

Payment infrastructure that is simpler, faster, and more adaptive



“The term ‘real-time payments’ perhaps hides an obvious truth: in order to make the payment real-time, everything and anything that touches the payment, including fraud checking, balance checks, and the front-end initiation system, have also to be realtime.”¹

Gareth Lodge
Celent

The imperative for modern payment infrastructure

Payment organizations are increasingly at the [tipping point to modernize their payment infrastructure](#) to better compete in a rapidly changing world. The emergence of new entrants, equipped with [the latest artificial intelligence and cloud technology](#), can deliver payment services faster and at a lower cost per transaction, which has increased the urgency to modernize for many organizations. Consumers have an expectation that digital payments can be processed using any device, network, and channel. Competition and regulators have reduced processing fees, and corporate treasurers are increasingly expecting better experiences from faster payments and richer data. Thus managing liquidity becomes easier and more transparent.

Other factors, in addition to demands for better customer experiences or cost reduction, are fueling the need to modernize. Payment volumes have accelerated over the last several years, driven by an increasingly digital population and overall expansion of the global economy. Global payment revenue is expected to [surpass US\\$2.4 trillion by 2028](#).² This revenue growth has [increased competition in the market](#) and has revitalized the conversation to prioritize and accelerate payment modernization for many organizations.

Innovate, adapt, and scale on your own terms with confidence

Real-time payments with events and data streaming

Markets across the globe have followed the path of Japan and Brazil, introducing new payment schemes to accelerate the settlement of funds. While there is not a singular term to describe these new schemes globally, they all relate to the same concept of clearing and settling payments quickly. This focus is leading the way for immediate payment processing to become the new normal in most markets.

Most payment organizations have had the technical capability to exchange data with messaging infrastructure for quite some time. However, recent advancements in messaging presented an opportunity for a fresh look at these capabilities. Tapping into data streaming means that organizations can process messages at a scale that was available only to mainframe and bespoke messaging systems in the past. Payments is a high volume, low margin business. In order to be on the right side of the volume-value trade-off, financial institutions need messaging infrastructure that can automatically adjust based on transactional volumes. It also means that the infrastructure can efficiently process hundreds of thousands of messages per second to support an always-on, real-time payments service.



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¹ Lodge, Gareth. “A Real-Time Hub for a Real-Time Everything Future.” Celent, 16 March 2018.

² “Global payments 2019: Tapping into pockets of growth.” Boston Consulting Group and SWIFT, 2019.



“65% of banks say their payment infrastructure will need significant renovation in the next three years and 14% in the next year. Banks are investing in payment modernization to meet compliance requirements, drive efficiencies, and better compete. Those that delay or defer this work risk falling behind the rest of the market.”³

—
David Bannister and Kieran Hines,
Ovum (now Omdia)

However, it is not just about improving the performance and resilience of exchanging data online, it is also about becoming more efficient with exchanging data offline. While the world continues to move toward real time, the need for file-based transfers still remains. The union between cloud, storage, and messaging means that complicated file handling and integration can be replaced by an event-driven approach for file transfers. In return, payment organizations can apply a uniform approach no matter what channel submits the payment instruction.

Adapt to evolving standards with cloud-native connectivity

Global standards such as ISO 20022, updated annually since 2004, show an organization’s ability to quickly adapt to new messaging standards. However, adopting the ISO 20022 standard is not the only challenge. Payment organizations need to connect and integrate with many messaging formats inside and outside of the organization. The cost and complexity of integration is a source of pain and frustration for many organizations. Customers are disillusioned with promises by vendors for quick and easy integration, only to find disappointment as they adopted their technology.

Taking a cloud-native approach to integration means organizations can adopt new messaging formats and standards rapidly without the toil of previous generations of technologies. It allows organizations to quickly model and test message schemes and formats with point-and-click browser-based tools that can be deployed using prebuilt delivery pipelines.

Connections, routes, and transformations can be created for just about any system with built-in templates using an intuitive browser-based interface. Integration with the underlying cloud platform means that teams no longer need to wait for the provisioning of infrastructure to support connectivity, allowing you to let go of the centralization and specialization of the past and empower your teams to focus on other things besides integrating systems.

