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#### **Executive Summary**

Enterprises are increasingly turning to software and services to deliver business value, ranging from increasing revenue to dramatically improving internal efficiencies. To achieve these business outcomes, many organizations are building integrations across cloud and software-as-a-service (SaaS) platforms. These integrations allow for the delivery of functionality, including user transactions, personalized offers, data stream processing, and verification systems.

In a worldwide survey, IDC found that eliminating data silos, improving customer experience, and improving internal processes were the most important outcomes achieved via the integrations between cloud and SaaS.

However, building and maintaining those integrations isn't ideal, as our study found:

- Of all survey respondents, 92% said it takes three months or more to build and deploy
  a single integration between cloud and SaaS providers (56% said it takes six months
  or longer).
- Fifty-two percent said it's a significant or very significant effort to maintain integrations that were manually/custom built internally.
- Half (50%) said they spend significant or very significant effort to maintain integrations using third-party integration tools.
- Only 22% are happy with manual/systems integrator-built integrations.

There's a bright spot, however. When respondents were asked how they intend to overcome these challenges related to integrations between cloud and SaaS platforms, their top answer was to ask cloud and SaaS vendors to offer native integrations. That suggests that native integrations are the preferred approach.

Topping the wish list of native integrations is data integration and/or data synchronization, cited by 58% of the respondents to our survey. Data virtualization was cited second in terms of the out-of-the box functionality respondents want from their cloud suppliers, reinforcing the finding that enterprises are prioritizing data-oriented functionalities.

Organizations that recognize the power of native integrations will gain advantage over the competition. In fact, when IDC asked respondents about their expectations if a desired integration were made easier, the top response was to get better value from data, followed closely by the ability to deliver more innovative capabilities. Native integrations allow for faster development of important capabilities and reduce ongoing maintenance overhead, which in turn frees up scarce engineering talent for the kinds of complex, innovative software development that enterprises need for differentiation.



### Introduction and Methodology



For organizations to deliver on digital innovation roadmaps, there is a strong need to integrate cloud platform-as-a-service (PaaS) and SaaS technologies. This IDC white paper explores what organizations aspire to do with cloud and SaaS technologies and what limits their ability to achieve those goals, specifically surrounding the challenges of internally building and maintaining integrations.

The paper explores what benefits can be expected when public cloud services and SaaS solutions offer native integrations, thereby freeing up enterprise resources from creating and building the integrations themselves. This paper also serves as a benchmark for business and IT leaders to gauge their readiness to build on their cloud and data strategies, offering insights useful for assessing these newly connected Salesforce and Amazon Web Services (AWS) capabilities.

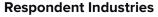
IDC conducted a survey of more than 1,200 respondents in North America, Europe, and Asia/Pacific who are using both public cloud services (e.g., AWS, Google Cloud, and Microsoft Azure) and SaaS solutions (e.g., Salesforce, SAP, and Zoho). Of those respondents using both AWS and Salesforce (66% of the overall respondents), at least half also had integrations between the two. IDC also interviewed joint AWS/Salesforce customers who were piloting new native integration offerings from AWS and Salesforce to gain an in-depth understanding of the prior integration challenges the organizations faced and the key outcomes from using the new natively integrated offerings (see the "Solution Description"

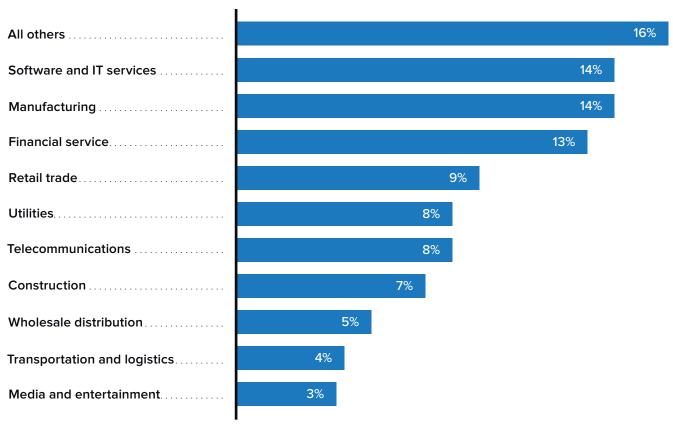


section for further details). **Figure 1** details the industry and regional insights of the survey respondents; additional demographics are included in the Appendix.

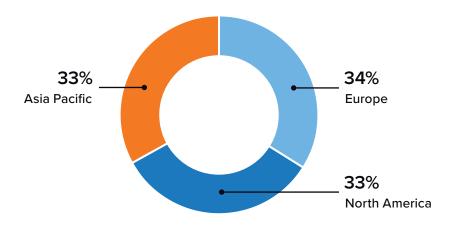
FIGURE 1 Survey Respondents' Industry and Region

(% of respondents)





#### **Respondent Region**



 $n=1264; Base: All \ Respondents; Source: IDC's \ \textit{AWS and Sales force Integrations Survey}, November \ 2022$ 



# Situation Overview

IDC research indicates that half of organizations are transforming into digital businesses, where value creation is based and dependent on the use of digital technologies. Cloud services and applications are predominant enablers of digital technology in the enterprise, with the number and variety of cloud systems in use in the enterprise continuing to grow.

However, as the number of cloud services in the enterprise multiplies, organizations are increasingly faced with demands to integrate across services. Doing so enables important business outcomes, with better value from data, improved efficiency, and customer experience topping the list (see **Figure 2**, next page).

