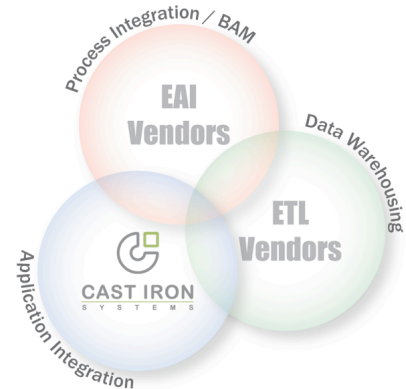
- Business process integration
- Data warehousing
- Application integration

Business process integration (BPI) projects involve automation of end-to-end processes, such as order-to-cash, credit-approval, and purchase-to-pay. These require complex business logic, involve extensive human-machine interaction, and need native connectivity to legacy applications in order to leverage the business logic. For example, a credit-approval process involves multiple steps of approval and human interaction, requires complicated reasoning to determine the creditworthiness of a customer, and typically needs information from multiple systems to determine an answer. Business process integration has logically extended into an area called

Business Activity Monitoring (BAM) – the need to provide a consolidated view of key performance indicators synthesized from different applications.

Enterprise application integration (EAI) technologies effectively solve BPI and BAM problems with a comprehensive suite of complex software modules. A complete EAI solution involves many moving parts, including hardware, operating systems, sophisticated stacks of integration software, adapters installed at endpoints, monitoring software, and the list goes on.

Data warehousing (DW) projects are similarly complex and involve the movement of huge volumes of business information from enterprise systems to a central repository. Business users perform detailed analytics and run ad-hoc queries against this central repository using front-end reporting tools. Data warehousing projects are batch oriented and often involve millions of transactions on a daily basis. For example, a company wanting to perform detailed analytics on its sales history for the past year uses data warehousing solutions to provide this information. Extract, transform and load (ETL) vendors have successfully provided very specific batch-oriented tools to solve these types of problems.



Cast Iron Integration: Complete application integration projects in days, for 20% of the cost of alternatives.

However, the vast majority of integration problems in a midsize company are much simpler than BPI, BAM or DW projects. Although no integration is *simple*, most integration projects are simply trying to integrate two, or just a few, applications. This size of project addresses the need to synchronize and integrate business information – such as customers, suppliers, items, inventory and orders – in a real-time manner across business applications and partners. Application integration creates a consistent view of information across the enterprise and enables companies to make fact-based decisions and operate efficiently.

Without application integration, organizations create islands of information that lead to operating inefficiencies and customer dissatisfaction. For example, a local phone provider that did not have customer information integrated across its billing, customer support, and technical support systems would have more billing trouble than one who integrated these systems. Additionally, since companies need to synchronize and integrate their data across applications before streamlining their business process (using process integration) or reporting on it (using data warehousing), application integration is a necessary first step for these more complex projects. The need for a single, real-time view of core business information such as customers, items, inventory, and pricing, has expanded the need for application integration today. Such projects are more numerous than process integration or data warehousing projects, have simpler requirements, and always require rapid implementations.

Using a Chainsaw to Open a Letter

So how are companies solving the growing need for application integration and why are these solutions so time consuming and expensive? The answer is that some companies have tried to use complex EAI and ETL platforms for solving simpler point-to-point application integration problems. These solutions have proven to be overkill for these reasons:

- Companies have incurred very high implementation and operational costs due to the complexity of these platforms, which involve many moving parts.
- Implementing integrations with these platforms requires many months of effort with specialized IT skill sets that may not be easily available in a midsize company.

As an alternative to these complex platforms, midsize companies have chosen to piece together their own custom-built solutions using Java, batch, SQL, VB scripts, and the like. These homegrown solutions may be adequate in the short-term but are a poor long-term answer for these reasons:

- They are not flexible enough to meet future demands because they have been built as a one-off solution for a specific need. Upgrades and changes to custom code require many man-hours of effort by their original author, leading to long lead times for changes and higher costs.
- Custom code solutions are not typically built in a way that feeds the existing management and maintenance infrastructure so critical after deployment. For example, custom code neither provides visibility into transactions nor alerts on data and connectivity errors.

