

# The 5 roadblocks to integration productivity in a hybrid cloud world

The cloud is full of promise, but also full of complexity—especially for the modern enterprise. Therefore, you need a smart approach to integration in a hybrid, multicloud world.

## Introduction: Multicloud and complexity

The rise of cloud environments in recent years cannot be denied. In a recent report, 94% of organizations said they are using two or more cloud providers to meet the needs of their clients more effectively.<sup>1</sup> Most businesses today find themselves managing complex hybrid and multicloud environments, regardless of whether that was their intention. Through mergers and acquisitions, legacy data and infrastructure requirements, and the proliferation of new cloud-based apps, organizations are seeing their business-critical information dispersed into a tangled web across cloud and on-prem environments instead of being streamlined and centralized.

For integration experts, multicloud can be both a gift and a curse. As an accelerator of digital transformation, the cloud helps you connect and exchange data in real time, scale data handling up or down, increase visibility across IT, and better control costs. But with that comes additional challenges around synchronizing policies and providers, establishing security across operations, and enabling advanced automations for the business to serve themselves. Integration should be part of the solution—but too often, integration practitioners are pushed to their limits as information silos hit hyper proportions, access permissions multiply, and third-party firewalls shut developers out.

The solutions that most integrators typically turn to—the integration platform as a service, or iPaaS—increasingly fall short: they either sacrifice power for ease of use among citizen integrators or are so complex that only IT can use them, resulting in never-ending backlogs of requests. To address this, enterprises adopt multiple platforms, often with duplicate integrations—or worse, shadow integrations created by well-intentioned business line users.

In a hybrid, multicloud world, integration is now both the solution and the problem.

That means you'd better have a solid plan geared toward interoperability, security, portability, and flexible management. Otherwise, you'll need to overcome a set of roadblocks that risk stopping your multicloud strategy in its tracks.

So, what are these roadblocks, and why isn't your iPaaS able to handle them? And how could a new approach to integration lead you down a more productive path? This white paper seeks to ease the burden on integrators by offering some answers.



# The multicloud integration dilemma

To start, it's worth probing deeper into today's most common integration conundrum: while practitioners can connect almost anything anywhere, until now, there hasn't been an iPaaS on the market that can do it alone. Today's iPaaS typically comes in one of two varieties: heavyweight IT-focused and lightweight project-oriented.

The **heavyweight iPaaS** was designed with the traditional integration model in mind. Born from an on-prem integration server or ESB and engineered for the IT elite, it relies on complex code and a deep understanding of APIs and integration theory. These industry heavyweights offer scale, reliability, and the most comprehensive "single source of truth" by integrating SaaS applications with other SaaS, on-prem applications, and various data sources. Their power, though, comes at a literal cost, as they're notorious for straining balance sheets. Integration projects are usually few in number, with release cycles that span months or even years. And since they're in the domain of IT, business line users either need to wait for the IT team to complete their requests or adopt a more lightweight equivalent.

The **lightweight iPaaS**, now moving into mainstream maturity, is the result of that business demand. In a bid to simplify modern integration delivery practices, these platforms appeal to teams in specific lines of business who can self-service using low-code tooling. With rapid release cycles measured in weeks, they offer access to numerous endpoints through lightweight

developments of APIs and events. Their agility and ease of use come with limitations, though: most lack the advanced capabilities and deployment models of their heavyweight iPaaS cousins; when it comes to complex hybrid integrations, you're out of luck. They're also more likely to expose your business to security and compliance risks. Overall, the rise of the lightweight iPaaS has had the detrimental effect of scattering your data even further.

That both approaches have their limitations isn't new: Gartner has been highlighting for several years that there's no single tool on the market capable of meeting all application and data integration requirements. Perhaps your COO or CTO has even asked you for one, and you've been left drawing a blank. Like many enterprises facing the lack of a one-size-fits-all solution, there's a good chance yours has adopted both types of iPaaS—each to solve different pieces of the integration puzzle.

The result, however, is more integration chaos. Shadow integrations. Poor visibility and control. Duplicated work. Data that is exposed across borders, which will upset data regulators.

