The Payment Rails Playbook for Financial Services
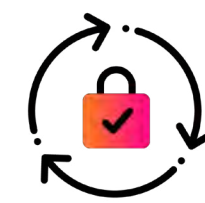
Harness intraday data to drive payment security and insights

Protect your payments ecosystem

The payments landscape is undergoing a seismic shift, shaped by increasing regulatory demands, rising customer expectations, and technological disruption. More than 60 countries have greenlit open banking — and more are planning to follow. However, legacy payments infrastructure was built for a slower, simpler world. Today's real-time, digital, and global economy demands speed, transparency, and resilience — and payment rails will have to evolve to keep the pace.

Thanks to observability tools, financial services institutions can modernize their payment rails with intraday insights to deliver secure transactions and:

Proactively mitigate enterprise risk

Strengthen compliance and fraud protection

Enhance customer transparency

According to the Splunk Downtime Report 2024 in Financial Services, the cost of downtime for financial services organizations is

$152

million annually

Navigate the changing payments landscape

Financial institutions are navigating regulatory reforms, technological disruption, and shifting customer demands. In this new era, homegrown and hybrid systems are no longer enough. As the global economy moves toward instant, borderless payments, organizations understand the new reality: yesterday's slow, siloed payments infrastructure cannot keep pace with today's real-time, digital-first world.

For financial institutions, this challenge isn't just about speed. It's about laying the foundation for payment systems that are secure, transparent, and resilient in the face of complexity.

To stay relevant, banks and payment providers can reimagine their infrastructure to deliver instant and seamless transactions. Doing so will also safeguard customers' sensitive data and attain compliance in a high-stakes regulatory environment.

Financial institutions that modernize their rails tend to thrive because they gain:

End-to-end reliability that ensures payments are fast, accurate, and transparent

Resilience against disruption with built-in observability and real-time monitoring

Customer trust and regulatory alignment through secure, compliant, and auditable transactions

> When **asked about their company's payments operations**, financial decision-makers described them as manual (47%), complicated (35%), slow (27%), and inefficient (26%).

The path to payment security and modernization

The rise of fintechs and new payments systems has drastically reshaped customer expectations. These faster, seamless alternatives challenge legacy banking systems, and for today's banks the risk isn't just inefficiency. Banks also risk falling behind in a market where instant, reliable payments are the new baseline.

And regulatory pressure compounds these challenges. Rising mandates around transparency, data security, and consumer protection make it essential to modernize. Without resilient, auditable payment systems, financial institutions face steep fines and reputational damage. At the same time, escalating cyberattacks and fraud attempts demand proactive defenses.

Institutions that recognize the importance of modernization benefit from:

Compliance-first systems that withstand evolving regulatory pressure

Operational agility to eliminate manual inefficiencies and bottlenecks

Resilient infrastructure built to detect and defend against modern threats

68%

of financial decision-makers agree that their finance team wastes a lot of time on payment operations.
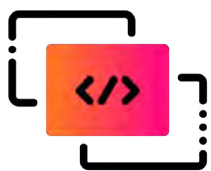
Top threats to payment security

The shift to real-time, digital payments has dramatically widened the threat landscape. From API attacks to fraud and account takeovers, adversaries are exploiting gaps in legacy infrastructure. Downtime and disruption carry steep costs — not only in revenue but also in customer trust.