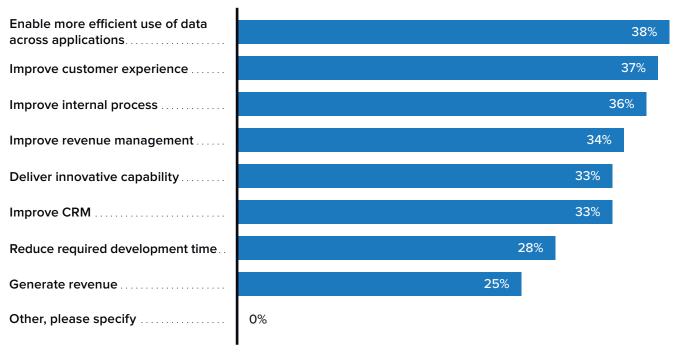
When we asked survey respondents about the most important outcomes they have achieved via integrations between cloud and SaaS, enabling more efficient use of data across applications was the top response, at 38%.

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#### FIGURE 2 Important Outcomes of Cloud and Saas Integrations

Thinking of the integrations your organization has built between cloud and SaaS, what are the most important outcomes your organization has achieved?

(% of respondents)



n = 1264; Base: All Respondents; Source: IDC's AWS and Salesforce Integrations Survey, November 2022

Many organizations are awash in data but find that their data lives in silos, making some of it inaccessible for delivering important capabilities and insights or requiring notable overhead in the form of skilled work and funding to build connections across those silos. Integrations across cloud services solve some of these problems while enabling powerful customer experiences. For example, a sales workflow could stitch together an organization's inventory system, payment processing, product catalog, and customer relationship management (CRM) service, with each system containing valuable data that when used together enables important features for customers.

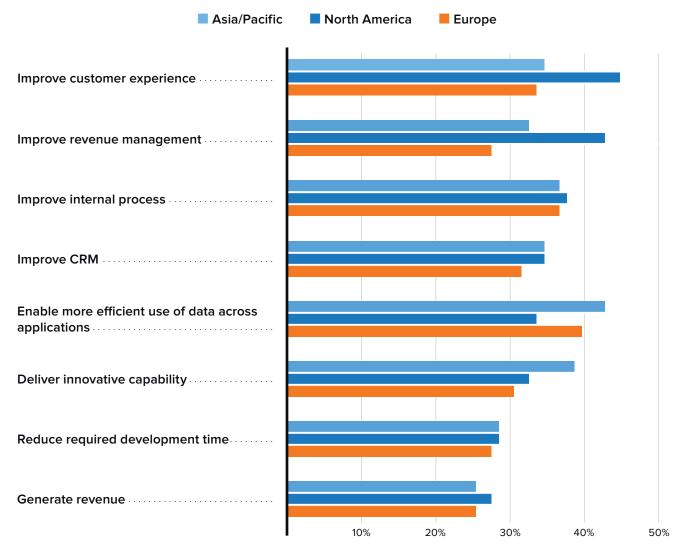
That type of workflow actually supports the top three outcomes cited by respondents to our survey (see **Figure 3**, next page). In addition to enabling efficient use of data across apps, integration also improves customer experiences (37%) and internal processes (36%). The customer is better served via a fast and accurate buying experience, and manual internal processes are replaced by automation, reducing the time required to make a sale and allowing employees to spend time on more important activities.



FIGURE 3
Regional Perspective on Important Outcomes of Cloud/Saas Integrations

Thinking of the integrations your organization has built between cloud and SaaS, what are the most important outcomes your organization has achieved?

(% of respondents)



 $n = 1264; Base: All \ Respondents; Source: IDC's \ \textit{AWS and Sales force Integrations Survey}, November \ 2022$ 

Some nuance emerged in terms of top outcomes achieved via integrations between SaaS and cloud services depending on the location of the respondent. In North America, improved customer experience was the most important outcome, followed by improved revenue management. Respondents in Asia/Pacific and Europe, however, chose the ability to enable more efficient use of data across applications as the top outcome. The ability to deliver innovative capability was a notably more important outcome in Asia/Pacific (38%) compared with North America (32%) and Europe (30%), indicating that Asia/Pacific organizations are focused on delivering digital innovation.

The kinds of apps and capabilities enterprises are building that are enabled by cloud integrations essentially runs the gamut. Enterprises are using integrations for mobile apps, ecommerce sites, customer service, and employee onboarding apps. Popular features supported by integrations include personalized offers, inventory tracking, process data streams, real-time transactions, approval/case routing, and verification systems.

Enterprises are indeed building a significant number of integrations across cloud and SaaS systems, with nearly half (47%) of our survey respondents completing 11–20 integration projects in the past five years. At the high and low ends, regional differences stood out. For instance, respondents in North America were half as likely to say they had built fewer than five integrations (2%, compared with 5% of respondents in Europe and Asia/Pacific). Respondents in Europe were more likely to say they had built the greatest number of integrations (21+), at 15%, compared with 11% of respondents in North America and Asia/Pacific.



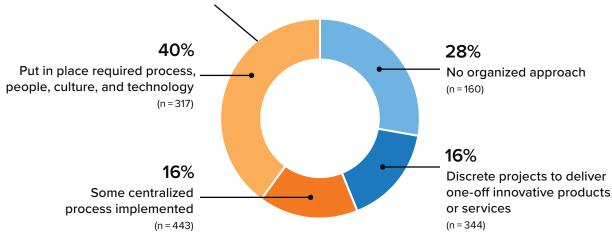
## Mature Organizations Choose Native Integrations to Support Innovation

Mature organizations are defined as those that put in place the people, process, technology, and culture to deliver intentional, continuous digital innovation. As such, they are best positioned to choose the right technologies for the right job. These mature organizations are more likely to have built more integrations across cloud services in the past five years. Forty percent of companies that have put in place the people, process, technology, and culture required to enable the ongoing development of innovative digital products and services have built 21+ integration projects over the past five years. That compares with 28% of organizations with no digital innovation programs in place, 16% of organizations with discrete digital innovation projects, and 16% with some centralized processes supporting digital innovation (see **Figure 4**, next page).

