

Impact of Splunk on mPOS

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ABSTRACT

The use of smart devices has changes the lifecycle of the security. Almost all kind of useful tools you can find on your smart devices. People use those to buy goods and products every day. For the purchase of goods, one has to pay and Availability, Performance and Security plays a vital role when payment or transactions are involved.

The concept working behind this phenomenon is M-Commerce. It is defined as system which is involved in money transactions over the wireless environment. M-commerce business is performed using same type of business transactions like the e-commerce system.

Keywords

Security, splunk, mpos, intelligence, analytics, availability

INTRODUCTION

M-PoS: Mobile Point of Sale

Since 1950's, the process of checking out the products in a store has not changed. Shoppers choose the merchandise they want to purchase and they approach fixed counters and store associates to pay. In 1970's retail began a transformation with Point of Sale (PoS) terminals replacing. Cash registers and Credit cards becoming the norm. Retailers began introducing mobile PoS. These solutions give the retailers the ability to process payments anywhere with any mode.

Many retailers are piloting new technologies in their stores, but one type in particular has the potential to forever change how a transaction process between a business and its customer i.e. mPOS.

mPOS technology has taken the point of sale from the back of the store to just about as far as your imagination can take you. With mobile point of sale solution, you can harness the power of a smartphone, tables or other mobile devices to accept payments on the spot. From providing services at your customer's home to doing business at tradeshows, flea markets, sports venues or food trucks and

much more. With a merchant account, Mobile application and card reader you can make all mode of payments on the go quickly and easily. It offers benefits and opportunities to connect with your customers in new ways and make sales anywhere.

CHALLENGES WITH mPOS

mPOS devices have been shown to be especially vulnerable to compromise critical security flaws in chip-and-pin devices makes it possible to compromise mPOS terminals with standard protocols and tools such as micro USB and Bluetooth. These exploits easily allow attackers to access PIN & Card details, it can also alter the mobile software to collect and accept illegitimate payments. Attackers in case of iOS can use Airdrop to surreptitiously send data from malicious software onto the mPOS device. This is why it is always recommended to turn off Bluetooth while not in use. From above, it is of no doubt why retail is expected to be hit hard by cybercrimes specially in the arena of fraud and mobile threats.

SPLUNK FOR mPOS

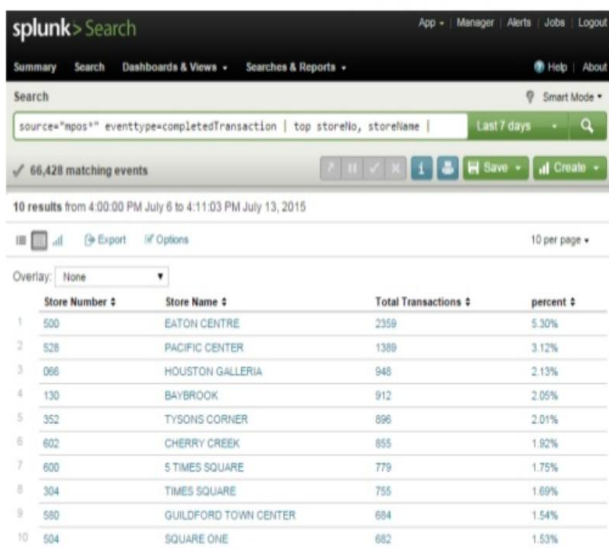
People expect to be able to shop anytime and from anywhere – instore or out of store, online, on mobile devices or over the phone. To provide their seamless customer experience, IT infrastructure is becoming increasingly complex. Poor Availability and Performance, Fraudulent transactions, theft of customer information adversely affecting revenue streams, business reputation and the most important customer satisfaction. Real Time Monitoring solutions are therefore crucial investments for securing existing or planned mPOS systems and presenting your retail enterprises data assets. Creating a seamless customer experience begins by having the right technology to connect all of your sales channels. At the same time, infra availability, protecting sensitive customer data has always been more important. Therefore, every organization look around for solutions with the joining attributes:

- Real Time Intelligence: Feeds real-time mobile intelligence and insights to MINT platform.

