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Five Emerging Use Cases for Cloud Integration

INTRODUCTION

The popularity of integration platform as a service (iPaaS) started with business users wanting to gain control and share data among their increasing number of SaaS apps without relying on IT. iPaaS is now being adopted by IT to support business users to ensure security is being maintained and to provide more of a self-service environment.

As iPaaS evolves to take a much bigger role than it originally addressed, it is turning into a key part of crucial emerging use cases, such as:

1. Integration anywhere
2. Asynchronous messaging
3. API creation
4. Long-running people-based processes
5. Learning and acting on data made available through analytics tools

BACKGROUND

One of the big drivers for cloud integration has been the high adoption rate of SaaS applications among line of business (LOB) users. Departments were subscribing to SaaS apps without any centralized plan and found they needed an easy, quick, efficient way to share data and information among cloud services and even on-premises systems. An iPaaS was the perfect solution. Operating very similarly to SaaS applications in that you don't need IT's involvement, iPaaS is relatively cheap to operate without hardware to host, and it's pretty intuitive to use. iPaaS quickly became the cloud integration tool of choice for LOB users.

Due to the increase in SaaS application adoption, IT needed to support more incremental and iterative delivery of integration functions. Supporting all the pervasive integration needs of organizations became too large of a task for IT alone. They needed to empower LOB users to integrate and to find a way to support and standardize what the business used while also ensuring the tools they chose complied with corporate policies and procedures. Being a good partner, IT started supporting iPaaS to ensure all developers had quick and easy access to tools that allowed them to quickly meet changing business requirements, as well as to maintain a standard approach, so integration could be easily managed and maintained by the business.

It's clear that iPaaS has become the choice of integration tech for new projects within LOBs. Integration needs have become so pervasive that every project an organization undertakes now requires the right integration tool. An iPaaS is meeting many of those needs at reasonable cost, no hardware to maintain, and ease of use. As pervasive integration needs expand, iPaaS will be found as the answer for many of today's emerging use cases. Let's look at some of these to see how prepared your iPaaS is to address them.

EMERGING USE CASES FOR IPAAS

1. INTEGRATE APPLICATIONS ANYWHERE, EVERYWHERE

Mobile integration is a given, but the number and variety of devices is increasing rapidly. To tap the true potential that IoT promises, organizations need to be able to pull data from all types of devices no matter where they are, understand what those devices are reporting, and act on the data. No device should be considered too small or too far away – you should be able to integrate anything, anywhere.

This broad connectivity use case is perfect for a good iPaaS, one that not only quickly and easily makes connections between all types of cloud services, on-premises systems, and mobile devices—but also enables connecting IoT devices to these same systems.

Does your iPaaS support the challenges of integrating IoT devices over unreliable or highly latent networks? Will it allow you to move integration logic closer to the edge, improving responsiveness of your IoT solutions and reducing the communications costs?

2. API CREATION AND PUBLISHING

In today's rapidly changing business environment, agility is a must. APIs create a layer of abstraction that allows for simplifying connections and consuming services, the new way for enabling vendors, developers, and end users to collaborate. In many cases iPaaS platforms are becoming the tool of choice to both create and publish APIs. However, you need to understand that the user experience with an API is just as important as it is for a mobile device or website.

A contract-first approach separates the designing of the API from its deployment and management. You model your API and ensure it operates the way you want it to before implementing the service. iPaaS platforms are beginning to support this best practice by allowing users to visually model the API and then automatically generate a mock of that API so you can ensure it is operating the way you want it to.

This API mock application can then be shared with the API consumers so they can start writing their applications while the actual service is being implemented. When the service is ready, you can automatically replace the mock application with the completed service. Not only does this approach improve the usability of the API, it speeds time to results and allows the organization to be more agile. The final step in this process would be to manage the working API via a good API management tool, which should be part of the iPaaS offering as well.

By taking this approach you are going to create more user-friendly APIs. And the more user-friendly they are, the more chance they have of being used, thus providing better service to your customers and partners.

Does your current iPaaS solution give you this proven and winning method of managing the full lifecycle of your APIs?