FIGURE 4
Mature Innovators Use More Integrations

Which of the following best characterizes your organization's approach to digital innovation? (% of respondents)

#### Mature organizations use, on average, 21+ integrations



 $n=1264; Base: All \ Respondents; Source: IDC's \ \textit{AWS and Sales force Integrations Survey}, November \ 2022$ 

Mature innovators are aware of the technologies available and tend to choose the right tool for the right job. Our study found that when it comes to building integrations, the mature innovators are more likely to reach for integration tools and native-built integrations than manually built approaches. They also likely recognize that integrations are enablers in that they allow for the efficient development of features and capabilities that make up innovative digital deliverables. The more mature innovators appear better able to build and reap the benefits of integrations: They have done the work required to bring on board the right technical skills, processes, and technologies that enable them to overcome the challenges associated with building the integrations.



Our study found that when it comes to building integrations, the mature innovators are more likely to reach for integration tools and native-built integrations than manually built approaches.

#### CASE STUDY: GLOBAL MEDIA AND ENTERTAINMENT COMPANY

A multinational media and entertainment company distributes its content to many platforms, meeting its viewers where they are in today's media world. The technical considerations for how that is achieved are numerous. The company takes advantage of cloud platform services, including AWS and Salesforce, to meet these challenges and innovate to deliver superior customer service.

#### The Challenge

Deep integration between Salesforce and AWS is critical to how the media company runs its content delivery business. The company has created proprietary applications to manage the workflows and exchange of information with its partners. Its developers make use of a variety of platform services from Salesforce and AWS. For example, all customer information and requirements for any given platform partner are captured in Salesforce. That profile information is used in the apps the company developed on AWS to fulfill the delivery of media assets. Making sure the most up-to-date and correct information is used in any given application — and there are many — is a key challenge.

#### The Solution

The media and entertainment company looked to move to an event-driven method to be sure information was updated in all relevant applications in real time at a reduced cost of custom development and the associated maintenance of those custom-built connections. "In some cases, the volume of data coming in is pretty high, making polling a less-than-optimal approach," said a senior software developer at the company. "Event-driven was key, as was the ability to ship out the same info to multiple services. This is why Amazon EventBridge as a native capability was a big win for us."

Amazon EventBridge is a serverless event bus service that helps customers connect their own applications running on AWS to external SaaS providers, such as Salesforce. By decoupling applications from custom connections, the company was instead able to use the capabilities of Amazon EventBridge to deliver events to selected target applications and AWS services. Furthermore, Amazon EventBridge provided the native capability to fan out the information to multiple applications.



Event-driven was key, as was the ability to ship out the same info to multiple services. This is why Amazon EventBridge as a native capability was a big win for us."

Senior Software Developer Global Media and Entertainment Company



#### The Benefits

The media company has checked the boxes of security and reliability with Salesforce Event Relay. The use of the native capability to connect Amazon EventBridge with Salesforce has allowed the company to reduce the need for custom development. This is a significant source of cost savings for the company because it no longer has to commit highly skilled development resources to build and maintain custom connections. In addition, the company can eliminate a unique and direct connection from Salesforce to each application, where each connection costs in the five figures.

"Furthermore, we aren't responsible any longer for the SLAs [service-level agreements] of those custom connections," the software developer noted. "AWS takes care of that. Being highly available is a key consideration for us to be production-ready." The media company's commitment to digital innovation and modern development, including the use of native capabilities from AWS and Salesforce, is paying dividends, with the technology team able to move faster on building capabilities that differentiate the company and deliver seamless customer experiences.

## Challenges with Integrating Cloud and SaaS

Integrating cloud and SaaS is a means to an end, where that end is achieving business value. However, as a means, the need to integrate presents numerous challenges. Whether organizations make use of third-party integration tools, APIs, or custom code to achieve integrations, and whether the process is done and maintained with internal resources or via a systems integrator, three challenges in particular were revealed by the survey:



1. Lengthy time to build and deploy



2. Significant effort to maintain



3. Scalability and security challenges



92% said it takes three months or more to build and deploy a single integration between cloud and SaaS providers.

#### 1. Lengthy Time to Build and Deploy

IDC asked organizations how long on average it takes to build and deploy a single integration between cloud and SaaS providers. A resounding 92% said it takes three months or more. The significance of this is felt in reverberation, any time a new integration is needed. When it comes to getting buy-in from the relevant internal teams to then building, testing, and moving the integration to production, the time frame is at least three months. Only then can the organization start making use of the functionality.

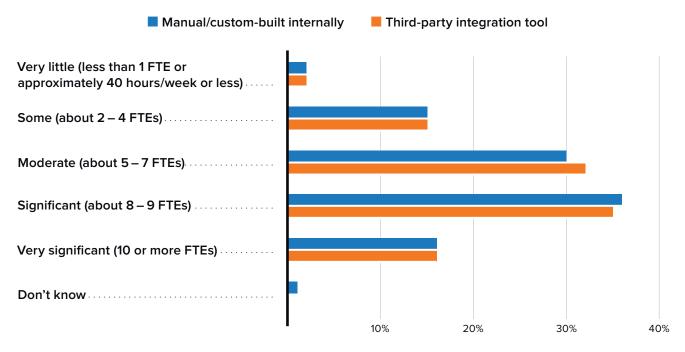


#### 2. Significant Effort to Maintain

Once an organization creates a new integration and has it running in production, it must be monitored for uptime, availability, and reliability. To the extent that the data exchange is critical to the business, this need is all the more important. This maintenance, of course, requires resources. IDC asked organizations about the extent to which they need to budget for resources to maintain integration between their primary SaaS CRM application and their public cloud providers. As shown in Figure 5 (next page), more than half (52%) said it takes significant or very significant effort to maintain integrations that were built manually, and the pain is almost equally high for those integrations built with third-party integration tools (50.5% said it takes significant or very significant effort).