The net result is that all existing software-based application integration solutions are complex and expensive, especially over time. Why use a chainsaw to open a letter? Isn't there a simpler and more appropriate tool for the job?

The Quest for Simplicity

The only way to truly accelerate application integration projects is to reduce the complexity of the solutions. Just tweaking existing software-based solutions won't reduce complexity since simplicity has to be designed into the solution. Instead, a fresh approach is needed to simplify application integration and thereby deliver dramatic cost and time savings. A model for this is *Software-as-Service applications like salesforce.com*.

Traditional packaged software comes equipped with a myriad of complex features and functions as they are built to solve the problems of large Fortune 500 organizations. This complexity not only drives up the upfront implementation cost of the software but also dramatically impacts the total cost of managing this software over time. Software-as-a-Service applications, on the other hand, take the approach that the majority of organizations do not need the complexity provided by traditional packaged software and will never use it; as a result, companies like salesforce.com build their applications from the 'ground up' to provide customers with *what they need and only what they need* to simplify the user experience. The net result of this simplicity is a two-fold improvement in customer adoption, due to a simpler user experience, as well as dramatic savings in implementation time and costs.

Cast Iron Systems has adopted the same design philosophy for creating its integration solution. Rather than provide all the complex features of a traditional EAI or ETL solution, Cast Iron has built its solution from the 'ground-up' to provide everything needed to rapidly deliver completed application integration projects at a dramatically lower cost.

What Is the Cast Iron Integration Solution?

The Cast Iron Integration Solution simplifies application integration by providing a "configuration, not coding" approach that doesn't require experts and enables rapid integration. For example, many companies need real-time integration between salesforce.com and SAP, regardless of where those applications are hosted. Companies using the Cast Iron Integration Solution can choose from two integration options to connect such applications: the Cast Iron Cloud™, which is an Integration as a Service (IaaS) option, or the Cast Iron Integration Appliance™, which is an on-premise device. The on-premise device comes in two flavors – a physical appliance or a virtual appliance that be installed on your own hardware. All the Cast Iron product offerings operate on the same code base, provide exactly the same functionality, and come with pre-set data and logic interfaces for specific application integration projects. With either option, the key differentiators from EAI, ETL, DW and custom coding are that (1) companies configure, they do

not code, and (2) companies do not license or maintain software. Let's look at the Cloud and Appliance more carefully.

Integration as a Service



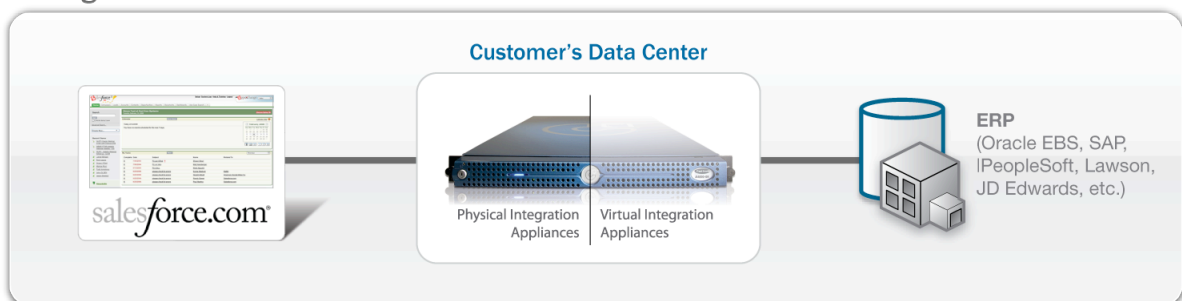
The Cast Iron Cloud Integration as a Service (IaaS) option follows the same model as Software as a Service (SaaS) or on-demand services. SaaS approaches, like salesforce.com or NetSuite, run a company's business applications through a network on a remote host supported by the service provider. They look and operate exactly as if they were running on the company's own systems. The Cast Iron Cloud does the same thing, except that instead of business applications that run over a network, application integration operations run over a network. Companies who integrate through the Cast Iron Cloud can integrate their SaaS and web-based applications in real time.