3. EVENT-DRIVEN / ASYNCHRONOUS MESSAGING / PUBLISH-SUBSCRIBE

Event-driven architecture is the future of application design. According to Gartner, by 2020, event-sourced, real-time situational awareness will be a required characteristic for 80% of digital business solutions. Being able to correlate a series of events and identify the meaningful ones that require action is how organizations are going to be able to truly differentiate themselves. The way this is accomplished is through adding event processing or event thinking to your technical, organizational, and cultural strategies. Event-driven architecture optimizes for agility, resiliency, extensibility, lower cost of change, open-ended design, and web scale.

Traditionally iPaaS was used in the request/response scenario, but high performing web and mobile apps require real-time exchange of information to securely and reliably enable bi-directional data exchange to mobile and web apps, IoT devices, and backend systems. For these types of on-premises requirements, asynchronous messaging has been used for years. iPaaS platforms are now supporting this style of integration, as well.

As the use cases expand and organizations find themselves needing to be constantly listening for events and taking action, we are seeing that iPaaS technology is increasingly being used to help act on events. For most iPaaS users, the event-driven journey will start with asynchronous messaging that will allow you to cover more elaborate integration use cases that involve more than just request/response.

Knowing that in the near future digital business is going to rely on event-driven architecture, you have to start thinking beyond simple request/response approaches to asynchronous messaging and to the even the more advanced use cases of correlating events and taking action instantly.

Does your iPaaS support this concept of event-driven architecture? Will it be able to support your needs today and into the future?

4. PEOPLE-BASED PROCESSES

iPaaS has become quite handy in the automation of interactions between cloud services and other systems and data sources. But traditionally iPaaS falls short when processes involve assigning tasks to other participants and making decisions that cannot easily be automated.

For instance, for a basic process in which an employee requests permission to take a trip and book it, you first have to collect information from the person requesting the trip. Then you need a manager's approval. A traditional iPaaS is well equipped to automate connections to the various travel sites for the actual booking, but are typically not designed for the human aspects of the processes. This is changing; some iPaaS platforms are incorporating human workflows into their feature set.

Will your iPaaS support human workflows?

5. ANALYTICS

A recent Gartner survey shows that many respondents are planning to use their iPaaS to aid in analytics projects. The whole concept of iPaaS is to connect systems to break down data siloes and have better insights into what's happening in the business. But, if those findings are only in a database, and you have no way of identifying them, that's of no help.

A good iPaaS, coupled with analytics, will help you dig into your data to identify opportunities and threats. Think about it. How are you going to make decisions and take informed action if you don't have a tool to analyze your data properly?

Does your iPaaS provide you with the full capability to visually analyze all of your data?

MORE USE CASES

As organizations learn to master use cases, more are always emerging. A way to stay prepared for future trends is to find an iPaaS platform that gives you ultimate flexibility. To stay agile, your organization can't be tied to a certain deployment.

For instance, if you build a service within your iPaaS but later want to move it to a private cloud or even out to an edge device, you should be able to do that without having to rework the service. Your iPaaS solution should provide you the agility to move that project or service easily—even to a function-as-a-service (FaaS) platform to support a serverless computing architecture. You need an iPaaS platform that gives you the flexibility to easily move all of your projects to the deployment of your choice to meet unpredictable future needs.

CONCLUSION

As cloud adoption has grown, iPaaS has become an integral tool. iPaaS, along with other cloud apps, has allowed organizations to take advantage of emerging use cases to create greater agility and achieve one of the major pillars of digital transformation.

At TIBCO, we see these emerging trends, understand the requirements, and have the cloud solutions to help you satisfy these use cases. We are working not just with our own technology, but partnering with companies like Amazon to make sure our solutions can be deployed in the places you need it. TIBCO has the capability for cloud-based integration, messaging as a service, cloud analytics, low-code process apps, API management and deployment, and much more.

Remember, the technology that you pick doesn't only have to address what you are trying to solve today; it needs to provide the flexibility to solve for emerging use cases and be able to address your business requirements moving forward. It needs to move with trends to reduce cost and improve returns. Your technology needs to be constantly supporting what your business needs to do.

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