#### **Effort to Maintain Integrations**

How would you describe the effort it takes to maintain the integrations between your primary SaaS CRM application and your public cloud providers? Please think about the total equivalent number of full-time resources. (Manual/custom-built internally AND Third party integration tool) (% of respondents)



n = 481 Manual/custom-built internally, n = 671 third-party integration tool; Companies with more than 1000 employees, asked only if integration is built internally or use third-party tool; Source: IDC's AWS and Salesforce Integrations Survey, November 2022

Looking at it another way, IDC research shows that more than half of organizations with 1,000 or more employees need to dedicate eight or more employees on a full-time equivalent basis to the effort of maintaining integration between their primary SaaS CRM app and their public cloud providers. This means there is a real opportunity for ROI when reallocating those resources to projects that are more engaging for developers and more aligned with differentiating the company. "Time to market is key for us, and that means streamlining our workflows [and data exchanges] with our partners/customers," noted a principal solutions engineer at a global digital visual content provider. "Moving to an event-driven architecture helped us build and enable the automation to support our critical business activities."



#### 3. Scalability and Security Challenges

For an integration to do its job properly, it must be scalable and meet security requirements. These are some of the main challenges with integrating SaaS apps and other capabilities hosted in public cloud providers, with only 22% of organizations saying they are happy with their manual and system integrator-built integrations. This is not to say that scalability or security is a detriment of the cloud; these same challenges exist with datacenter-hosted applications and services.

Indeed, 35% of organizations said these manual and system integrator-built integrations represent a security risk. Another 30% said they aren't scaling well. Add to that the 40% who said "We waste too much time and money maintaining them" and the data clearly indicates the need to solve the challenges of integrations between SaaS and cloud providers.



#### CASE STUDY: GLOBAL DIGITAL VISUAL CONTENT PROVIDER

A global digital visual content provider serves some of the largest broadcasters in the world. Its offerings include a website that is self-branded by the broadcaster and custom content management services that allow end users to purchase rights to use historical broadcasts, movies, documentaries, or other video content owned by the broadcaster.

#### The Challenge

On the back end, the process the digital visual content provider uses to receive a request for a clip, approve it, and deliver the content has been a largely manual process that might take days. "There were a lot of emails being sent back and forth," said a principal solutions engineer at the content provider. To better serve customers, the company sought to speed up that process so that its end users didn't have to wait so long to purchase and receive the content.

#### The Solution

The digital content provider's system is built in Salesforce and manages the entire life cycle of the customer purchase, from the initial request from an end user for video all the way to receipt of the content, confirming completion of the order. "What we came up with was an event-driven integration where we can push all that data, all the information we were previously sending via email, and make it almost real time," the solutions engineer said. The team created the workflows by building custom platform events that are triggered by UI actions, such as a button-click on the website.

Leveraging Amazon Appflow & Amazon EventBridge, the native integration developed in collaboration between AWS and Salesforce, which allows the digital visual content provider to use Amazon AppFlow to securely send an event to its broadcast partner. The Salesforce-triggered event goes through a secure, private link that AWS builds on demand, and is delivered to Amazon EventBridge. From there, based on the event type, it may be routed to the broadcast partner's Amazon SQS queue, which ultimately triggers a job to generate the video output for the end user.

"The simplicity of being able to securely move that one packet from AWS in the U.S. West to the customer's SQS queue in AWS in the U.K. is zero effort on our part," the solutions engineer said. There is no integration required between the digital content provider and its broadcast customer; they are in essence using AWS as a "shared, secure conduit."



What we came up with was an event-driven integration where we can push all that data, all the information we were previously sending via email, and make it almost real time."

Solutions Engineer Global Digital Visual Content Provider



#### The Benefits

During the solution design phase of the project, the engineering team was required to participate in an internal review, in part because the video ordering system is a revenue-generating critical process. "One thing tech leadership picked up on right away was the overall time to develop and get to an end-to-end working solution with this AWS integration," the solutions engineer said. He spent only two hours to get a proof of concept (POC) for generating a custom event in Salesforce and dropping it in an Amazon SQS queue. That POC process eliminated the internal questions raised about whether the team would need to spend a lot of time learning about using a new system and supporting it. When the engineering team decided to build the new system, it took two weeks, including a full review from the security team.

With the system in place, the digital visual content provider is moving on to building other integrations between Salesforce and AWS.

As for the initial customer and partner feedback on the new enhancements, "they are thrilled" and recently renewed their contract, the solutions engineer said. He anticipates that broadcast customers may see orders grow now that end users know that delivery time is much quicker. Also, the broadcast partner now has a list of enhancements they are requesting to extend new functionality that is now possible because of the new integrations. For instance, in the new system, someone from the broadcaster still manually approves requests from end users. The broadcaster would like to develop a system that automates that step, and the digital visual content provider's engineer envisions the possibility of creating business rules based on the types of assets that might allow for that.



### Overcoming Integration Challenges

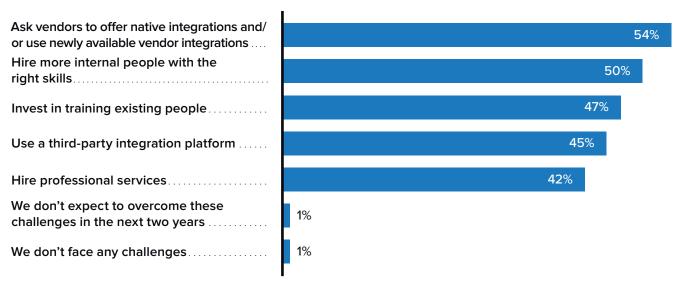
IDC asked organizations how they intend to overcome the challenges related to integrations between cloud/SaaS providers in the next two years. The results, shown in **Figure 6**, indicate a variety of ways organizations are working to overcome the challenges. However, the top answer is notable: "Ask vendors to offer native integration and/or use newly available vendor integrations." Organizations overwhelmingly recognize the benefits available to them when their SaaS and cloud vendors take on the burden of natively integrating their services.

#### FIGURE 6

#### Organizations Want Vendors to Provide More Native Integrations

How does your organization intend to overcome the challenges related to integrations between cloud/SaaS providers in the next two years?

