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Home » Cross-Channel » [Offline Retail in an Online World](#)

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## OFFLINE RETAIL IN AN ONLINE WORLD

### Retail IT Architecture and Its Effect on Payment Readiness

Rule #1 for retail success: *always be able to accept the customer's money*. It's not as simple as it sounds. Just recently, one of the world's largest, most recognizable brands (if you're a caffeine addict, you probably visited one of their stores this morning) [relearned this lesson the hard way when a widespread failure of their POS system](#) ended up costing them millions of dollars in a single day.

The overriding priority in retail operations is always having the ability to serve the customer, regardless of the situation in the store – and always being able to accept the customer's money. Like so many best practices, though, something that sounds simple in theory can be more complicated than one would think. Today's POS transactional systems depend on a complex, heavily networked infrastructure. Card readers, back office servers, and peripherals all need to work together to complete a single transaction. A loss of connectivity, a power outage, or a software glitch can keep retailers from taking payments from customers eager to make a purchase, which is nothing short of a disaster.



How can retailers who depend on these complex systems make sure they're always able to accept customer payments without having to regress to a cash-on-the-barrel policy? First, let's look at the two primary commerce architectures most retailers rely on today.

- The Centralized Approach** – For some retailers, the preferred approach is to centralize. They create a single platform that they manage, maintain, and modify from a central home office location and distribute to each store. This approach takes its cues from the ecommerce model. It replicates the relatively straightforward, completely centralized, browser-based, and network-dependent approach used on a website and distributes it to every store via the network. Under this model, if the central servers or network connection go down, multiple stores can lose the ability to process transactions. To avoid this scenario, retailers will invest heavily in their networks to ensure they have the redundancy, backups, and bandwidth they need to keep their stores running.
- The Decentralized Approach** – For other retailers, the solution is to decentralize. They replicate everything needed to transact business in every retail location. Each store has a fully featured POS, database, and store server it can rely on in the event of a lost connection or outage at headquarters. This approach is significantly more costly and comes with a heavier technical footprint at each store, but individual stores can function independently when a central location is offline or unavailable.

Every technology decision of this scope is also a business decision. It directly reflects the

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retailer's strategy and priorities. It highlights the degree of risk the retailer is willing to undertake and how it chooses to mitigate that risk.

At Starmount, we don't see the centralized/decentralized decision as an either/or choice for retailers. Retail is a decentralized business that requires a high degree of centralized policies and processes. Our solutions are designed to accommodate that hybrid nature.

With our latest software release, we've created a lean, lightweight architecture that allows retailers to deploy centrally and locally, depending on their needs. We've also built in the replication so that any data required to run locally is transmitted to the central location as needed for analysis, standardization, and process control. If network or power outages interrupt communications between a store and the home office, the store can still process transactions and replicate all sales to the home office when power returns. Associates in the store may not be able to access centrally maintained inventory, customer, or product data during an outage or service interruption, but they can hold fast to the first rule of retail and accept the customer's payment.

Whether a retailer leans toward a centralized or decentralized architecture, the bottom line is that a store never wants to turn away customers because it can't process transactions. We agree, and we've designed our solutions to ensure retailers stay open for business.

Post by: [Jerry Rightmer](#) | Apr. 28, 2015 10:21am EDT | [Permalink](#)

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