Counter financial crime with cloud-native rules, machine learning, and artificial intelligence

Criminals continue to find new ways to circumvent controls and take advantage of weaknesses in preventing financial crime. From 2008-2018, organizations were sanctioned **US\$27 billion in fines** for failures in their screening processes to detect financial crime.⁴

Accelerating payment processing is great for customers and banks but also for nefarious actors who wish to commit financial crime. Applying real time intelligence across the payment process is essential to maintain compliance obligations. Scoring payments in real time requires evaluation of high volumes of data that is being streamed from various channels. It also means that organizations need to efficiently deploy and manage machine learning models so they can better detect illicit payment activity.

Artificial intelligence, machine learning, and cloud-native rule processing are part of the toolbox that payment organizations must use to **meet compliance obligations** but these tools are no longer optional capabilities.

³ Bannister, David, and Kieran Hines. “*Making the Business Case for Payment Transformation.*” Ovum and Temenos, Oct. 2018.

⁴ “*Global AML/KYC/Sanctions Fines: 2008 - 2018.*” Fenargo, accessed 17 March 2020.



The time and cost spent on infrastructure maintenance and software deployments can weigh down the payment organization and prevent it from being competitive. As the size of the payment infrastructure grows, so does the impact of the nonvalue-added maintenance and deployment activities.

Adapt to stay ahead of the competition with any cloud

Thriving in an increasingly dynamic digital world can be a challenge with previous generations of technologies. Managing capacity for volume increases, adopting new security policies, coping with cost pressures, and delivering features more quickly can overwhelm organizations. Thankfully, over the last several years, cloud platforms have improved how applications are managed and delivered. They make it possible for compute and application resources to be adjusted automatically as payment volumes increase. Cloud platforms also provide the ability to deploy software without human intervention. As a result, the cost for hosting can be reduced, and technology resources can be liberated from maintenance activities. These benefits are amplified as payment volumes increase.

Cloud platforms make it easier for payment organizations to respond to changing market conditions, helping these organizations adapt capacity automatically and scale intelligently across cloud providers to meet growing payment volumes. You can move between cloud environments without redesigning and re-engineering your payment service to meet changing data residency or commercial requirements. It also makes it easier to change security policies to deal with emerging internal and external security threats.

Being adaptable also means that you need to make it easier to adjust the running processes while limiting the impact to ongoing operations. Cloud platforms make it easy to deliver smaller changes more frequently, run multiple versions of software concurrently, and switch over automatically when your users are ready.

The time and cost spent on infrastructure maintenance and software deployments can be an unnecessary burden and prevent it from being competitive. As the size of the payment infrastructure grows, so does the impact of the nonvalue-added maintenance and deployment activities. Red Hat automates the process of maintaining the hosting infrastructure – from the container applications that perform the payment processing to the underlying operating system that hosts the cloud platform. The result is that your payment organization can spend more time creating value for your customers and adapting to their needs instead of focusing on basic system and infrastructure maintenance.

Innovate on your terms

The market has a ruthless way of punishing organizations that are unable to adapt and innovate. What often holds back organizations from being more adaptive is a centralization of teams and technology that are governed by a more traditional organizational model. Modern cloud platforms have made it possible to break free of these traditional models, empowering teams to innovate without being constrained by centralization. They provide application, developer, and data services that can be installed on the cloud platform through an intuitive marketplace.

Having technology that aligns with the organization's goal of being more nimble is only part of the equation. No single technology provider can supply all of the tools required for an organization to innovate and adapt. Having a cloud platform that is based on open source and open standards means that you are not constrained by the capabilities of a single technology partner.

With Red Hat, you gain access to an open ecosystem of partners that are powering the future of the software industry. You have support from a leader in critical [open source communities](#), allowing you to co-create with a respected leader in the industry.

Learn more

A modern cloud platform can help you to take advantage of real time processing, adapt to changing messaging standards, reduce operating costs, and innovate with digital ecosystems. Go to <https://www.red.ht/payments> to learn how Red Hat can help make payments simpler, faster, and more efficient for you.



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