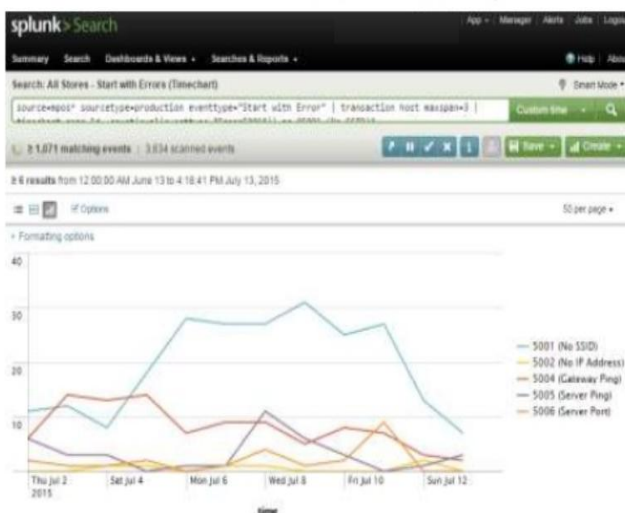
- Multi-Layered Defense: Defends against malware, app exploits, repackaged apps, sniffing, network attacks, rogue networks, OS vulnerabilities.
- Real-time insights into cross-channel customer behavior.
- Track orders, inventory and other processes from end to end.
- Maintain uptime performance for store, web and mobile.
- Protect customer data and prevent security breaches.

Organizations using mPOS devices should ensure that their mobile end points are secure to prevent hackers from accessing privileged networks. IT in Retail is undergoing a major transformation with increasing focus on core initiatives.

Fortunately, SPLUNK platform can help both mPOS and other mobile devices on a corporate network from being compromised. SPLUNK software enables retailers to transform the massive volumes of machine data into business insights that capture more revenue, improve the customer experience and mitigate security risks. SPLUNK enables you gain operational visibility across all system channels and track inventory, orders and other processes from end to end. SPLUNK innovative solution ensures that mPOS terminals and other mobile devices are only running approved software, halting device activity if a change in security posture is detected. Additionally, it provides IT and operations the ability to manage and secure fleet of devices remotely, enabling unprecedented IT operational efficiencies and business agility. SPLUNK for operational excellence drive efficiencies, reduce cost, detect fraud, gain insights into customer journeys, accelerate order fulfillment, faster checkout and maintain a better security posture.



a) mPOS Transactions – Top Stores



b) mPOS Error Codes – Start Up

Fig. 1 mPOS Dashboard

WHY SPLUNK FOR mPOS?

Security, Safety & Compliance:

Help protect mission-critical assets and systems against security threats. It helps gaining visibility into system performance and satisfy compliance reporting requirements.

IT Operational Excellence:

It helps to manage an increasingly complex environment- customers using mobile devices to pay for goods in store, via mobile browser or app, kiosks and mobile POS and tablets deployed in stores, call center and international operations- all of these areas have grown exponentially in the last few years, which places additional burden on the IT department.

Monitoring and Diagnostics:

Ensure that equipment in the field operates as intended. Monitor and track unplanned device or system downtime. It understands the cause of failure on a device to improve efficiency and availability. It also helps identify outliers and issues in device production and deployment.