The problem isn't just the attacks themselves, but also the lack of visibility. Siloed systems make it harder to spot anomalies fast, leaving financial institutions in a reactive position. Protecting payment integrity requires treating payments as a core security priority with proactive monitoring and adequate defenses.
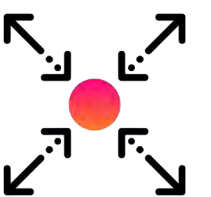
Building resilience against today's payment threats requires:
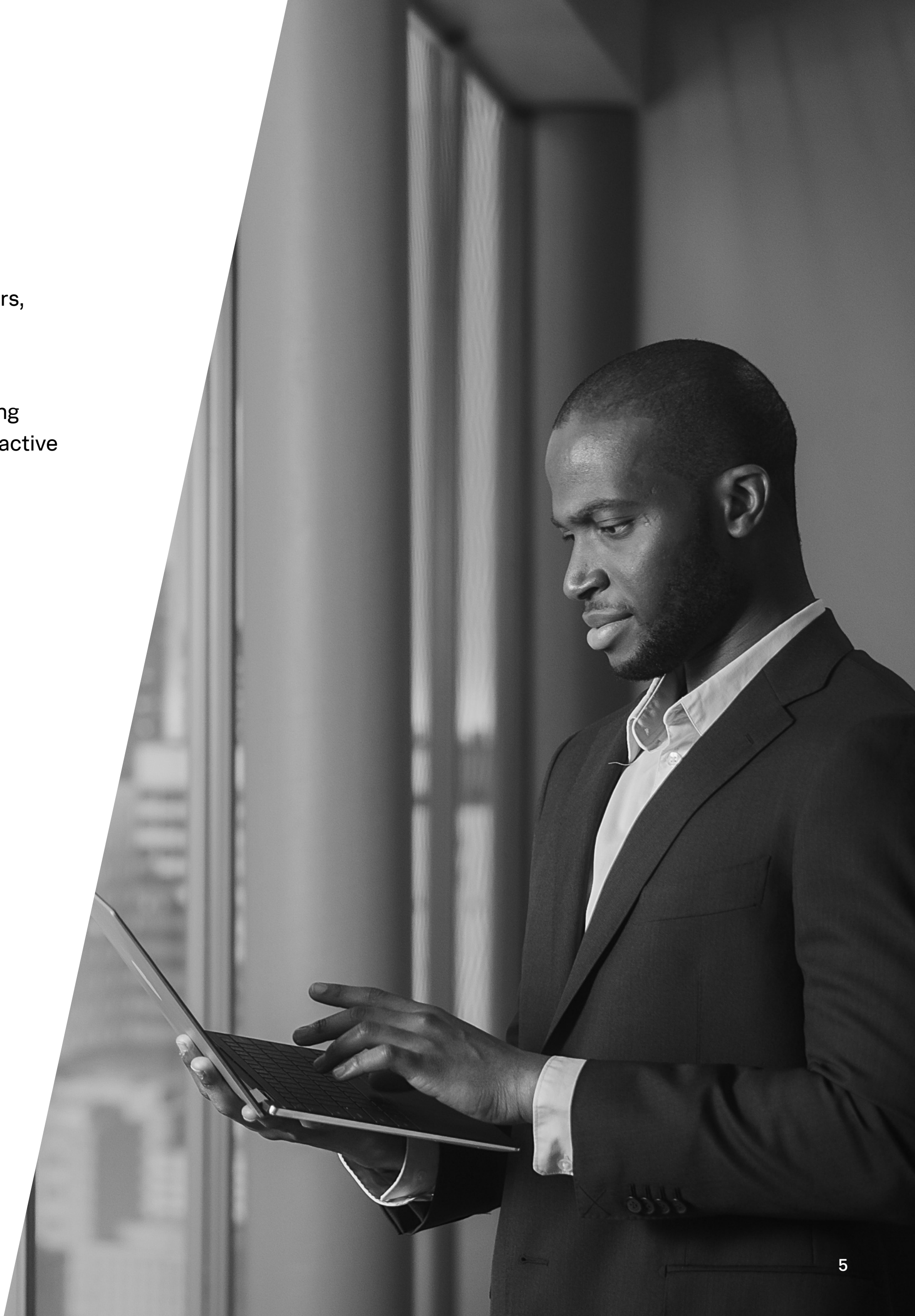
Unified visibility across systems and transactions

Real-time fraud detection to quickly stop suspicious activity

Adaptive defenses against evolving cyber risks

72%

of respondents in the Splunk State of Security 2025 in Financial Services Action Guide reported that their tools are dispersed and disconnected.
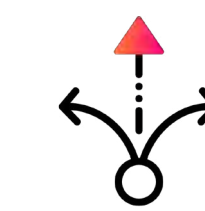
Drive decisions with intraday data

Traditional payment operations rely on end-of-day reporting, leaving institutions blind to issues until it's too late. Fragmented visibility means delays, errors, or fraud can spread quickly. In a real-time economy, reactive operations just can't keep up.

