



Planning For EMV: Integrated Or Semi-Integrated Payment Solutions?

By now, many merchants, VARs and integrators know that EMV—the globally accepted approach to payment security based on smart card technology—is coming to the U.S. The adoption of the EMV standard, which calls for the rollout of microprocessor-equipped smart cards that enable every transaction to contain a unique cryptogram, will be accelerated by the so-called “liability shift.” As of October 1 of 2015, merchants and acquirers—not card issuers—will bear the financial burden resulting from fraudulent use of counterfeit, lost and stolen cards. That risk of financial burden is only mitigated by demonstration and documentation of EMV compliance.

For merchants, VARs and integrators, the next logical question is, “*what should we be doing now to prepare?*” The long-term migration to EMV requires merchants and integrators to do some short-term planning. Preparation for the transition to EMV begins with hardware infrastructure and physical card payment processes, and the integration choices made today will have significant implications tomorrow.

For some merchants, one primary consideration is the choice between integrated or semi-integrated payment environments.

Generally speaking, in an integrated solution the payment application is part-and-parcel with the core POS solution; one piece of software handles every aspect of the transaction, from bar code reading to tendering and processing payments to managing inventory and replenishment. In a semi-integrated environment, the terminal or peripheral device used to capture credit card data is connected to the POS application, but the application used to actually process card payments is on a separate device.

EMV adoption will influence the approach to payment application integration because every EMV acceptance

application, device and combination thereof requires certification with each card brand. Therefore, in a fully integrated environment, any modification to the core POS application (i.e., a new module, upgrade or wholesale change) presents the potential that recertification might be necessary, even if the payment-specific part of their application goes untouched. At the very least, merchants and/or their VARs or integrators will find it necessary to review their POS application roadmap with the card brands to determine if recertification is necessary as a result of the upgrade path. Certification comes at a cost, and most merchants would reject the notion that their payment application should have any bearing on the freedom to execute creative application change at the POS.

If it fits the merchant’s business model, it’s likely that a semi-integrated payment application approach will prove easier, less costly and more flexible. In a semi-integrated environment, the POS sends simple transaction data (i.e., purchase amount) to the payment application via middleware. The payment application then creates the transaction and sends it to the processor. The payment application then receives the processor’s response (approval or denial) and sends



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it back to the POS application. Payment data is managed in a separate software module operating on separate hardware—a peripheral payment terminal or server—that's not directly connected to the POS application.

In a semi-integrated environment, the POS and associated retail systems' applications can be changed freely without the necessity for payment application recertification; this approach takes core POS applications out of scope for EMV approval by card brands. Because payment data transmission is limited to the payment application and the processor—in other words, that data never touches the POS—semi-integrated approaches can potentially take POS applications out of scope for PCI (Payment Card Industry) certification as well.

As merchants, VARs and integrators work together to assess their approach to EMV adoption, the payment application integration scheme—which will dictate so much long-term exposure to certification and recertification—should top the list of considerations. It's likely that a semi-integrated approach will prove the most secure, efficient and least cumbersome route to the benefits of EMV.

To learn more about EMV and get the facts on what merchants need to know now, download our comprehensive white paper on the topic [here](#).

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