EMV® Migration Forum

Payments Security Task Force (PST)

EMV Development Preparation

EMV Migration Forum/Payments Security Task Force

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About the EMV Migration Forum and the Payments Security Task Force

The EMV Migration Forum is a cross-industry body focused on supporting the implementation steps required for global and regional payment networks, issuers, processors, merchants and consumers to help ensure a successful introduction of more secure EMV chip technology in the U.S. The focus of the Forum is to address topics that require some level of industry cooperation and/or coordination to migrate successfully to EMV chip technology in the U.S.

For more information on the EMV Migration Forum, please visit http://www.emv-connection.com/emv-migration-forum/

Announced in March 2014, **the Payments Security Task Force** is a cross-industry group focused on driving executive level discussion that will enhance payment system security. The Task Force comprises a diverse group of participants in the U.S. electronic payments industry including payment networks, banks of various sizes, credit unions, acquirers, retailers, industry trade groups, and point-of-sale device manufacturers.

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Introduction: *EMV Development Preparation*

Welcome to the U.S. EMV Value-Added Reseller Qualification Program's educational webcast series, brought to you by the Payments Security Task Force and EMV Migration Forum.

This is a brief on EMV development preparation details and lessons learned, presented by Aidan Corcoran of Acquirer Systems.

Note: This webcast is one in a series of webcasts which will provide U.S. value added resellers, independent software vendors and merchant organizations with understanding of the U.S. market for EMV migrations, U.S. debit deployment, development preparation, lessons learned and testing considerations to assist with EMV chip migrations.

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How do I, a merchant, select an approved device?

Selecting an approved device is typically one step in a series of steps taken after you've already considered:

- Your existing card acceptance environment
- The payment network requirements for EMV acceptance particularly in your retail sector
- Full details on these requirements can be obtained from your acquirer or its processor as well as from the payment networks
- Recommend review of one or more of the following documents:
  - Visa Transaction Acquirer Device Guidelines (TADG)
  - MasterCard M/Chip Requirements
  - Discover D-PAS Terminal Requirements
  - American Express "AEIPS Terminal Specification
  - Acquirer Implementation Guides
- For debit documentation, refer to the debit webcast

How do I, a merchant, select an approved device?

- Review the implications of the acceptance requirements with your existing suppliers
- Review the acceptance requirements with your acquirer
- After this analysis, you would be in a good position to know what minimum capabilities are needed for your solution

Refer to the EMV Migration Forum (EMF) document defining minimum configuration requirements for EMV terminalization that may vary across networks, available on the EMV Migration Forum Knowledge Center website

How do I, a merchant, select an approved device?

Things to consider are:

- Specific requirements by payment networks and acquirers (EMVCo Level 1 and 2, PCI-PED, PA-DSS)
- Cardholder PIN entry [including debit card requirements]
- Single merchant/cardholder unit, or separate PIN pad from merchant unit
- Integration with existing system, full, semi, or light integration
- Attended and unattended implications
- Acceptance of legacy technology for non-credit/debit cards (loyalty, EBT, healthcare)
- EMV contact and contactless acceptance
- Requirements for tokenization

What are core business process changes?

Short Term (next 6 months):

- Develop an EMV terminalization plan
- Progress delivery of your EMV solution
- Develop or source appropriate in-house technical skills to support EMV acceptance in production
- Train staff to understand and support the cardholder interaction at the POS

Medium Term (next 12 months):

- Staff training to understand implications of EMV, and handling exceptions (declines, failures) at the POS
- Enhanced maintenance schedule to support EMV configuration, compliance and software changes

Long Term (more than 12 months):

- Staff training to keep current with the technology and compliance changes

What are implementation options for contact and contactless payments? What considerations and what configurations?

- Merchants should consider if contactless payment technology is suitable for their particular business and merchant sector
- Some retail verticals might not suit contactless payment
- If contactless payments are appropriate, then a similar set of considerations should be assessed

If using an integrated POS system, what do I need to consider to integrate my terminal with the POS system?

Integration can be achieved in a number of ways, including full integration (meaning acquirer messages are generated in the back office) and semi-integration meaning acquirer messages are generated by the POS device.

Each of these two main options has implications:

- Testing and certification – semi-integrated may be easier to test, verify and certify
- Integration with older POS systems may not be feasible
- Support for EMV, tokenization and encryption may require a whole new systems design

If I have development questions, who can guide me on the implementation roadmap?

There are a number of sources if you would like to receive helpful information:

- Acquirers
- Terminal/device suppliers or system providers
- Industry groups such as the Merchant Advisory Group or EMV Migration Forum (EMF)
- Payments Security Task Force service providers
- Payments Security Task Force recommended education and educators
- Test tool providers
- Industry consultants

What is the expected timing for implementation?

Depending on the size and scale of the project, EMV terminal implementation may include the following phases:

- Discovery and requirements gathering
- Evaluation of potential solutions and final choice
- Development of the chosen solution
- Internal and external QA of the chosen solution [including U.S. EMV VAR Qualification Program]
- Acquirer and network certification of the chosen solution
- Pilot of the chosen solution
- Rollout to all stores/POS of the chosen solution

What happens if the device selected is not currently approved by EMVCo? What steps need to be taken?

- All devices need to have current EMVCo approvals prior to deployment
- Devices that have expired EMVCo approvals can be submitted for re-approval using the recognized EMVCo process
- Systems that have no existing EMV capabilities can be supplemented with approved EMVCo devices to deliver full EMV support

What are best practices to consider?

Prior to commencing development, the following should be considered:

- Documentation
- Device requirements and kernels
- API choice
- Importance of design stage
- Project stages – test early and often
- Certification is not a QA stage
- Data integrity – a common failure point
- Remote management and parameter files
- Other payment technologies

What are common misconceptions or incorrect implementations that have led to interoperability issues?

- EMV Level 2 certification means production ready
- Expecting all payment networks requirements to be the same
- No software or configuration maintenance is required
- Payment network certification is only required once
- On the implementation side:
  - Incorrect configuration of the EMV Level 2 kernel (CA Public Keys, Terminal Action Codes)
  - Incorrect choices for kernel capabilities for merchant (signature, no CVM, offline PIN)
  - Data synchronization problems between the EMV kernel and the merchant component creating acquirer host messages
  - Inadequate negative testing

Will merchants need to deploy PIN pads? Does U.S. debit always require a PIN, or a signature?

- Support for PIN will be based on your business vertical, your existing card acceptance environment, and the payment network requirements for your business.
- The best source of information for a U.S. debit EMV implementation is the EMV Migration Forum U.S. debit EMV white paper.
- It is possible to deploy signature only EMV devices without support of PIN. This will depend on if your merchant location supports PIN today.
- Terminals supporting a wider range of Cardholder Verification Methods (CVMs) allow processing transactions with the issuer's preferred CVM and will need to be reviewed based on your current acceptance environment.

Consult with your acquirer and payment network for more details on their EMV implementation requirements

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