Intraday visibility transforms this picture. By surfacing risks, anomalies, and compliance gaps as they happen, financial institutions gain control over payments in motion. This proactive approach can speed up decision-making, strengthen resilience, and reduce both financial and operational risk across the global payments infrastructure.

Intraday visibility turns reactive operations into proactive control through:

Real-time risk detection to stop problems before they escalate

Faster, data-driven decision-making for greater control and resilience

Continuous compliance and oversight through dynamic monitoring

68%

of respondents at organizations with a leading observability practice say their teams are aware of application problems within minutes or seconds of an outage or slowed performance, 2.8x the rate of beginning organizations.

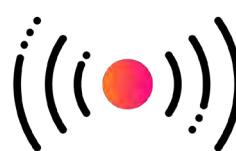Source: Splunk State of Observability 2024

Mitigate enterprise risk

Every payment delay, failure, or anomaly carries both financial and reputational risk. Legacy rails magnify those risks, making it harder to spot issues early. Idle balances and overdrafts further erode efficiency across payment systems.

Real-time monitoring and analytics reduce these risks. And, by identifying anomalies as they happen and optimizing liquidity in motion, institutions can reduce losses, safeguard assets, and maintain confidence in their payment systems.

To proactively mitigate risks, organizations should have:

Instant anomaly detection to quickly identify payment failures

Liquidity optimization to minimize funding gaps and overdrafts

Continuous, always-on monitoring for early warning and faster response

On average, financial organizations that purchase observability technology report an annual return on investment of

2.5x.

Source: Splunk State of Observability 2024 in Financial Services

Unify your payment data

Data fragmentation is one of the biggest barriers to payment rails integrity. Too often, data silos and disparate platforms require teams to access multiple systems just to reconcile payment activity or investigate anomalies, slowing response times and creating blind spots. In a high-stakes environment, lack of data control can lead to higher operational costs, increased risk, and missed opportunities for efficiency.

With better data standardization and unified observability that leverages OpenTelemetry (OTel), financial institutions can capture and analyze payment data consistently. Splunk uses an OTel-native approach to give users access to insights on demand and less manual toil. This also ensures that organizations instrument once and apply visibility everywhere — securing applications, ensuring compliance, and inspiring smarter decisions at scale.

By taking control of data, financial organizations can:

Unify visibility to reduce silos and speed up decision-making

Automate oversight to minimize manual work and human error

Cut costs by collecting and analyzing only the data that matters

47%

of financial services institutions admit they have to log into different platforms to access different data sources.

Source: Splunk, The New Rules of Data Management 2025

Strengthen compliance across payment systems

Regulators are raising the bar on cybersecurity in the financial services industry with mandates such as DORA and T+1. Legacy payment rails, with fragmented oversight and manual checks, can't quite keep up. Gaps in compliance create costly fines, reputational damage, and operational risk.

Automated, real-time monitoring changes the game. With predictive insights and dynamic checks, compliance shifts from reactive box-ticking to proactive assurance. This allows organizations to reduce penalties while strengthening resilience and keeping financial institutions one step ahead of incoming regulations and mandates.

A strong compliance posture depends on:

Real-time oversight that flags risks instantly

Automated checks to streamline regulatory reporting

Predictive insights to get ahead of mandates

52%

of financial services organizations cited failure to meet compliance or regulatory mandates as a result of data management gaps.

