

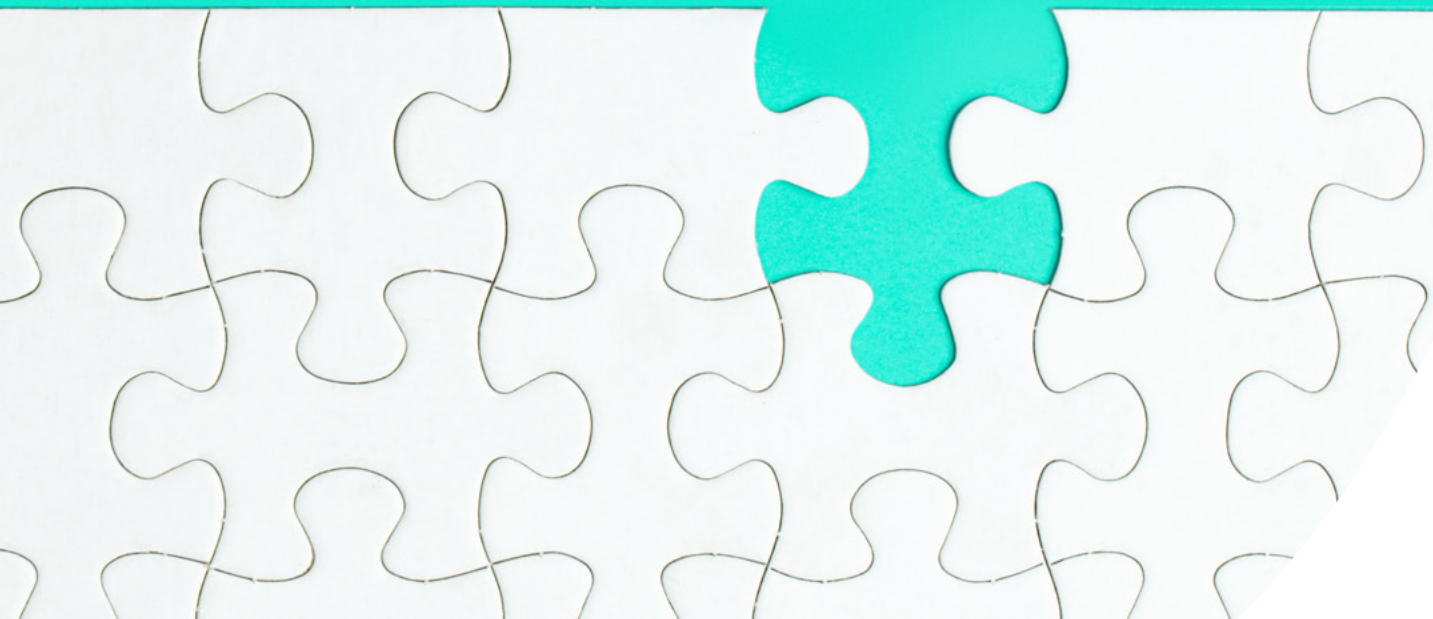


CITO RESEARCH



Putting It Back Together: Solving the SaaS Integration Problem

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Introduction

The number of Software as a Service (SaaS) applications in the enterprise has exploded. Modern applications—especially SaaS solutions—tend to be singularly focused. Adoption of SaaS is often ad-hoc, per department rather than organization-wide. For the most part, companies have moved away from software suites that encapsulate multiple business functions or capabilities, instead deploying a myriad of separate applications (with a singular focus) that may or may not talk to each other.

Because business processes require functionality and data from multiple systems, companies need a means of interconnecting various applications and managing the flow of work in a disciplined way. What's more, these integration capabilities must be available to a range of skillsets within the enterprise, from the business analyst to the code-savvy developer or systems integrator.

This CITO Research white paper describes the integration challenges organizations are facing and explores how integration Platform as a Service (iPaaS) can help.