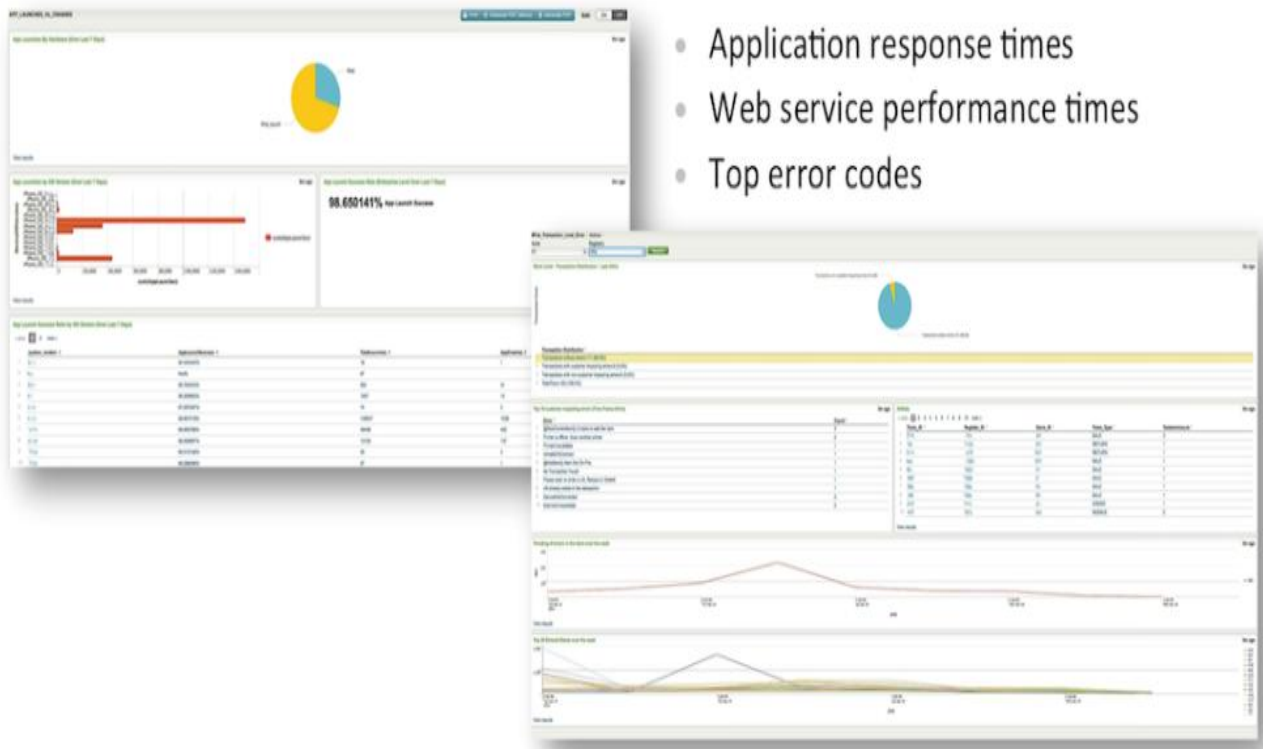


Fig. 2 Splunk Metrics for mPOS

Predictive Maintenance:

Gain real-time insight into asset deployment, utilization and resource consumption. Recognize patterns and trends, and use operational data to proactively approach long-term management, maintenance and performance.

Asset Life Cycle Management:

Gain real-time insights into the health and performance of industrial assets.

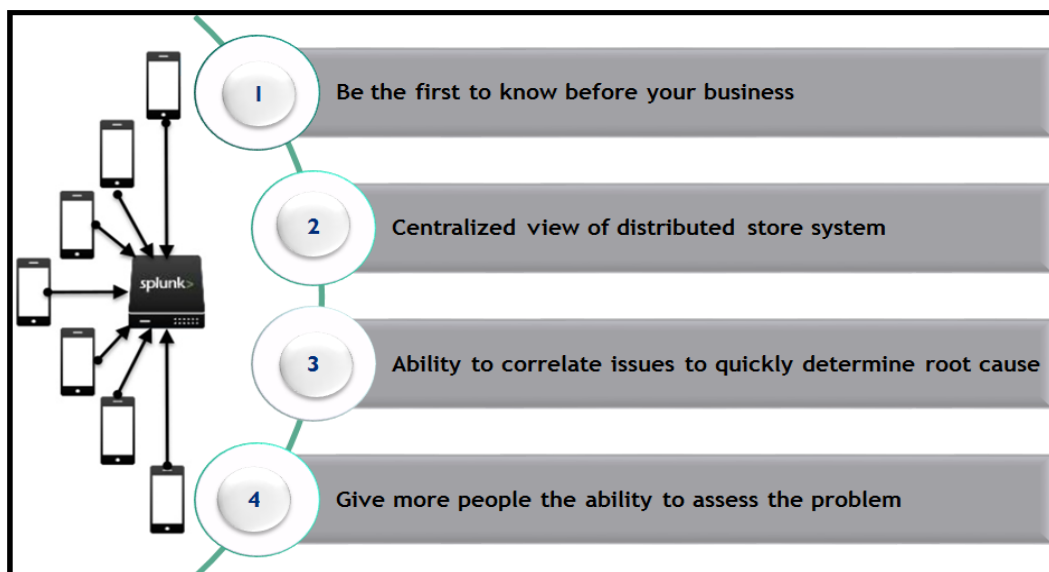


Fig. 3 Need of Splunk for mPOS

CONCLUSION

As businesses build and deploy connected devices, they are also deploying a new generation of commercial platforms and services. SPLUNK platform ensures that devices are continuously monitored for vulnerabilities and security gaps that could lead to data breaches. SPLUNK enable device connectivity, visibility and simple provisioning and remote device management. It also provides a platform for interaction with remote device operations and performance. Cyber hackers are readily aware of the rising popularity of mPOS and enterprise mobility at large, and are actively targeting such devices as easy points of entry for compromising privileged accounts and data. By applying innovative purpose-built machine data management and analytics technologies such as Splunk, retailers have the unique opportunity to take advantage of machine data to reap huge benefits—they can improve the end customer experience, increase wallet share and drive higher profits.

ACKNOWLEDGMENTS

I would like to thanks Deepak Chand forgiving me the opportunity to explore and build a career in this platform, for his continuous mentorship and references for materials and artifacts and promoting me to complete Splunk Certifications and Research.

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