Source: Splunk State of Security 2025 in Financial Services

Get ahead of financial crime and fraud

Financial crime and fraud are fast-moving targets, with banks and fintechs reporting more attacks on both businesses and consumers. Legacy payment rails make it difficult to spot suspicious patterns quickly, leaving institutions exposed to losses and customer distrust.

Modern fraud prevention uses real-time data and risk scoring to flag anomalies and stop threats before they spread. From account takeovers to money laundering, proactive monitoring builds resilience and protects both assets and reputation.
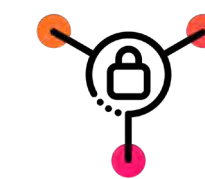
Staying ahead of financial crime and fraud requires:

Continuous monitoring of transactions and behaviors

Risk scoring to detect money laundering and fraud attempts

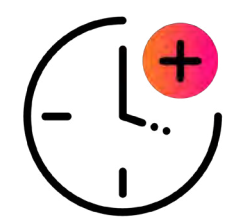Proactive defenses against account takeovers and emerging threats

50%

of banks, fintechs, and credit unions report an increase in business fraud, while over 2/3 report an increase in consumer fraud.

Establish infrastructure visibility

Transparency is no longer optional — it's required for those institutions seeking a competitive advantage. Customers and counterparties want real-time clarity on payment status, and financial institutions that deliver it strengthen trust while elevating service. Transparent payment rails turn what was once a source of friction into a driver of loyalty.

Modernized infrastructure makes this possible. With real-time visibility, organizations can provide instant updates, streamline reconciliation, and minimize back-office effort. The result? Greater efficiency, lower costs, and stronger customer relationships.

Transparent payment systems empower financial institutions to:

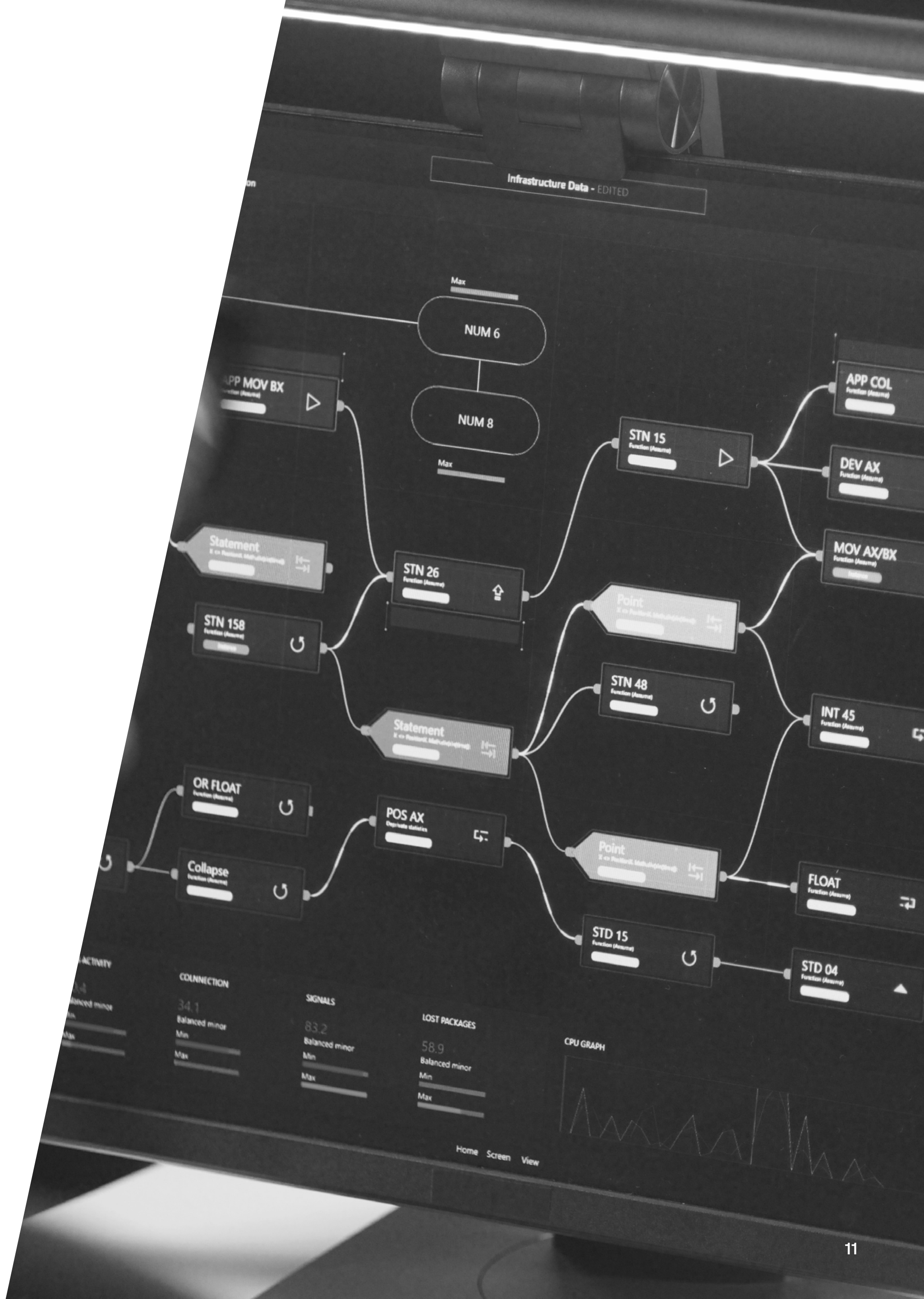Enhance customer confidence with accurate, timely updates