The Integration Challenge

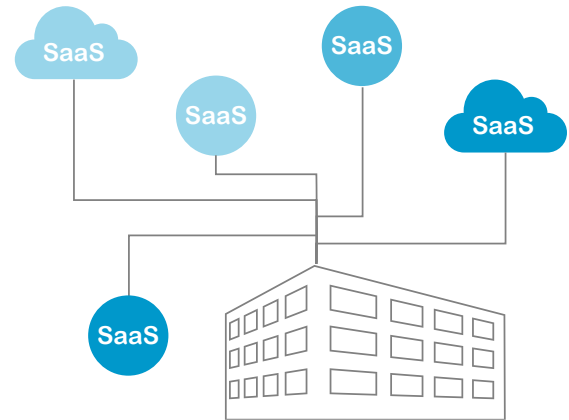
While legacy applications, like Enterprise Resource Planning (ERP), tried to solve everything, today's applications tend to address a single task or area. As a result, processes are no longer defined within applications. Ideally, when a Salesforce opportunity is moved to a certain state of readiness, it is automatically assigned to the next person in the process. However, not every function is inside Salesforce. The next person may use general-purpose tools such as Box, Office365, or Google Docs or a specialized application for creating proposals. That person needs to be notified, and that system needs to have data transferred to it. Perhaps even more importantly, management needs visibility and transparency about where any given workflow or customer initiative is at this moment so that decisions can be based on the latest information.

Users often attempt to “knit” various applications together using spreadsheets, email, and communication platforms like Slack. These tools are useful to some extent. While they can facilitate awareness, they are not ideal for tracking and managing the movement of data in a disciplined and systematic way. Businesses need a platform that integrates applications and their data, regardless of whether applications are in the cloud or on-premises. This solution has emerged as integration Platform as a Service (iPaaS). iPaaS addresses the task of knitting together applications and is the place where process lives and where, importantly, decision makers can find out how work is progressing.



Easing the Work of Integration

With the challenge of how to achieve integration addressed, enterprises face a new challenge: Who will do the work of connecting all those SaaS applications? Who will update and manage those connections? Users and technology are changing – even as the barrier to technology has been lowered, the technical competence or understanding of business users has increased.



For an example of this shift, we need look no further than the evolution of databases. Over the past ten years the industry has moved from one standard relational database management system (RDBMS) to a world of many different databases. In addition to relational databases, it's not unusual for organizations to use graph, NoSQL, columnar, or in-memory databases. This variety is reflective of the growing number of use cases – each database addresses a different need. Because of simplified programming and querying with newer database technologies, business users and other professionals such as investigative journalists are gaining skills to leverage these databases.

The same phenomenon has taken place with integration technology. In the past, integration technology was built for heavy-duty purposes and was intended to be used by highly technical people. Today, we have a proliferation of integration technologies just like we have a proliferation of database technologies. But an iPaaS solution that can only be controlled by highly technical users is unmaintainable. By definition, an iPaaS solution must be easier to use — but that doesn't mean that enterprises have to compromise on functionality or be limited to uncomplicated projects. An iPaaS solution should support a hierarchy of users — from dedicated integration specialists to application developers within departments or lines of business. Application developers can easily integrate applications with a drag-and-drop graphical design experience, reducing time to results and simplifying ongoing maintenance of systems.

A platform like iPaaS that can enable a range of users to carry out their tasks gives enterprises the ability to do significant, difficult integrations more efficiently and with less maintenance. Because iPaaS is hosted in the cloud, users don't have to worry about the infrastructure or integration platform. They use the tool just as they do any other SaaS offering. For example, with Salesforce, users simply log in to perform their tasks. They don't care about where or how it's running. An iPaaS solution is similar. Users log in to the solution, create connections between systems that share data, and let the iPaaS solution manage that created connection.



The Ideal iPaaS Platform

TIBCO Software Inc. is a global leader in integration, API management, and analytics. TIBCO's mission is to help companies achieve a competitive advantage by interconnecting everything — systems, data, people, and processes — to gain efficiency, and augmenting intelligence to help companies make decisions faster. TIBCO offers a range of capabilities designed to address the full spectrum of integration use cases. One of those is TIBCO Cloud Integration.