(% of respondents)



n = 1264; Base: All Respondents; Source: IDC's AWS and Salesforce Integrations Survey, November 2022

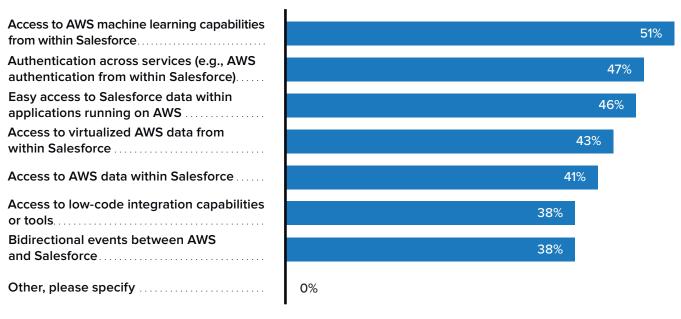


The out-of-the-box functionality that organizations want to simplify their integrations and workflows is varied. According to IDC research, at the top of the list is "data integration and/or data synchronization," at 58%. This is followed closely by 50% of respondents saying that data virtualization is a top request of their cloud and SaaS vendors. For more digitally mature organizations, these response rates jump to 68% and 62%, respectively, indicating the extent to which organizations that are investing more significantly in digital innovation to maintain market leadership recognize the importance of these areas of native offerings.

Figure 7 shows the desired joint capabilities specific to Salesforce and AWS customers as found in the IDC survey. The results again show a variety of areas of value, as expected given the wide range of fundamental value propositions, including access to low-code capabilities, access to data, authentication, and access to machine learning (ML) capabilities. Topping this list is "Access to AWS ML capabilities from within Salesforce," indicating organizational recognition of the value of digitally innovating with advanced ML capabilities.

#### FIGURE 7 Desired Joint Capabilities Between Salesforce and AWS

What joint capabilities between Salesforce and AWS would deliver value to your organization? (% of respondents)



n = 1264; Base: All Respondents; Source: IDC's AWS and Salesforce Integrations Survey, November 2022



#### **CASE STUDY: SLALOM**

With expertise spanning strategy and technology, including AWS, Salesforce and more, global consulting company Slalom helps its clients tackle innovation projects and build new capabilities. Slalom also uses cloud technologies to run its own business to ensure the company benefits from the same attention to innovation it delivers in its consulting engagements.

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In reality, all the technology you need to build this integration already exists and you could do it, but the Amazon EventBridge connector for Salesforce simplifies it and speed to market is significantly easier."

Architect Slalom

#### The Challenge

Making sure data is synchronized across SaaS solutions is critical to Slalom's sales and customer service organizations. For example, the sales team uses Salesforce for its sales processes, but once a customer deal is finalized and the contract closed, the data must be replicated across relevant systems. "We had a three person ETL team running a process to move data across the various products, syncing data every 24 hours," said a Slalom architect. "But as we grew, going from 5,000 to 13,000 employees and began to open more offices worldwide, the concept of syncing at midnight lost meaning. There is no midnight when running a global business 24/7."

#### The Solution

Slalom looked to an event driven architecture to solve its data synchronization problem. With the event driven architecture, when an event happens, the systems publish the data into an event bus, and any other system that needs it can grab it. To help make its implementation the most future proof, Slalom took a data virtualization paradigm and used the Amazon EventBridge connector. "In reality, all the technology you need to build this integration already existed, but the [Amazon] EventBridge connector for Salesforce simplifies it and speed to market is significantly easier," the architect said. "It would have taken us a couple of weeks to build that code, without the native integration."

Slalom is also using Salesforce Connect to virtualize data stored in AWS. "Before, we were always having to think about moving every piece of data to every system in order to do anything," he said. "By implementing the concept of data virtualization and Salesforce Connect, you don't have to host the data in every system where you need it. Instead, you can retrieve it in real time when you need to display it land it just looks and feels like it's native."



#### The Benefits

One key benefit Slalom found is the speed with which it could build the proof of concept. "Building the proof of concept is a matter of going to the AWS console, clicking a few buttons, and immediately being able to see things working," the architect said. "It doesn't mean you are done building in five minutes, but literally in five minutes we can see if the concept is going to work and it helps us decide quickly how to move forward."

Another important benefit is the ability to make sure developers spend less time on rote work and instead have the maximum time possible to innovate. "If you're asking the same person who thinks about architecture to also attend to uptime and availability, they are going to have less capacity to think about the cool things they could be building."

In fact, maintaining all the custom integrations that Slalom needs would essentially consume all of the technology team's time. "If we were hosting and maintaining all of this ourselves, my team would be on call all day," the architect said. "Now, we don't have to worry about it." By making use of Amazon EventBridge and Salesforce Connect, Slalom is eating its own dogfood in this regard, helping its developers and architects focus their time in order to deliver value back to their growing, global business.

#### CASE STUDY: CVENT



Salesforce is like the umbrella view of Cvent customers throughout our products."

Charlton Port
Architect
Cvent

At Cvent, a leading meetings, events, and hospitality technology company, Salesforce is an important component of the identity and access management system, used to closely track clients and the products they use, and to allocate tenancy. Cvent's robust platform offers a range of SaaS-based solutions and services that its customers use to automate and simplify the event management lifecycle and maximize the impact of in-person, virtual, and hybrid events.

"Salesforce is like the umbrella view of Cvent customers throughout our products," said Charlton Port, an architect at Cvent.

#### The Challenge

The custom-built tools that Cvent had been leveraging to support integrations between Salesforce and AWS resources, where Cvent's SaaS offerings run, were not operating in a way that matched Cvent's high expectations for efficient, scalable integrations. For example, they didn't always support asynchronous or batch data exchange and as a result, were sensitive to unexpected demand.