For far too many businesses, the move to the cloud has not created a single, integrated solution, but rather multiple islands of integration. This, in turn, leads to roadblocks that impact IT leaders, architects, and operators, ultimately reducing enterprise productivity.

# The 5 roadblocks to integration productivity

Imagine you're a multinational enterprise—a logistics firm, for example—that wants to build and deploy a new service to help link retailers and shipping providers. Your company, like most of its competitors, has multiple integration platforms running across multiple clouds: one hosted by Azure in the U.S. and another hosted by AWS in Europe. Getting the new service up and running involves a range of testing and quality assurance—and because different users have different permissions, the process is taking longer than expected. Your Europe-based team working on Azure keeps hitting firewalls, which drags their work into the weekend. When they've finally finished, they'll need to start from scratch and repeat the same integrations in AWS. It's a demoralizing process, rendering it nearly impossible to capitalize on the full value trapped in your data. And it will happen again and again.

## Roadblock 1: Task duplication—a never-ending story

The above story is a stark example of the first—and arguably most debilitating—roadblock faced by practitioners working across multiple clouds with more than one integration platform. For each tool in their arsenal, they need to recreate, retest, reconfigure, and redeploy similar services. Not only is task duplication sluggish, it makes finding and fixing errors a major headache, consuming valuable time and money.

## Roadblock 2: Data residency—too many moving parts

Another common roadblock is the ever-shifting landscape of data regulations. As governments around the world introduce new requirements, firms with a presence in multiple jurisdictions must constantly adapt. Not only is it vital to understand which cloud vendor you're using, but also where that cloud is physically located. Doing so with multiple integration platforms makes your international transactions even more complex, consequently making it harder to demonstrate compliance and avoid the related penalties.

## Roadblock 3: Risk assurance—protecting your data

Security in your cloud environment is paramount: even a single data breach can cause long-term reputational and financial damage. Yet when processes and transactions cross multiple integration platforms, the complexity of tracking your data, systems, and networks spikes. Malicious actors can more easily slip by unnoticed, and a lack of visibility means you can't react in real time to fix problems before they escalate.

## Roadblock 4: Core control—now you see it, now you don't

The rise of the cloud service-based iPaaS has been a benefit to business users: now, they have the tools to create their own automations without banging down IT's doors. Too often, though, these ungoverned shadow offerings, created with multiple platforms, lack proper operational support. They're nearly impossible to monitor and track, and are thus counterproductive to one of IT's core goals: centralized control.

## Roadblock 5: Data complexity—lost at sea

Companies that struggle in a multicloud world often fail to realize the potential of their data. Multiple platforms mean that data is often siloed in different pipelines, each with their own format and protocols. With that data adrift, opportunities to leverage it for insights and efficiencies are lost—and the enterprise becomes worse off for it.

## Integrators in a distributed world: a novel approach

What our imaginary multinational logistics firm needs is a new approach to integration—one designed to break through the roadblocks and the chaos of multiple platforms, endless duplication, and the disconnect among different teams in different regions. What if you could combine the best that the heavyweight and lightweight iPaaS each have to offer to create a powerful engine for building and managing complex hybrid integration—with the agility to develop and deploy anywhere in days rather than weeks?

IBM webMethods believes this is the basis for a **new approach to integration**—one built upon a single hybrid platform that recognizes the complexity of today's business landscape and can fully deliver on transparency, productivity, and agility. Instead of being forced to choose between feature-rich developer tools and lightweight cloud UIs, this approach is built around a single sophisticated development tool you can use in a browser or even offline. With an AI-enabled interface, business users can easily create their own workflows. Critically, you can monitor and control everything from a single place to finally gain a holistic view of those shadow integrations—ensuring you unlock the value of your data.

This new approach differs from the status quo in four important ways:

**Easy deployment**

First, it makes the burden of task duplication a thing of the past. With a develop-and-deploy-anywhere model, creators can design a service once and deploy it in a managed iPaaS, on a public cloud in another region, in a private cloud, or even on premises. Developers can start integrations remotely with licensing, security, and dependencies automatically applied. Business users can easily create automated workflows, even using natural language UI. And since their integrations can be validated and managed by IT, they won't need to operate in the shadows: instead, business and IT can collaborate for innovation.