TIBCO Cloud Integration is the culmination of more than 20 years of integration experience. An iPaaS solution, TIBCO Cloud Integration was built in the cloud for the cloud. Using a contract-first approach to integration, users can integrate systems and applications, regardless of where they reside, visually and without a single line of code. It also provides project portability, enabling organizations to reuse functionality built on-premises for cloud-first projects.

How TIBCO Cloud Integration Works

TIBCO Cloud Integration enables users to connect applications easily and efficiently. Users visually define integrations between applications using a drag-and-drop interface. TIBCO Cloud Integration can connect to any cloud application or data source, including SaaS applications, social media sites, IoT networks or any data stored in the cloud, using packaged connectors or APIs. With packaged connectors, users simply tell TIBCO where the solution exists (the URL) and how to connect to it (the user's login ID).

TIBCO Cloud Integration enables users to connect applications easily and efficiently

APIs are no longer the domain of low-level development but a prevalent means of connecting applications. TIBCO Cloud Integration not only allows for connections created by APIs, but also allows users to define APIs to extend the reach of applications and services. Furthermore, TIBCO Cloud Integration can connect on-premises applications, creating a virtual private network (VPN) between the cloud and on-premises software.



Benefits of TIBCO Cloud Integration

TIBCO Cloud Integration delivers a number of benefits that simplify interconnecting cloud-based software.

Prebuilt connectors.

Users can easily and efficiently address business needs using an ever-increasing number of out-of-the-box pre-built connections to the most popular SaaS applications including Salesforce, NetSuite, WorkDay and ServiceNow, as well as a vibrant community of user-built plug-ins that exist on [TIBCO's GitHub space](#). This, in turn, improves the speed to delivery and speed of innovation for a faster time to market.

Contract first.

Users can easily define RESTful APIs using a guided graphical designer. This approach provides visibility into how the integration will behave and reduces development time by eliminating dependencies.

Project portability.

Project portability (that is, the ability to leverage integrations built on-premises for cloud-first projects) further improves efficiencies while giving organizations the flexibility they need to address changing and growing needs. Organizations can leverage their technology investment in projects created with TIBCO BusinessWorks in TIBCO Cloud Integration — or vice versa. There's no need to rebuild functionality that already exists, and a consistent, streamlined user experience increases productivity. Users can also start with TIBCO Cloud Integration to experiment and create innovative services or APIs and, if needed, move these services to BusinessWorks or BusinessWorks Container Edition.

All the benefits of the cloud.

Because TIBCO Cloud Integration runs in the cloud, it offers a number of cloud-related benefits. There is no hardware to manage, and TIBCO Cloud Integration can scale to meet capacity and performance needs. It also facilitates increased productivity, as it is easy to access, create, and deploy without the infrastructure hurdles of being on-premises. Finally, TIBCO Cloud Integration enables organizations to have better visibility into business activity because data is shared among applications.



Conclusion

As organizations expand their reliance on SaaS applications, it becomes increasingly important to be able to interconnect those applications. Users must be empowered to quickly integrate applications so that real-time data is available across the entire application ecosystem. TIBCO Cloud Integration empowers users to connect their applications without writing code or increasing risk. At CITO Research, we believe that TIBCO Cloud Integration enables organizations to standardize on their integration strategy while having the flexibility to grow and adapt to changing business needs.

To learn more about TIBCO Cloud Integration and experience the full spectrum of integration that TIBCO delivers, visit cloud.tibco.com.

Start your free 30-day trial of TIBCO Cloud Integration at <http://cloud.tibco.com/free-trial>

This paper was written by Dan Woods and sponsored by TIBCO

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I do research to understand and explain how technology makes people more effective in achieving their goals. My strong belief is that we are at the threshold of a golden age of IT, in which the promise of gaining value from technology will be fulfilled. I have written or coauthored more than 20 books about business and technology, including *APIs: A Strategy Guide*. I write about data science, cloud computing, and IT management in articles, books, and on CITO Research, as well as in my column on Forbes.com.