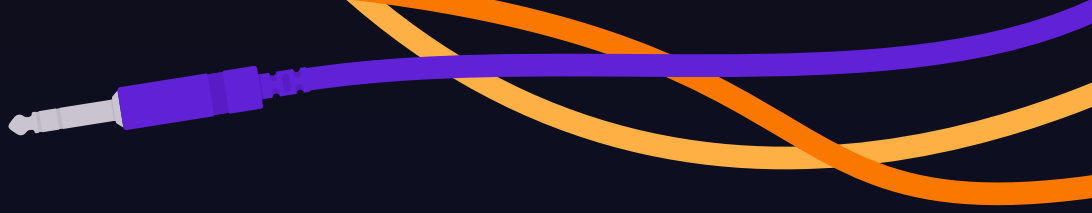
A JITTERBIT WHITE PAPER

The Benefits of Jitterbit's Integrated Message Queue in Strategic Automation

Jitterbit



Introduction

A messaging queue is a core component of any comprehensive automation strategy. It manages the flow of communications and messaging between different systems and applications, ensuring that information gets delivered securely and in sequence.

You only need to consider the prevalence of SaaS applications to grasp the critical nature of reliable messaging. Think about it: Organizations with more than 1,000 employees use **an average of 177 SaaS applications** – and that number is only going to grow.

This proliferation of cloud applications has put IT teams under an enormous amount of pressure. They are faced with an unprecedented amount of data, processes, and applications stemming from numerous and diverse business processes that span across multiple platforms and regions – especially in the post-COVID era of remote collaboration.

All of these API integrations rely on the secure transmission of messages between two or more data sources. A message is any data that is transferred between two systems or applications. These might be automated systems critical to a production or delivery process, or applications connecting key individuals, organizations, or platforms. Most businesses would agree that they can't afford the risk of a data loss if your sending or receiving system goes offline.

Dropped communications or mishandled messages can have expensive consequences. For example, if a fulfillment service receives incorrect details regarding a delivery, important consignments might be sent to the wrong address, billed incorrectly, or even missed entirely. If the service operates in the enterprise space (where large consignments or potentially business-critical materials may be involved), the resulting losses could amount to millions of dollars.

It's crucial to maintain a strong data communications strategy to minimize the risk of these costly errors. Modern business automation strategies that incorporate message handling can help.

There are many independent message queue solutions on the market, but implementing one means integrating and managing another application within your tech stack. That is, unless your message queue management is fully integrated into the larger framework of an enterprise automation strategy.

Meet Jitterbit's Message Queue, a fully integrated messaging service within its Harmony platform. It is an easy to use, cloud native, multi-tenant message queuing service that simplifies the management of complex workflows. By building message handling into Harmony, it is fully integrated with its Integration Platform as a Service (iPaaS) capabilities and therefore delivers exponential benefits and cost savings for businesses.

Why Automation Begins with iPaaS

The explosion of software, plus the increased complexity of hybrid tech environments, growing security risks, and other macroeconomic challenges, is driving businesses to accelerate their digital transformation journey. Most organizations have some form of digital initiative in play that depends on integration and automation technologies to streamline their business processes.

In fact, Gartner finds that 80% of organizations consistently self-report increased or continued investment in hyperautomation initiatives — meaning the proliferation of business apps will continue to accelerate and the need for integration will become even more critical. Coined by Gartner in 2019, hyperautomation is automation at its highest level of maturity: It is a disciplined approach adopted by competitive enterprises to automate as many business and IT processes as possible to drive business decisions.

iPaaS is at the heart of any automation – or hyperautomation – initiative. With a cloud-based integration platform, businesses can create integration flows to connect and deploy cloud-based and on-premise applications without hardware or middleware. The benefits of doing so are endless: it can help reduce costs, minimize or eliminate human error, and reallocate resources to focus on higher value tasks.