#### The Solution and Benefits

Cvent has been able to replace layers of custom integration using Salesforce Event Relay with Amazon EventBridge and has experienced a number of benefits including:



**Cost reduction:** With the AWS native integration, Cvent can remove custom curated server images in AWS and instead use Salesforce Event Relays and Amazon EventBridge to drive serverless execution as needed. Doing so shifts sustained costs associated with services such as EC2 to on demand costs realized only for actual compute usage, thus reducing overall spend.



**Development efficiency:** Historically, when relying on synchronous APIs for the integrations between AWS and Salesforce, every time Cvent added a feature to a product, the IT team was required to expand the use of the APIs, triggering internal process designed to ensure the protection of client data. That process could notably extend the development cycle. The Salesforce Event Relays native integration, however, "lends itself toward shared efficiencies," the architect said. "Once in place, it's natural to onboard as many consumers of that data as you might need. It exists as a platform in AWS rather than a single point to point solution." Now, Cvent doesn't need to revisit internal compliance



processes each time a new capability must consume data already provided via the native integration. Because governance facilities that achieve compliance are built into the solution, oversight remains undiminished.



**Improved automation:** Cvent's custom-built system required a lot of syncing of data and polling Salesforce when changes happened to determine the current state of fields. When discrepancies arose or if a process stalled due to a rate limiting event, a team member would have to investigate and often pull in a developer to review the incident and rectify data inconsistencies. Now, changes can be made asynchronously, eliminating the need to poll Salesforce to determine whether a change happened correctly.

Eliminating manual work is an important benefit for Cvent. "No developer wants to be made into a button monkey," the architect said. "They want to do durable work that's meaningful. Developers don't enjoy building data fixes and one time scripts. Not only is it expensive, it's error prone. That's not what we want to encourage."

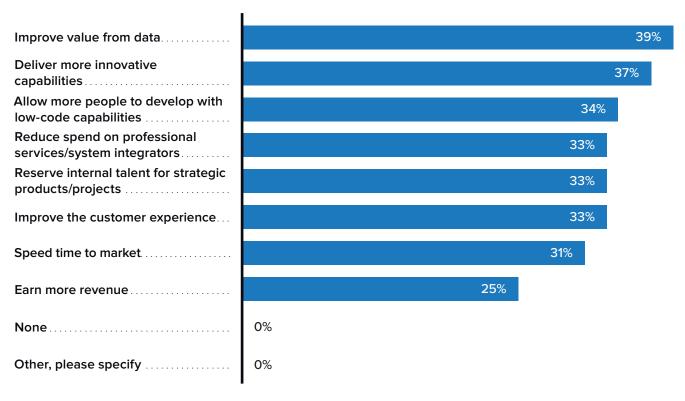


## Benefits and Value of Integrations

Enterprises recognize the potential business value enabled by integrations, although in some cases they find that building integrations is too difficult. If access to a type of integration were easier, respondents said that they could improve the value they can get from data (39%) and deliver more innovative capabilities (37%). (See **Figure 8**).

#### FIGURE 8 Benefits Of Easier Integration

If access to a desired integration were easier, what are the top benefits your organization would realize? (% of respondents)



 $n = 1264; Base: All \ Respondents; Source: IDC's \ \textit{AWS and Sales force Integrations Survey}, November \ 2022$ 



In addition, when integrations are easier to build, more people in an organization have the potential to build them (a benefit cited by 34% of respondents). With most organizations struggling in the face of a challenging skills shortage in the market, this benefit goes beyond simply enabling more integrations; when the work of building integrations is simplified, individuals with development and other scarce skills can instead focus on strategic and complex work. Reserving this kind of talent for strategic projects was also cited as a top benefit (33%) of offerings that ease the development of integrations.

Twenty-five percent of respondents also noted that their companies could earn more revenue if integrations were made easier, reflecting a notable correlation between the ability to build cloud integrations and achieve important business outcomes. While some integrations will support customer-facing functionality, such as ecommerce sites and mobile apps, others are used to improve internal efficiencies.

Regionally, respondents in Asia/Pacific are more attuned to the potential for integrations to address skills shortages, in some cases. Respondents in Asia/Pacific were more likely to say that if an integration were easier, they could reserve internal talent for strategic products (37%), compared with North American (34%) and European (28%) respondents. Asia/Pacific respondents were also more likely to say that easier integrations could help them reduce spend on professional services.

## Overview of Salesforce and AWS Native Integrations



These newly integrated offerings from Salesforce and AWS help customers enable connected capabilities across their cloud infrastructure, data, and applications.

The new, natively integrated offerings between AWS and Salesforce addressed in this paper are as follows:

- Private Connect (with/without Amazon AppFlow)
- Salesforce Connect's new connections with Amazon DynamoDB and Amazon Athena
- Salesforce Event Relay (with Amazon EventBridge)
- Named credentials for AWS integrations

With cloud being the go-to source for most things new in enterprises today, IT leaders are tasked with leveraging cloud technologies to deliver the highest impact for their business. These newly integrated offerings from Salesforce and AWS help customers enable connected capabilities across their cloud infrastructure, data, and applications. In delivering these natively integrated solutions to the market, Salesforce and AWS are increasing the ways that organizations can build seamless customer experiences with reduced development effort and higher reliability by using Salesforce and AWS together.

## Unlocking the Value Of Data is the #1 Outcome Driving Cloud/SaaS Integrations

Data is a central theme throughout this study as shown in numerous data points. Unlocking the value of data is driving organizations to invest in better integrations:



#### Most important outcome of integrations:

"Enable more efficient use of data across apps" (38%)



Top ways cloud and SaaS vendors can simplify integrations with out-ofthe-box functionality: "

"Data integration and/ or data synchronization" (58%), followed by "Data virtualization" (50%)



#### Top joint capability between Salesforce and AWS that would deliver value:

"Access to AWS ML capabilities from within Salesforce" (51%)



Most significant impact when companies can't build an integration between cloud providers:

"Data access becomes too slow, preventing us from getting value from data" (50%)



If integrations were easier, the top benefit would be:

"Improve value from data" (39%)



#### Considerations and Potential Challenges

Integrations between cloud and SaaS platforms enable a wide range of new capabilities, clearly supporting the digital innovation aspirations that many companies have. Building those integrations efficiently is key to actually achieving desired outcomes. Creating a custom integration when native tools are available is a waste of resources. Custom integrations require skilled developers to both build the integration and maintain it. There are opportunity costs as well, since custom integrations tend to take longer to build and also iterate on.

