

IBM WebSphere Cast Iron Cloud integration: an integration solution for midsize companies

A fast, simple and low-cost approach for midsize companies

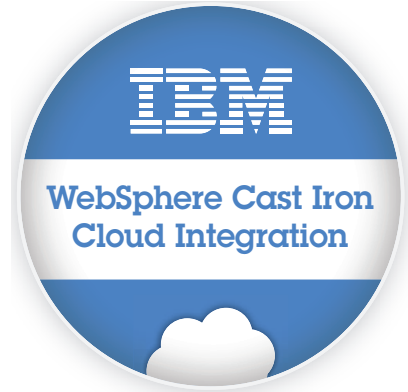


Executive summary

Technology leaders of midsize companies face a complex problem—how to integrate their key applications in a way that keeps risks low, costs down and schedules short. Midsize businesses don't have the IT resources they need, nor do they have the financial slack to invest in expensive and complicated software-based integration tools. Nevertheless they must integrate their core applications in order to gain the most value for their business.

Already \$1 out of every \$3 spent by companies on IT goes toward integration projects. Furthermore, Gartner Group predicts that, in the next few years, application integration projects will increase in both scope and number. This trend is especially challenging for midsize companies.

In this paper, we examine the application integration trends for midsize businesses—companies with less than \$3B in revenue. Technology leaders in these companies have a handful of integration approaches to choose from: wrestle with sophisticated enterprise application integration (EAI) tools, write custom code, or use the simple and rapid approach of pre-packaged integrations from IBM WebSphere® Cast Iron®. WebSphere Cast Iron Cloud integration includes the flexibility of three deployment options—a cloud solution, a virtual appliance, or an on-premise appliance.



These three integration approaches are analyzed so that managers can more knowledgeably select the best approach. You will see that WebSphere Cast Iron Cloud integration stands out as the best alternative for most of the integration projects—it simply costs less, is easy to use and minimizes risk as compared to the other approaches. IT managers can lower total cost of ownership (TCO) and typically save 40 - 80 percent in integration costs and integrate in days, rather than months.

Growing need for integration

In the past few years, enterprise software providers have turned their attention to midsize companies. Companies like SAP, Oracle, salesforce.com, NetSuite and Taleo have created solutions for midsize businesses and are currently seeing strong growth in the adoption of these systems. AMI-Partners, an industry research group, expects continued demand emerging from applications like enterprise resource planning (ERP) and customer relationship management (CRM) as midsize businesses aim to get the same operational and analytical benefits that larger companies have enjoyed. In addition to vertical solutions, hosted offerings such as on-demand and Software as a Service (SaaS) applications are gaining traction among midsize businesses as well.

The trend of hosted solutions for enterprise applications will likely help midsize businesses gain important abilities, however, there remains one huge problem—the benefits of these applications can only be realized when they are fully integrated with other business software. Two (or more) applications that solve a single business need must be able to share data and business rules seamlessly, in real time, with reliable performance, visibility and scalability. For example, a field sales representative who can see that the customer he's been spending time selling to has not paid his bills and is on "credit-hold" in the billing system, might want to reprioritize his activities accordingly. Or, manufacturing and materials management groups can gain early visibility of an impending, downstream surge in orders and use this information to adjust production schedules.

As a result, integration is a top priority for companies. A web survey conducted in 2009 by Saugatuck Technologies reveals a crucial need for rapid integration of SaaS solutions with existing data formats. It also shows that companies are only just beginning to consider the implications of a future hybrid environment, wherein multiple SaaS offerings and existing in-house applications must effectively coexist. Companies that integrate their applications protect their current investment by improving business agility and their business processes as most core processes flow across various functional areas. In an earlier baseline survey, application integration was number one on the list of top five projects ranked by average planned spending. In that survey, application integration was ranked ahead of business analytics, enterprise portals, CRM and intrusion detection and prevention.