Businesses rely on a complex and ever-growing mix of platforms and systems to deliver their services, and iPaaS solutions enable IT to quickly connect these applications instead of custom-coding each integration, and therefore streamlining and accelerating operations across the organization. Low-code iPaaS offerings also make it easy for non-technical employees to build integrations, alleviating the burden on overwhelmed IT teams.

The Exponential Benefits of Message Queue

Jitterbit's Harmony expands on the traditional capabilities of iPaaS. It is a low-code iPaaS solution that combines the power of integration, API management, no-code application development and, now, message queuing.

Message Queue (MQ) is fully integrated with the Harmony iPaaS platform. The cloud-based, multi-tenant message queuing service provides customers with the tools and capabilities to create, deploy, and manage message queues to support asynchronous processing, guarantee message delivery, and enable more efficient management of system workloads and resources.

MQ's integration with Harmony removes the overhead of configuring the backend infrastructure of a message queue – a time-consuming and costly process. With the already powerful integration capabilities in Harmony, this gives customers a single platform to build and manage business process automations throughout the business. The key benefits of leveraging Jitterbit's MQ include:

Easy to use: Built into Harmony

Since MQ is fully integrated within Jitterbit's Harmony platform, it is easy to use and configure. Users can access MQ Connector (which acknowledges, retrieves, and sends messages in the queue) in Harmony Cloud Studio, and manage queues in Harmony Management Console.

Eliminates the need to configure the backend infrastructure for a message queue

MQ eliminates the need to configure the backend infrastructure for a message queue, simplifying the management of complex automated workflows and empowering automation.

Simplifies the management of complex automated workflows

MQ is specifically designed for use in environments that include many integrated applications, often experience spikes in transaction volumes, or need to deal with a high volume of complex automated workflows. This particularly impacts financial and healthcare organizations, those dealing with the movement of products and services in the supply chain/logistics sector, institutions that handle government documents or intellectual property, or e-commerce companies who want to fulfill orders successfully without fear of order loss.

How Message Queue Integrates Communications in Harmony

Many organizations continue to rely on synchronous (real-time) communication, but this approach can lead to loss of messages, even with retry and other failsafe strategies. With increasing dependence on the cloud, the surge in the number of Software as a Service (SaaS) applications has led to the need for more integration and information exchange amongst these apps – and a need for complex automated workflows to manage these interactions.

However, if you rely on synchronous communication, transactions between these apps often fail due to unstable connectivity or network errors, overload on systems, spikes in transactions, or network downtime due to system upgrades and maintenance.

