

Splunk for Retail Omnichannel Operations

Deliver Seamless Shopping Experiences for Your Customers

Key Benefits

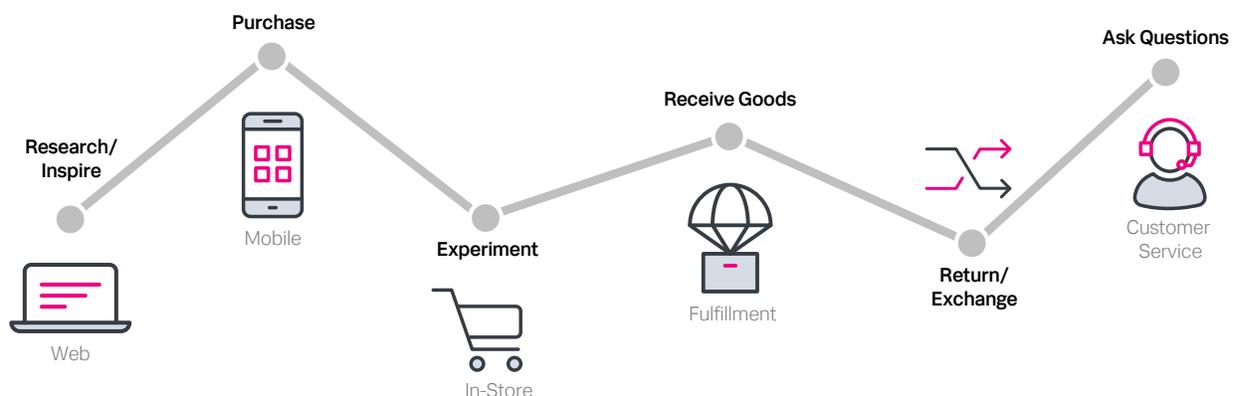
- **Protect your brand** — Prevent revenue loss from outages and service degradations by proactively identifying and restoring services before they impact the customer experience
- **Deliver reliable experiences** — Rapidly deliver new digital services at scale without sacrificing quality, availability and performance
- **Accelerate operational innovations** — Continuously improve services for customers by providing the most convenient purchasing options, enhancing website performance and maturing fulfillment offerings

The technologies and supporting infrastructure that power retail are growing more complex every day. This complexity is driven by the continuous integrations of online and in-store experiences to make the shopping experience more seamless. Omnichannel capabilities such as Buy Online Pickup In Store (BOPIS), Curbside Pickup and Ship From Store are necessary to keep pace

with rapidly changing customer expectations. With increasing volumes of data from online activity and in-store technologies, it's crucial to modernize IT operations to gain greater cross-channel visibility of infrastructure, services and critical retail applications. In doing so, real-time responses to customer-impacting issues can become a reality. Making sense of data in real time requires a modernized approach so that retail teams can continue elevating the customer experience, protecting the brand and revenue, managing their infrastructure and digital interactions with customers, and rapidly delivering new services.

Splunk® provides retail teams a single, real-time view of omnichannel operations — from eCommerce to in-aisle experiences — for better investigation, monitoring, analysis and action on infrastructure and application data to impact the business. With logs, metrics and traces from any source including web servers, mobile devices and applications, databases, networks and IoT devices centralized in one data platform, retailers can shorten the feedback loops between people and technologies to rapidly resolve performance issues and get time back with customers.

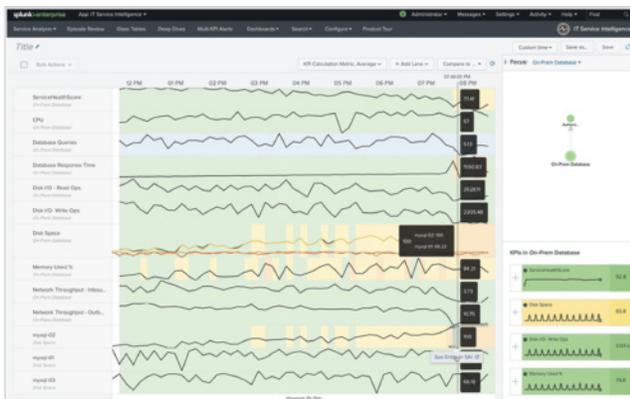
Omnichannel Operations enables frictionless experiences to customers across channels while providing end-to-end visibility for all technologies and touchpoints



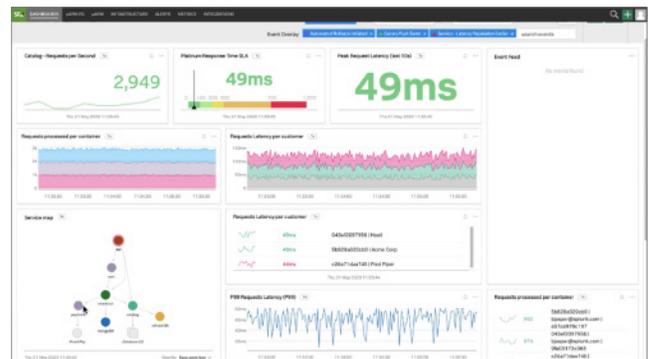
Increase eCommerce Reliability

Go into peak shopping seasons and events with confidence by eliminating blind spots in the digital ecosystem. A slow or unavailable website occurs when an isolated service or a broad network disruption arises. These applications depend on many services such as DNS, network connectivity, databases and the infrastructure it runs on. Any incorrect settings or performance hiccups from these systems or resource contention issues within physical and virtualized servers will negatively impact application performance and the customer experience. Splunk provides end-to-end visibility to effectively troubleshoot across all technologies and touchpoints by bringing data sets together while correlating application data, infrastructure metrics and business performance.