While native integrations address these challenges, certain barriers may still persist. It's important that organizations account for these key considerations when building their overall strategy:

- The integration an organization wants may not be available. In some cases, it
  may make sense to employ an existing native integration, adding a layer of
  customization that enables the unique functionality required. Building strong
  relationships with technology suppliers helps encourage vendors to prioritize an
  integration that's important to an organization.
- Native integrations may not provide the monitoring data preferred. When a
  performance problem occurs, visibility into the integration technology is needed,
  but an organization may not always have access to the data that provides insight
  into the problem, depending on which vendor the data is coming from. As more
  vendors build native integrations, this shortcoming will likely ease; suppliers will
  respond to end-user demand for visibility into the integrations.
- There is a learning curve. As with anything new, an organization's team will have to gain experience using the native integrations. Since an integration involves two or more services, that learning curve may extend to introducing another team to the native integration and potentially convincing them that it is the desired approach. Most organizations find that the learning curve isn't particularly steep and that the benefits outweigh any costs associated with starting up usage. For instance, over time, a native integration is typically easier and less costly to maintain and extend.

The recommendations outlined above, in addition to building the right internal skill set and taking advantage of existing integrations, can help address some of these challenges in the short term.



Integrations between cloud and SaaS platforms enable a wide range of new capabilities, clearly supporting the digital innovation aspirations that many companies have.



#### CASE STUDY: PUBLISHING FACTORY

Publishing Factory is a marketing company that primarily offers email marketing campaigns for its customers. Its offering initially was developed on a publishing platform built by a technology vendor, but the platform didn't meet all of Publishing Factory's needs. "We were building a lot around their product because it wasn't good enough for us," said a senior technology executive at Publishing Factory. In 2019 the company decided to build its own system, using Salesforce and AWS. Now, Publishing Factory's subscription business runs in Sales Cloud, with connections to AWS for additional functionality and data storage.



We were building a lot around their product because it wasn't good enough for us,"

Senior Technology Executive Publishing Factory

#### The Challenge

As part of the new system, Publishing Factory built essentially its own middleware to interface between Salesforce and AWS. That internally built integration allowed the company to handle the scale required by the business, including sometimes generating very large files to Salesforce. While the middleware generally works well, it adds notable complexity to the system and it is often slow, resulting in data synch issues.

#### The Solution and Benefits

Since more native integrations have become available from Salesforce and AWS, Publishing Factory has built a pilot that replaces the custom middleware with Salesforce Connect and has found notable benefits ranging from performance to cost. The native integration doesn't experience the slowness that is a problem with the internally built software — an important performance benefit, according to the senior technology executive. In addition, the native integration is simpler and should reduce the human costs that are currently required to maintain and improve the custom middleware.

Publishing Factory expects to replace each point where data comes in or out of Salesforce with a native integration to Amazon DynamoDB. Those integration points support order processing, lead generation, and retailer tracking. With those in place, the company expects it will be much easier to build innovative improvements, doing so via AWS services, where the Publishing Factory team has strong development experience.



#### Recommendations

Organizations that aren't yet mature digital innovators can take cues from the mature innovators in their approach to achieving integrations by doing the following:



**Prioritize native integrations:** Our study found that mature innovators are more likely than their less mature counterparts to approach overcoming challenges related to building integrations by using native-built integrations or influencing vendors to build native integrations. It is clear that mature organizations regard native integrations as the best approach to building connections between cloud services and SaaS. Less mature organizations should prioritize native integrations, as doing so will allow them to more quickly deliver the innovative capabilities that customers demand and enable competitiveness, boosting their digital innovation success.



Address skills gaps: Most organizations are struggling to deliver the digital technologies required to drive business growth. Taking a multifaceted approach to the problem can help. When it comes to considering the skills required to build cloud-to-SaaS integrations, the choice of how to build the integration has a notable impact on challenges related to skills. For instance, native integrations typically require less time to build and maintain, and they have the potential to be used by people who do not have specialized integration skills.



Native integrations also may be used to bridge the gap between the specialized skills required for one of the cloud platforms being integrated. For instance, if an engineer has experience with a cloud platform but not with the SaaS offering, a native integration often may allow the engineer to build the integration without first requiring a steep learning curve about building on the SaaS offering. The reverse is also true: when a team member has experience developing a SaaS offering but not the cloud platform, native integrations enable productivity without requiring a steep learning curve on the cloud platform.

Also, because native solutions allow for faster delivery of integrations, resources can be used more efficiently. Skilled technologists can focus on complex problems and high-priority deliverables, allowing the organization to do more with the skilled resources they have.



Recognize the power of integrations to unlock data: Throughout our study we found that getting better value from data was a top driver and demand from respondents. Efficient integrations between cloud services and SaaS offerings break down silos that otherwise prevent access to data. Integrations that support access to data can allow an organization to eliminate manual activities, contribute valuable data to artificial intelligence workloads, deliver innovative new capabilities, and more.



Our study found that when it comes to building integrations, the mature innovators are more likely to reach for integration tools and native-built integrations than manually built approaches.

#### Conclusion

It is clear that delivering digital innovation requires integrations between cloud platforms and SaaS technologies. IDC research shows that the most digitally mature organizations are more likely to have built more integrations across cloud services in the past five years than less digitally mature organizations. However, this approach to integration comes at a cost, which is what deters the bulk of organizations from moving faster along the digital maturity curve. Integration challenges include lengthy time to build and deploy, significant effort and specialized skills to maintain, as well as scalability and security challenges.

