

Business Agility from Modern Architectures

10 Reasons Why TIBCO Is the Leader for Connecting Modern Application Architectures and Why that Matters to You

Agility is a business imperative. Today, it requires an application architecture built with modern, highly responsive, cloud-native technologies that operate, adapt, and scale to support fast changes. A responsive architecture increases agility and creates a foundation for rapid innovation far into the future.

In a down economic cycle, your business focuses on resiliency and protecting itself. When markets rebound, it needs to quickly refocus on innovation and growth. Both scenarios require agility and fast change.

An integration platform-as-a-service (iPaaS) helps modernize an application architecture, by helping to form a connective tissue across your diverse apps, data, and devices hosted on-premises, on cloud platforms, and elsewhere. But to gain the full benefits of the transformation it provides, your iPaaS must embrace cloud-native approaches and provide the widest array of implementation and deployment options.

The TIBCO Cloud Integration iPaaS is designed for modern cloud-native architectures. It offers maximum flexibility to consume, run, deploy, and scale across hybrid environments as you choose. To evolve your application architecture, here are the top 10 reasons to choose TIBCO.

Unlike other competitors, TIBCO delivers:

- 1 A highly efficient and scalable iPaaS
- 2 Modern event-driven app development
- 3 Reliable, secure, and scalable communication between apps
- 4 An iPaaS that runs on multiple cloud platforms
- 5 Deployment to your preferred container management service
- 6 Flexibility to integrate with a variety of service mesh implementations
- 7 Deployment to serverless
- 8 PAYG pricing options
- 9 Deployment to edge devices for highly scalable IoT integration
- 10 App integration across your cloud-native ecosystem

Reason #1: You need a highly efficient and scalable iPaaS

Your digital landscape is growing in size, diversity, and complexity; your iPaaS connects it all together. This expanded range of connectivity creates more dynamic demand, so your iPaaS must be architected to scale quickly to keep the business processes that depend on your integrations running smoothly.

The elasticity provided by cloud technologies is the foundation of modern application architectures. The TIBCO Cloud Integration iPaaS, available in the TIBCO Cloud, is fully cloud-native, supporting both containerization and serverless technologies. It is highly elastic and able to scale both up and down quickly and efficiently to meet whatever workloads you experience. Most importantly, it allows you to build portable cloud-native apps and deploy them with all their rich functionality to the cloud platform of your choice.

Reason #2: You need modern event-driven app development

Traditional architectures are based on the tightly coupled, request-response paradigm. They connect client software components directly to server components, and force clients to halt execution until synchronous services complete processing, limiting flexibility and scalability.

Modern architectures are event-driven, built with microservices and functions that provide far greater responsiveness, agility, and scalability. Event-driven architectures distribute business logic and data processing across independent components that consume and process events raised by other components. Important business events are sensed and immediately and asynchronously acted on, improving response time. This loosely coupled architecture allows new digital services to be rapidly introduced. While request-response implementations remain an important element of modern architectures, an event-driven design should be the primary approach.

With an event-driven core, the TIBCO Cloud Integration Develop capability (based on the open-source Project Flogo framework) was built from the ground up for real-time event processing.¹ You can easily build event-driven apps using a visual designer to define powerful event triggers, and powerful actions that respond to those triggers. And these apps can be deployed to a wide range of environments including containers, serverless, and edge devices.

¹ <http://www.flogo.io/>

Reason #3: You need reliable, secure, and scalable communication between your apps

Using APIs and events, interoperability between apps hosted in hybrid environments requires an underlying communication infrastructure that can tolerate high throughput and unreliable transmissions. Communications infrastructure built with messaging technology enables this reliable, secure, highly scalable communication.

Seamlessly complementing the TIBCO Cloud Integration iPaaS, the TIBCO Cloud Messaging service provides guaranteed distributed and asynchronous messaging-as-a-service. It incorporates a simplified approach to pub/sub messaging via multiple communication technologies for higher developer productivity. In addition, TIBCO provides full technical support for Apache Kafka and provides a bridge to it within TIBCO Cloud Messaging,² so you can confidently make it a key component of your communications infrastructure.

Reason #4: You need to deploy your apps to an iPaaS that runs on multiple cloud platforms

Your business policies and technology requirements might require a specific cloud platform to run your apps. Or, to ensure maximum scalability and availability, you might choose to run your apps across multiple cloud environments. Or, you may simply not want to be locked-in to a single cloud vendor.

