

2014 Technical Conference

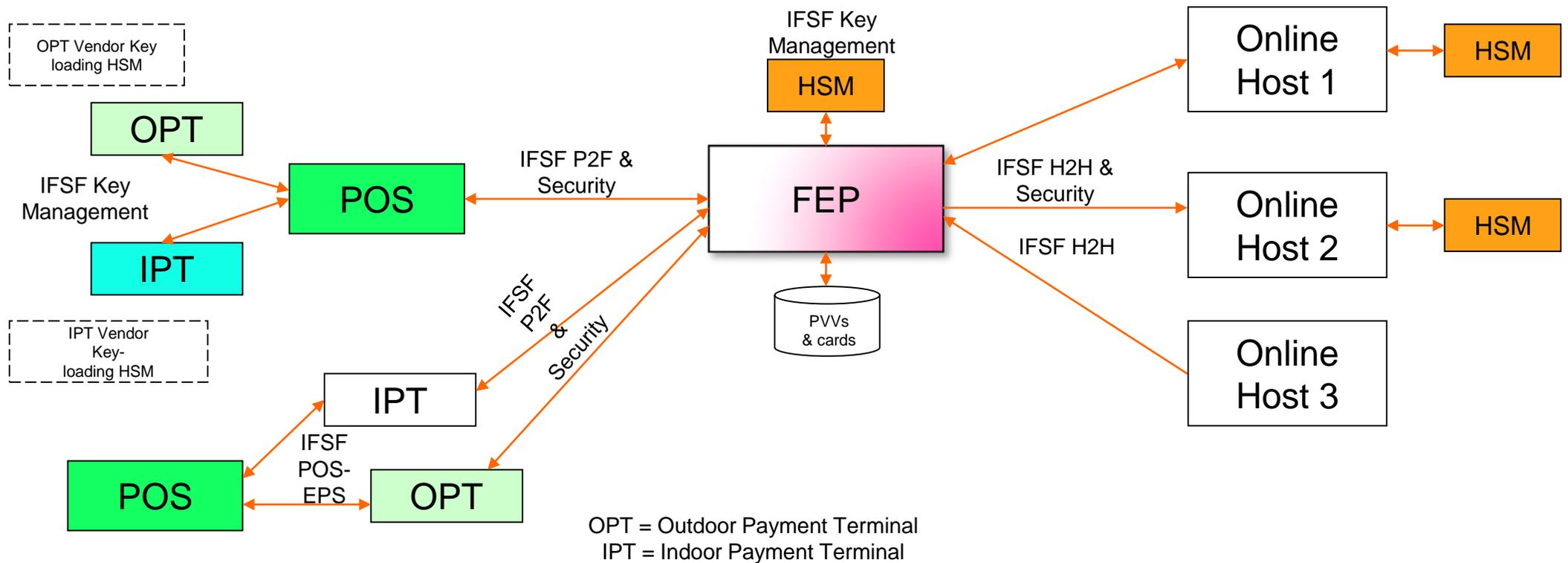
IFSF V2 of POS/FEP and Host/Host

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IFSF EFT Standards

- POS (Point of Sale) to EPS (Electronic Payment Server)
 - XML based interface allowing EPS to handle (payment) card processing outside POS
- POS to FEP (Front End Processor) or P2F
 - ISO8583 based messaging standard for online card messages from POS or EPS to FEP
 - Handles all types of payment, fuel and loyalty cards and combinations
 - Online or offline PIN, Magnetic stripe and/or EMV, PKE, RFID, Central Product Control
 - Indoor or outdoor (preauthorised) purchases, KM and other cardholder data etc
- Host to Host (H2H)
 - (Virtually) a mirror image of P2F for links into and/or out of FEP to/from other Hosts
- Security standard
 - PIN encryption, MAC (Message Authentication Codes) and Sensitive Data encryption
 - Uses 3DES DUKPT P2F and ZKA UKPT H2
 - Format Preserving Encryption (eg: to meet PCI P2PE)
- EMV-based Fuel Cards
- Key Management
 - Encryption Key management for all of the above