In traditional data center environments, Splunk IT Service Intelligence (ITSI) combined with a metrics-centric backend, Splunk App for Infrastructure, helps retail teams decrease event noise while quickly identifying infrastructure and application issues. This can all be done from dashboards and drilling into the raw log data to understand the root cause of the problem. Predictive KPIs and health scores are powered by machine learning so that Splunk ITSI can show precisely which service is likely to degrade and when while instantly drilling down into root cause.



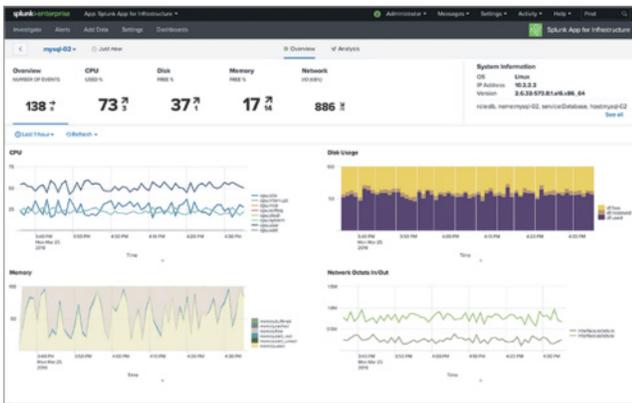
In complex microservices cloud environments, Splunk’s SignalFx Infrastructure Monitoring and SignalFx Microservices APM products collect all traces in real time to correlate them with infrastructure metrics and application logs - helping retailers better understand the current state of their applications at any point in time. This results in deeper insights into the health of their services, request/response latency, application errors, and the end-to-end user experience of customers throughout their ecosystem. Whether a retailer is operating in an on-premises environment or cloud infrastructure, Splunk integrates these offerings for a unified view into the hybrid retail landscape.



Optimize Store Operations

Retail operations teams are leveraging existing and emerging in-store technologies to improve productivity while better serving their customers. POS systems, handheld devices and applications, payment processing services, wired and wireless networks, surveillance cameras, kiosks, IoT and more are essential to providing the level of service and quality of frictionless retail experiences that customers come to expect. Identifying issues in retail systems, applications and devices on store networks at scale requires a comprehensive view of the health of store technologies and touchpoints, as well as the ability to drill down to a particular location, network, device type, software version or individual endpoint.

Splunk Enterprise combined with Splunk ITSI enables retail operations teams to create device and system inventory maps for each store and gain insights into system health, tracking CPU, memory, firmware and disk operable statuses while providing greater visibility to application performance. For example, retailers can track customer interaction times, transaction counts and device usage percentage directly from POS logs. Retail teams can also use Splunk to keep a pulse on their store network availability while monitoring and analyzing the applications running, databases, store inventory, workforce management applications, replenishment and back office functions.



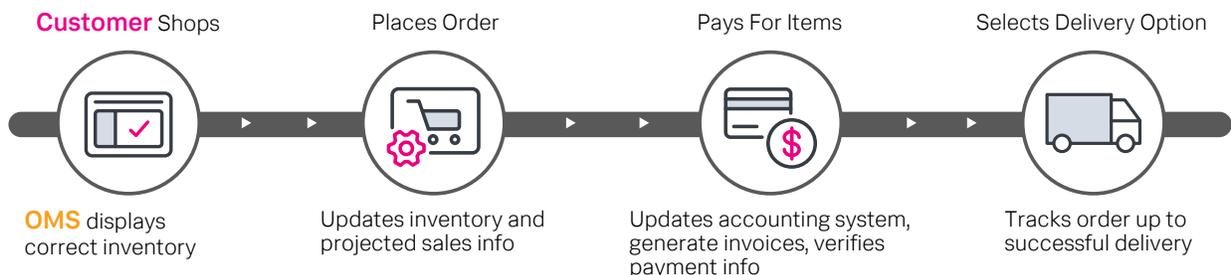
Drive Fulfillment Operations Efficiencies

Order management and the orchestration across distribution points has become a competitive necessity in today's retail landscape. It's no longer scalable for retailers to run their online and brick-and-

mortar businesses separately meaning that inventory management systems need to be connected or consolidated. Retailers offering services such as BOPIS, Buy Online Return/Exchange In-Store and Endless Aisle have deployed modern order management systems (OMS) to manage the complete supply chain as an interconnected ecosystem. The OMS provides a complete view of all orders across sales channels to ensure products make their way to customers faster and more efficiently. As the OMS becomes the central hub for omnichannel fulfillment, retailers are depending on more reliable fulfillment options and last-mile logistics strategy.