The overwhelming majority of application integration needs of midsize businesses is straightforward: move data from one application or database to another according to set business rules. Some complex integration problems will always exist, and these problems will require the use of sophisticated and custom tools. However, most integration projects are relatively simple. Does it make sense then to build a car when you can buy one? Probably not. It's more likely that technical managers will want a technology that takes care of the vast number of straightforward integration projects in a quick, simple and cost-effective manner to free up resources for other strategic projects. A technology that completes integration in just days, not months. A technology that will quickly give businesses the full benefit of an integrated enterprise.

Doing application integration—three choices

There are three ways to integrate applications. First, through Enterprise Application Integration (EAI) tools. Second, through custom coding. The third way is through WebSphere Cast Iron Cloud integration, a proven approach that has already overcome the challenges and barriers of the first two approaches for mid-size businesses. Let's look at each.

EAI and ETL tools—like using a chainsaw to open a letter

EAI tools are designed to create elaborate frameworks for integrating dozens to hundreds of applications. Companies have found that they are good approaches to addressing complex business process initiatives such as business process management (BPM), business activity monitoring (BAM) and an enterprise backbone. Extract, transform and load (ETL) tools support massive volume transactions and very complex data manipulations like the ones found in big data warehousing solutions. Both of these approaches require heavy investments in the form of skilled programmers, long delivery times and high budgets.

Interestingly, most integration projects do not have the characteristics described above. According to Gartner application platform research, only 10 percent of all integration projects fall into this category. Most midsize businesses do not implement huge data warehouses, nor do they see the need to integrate the hundreds of stand-alone applications for which EAI was designed. Most midsize businesses need to integrate fewer than 10 applications. Using EAI tools for these kinds of integrations is

like using a chainsaw to open a letter—too much overhead and time required for the task, which prevents positive payback.

Custom coding—complicated when you need simple

The default practice for any company with an integration project among critical applications is to write the data transformation and workflow mapping code from scratch using Java-based languages, ABAP or some other scripting language. However, writing custom code creates at least five serious problems for IT managers.

1. **It monopolizes specialist skills.** By writing custom code for straightforward application integration projects, midsize businesses must commit their limited programmer resources and therefore delay other core business-related projects.
2. **Custom code is not reusable.** Integration code usually cannot be reused because variables and calls are idiosyncratic to the underlying project. Even for the smallest change in business requirements, custom coding turns out to be very expensive.
3. **Custom code does not provide visibility into integration transactions.** Custom coding tends to focus on data transformation and workflow mapping rather than on important integration monitoring and logging features. Without such monitoring and logging capabilities, managers cannot make informed business decisions about sporadic failures in orchestrations or data mismatches, nor do they get warnings of such integration failures.

4. Custom code is rarely scalable and flexible, it's "brittle".

Integration code that is written for a specific "one-off" purpose does not scale as business grows. A custom program is not typically designed for future changes and it will need to be recoded for those changes.

5. Custom code is expensive. Most midsize businesses do not have adequate testing and version control systems in place, which leads to expensive maintenance in the future. IDC, an IT industry researcher, found that "for every \$1 spent on integration software, companies spend \$5.30 - \$7.20 on people".

Thus for most midsize businesses, custom coding creates problems that are difficult to manage and have many hidden costs.

WebSphere Cast Iron Cloud integration—a simple, reliable approach for integration

WebSphere Cast Iron Cloud integration simplifies application integration through pre-built integration templates that connect applications in just days, not weeks or months.

For example, it provides bidirectional, real-time integration between salesforce.com and Oracle ERP, regardless of where these applications are hosted.

"WebSphere Cast Iron Cloud integration lets us harness both cloud and network applications very quickly and provide dynamic interaction with accurate, real-time data. We thought about in-house coding, but development and revisions would take far too long. WebSphere Cast Iron lets us pick and choose which applications and data sources we want to integrate in a very granular way according to our business rules and objectives. The speed and flexibility of WebSphere Cast Iron Cloud integration gives us a tremendous creative advantage."