IDC research further shows that organizations overwhelmingly recognize the benefits available to them when their SaaS and cloud vendors take on the burden of natively integrating their services. At the top of the list are integrations that support business outcomes with data, including data synchronization and data virtualization. Efficient integrations between cloud services and SaaS offerings break down silos that otherwise prevent access to data. Integrations that support access to data can allow an organization to eliminate manual activities, contribute valuable data to Al workloads, deliver innovative new capabilities and more. As one interviewee noted, "Time to market is key for us, and that means streamlining our workflows [and data exchanges] with our partners/customers."

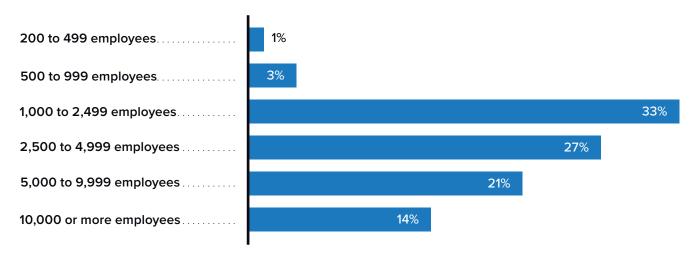
With 92% of survey respondents reporting that it takes three months or more to build and deploy a single integration between cloud and SaaS providers, the benefits of instead employing native integrations between cloud platforms and SaaS providers are apparent. The research shows that digitally mature organizations especially regard native integrations as the best approach to achieving application capabilities based on connections between cloud services and SaaS. IDC believes that all organizations should prioritize native integrations: Doing so will allow them to more quickly deliver the innovative capabilities that customers demand, enable competitiveness, and support the virtuous cycle of enabling developers to spend more time on the next innovation success.





#### **Employees**

How many people are employed by your organization at all locations worldwide? (% of respondents)

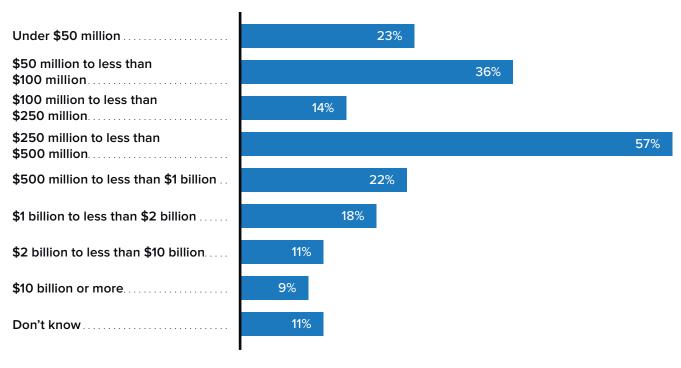


 $n = 1264; Base: All \ Respondents; Source: IDC's \ \textit{AWS and Sales force Integrations Survey}, November \ 2022$ 



#### Revenue

Which of the following best describes your organization's total revenue in the last fiscal year? (% of respondents)

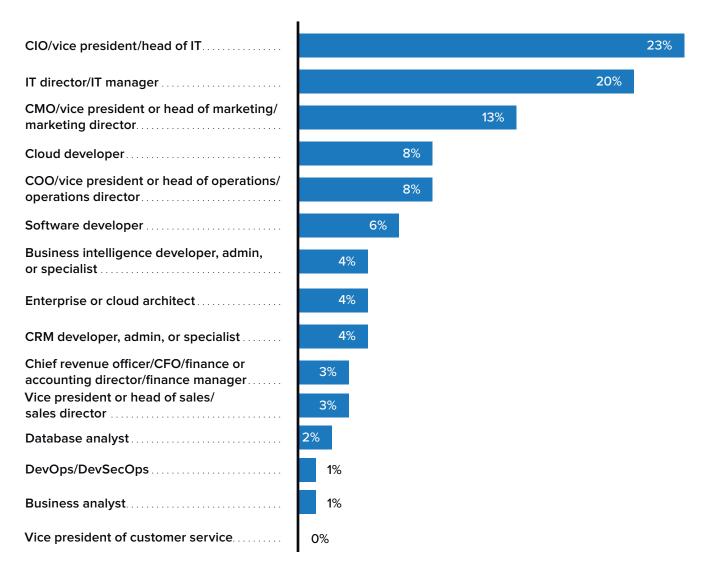


n = 1264; Base: All Respondents; Source: IDC's AWS and Salesforce Integrations Survey, November 2022



#### Role

Which of the following most closely matches your role within your organization? (% of respondents)



n = 100 banks worldwide; Source: IDC's Worldwide Industry CloudPath Survey, June 2022

#### About the IDC Analyst



Nancy Gohring
Research Director, Future of Digital Innovation Agenda Program, IDC

Nancy is research director for IDC's Future of Digital Innovation market research service. She focuses on software innovation programs in the enterprise and their potential to drive efficiencies into corporate processes, generate new revenue streams, respond to customer demand, and improve competitiveness. Her research examines ways that enterprises can best execute on the four pillars of software innovation — plan, source, develop, and distribute — and highlights leading enterprises that have developed successful new approaches to these competencies.

More about Nancy Gohring



Lara Greden Research Director, Platform as a Service (PaaS), IDC

Lara's research focuses on platforms for application development on private, public, and hybrid clouds and on edge deployments. She directs research into the competitive markets of cloud platforms and application development and deployment services that are enabling digital transformation, including integration, containers, serverless computing, Big Data, Al, ML, predictive analytics, IoT, and other emerging technologies. Lara advises customers and vendors on the trends that are shaping the modern application deployment environment. She closely follows the emerging platform services and focuses on tying platform research on emerging technologies to customer needs.

More about Lara Greden

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