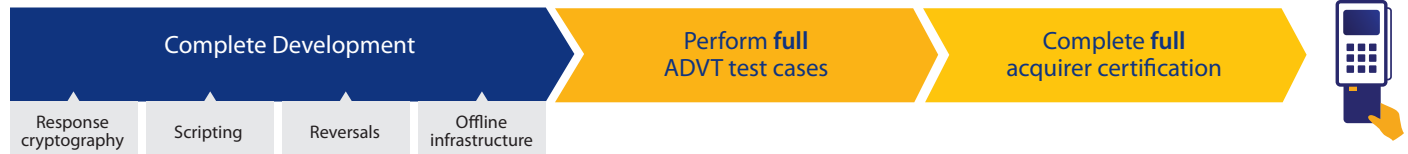**VISA**

# EMV News

SEPTEMBER 2016

## Did you know?

Implementing either semi-integrated POS solutions or use of a gateway can accelerate EMV migrations with reduction in development and EMV® terminal testing requirements. In addition, isolating the payment application from software changes or allowing for a single point of connection can ease the EMV migration. Quick Chip for EMV not only improves transaction time but saves on development and testing as well.

### Quick Chip Development and Testing

Quick Chip significantly reduces development and testing time by simplifying the EMV transaction flow so that more complex EMV functionality is taken out of scope.

#### Standard EMV Chip Deployment

| Complete Development | Perform **full** ADVT test cases | Complete **full** acquirer certification |
|---|---|---|

| Response cryptography | Scripting | Reversals | Offline infrastructure |
|---|---|---|---|

#### Quick Chip for EMV Deployment

| Complete Streamlined Development | Perform **minimum** set of ADVT test cases for online-only configuration |
|---|---|

Defer support of more complex EMV functionality

Reduces development testing time by up to **85%** ↓

Implementation in as fast as **1 week** ↓

### Kernel Management: When to Test

An EMV kernel is a set of functions that provides the processing logic and data that is required to perform an EMV contact or contactless transaction. The kernel is a part of the terminal payment application supporting EMV functionality and is included in the EMVCo Level 2 approval process.

EMVCo Level 2 approval requires every EMV kernel to have completed laboratory-type approval testing before it can be used in terminals to perform EMV transactions. EMVCo also requires this approval to be renewed at defined intervals to retain compliance. To reduce terminal testing requirements, as well as to minimize the impact when necessary updates/ changes to existing terminals are deployed in the market, Visa recommends being familiar with supported kernels to assist in proper EMV kernel management. Kernel management promotes terminal vendor communication, ensures new terminal deployments contain current approved IFMs or kernels and standardizing solutions.

Whenever the terminal vendor makes changes to the kernel, acquirers, merchants and value-added resellers should:

• Evaluate if the kernel update is necessary for an existing deployment, as an expired kernel on hardware associated with a deployed solution is not a mandate for kernel update. A kernel update in this instance is only necessary when consistent with the business goals of a given deployment.[1]

• Ensure the EMV terminal has EMVCo approvals for the Interface Module (IFM) and kernel at time of initial deployment

• Review EMVCo's renewal policy for IFM and application kernel approvals. EMV IFM and kernel changes are defined as major and minor by EMVCo, based on their impact. Refer to the latest version of *EMVCo Type Approval Bulletin #11*, located on EMVCo Bulletins.

Terminal vendor maintenance changes to an existing kernel are usually incorporated into the next kernel version, which would require Visa terminal testing (i.e., Acquirer Device Validation Toolkit [ADVT] and/or Contactless Device Evaluation Toolkit [CDET]) testing. Refer to Visa U.S. EMV Chip Terminal Testing Requirements for more details.

## Terminal testing considerations which can ease testing efforts include:

• Standardize point-of-sale solutions by using the same kernel configuration, which reduces required testing to only one unique terminal configuration; a kernel can be supported on more than one device (terminal family). Consult with the terminal vendor to determine if the terminal is the same family.

• A minor change to a kernel would not require Visa terminal retesting.

• If the new kernel contains major changes, then it would require Visa terminal testing for each unique terminal configuration once it is integrated into the payment application and prior to deployment. However, this effort can be significantly reduced as follows:

– Deploying an online only configuration (i.e. zero floor limit and related TACs) as required by Visa. Testing of an online only configuration has been significantly reduced by all brands. Refer to US Minimum Terminal Configuration ADVT Use Cases document for more details on the subset of test cases.

– Deploy a Quick Chip solution and the certification overhead of an EMV Level 2 kernel major change can be further reduced. Quick Chip reduces the scope of testing by removing tests associated with offline EMV authorization, response cryptography, issuer scripting, and card generated reversals caused by tearing or a chip decline following an issuer approval.

**Just announced effective immediately**, acquirers participating in the U.S. Chip Acquirer Self-Accreditation Program will be granted a one-year blanket waiver from the kernel expiration date for acquirer end-to-end testing performed on an expired EMVCo-approved kernel supporting Quick Chip or Visa Minimum U.S. Online Only Terminal Configuration. A waiver request will not be required.

The Visa Kernel Management Guidelines for Contact and Contactless Chip Terminal Implementations is a good reference for these best practices.

### Reminder About VAR Mailbox

If your organization currently does not have a Visa representative, you can send an email to USVAREMV@visa.com with your questions, interest in future webinars and training sessions and a Visa EMV Subject Matter Expert will respond to your email within 2 business days.

### For More Information

Please visit these chip sites for more information about EMV:

Visachip.com

Visa Technology Partner

Visa Chip Bytes

EMV Testing and Certification White Paper: *Current Global Payment Network Requirements for the U.S. Acquiring Community*

EMVCo Bulletins

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[1] While EMVCo recommends that expired kernels be replaced within a year, Visa allows that an EMV terminal (e.g., payment application, Level 2 kernel and Level 1 IFM) can continue to be deployed beyond the approval expiration of any component, assuming there are no changes to these components nor any reported interoperability issues. This principle also applies to existing EMV terminal inventory already in the distribution channel.

**VISA**