—Reed Sheard, Vice President and CIO, Westmont College

The business value of WebSphere Cast Iron Cloud integration

Technical managers who use WebSphere Cast Iron Cloud integration for their integration projects see four major business benefits when compared to custom coding or EAI tools.

1. **Fast delivery:** Template Integration Processes (TIPs) deliver integrations in just days, not months as with custom coding and EAI approaches. A typical midsize business integration project takes less than 30 days. One SAP to salesforce.com project using an appliance approach took just 15 days while an Oracle ERP to NetSuite project took just 14 days.
2. **Low total cost of ownership (TCO):** Both cloud and appliance choices are impressively cost effective. Vendors offer subscription rates, which—combined with short and simple implementation cycles—lead to TCO savings of up to 80 percent over custom coding and EAI approaches. In a sample of 10 integration projects using the appliance approach, customers saved between 40 percent and 80 percent in TCO over custom coding. All three deployment options have the exact same features and functionality thereby reducing transitional training time.
3. **No programming skills:** With WebSphere Cast Iron's *Configuration, No Coding* approach to integration, midsize businesses don't need any skilled programmers to integrate their applications. Companies can then direct their scarce programmers to other projects that focus on their core business.

4. **Simpler operations:** WebSphere Cast Iron Cloud integration comes with complete on-line diagnostics and monitoring, enabling remote management from a web interface. If a problem does occur with an on-premise appliance, customers can simply swap the appliance with another one—without losing any data, configurations, or availability.

Midsize businesses have applications that operate in silos with numerous requirements to connect them to make better business decisions. Having a reliable, simple and proven solution, such as WebSphere Cast Iron Cloud integration, that can solve most of a midsize business's integration needs is the right answer for highest returns on investment.

Why WebSphere Cast Iron Cloud integration?

WebSphere Cast Iron Cloud integration is a simple, fast, low-cost and proven approach to integration problems. Simplicity means different things to different people. For technical managers, it should mean a solution with fewer “moving parts”, fewer potential problems and risks, and less dependency on scarce skilled staff. WebSphere Cast Iron provides this kind of simplicity.

One source	With the cloud deployment choice, the provider operates and maintains all the integration operations on their systems. The appliance deployment choice comes in two flavors. First, the appliance comes as a completely self-contained box with all the hardware, connection ports, operating system software, dedicated integration authoring and integration management applications included. Second, the appliance comes as a virtual operating system that is loaded onto a company's existing hardware.
No coding	Visual, intuitive tools are used to map data among pre-loaded database files and fields, and to create the work flows and rules that are needed. Think of the TurboTax methodology with a guided wizard that takes you through a list of steps to complete your tax calculations, and you'll get a sense of how WebSphere Cast Iron configures your integration.
No recoding	When business requirements change, and you add data elements or modify business rules, you should be able to make a few configuration changes using WebSphere Cast Iron's visual tools and get the system back into production quickly.
One console	Support for monitoring, predicting and troubleshooting integration issues from anywhere, anytime is critical to businesses. The user interface should provide all the information needed to ensure smooth operations and proper real-time integration.

Flexible deployment options

WebSphere Cast Iron Cloud integration provides various deployment options: WebSphere Cast Iron Live Integration as a Service (IaaS), and a physical or virtual appliance. Let's look at each of these in detail.

Integration as a Service follows the same model as SaaS solutions like salesforce.com or NetSuite, which host a company's business applications remotely. They look and operate exactly as if they were running on the company's own infrastructure. IaaS

does the same thing, except that instead of business applications that run over a network, application integration operations run over a network. Using WebSphere Cast Iron Live, customers can integrate:

- SaaS applications with other SaaS applications
- SaaS applications with on-premises applications
- On-premise applications with other on-premise applications

Companies enjoy the same benefits with IaaS as with SaaS—subscription pricing, no upfront costs, no pressures to maintain their own integration IT infrastructure and no investment in IT personnel to develop interfaces.

The WebSphere Cast Iron Physical Appliance performs specific functions, with all of the required programming installed on a stand-alone, self-contained hardware platform. The WebSphere Cast Iron physical appliance successfully performs common functions such as encryption, logging and performance management, security, etc.