Companies gain the same benefits with the IaaS Cast Iron Cloud as with SaaS – subscription pricing, no need to invest in and maintain their own integration IT hardware and software, scalability, support from the service provider's (Cast Iron) experts, and no need to invest in integration IT personnel to write custom code.

"Our projects have short implementation trajectories, and the Cast Iron Cloud gives us the integration speed and agility we need and enables us to focus on our core competencies rather than on plumbing. This increases our productivity across the board."

Bill Hoban, CIO of Extra Space Storage

Integration On Premise



The Cast Iron Integration Appliance is a stand-alone, self-contained hardware platform. It comes with all of the required programming on board for a particular integration project. The device is called an "appliance" because it has the same self-contained/dedicated function characteristic as most household appliances, and like a network router. They look like any other rack-mounted box, but are dedicated to one important task: integrating multiple on-premise or SaaS applications. The virtual appliance option can be installed on a company's own hardware.

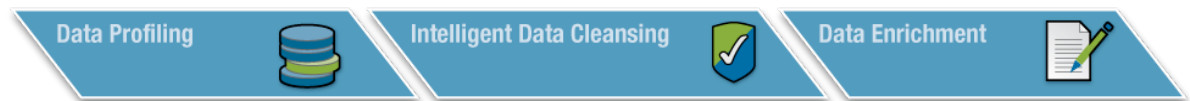
“The Cast Iron Integration Solution enabled us to easily connect our SAP applications and free up resources to deliver ongoing value rather than focus on middleware issues.”

Steve Luchessi, Sr. IT Director, Intuitive Surgical

The Cast Iron Integration Solution provides everything needed to integrate applications with the following key features that simplify and accelerate data migration and application integration:



Migration and Data Quality:



Data Profiling: Assess the quality of your data before commencing data migrations

Intelligent Data Cleansing:

- **Duplicate Removal (de-duplication):** Combine data from various different sources and remove duplicate values
- **Fuzzy Lookup:** Configure sophisticated rules to highlight errors and fix them
- **Data Enrichment:** Perform lookups with third-party providers to enrich your data

Integration and Extraction:



1. **Connectivity:** Configurable connectivity to hundreds of applications and endpoints
2. **Transformation:** Drag-and-drop UI for data transformations
3. **Workflow:** Visual interface for designing workflow rules
4. **Management:** Easy manageability through single web-based console

Regardless of whether you choose the Cloud or Appliance, you will get the same highly sophisticated integration logic, data mapping, configuration tools, and management capabilities enumerated above. You just need to decide if you want to house the appliance on premise or use a multi-tenant integration service that is provided by Cast Iron.

Companies use the Cast Iron Integration Solution to solve a variety of application integration problems:

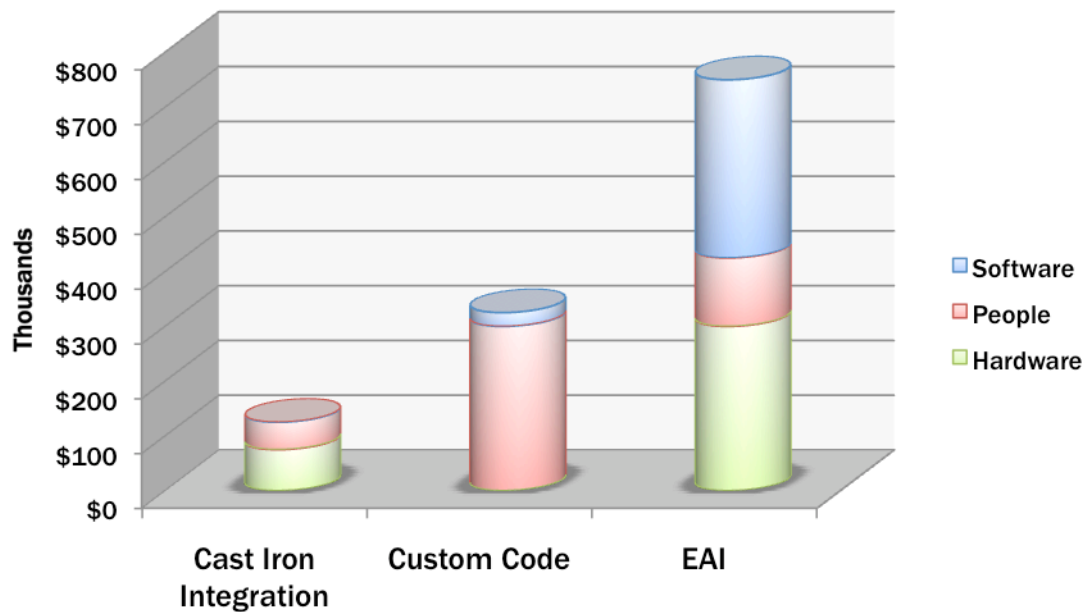
Integration Problems Solved	Systems Connected
<ul style="list-style-type: none"> • Data migration from legacy to new applications • 360° view of customer and product across ERP, CRM and call center applications • Opportunity to Order integration between marketing automation, CRM and ERP systems • Order to Cash integration between CRM, ERP, warehousing and financial systems • Billings, Bookings and Backlog visibility from ERP to CRM • Pricing and product catalog information between ERP and customer portals • POs, shipping notices and payments with suppliers • Customer support integration between ERP and customer support systems • Repair and warranty information between call centers and customer portals • Data extraction from ERP/CRM to reporting and BI systems • Mergers, acquisitions & divestitures integration • Enabling Service Oriented Architectures 	<ul style="list-style-type: none"> • All major SaaS applications including salesforce.com, RightNow, NetSuite, Oracle CRM On Demand, etc. • ERP including SAP, Oracle, JD Edwards, PeopleSoft, BAAN, QAD, Lawson, Great Plains, etc. • CRM including Siebel, Clarify, Remedy, Oracle, Kana, Vantive, etc. • All major databases including Oracle, DB2, SQL Server, MySQL, Sybase, Informix, etc. • Flat-files using FTP, HTTP(S), e-mail, etc. • XML and Web Services • EDI • Middleware and all major EAI platforms • Project management applications including Clarity • And many more...

Simpler = Faster Projects, Lower Costs

The Cast Iron Integrated Solution provides many benefits when compared to traditional software-based approaches (EAI, ETL, DW, custom code) to solve application integration problems:

- **Fastest Time to Market:** Customers can start using the Cast Iron Solution and design and deploy an integration project within hours. The Cast Iron Integration Solution provides a graphical modeling environment that enables customers to complete integrations without ever having to write code. Because it is specifically designed for a single purpose, the Integration Solution is by far the fastest way to connect applications. In a head-to-head benchmark study by one of the world's leading electronics manufacturing companies, the same application integration project was implemented using both the Cast Iron Solution and a traditional software stack from a leading EAI provider. The result: the Cast Iron Integration Appliance needed 75% less development time than the EAI solution.

- Lowest Costs:** The Cast Iron Integration Solution is very different from software-based solutions in use today. It provides all of the software and hardware needed to solve application integration in one device or service. It includes all of the necessary connectors, the management and monitoring capabilities, and the ability to connect any number of endpoints without additional cost. No additional technology is required, making either the Cast Iron Solution much more cost-effective to acquire and configure. Also, the hosting costs of an appliance are about 90% cheaper than that of a hardware server. The result? Midsize companies have slashed their total cost of ownership by 80%.