Examples of use of IFSF EFT Standards



History of EFT standards

First release of:

- POS to FEP in 2001
- Host to Host in 2002
- POS to EPS in 2002
- Security Standard in 2006
- EMV-based Fuel Cards in 2011
- Key Management Standard in 2011

Backward compatibility policy

- “IFSF’s policy is to maintain backward compatibility of standards as future enhancements are required. It is recognised that this may not be possible in all cases and therefore the Executive Committee may authorise a case for an exception from this policy. Where this happens, the standard will have a new version number in the first digit. For example, if the previous version had been 2.3 the new version will be 2.4 if compatibility is maintained and 3.0 if it is not. Earlier versions of the standard should then be reviewed for eligibility for retirement.”
- Current latest version of standards:
 - POS to FEP version 1.51 (218 pages)
 - Host to Host version 1.41 (180 pages)

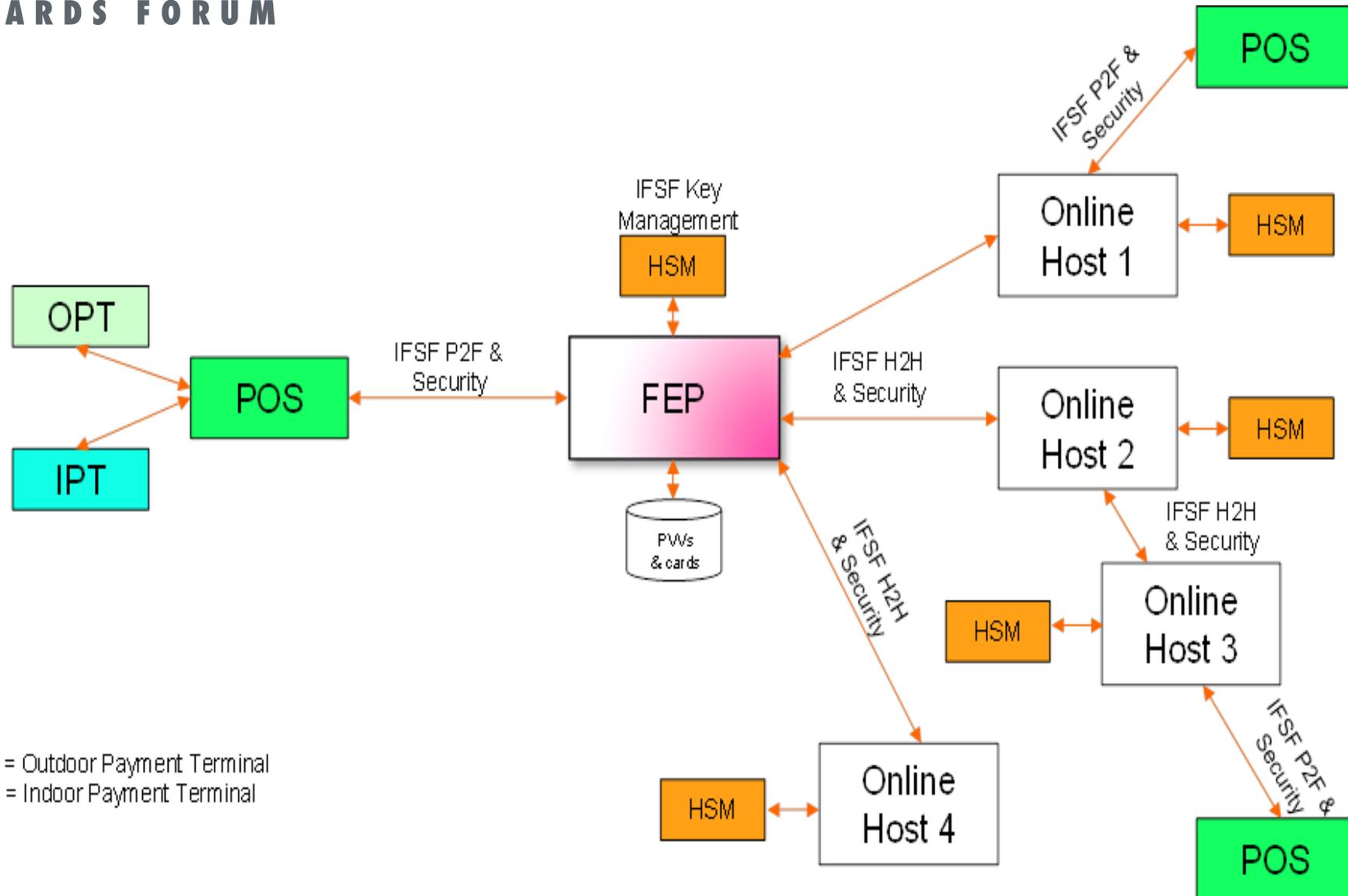
Work on V2 of P2F & H2H:

- Started in EFT Work Group during 1Q2013
- Primary driver was to extend the number of products and content beyond current limit of 18 line items in card messages, but many others
- Impossible to accommodate more than 18 line items in V1 so finally forced a non-backwardly compatible V2
- However, design focused on forward compatibility to ease migration for V1 users as far as possible
- Separate V2 Sub-Group (reporting to EFT WG) formed to work on drafting changes and good progress made
- V2 work was aligned with Mobile Payments initiative and later incorporated both the Mobile Payments Sub-Group work and Security Sub-Group work and its messaging updates

New in V2 of P2F & H2H:

- More than 18 «line items» in card messages (approx 100)
- Better Central Product Control functionality
- More data per line item (VAT, discounts etc) allowing replacement of all types of card batch interfaces by OLTC
- 4 cards per transaction rather than 2
- Enhanced loyalty functionality
- Mobile payments (outdoors only in first release of V2)
- Encryption of any data field or sub-field
- Security profiles with multiple encryption options

Migration to V2:



OPT = Outdoor Payment Terminal
 IPT = Indoor Payment Terminal

Migration strategies:

Since V2 will be fully capable of handling V1-mode messages (ie: messages originated using V1) , there is no issue about forwarding messages from a POS sent on a V1 interface over a subsequent H2H link that is V2.

However, the reverse is not true. A V2 message will most likely contain more data (eg: number of products in a 1200 or 1220 message) than can be processed by a V1 interface.

Whilst a Request message could simply be declined in such circumstances, for Advice messages that are accepted before forwarding to the next link in the chain, this is not possible so it is critical that V2 messages are not sent to an FEP or Host that may have to forward that message on a V1 interface.

For this reason, for any POS there are only two viable migration strategies for P2F from V1 to V2:

- Migrate all the relevant H2H links to V2 for all possible card types before sending any POS messages on P2F using V2 for any card tx
- Migrate P2F to V2, but first develop POS functionality that “knows” which, if any, H2H links are relevant for each card type (or other variable such as loyalty or not) and then send each P2F message in either V2 or V1 mode for each transaction

The same principles apply not only to P2F, but also to the first H2H link in a chain.

Whilst users must naturally develop their own migration strategy, the IFSF recommends the first option in order to minimize interoperability issues.

V2 of POS/FEP & Host/Host finalised 13th November

- First draft full POS/FEP document issued in June 2014 and reviewed at full day EFT WG meeting June 18th
- Second draft of POS/FEP (391 pages) and first draft of Host/Host (316 pages) issued 1st September 2014 and reviewed at EFT WG Meeting 17th September
- Security SG work for V2 completed on 22nd October (except for update to the Security Standard itself)
- Final changes agreed at EFT WG telcon 13th November
- Target of publication in time for Technical Conference