Streamline operations by reducing inquiries and exceptions

Increase efficiency through faster reconciliation and better service

73%

of bank respondents say they grapple with the legacy infrastructure that's in place, which hampers the ability to deliver consumer payments that are rooted in batch processing.

Strengthen your payment systems with Splunk

Splunk's unified platform for security and observability can help you:

Track payments with advanced monitoring

Real-time monitoring, fraud detection, and compliance reporting secures payment rails and increases integrity to protect customer data. With complete visibility of the entire payment lifecycle, financial institutions can track how payments flow across multiple systems.

Increase third-party monitoring and integrity

Security teams benefit from end-to-end visibility into third-party performance, usage, and security to monitor and track all third-party activity across the payments ecosystem. With centralized monitoring, teams can quickly identify — and resolve — performance issues.

Support infrastructure transparency

Ensure optimal performance and availability through comprehensive server, network, and application monitoring. Teams can proactively identify and resolve potential issues before they impact payments.

Streamline compliance

Shift from manual checks to automated oversight. Real-time compliance monitoring can help reduce risk to the payments environment, ensure regulatory alignment, and strengthen trust while saving time and cutting costs.

Enhance financial crime and fraud detection

Combat fraud in payments ecosystems through multi-channel detection, leveraging visibility into online banking, mobile applications, APIs, and third-party integrations — all in one place. With real-time analytics and advanced machine learning algorithms, teams can analyze contextual information to identify suspicious patterns.

Innovate for the next era of payments

Modern payment rails demand resilience, speed, and trust. Splunk delivers all that and more with observability and security built for real-time financial ecosystems. From instant monitoring to fraud detection, Splunk helps financial institutions move beyond the limits of legacy infrastructure and stay ahead of threats.

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> **It's important to respond to incidents in a timely manner. Having end-to-end visibility across the board [through Splunk Enterprise Security] equips the team to make sure that whatever incident happens, it has a very minimum impact on the business. It also allows us to fix things that need to be fixed immediately.**
>
> — Head senior manager, security operations center, medium-sized financial services firm

splunk>
a CISCO company

Learn more:

www.splunk.com