- Better Utilization of Skills:** The Cast Iron Solution is purpose-built for solving the simpler integration problems. Thus, it does not require sophisticated middleware programmers to write code to implement integration solutions. Instead, a systems analyst or a junior applications developer can configure projects in days and deploy to production in minutes using a drag-and-drop GUI. This way, IT departments can free up their most skilled resources for complex projects while leveraging other resources for the tactical, point-to-point, integration problems.
- Simplest Operations and Management:** The Cast Iron Solution can be monitored and managed remotely from a Web interface which facilitates maintenance, management and repair from a centralized location. Both provide proactive alert notifications on data and connectivity errors that help IT fix the problems before business users report them. With the Cloud, all management and repair is done by Cast Iron Systems, the service provider. With the Appliance, Cast Iron uses a simple, cost-effective, “repair by replacement” strategy – if a problem arises, you just swap out the appliance with another one provided by Cast Iron, with no loss in logic or data.
- Reusability Using Template Integration Processes (TIPs):** With thousands of successful customer integrations, Cast Iron leverages a wealth of integration experience to provide a comprehensive set of TIPs. Offered for the most common integration scenarios between a number of enterprise applications like salesforce.com, SAP, Oracle, etc., these TIPs eliminate the need to build your integrations from scratch. You can simply log in via your browser, select the template that best suits your requirements and enjoy proven, supported and certified processes. The TIPs can also be further customized to meet your specific needs using a simple configuration wizard.

- **High Availability Option:** The Cast Iron Integration Solution is also available with a High Availability (HA) option, for mission-critical on-premise integration projects that need 100% real-time availability. While traditional High Availability solutions require multiple specialist resources and weeks to assemble, code, test, deploy and maintain; the Cast Iron HA option can be installed in under one hour. The HA option ensures no data loss and requires no manual intervention upon failure – a quantum leap for all mission-critical data centers.
- **Low Monthly Subscription Pricing:** The growing popularity of Software as a Service (SaaS) applications is in no small part due to the subscription pricing models that eliminate large up-front payments. For these customers, having to pay up front for an application integration solution to connect their SaaS application with other corporate systems would decrease the flexibility gained by a monthly SaaS subscription plan. The Cast Iron Integration Solution addresses this customer need and is available with low monthly subscription fees, with both the Cloud and Appliance options.

The Cast Iron Approach Extends Current Integration Solutions

The Cast Iron Integration Solution complements existing integration solutions and improves overall enterprise integration because of its focus, simplicity and rapid implementation capability. Many Fortune 500 companies choose the Cast Iron Solution to augment their existing integration solutions. For example, one of the world's largest electronics manufacturers uses EAI solutions extensively for business process integration problems. Recognizing that the complexity of using EAI technology for simpler application integration projects is not cost effective, they have adopted two standards for integration: EAI for process integration and the Cast Iron Integration Solution for point-to-point application integration.

In such a context, EAI technologies can be viewed as freight trains that use railroad backbones to transport goods (heavyweight business processes) between large stations (endpoints such as ERP and financials). The Cast Iron Integration Solution can therefore be viewed as the trucks that transport the goods to and from the major freight train stations which then transport these to the end destinations. In other words, appropriate purpose-built solutions are applied to the appropriate tasks.

Summary

The Cast Iron Integration Solution dramatically simplifies application integration today. As a purpose-built solution designed exclusively for application integration, both the Cloud and Appliance eliminate complexity from an integration problem and enable companies to implement projects in days, rather than weeks or months. Companies achieve rapid integrations due to the simple installation (plug in the integration appliance or turn on the integration service) and the easy drag and drop configuration approach along with the preconfigured integration templates called TIPs. The "configuration, not coding" approach eliminates the need to use expert resources for application integration and allows companies to reallocate highly skilled resources to more strategic projects. With thousands of customer integrations across all industries and around the world, including Allianz, British American Tobacco (BAT), AmerisourceBergen, Emerson, Krueger International, Peet's Coffee & Tea, PGP, salesforce.com, Tesla Motors and more, companies are benefiting from the simplicity, speed, and flexibility of the Cast Iron Integration Solution for delivering application integration in days.

Contact Us

To learn more about the Cast Iron Integration Solution, please call us at 650.230.0705 or visit us online at www.castiron.com

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