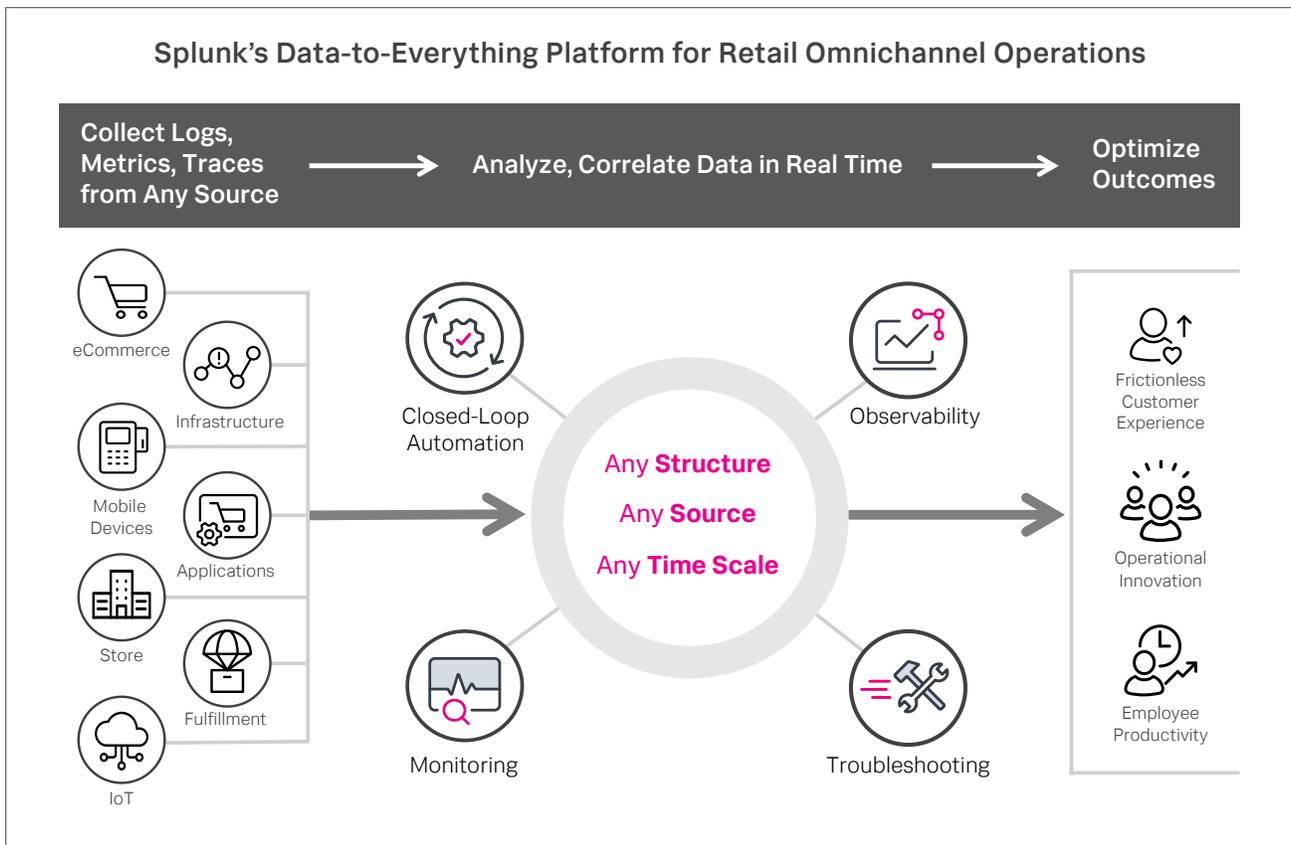
One of the challenges fulfillment operations teams face with intelligent OMS ecosystems is monitoring and end-to-end visibility. The OMS includes many different functionalities that need to be monitored to ensure it is running properly and as expected. Additionally, the OMS can integrate with sales channels, payment and accounting solutions like Paypal and Xero, and various 3rd-party shipping providers like UPS, FedEx, DHL and USPS. It takes an integrated data platform to collect, analyze and correlate the data across the OMS components, eCommerce channel, in-store POS, enterprise resource planning (ERP) software, warehouse management systems (WMS) and shipping solutions in real time to ensure customers get exactly what they want, when they want it.

Splunk's Data-to-Everything Platform provides full visibility into fulfillment operations while notifying retail teams of system performance issues at each customer touchpoint



Splunk, the Data-to-Everything Platform, for retail omnichannel operations provides full visibility into fulfillment operations while proactively notifying teams of system performance issues at each customer touchpoint. Splunk's ability to monitor and observe the processing throughput, response time, pending orders, and errors generated at the API level of the OMS provides immediate value to retail operation teams. Teams can quickly resolve OMS performance issues by

collecting throughput queries, application server logs, and traces when more information about a component is needed while the application is running. This data can be correlated across logs, metrics and traces from other critical retail interconnected systems to ensure overall health of fulfillment operation centers and customer satisfaction.



Learn more about [Splunk in retail](#).



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