**Local reach, central control**

Second, it helps you combat the complexity of data residency by enabling all integrations to run locally, close to the source of data, while being controlled from a central iPaaS console. That means you handle data compliance in accordance with local regulations and gain optimal performance when interacting with data sources in different regions. With this new approach, you'll also be able to orchestrate these integrations into more complex transactions with full end-to-end visibility from your central user interface.

**Tighter security**

The third change is tighter security by giving you a private VPN for every customer. This protects your identity and your data no matter where your integrations and APIs are running: on prem, in a private cloud, or in public clouds across the globe. It vastly reduces the risks of connecting multiple networks, keeping you and your data safe from malicious actors.

**Comprehensive monitoring**

The fourth difference is far more comprehensive observability. Whereas enterprises running multiple platforms tend to struggle with visibility, this new approach lets you debug and alert integration transactions running anywhere in the world in real time. In effect, it gives you a "single pane of glass" to manage your APIs, integrations, and data pipelines no matter where they're hosted, improving your operational resilience.



## The new iPaaS for a hybrid multicloud world

What we're describing is the next generation of integration required to keep enterprises connected and running efficiently in a hybrid multicloud world, and the IBM iPaaS, powered by webMethods, will allow you integrate anything, anywhere, any way you want—all in a single platform.

Our iPaaS provides the **agility** required across data and applications to help enterprises adapt quickly to new opportunities. It fosters **productivity** by allowing more users to get more done together. And it empowers your organization with stronger **governance**, giving you the visibility to meet external regulations while ensuring enterprise-grade security. Instead of integration chaos, it offers a single, centrally managed platform that can be used by everyone across your enterprise. It gives you the power to rapidly adapt to your technology needs, answer business requests quickly, and wield exacting control over every integration across your business. It delivers six capabilities that make it unlike anything that's come before it:

1. **Work flexibly—and fast.** You can use your preferred tooling—online or off, in any cloud or on premises—to design, develop, and deploy integrations anywhere without having to build the same thing twice.
2. **Regain control of your integration landscape.** With a “single pane of glass” view, you can monitor, manage, and operate integrations, APIs, and data pipelines across complex hybrid, multicloud infrastructures.
3. **Capitalize on past, present, and future data.** By connecting any source to analytics (including apps, APIs, and events), you can turn data into decisions, with seamless flows from on prem to the cloud and back.
4. **Achieve instant productivity with a single user interface.** A unified iPaaS experience means you only have to learn a single set of tools: metering and usage reporting are streamlined, and collaboration is built in.
5. **Rapid scale-up.** With a composable API and event-enabled architecture, you can say “yes” to real-time business demands and build better experiences for customers, employees, and partners.
6. **Make everyone an integration expert.** Through an easy-to-use, generative AI interface, anyone can create integrations—and your enterprise can then manage them from one central place to ensure shadow integrations don't proliferate.

## Fulfilling the promise of the cloud

Is your enterprise seeking a way to move beyond the complexity of multiple clouds and integration platforms? To leave behind the constant frustration of duplicating tasks, integrations living in the shadows, and data that's never visible? If so, you're far from alone. The speed of business today, after all, means that companies who struggle in the multicloud world will likely lag behind the competition. The more connected an enterprise can become through efficient and agile integration, the better positioned it is to thrive by extracting value from your data.

With IBM iPaaS, you can have a single, centrally managed integration platform with end-to-end visibility used by everyone across your enterprise—putting an end to integration chaos once and for all. Now, you'll be able to launch new products, tap into new streams of revenue, and compete in new markets without enacting massive changes to your technology stack or introducing new risks. You'll have the agility to pivot as the technology landscape changes, your users will be more productive, and you'll have peace of mind knowing that you're in complete control.

[Learn more about the webMethods iPaaS at ibm.com/webMethods →](https://ibm.com/webMethods)

1. "Research Report: Distributed Cloud Series: The Mainstreaming of Cloud-native Apps and Methodologies," Enterprise Strategy Group, 21 July 2023.

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