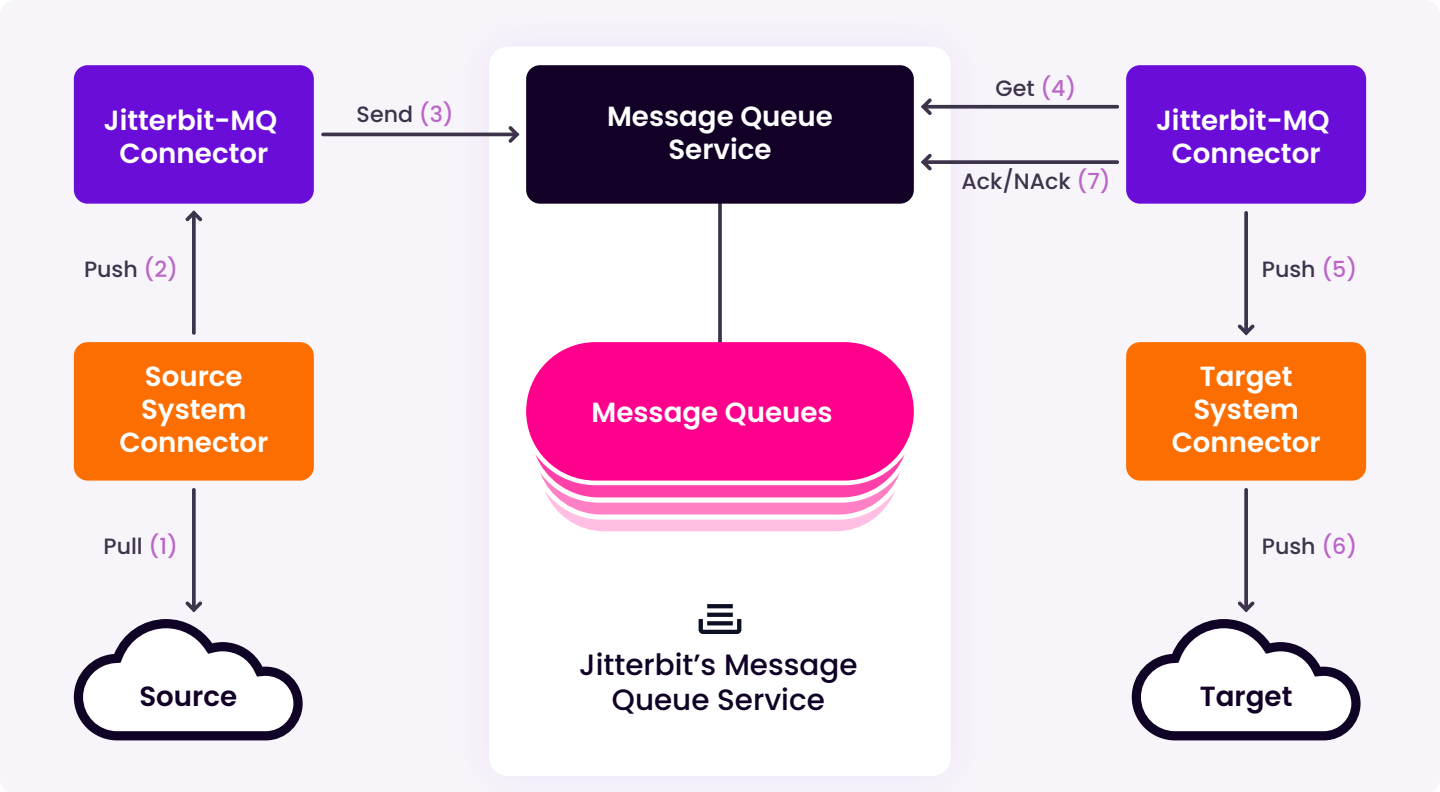


IMAGE SOURCE: **JITTERBIT**

By contrast, a message queue ensures reliable message delivery. It sits between applications, holds the incoming messages, and delivers them to the receiving system as per instructions. In addition to reliable delivery, this provides increased performance and the assurance of secure messages.

The benefits and capabilities of a message queue service include:

1. **Guaranteed Delivery**: Native capability utilizing explicit 'acknowledgements' or dedicated retry queues
2. **Message Throttling:** Ability to cope with peaks in transactional volume while safeguarding against backpressure & honoring downstream system constraints
3. **Asynchronous APIs:** 202/Accepted response along with a trackingId (paired with a synchronous API to retrieve the payload once ready, and/or a webhook to be notified once ready)
4. **Message Tracking:** Breadcrumbs in the form of message headers (metadata) that act as an audit trail of the message journey through an integration workflow
5. **Dynamic Routing:** Branching logic based on identifiers such as Format/Object/Version
6. **Message Prioritization:** Ability to prioritize based on Business Criticality, and/or apply quality-of-service (QoS) rules.
7. **Payload Encapsulation/Encryption:** 'message in a message', along with routing keys/metadata that drive adaptive behavior
8. **Push Queues:** Listen to (poll) specific queues and send push notifications to drive event-driven patterns

With its reliable and secure message handling, Jitterbit's MQ is ideal for all businesses that require trustworthy transaction completion.

Learn more at jitterbit.com/product/message-queue.

Jitterbit

Jitterbit empowers businesses to optimize their connectivity and scalability through a single integration and workflow automation platform. Our mission is to turn complexity into simplicity so your entire organization can work faster and more efficiently.

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