The TIBCO Cloud Integration iPaaS provides a fully-managed cloud-based deployment option, allowing you to run your apps on AWS, Microsoft Azure, or both. You can purchase flexible iPaaS subscriptions either directly from TIBCO,³ or through the AWS⁴ or Microsoft Azure⁵ marketplaces.

2 <https://www.tibco.com/blog/2019/10/08/5-things-to-know-about-event-driven-apis-and-apache-kafka/>

3 <https://www.tibco.com/products/cloud-integration/pricing-plans>

4 <https://aws.amazon.com/marketplace/pp/TIBCO-Software-Inc-TIBCO-Cloud-Integration-SaaS/B07B8V2PLL>

5 https://azuremarketplace.microsoft.com/en-us/marketplace/apps/tibco-software.tci_saas?tab=Overview

Reason #5: You need deployment support for your preferred container management service

Use of containerization technologies, such as those based on Docker, is growing rapidly. Containerization makes your apps highly portable and scalable across diverse deployment environments: on-premises, infrastructure-as-a-service (IaaS), platform-as-a-service, and serverless. Container management services simplify the deployment and orchestration of containers so you can quickly and easily meet any level of demand for your apps. With the variety of container management services in the market, including those based on open-source Kubernetes, you have a wealth of options.

The TIBCO Cloud Integration platform supports a wide range of container management services. And just as easily as you can deploy to the TIBCO Cloud Integration iPaaS, you can deploy apps to your preferred container management service: Amazon Elastic Container Service, Amazon Elastic Kubernetes Service, Microsoft Azure Kubernetes Service, Google Kubernetes Engine, Cloud Foundry Container Runtime, as well as serverless container services such as AWS Fargate, Azure Container Instances, Google Cloud Run.⁶

Reason #6: You need the flexibility to integrate with a variety of service mesh implementations

As microservices development continues to grow across the enterprise ecosystem, service meshes have emerged as key components of an API mediation strategy. Service meshes can facilitate communication between individual microservices (so-called “east/west” communication). With the variety of service mesh implementations available, your iPaaS should allow you to build and deploy your apps so they work with your service mesh of choice.

With the TIBCO Cloud Integration iPaaS, you can build microservices that seamlessly participate in your choice of service mesh — including Istio and Linkerd⁷ — allowing you to choose the implementation that best meets your requirements. Microservices deployed from the TIBCO Cloud Integration iPaaS are managed in the same way as your microservices deployed within non-TIBCO frameworks (such as Node.js and Spring Boot), allowing you to use the same service mesh control plane to manage all your microservices.

⁶ Supported containers provided by the TIBCO Cloud Integration - Integrate capability (powered by TIBCO BusinessWorks) https://docs.tibco.com/pub/bwce/2.5.2/TIB_bwce_2.5.2_readme.txt?id=0 and TIBCO Cloud Integration - Develop capability (powered by Flogo) https://docs.tibco.com/pub/flogo/2.8.1/TIB_flogo_2.8.1_readme.txt?id=0

⁷ <https://medium.com/@alexandrev/integrating-istio-with-bwce-applications-377664236a9c> and <https://adityawagle.com/using-linkerd-with-tibco-businessworks-container-edition/>

Reason #7: You need to deploy your apps to serverless

Serverless computing is a cloud service model where provisioning and management of cloud resources is handled by the cloud vendor. The cloud user only needs to deploy their app code (functions); the cloud vendor manages the startup, scaling, and termination of the runtime environment and supporting services. The cloud user is charged only for compute time when the app is servicing requests, typically by the second, and not for app idle time. This architecture is ideal for small, event-driven digital services that have widely varied demand loads. Services can be invoked many times per second, and serverless executes them very rapidly, efficiently, and cost-effectively.

The TIBCO Cloud Integration iPaaS supports AWS Lambda for serverless deployments,⁸ creating highly-efficient apps that can reduce your infrastructure costs. For example, a function deployed to AWS Lambda with the TIBCO Cloud Integration iPaaS can cost as little as \$0.10 USD for 1.5 million requests.⁹

Reason #8: You want Pay-as-You-Go (PAYG) pricing

Modern architectures can also use serverless environments, where apps are started quickly to handle incoming requests, then shut down immediately. Compute charges apply only for processing, not idle time, a consumption model quickly becoming the industry standard.

A number of flexible purchasing options are available for the TIBCO Cloud Integration iPaaS. You can choose pay-as-you-go (PAYG) pricing via the AWS Marketplace,¹⁰ meaning pay only for compute resources that your apps consume, ideal for serverless deployments. You can also choose a fixed price subscription to pay for capacity upfront, and deploy apps over time, ideal for apps deployed into the TIBCO Cloud Integration iPaaS on AWS, Microsoft Azure, on-premises, or via containers.