The WebSphere Cast Iron Virtual Appliance uses virtualization to run the WebSphere Cast Iron Cloud integration operating system and business logic on a company’s own servers, rather than in the Cloud or on a physical appliance.

Here is how it works

To many technical managers, this may all seem like magic, and you might be more than a little suspicious. Let’s look inside to see the reality.

A good application integration approach, whether it is in the Cloud or on an appliance, should be wholly contained and dedicated to one function: integrating two or more business applications. It should be designed with best practices from a variety of vendors, including software, hardware, and network and data management. Good integration design can only come from a developer’s intimate understanding of the nuances of application connectivity, transformation, workflow and integration management. WebSphere Cast Iron has built that knowledge into our solutions to simplify and speed up integration projects.

The WebSphere Cast Iron Cloud integration solution has four simple steps to integrate applications.



Figure 1: A best-in-class integration solution must provide four simple steps for integration and must come certified by the original software provider

Connectivity: The first step is to connect applications, databases, files, web services and XML schema. WebSphere Cast Iron Cloud integration provides reliable, “out-of-the-box” connectivity among most of the commercial software available in the marketplace.

Transformation: The second step is to map the data model of the source application with that of the target application. To make this work, WebSphere Cast Iron Cloud integration comes preloaded with both applications’ data objects and interfaces. Using a “no coding” methodology, WebSphere Cast Iron transforms data using a graphical interface with drag-and-drop operations.

Workflow: The third step is to create workflows that will govern the integration process and define business rules—without involving programming or programmers. Again, using a graphical interface, WebSphere Cast Iron Cloud integration can build these workflows quickly and easily.

Management: Finally, IT managers need to monitor all real-time integration activity, handle exceptions and provide proactive support for forecasted problems. WebSphere Cast Iron Cloud integration provides a web management console that enables managers to monitor integration operations remotely from anywhere.

All of these steps are built into WebSphere Cast Iron and come preloaded and ready to use with no additional investment in hardware, software, or staff. In addition, each configuration of WebSphere Cast Iron Cloud integration is dedicated to a particular provider’s software and is certified by that provider, to ensure high integration reliability and quality.

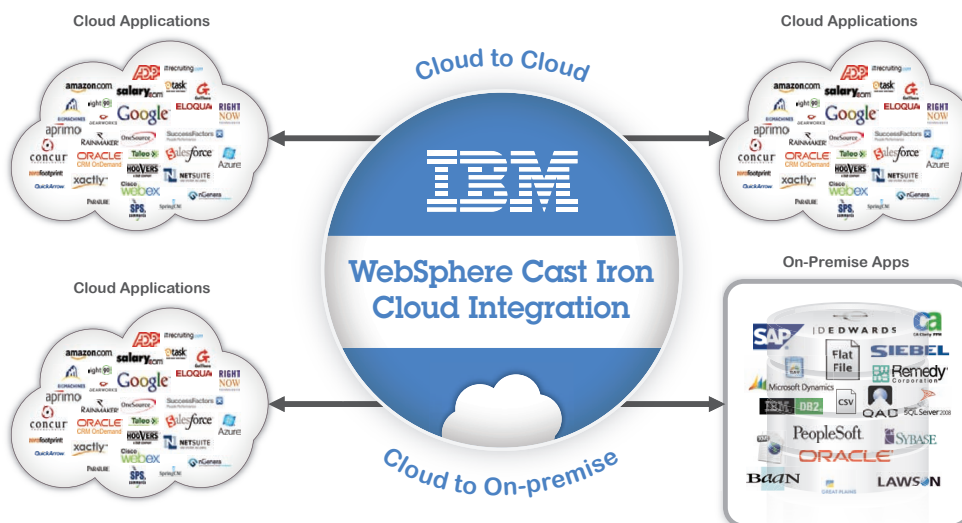


Figure 2: Application interfaces come preconfigured and installed, either through the Cloud or through an on-premise integration appliance.

Case study: Leading provider of electronic technologies

Order to shipment in 15 days

A fast-growing multi-million dollar leading provider of advanced electronic technologies for healthcare and homeland security had a manual data entry process which was both error-prone and labor-intensive. This translated to growing operational costs and inefficiency in one of the company's key business processes: order to shipment for their global inventory, which at times took up to 15 days to complete. The company lacked effective integration between their ERP system (MS Dynamics NAV), which managed all their financial, distribution/manufacturing transactions and their expense management system (Concur), which controlled all their expense reporting and reimbursements. The long processing times, due to manual and error-prone double data-entry, also consisted of data review and reconciliation, leading to delays in financial close, intercompany reconciliation and production planning.

The company considered a number of solutions, including Tibco BusinessWorks, Oracle Weblogics, and a custom-coded solution for integrating its systems. These approaches were found to be too expensive (high TCO due to initial purchase price and maintenance costs) and not scalable or flexible enough for future projects. The company finally chose the WebSphere Cast Iron appliance-based approach, which enabled real-time, bi-directional data updates across their ERP customer master data and expense applications. This "no coding" approach to integration took just 15 days to roll-out, including training. The architecture and small overall IT footprint were flexible and scalable enough to use as a template for over 32 other integration projects. The benefits of WebSphere Cast Iron were immediate: transactions were recorded in minutes rather than weeks allowing for a rapid order to shipment process. Inter-company ledgers and accounts were updated instantly, and errors in data entry were reduced by 90 percent. All of this equated to a cost-savings of \$88K in the first year.

Case study: Global leader in near-patient diagnostics

360 degree customer view 10 days

A global leader, in near-patient diagnostics and health management services with international sales, manufacturing and distribution facilities was seeking to integrate their CRM system (salesforce.com) with their primary system of record, SAP. However, having acquired multiple companies, there were also a number of other legacy systems in their enterprise which required separate interfaces and resulted in islands of information. The IT resources needed to update and maintain all these systems, as well as the loss in user productivity associated with searching for data across multiple applications, presented significant challenges and costs for the company. The company needed immediate integration between their new salesforce.com application and their existing SAP system so that they could achieve a 360 degree view of the customer from a single interface. They also needed a solution that would provide a backbone for eventually integrating the remaining systems within their enterprise.

Although the company had an existing application it was using for integration, the reality was that it was simply too costly to maintain, and didn't scale to meet their reuse needs for future projects. They evaluated the benefits of using custom code or going with other EAI vendors, such as Tibco and Pervasive, but found in all cases the proposed solutions were too cumbersome, costly and complex to meet their needs. The company's technology leadership chose the WebSphere Cast Iron Integration Appliance to integrate their CRM and ERP systems because of the easy, user-friendly "configuration, no coding" approach to integration. The first salesforce.com to SAP project was rolled-out in just 10 days, which allowed the company to realize an immediate \$100K/year cost savings in SAP licenses. Further cost reductions included a \$95K/year improvement in productivity, \$20K/year in implementation service fees and \$10K/year in maintenance costs—a savings of over \$225K in the first year alone.

Conclusion

Technical leaders in midsize businesses have to make their key applications work together. To get the most value out of their current IT investments, they must integrate their critical applications and exchange data seamlessly between those applications. Common integration approaches such as EAI or custom code cater to the needs of complex integrations in large companies with extensive time and resource commitments. Moreover, they are too costly, too risky and too slow for midsize businesses. Midsize businesses need a simple, fast and low-cost approach for their integration projects as well as the flexibility of deploying those integrations in the Cloud or on premise. With thousands of customer integrations, WebSphere Cast Iron Cloud integration has a proven track record and is an excellent choice for most midsize businesses looking for a real-time, bidirectional integration solution.

For more information

To learn more about WebSphere Cast Iron Cloud integration please call us at 408-956-3380 or visit us online ibm.com/software/integration/cast-iron-cloud-integration

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