8 <https://integration.cloud.tibco.com/docs/index.html#Subsystems/flogo/flogo-all/developing-for-lambda.html>

9 Uses public pricing available for AWS Lambda at <https://aws.amazon.com/lambda/pricing/> and based on all kinds of TIBCO Cloud Integration (Flogo) functions that run within the minimum 128 MB memory and 100 ms billing duration. Estimated paid pricing based on public pricing from AWS Lambda.

10 <https://aws.amazon.com/marketplace/pp/TIBCO-Software-Inc-TIBCO-Cloud-Integration-Flogo-P/B07KMGRBQ1>

Reason #9: You need to deploy your apps to edge devices for highly scalable IoT integration

Connected smart devices are increasing at a highly accelerated rate, giving your organization unprecedented access to valuable real-time data that can help generate insights and spot opportunities and risk. Therefore, it is critical to collect, analyze, and act on this contextual data in the moment when it's meaningful, which is often just a few seconds or even shorter. However, most IoT devices send vast quantities of data to a cloud platform for analysis. This method causes unnecessary lag time, which limits the ability to act quickly. It would be far more efficient to process IoT data closer to where it is produced, such as on edge devices that connect IoT devices within a local network.

Edge devices have very limited memory and processing capacity. The TIBCO Cloud Integration iPaaS creates very small, self-contained apps optimized for small edge devices. Rather than hundreds of megabytes or gigabytes as with Java technology, these apps are often a few megabytes in size. With the TIBCO Cloud Integration iPaaS, you can efficiently run intelligent apps directly on small edge devices and take fast, efficient action on IoT data.¹¹

Reason #10: You need integration across your cloud-native ecosystem for your apps

Modern cloud-native app developers use tools that simplify deployment, monitoring, and debugging across complex distributed environments. They include tools for configuration management to externalize app configuration; for service discovery of microservices that register themselves and discover other services; for metrics that illustrate microservice performance and execution details; for logging to capture events that occur during microservice execution; and for distributed tracing to detail the execution flow across multiple microservices. These capabilities are provided through a number of robust commercial and open source solutions, particularly Cloud Native Computing Foundation projects that can support your entire architecture.

The TIBCO Cloud Integration iPaaS fully embraces an open environment for cloud-native app development supporting out-of-the-box integration with your preferred tools for service discovery, configuration management, metrics, and distributed tracing, including OpenTracing, Jaeger, Prometheus, and Consul.

¹¹ <https://www.tibco.com/blog/2019/11/06/how-to-process-your-iot-data-more-efficiently/>

Why TIBCO

Building modern architectures to power complex business transactions is not something to be taken lightly. When selecting a platform for building these applications, you are better off with a solution that uses both traditional and modern technologies and that has been proven through decades of successful implementations at thousands of organizations.

A single platform, the TIBCO Cloud Integration iPaaS offers a highly intuitive, powerful, and flexible integration solution that addresses all forms of connectivity. With it, anyone in your enterprise can connect anything, in any form, and deploy it anywhere. It includes a wide range of integration capabilities based on open platform and cloud-native technologies. In addition, full lifecycle API management; app, data, and device integration; event processing; messaging; and process automation via low-code app development are all available within the TIBCO Connected Intelligence Platform.

TIBCO is architecturally neutral, not biased towards any particular cloud platform or deployment technology. This neutrality gives you the flexibility to select the deployment environments that best suit your needs, regardless of how you build your apps. And TIBCO has partnered with organizations across industries worldwide to help achieve superior business results enabled by modern architectures:

- [CargoSmart](#) reduced fuel consumption for its carrier customers by 3.5%
- [T-Mobile](#) scaled to meet a 10x increase in demand from its promotions
- [Air France-KLM](#) increased its Net Promoter Score by 20%
- [Sydney Water](#) increased its Net Promoter Score by 127 points
- [Telkomsel](#) achieved an astounding 3x market growth
- [University of Chicago Medicine](#) reduced cardiac arrests in the hospital by an estimated 15 to 20%

TIBCO is the superior choice for building modern architectures. But don't take our word for it or rely on dubious competitive claims, see what [TIBCO customers have to say](#), then [try the TIBCO Cloud Integration iPaaS yourself for 30 days](#) at no cost or obligation.



Global Headquarters
3307 Hillview Avenue
Palo Alto, CA 94304
+1 650-846-1000 TEL
+1 800-420-8450
+1 650-846-1005 FAX
www.tibco.com

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