

What's in a Number? 8-Digit BINs and PCI Standards

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PANs, IINs, and BINs



PANs, IINs, and BINs

- Standardized global numbering scheme
- IIN (or BIN) identifies the institution that issued the card
- Prior to 2017, IIN was defined as a fixed-length numeric of 6 digits



Why Now?



**Number of
card issuers**



**Available supply
of IINs**



**Expansion of IIN
from 6 to 8 digits**

Revised *ISO/IEC 7812-1* standard published in 2017

What Does This Have To Do With Me?



How Could This Affect My Environment?

- Some merchants will not need to do anything differently
- Changes may be managed by downstream processor or acquirer

Where Might Changes Be Needed?

- Business logic specific to BIN or BIN range
 - Is BIN information provided to third parties?
- Internally-managed or proprietary systems
 - System configuration relies on BIN tables or hard-coded BIN data

How Does The Introduction Of 8-Digit BIN Affect PCI Standards?



Truncation



Truncation



Truncation



Masking



Masking

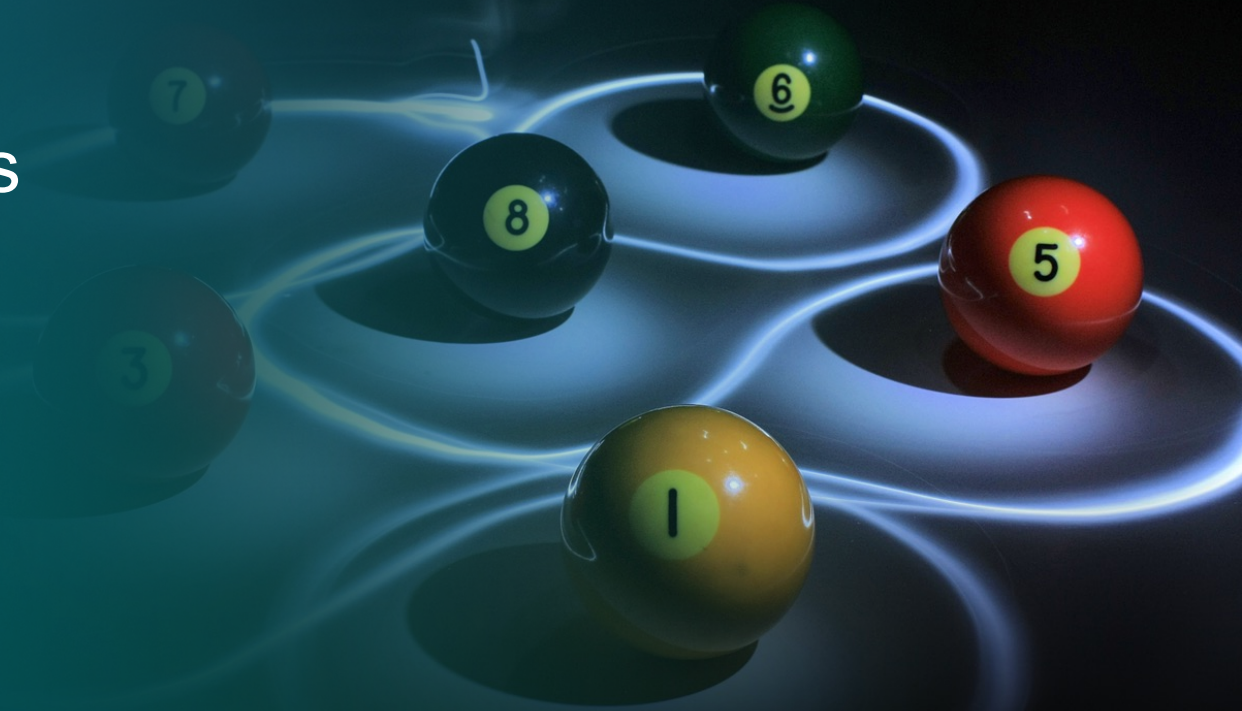


Masking



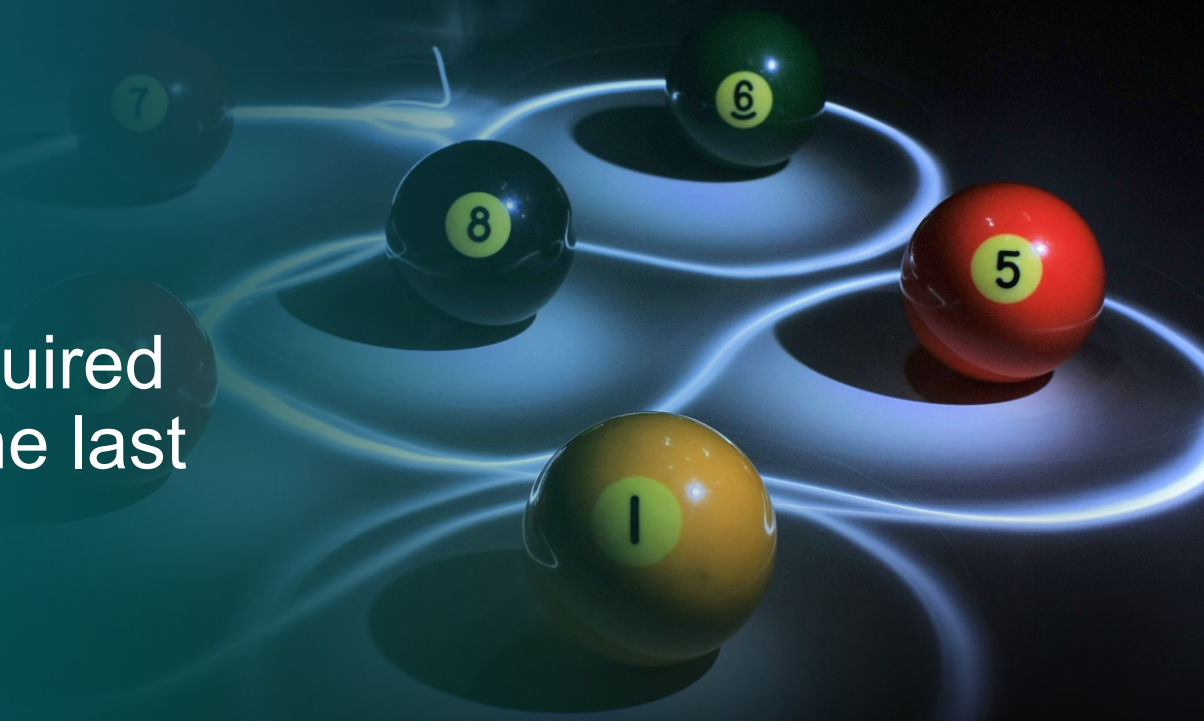
Truncation and Masking for PCI DSS

- PCI DSS supports truncation and masking formats for all BIN ranges



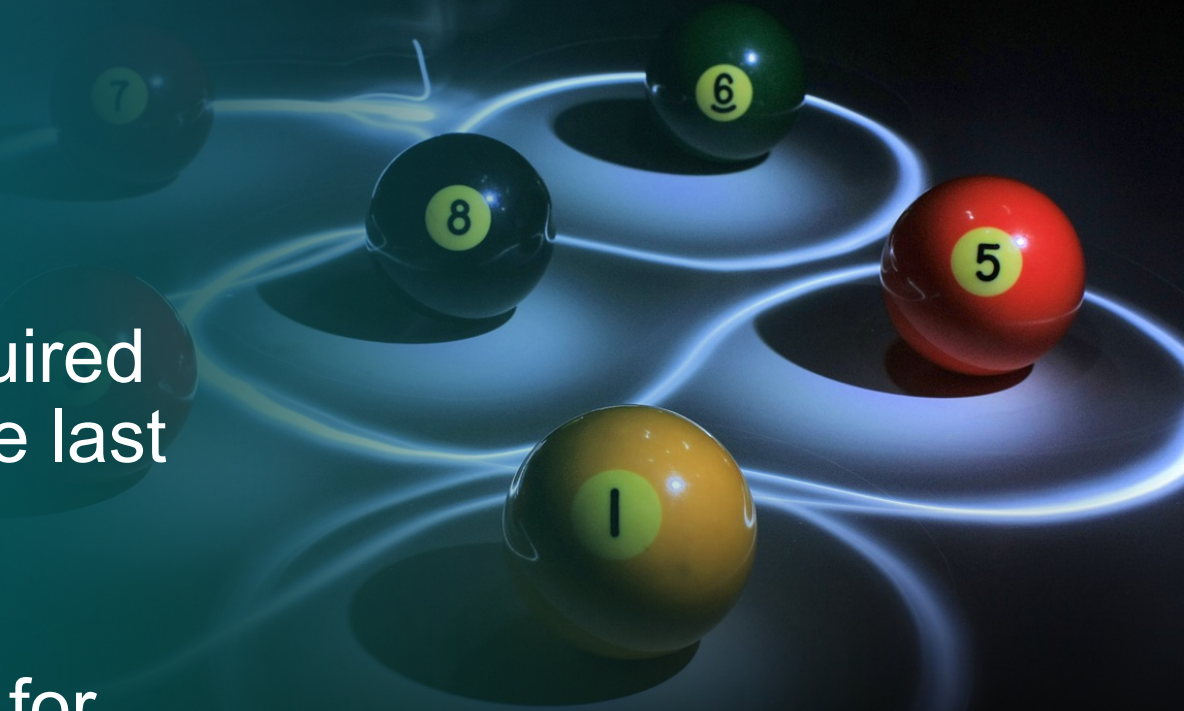
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Truncation and Masking for PCI DSS

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- **Masking:** Business justification required to display more than the BIN and the last four digits of the PAN
- **Truncation:** An acceptable method for rendering PAN unreadable when stored



Truncation Formats

- FAQ #1091: Acceptable formats for truncation of primary account numbers
- Regularly updated
- Includes formats for all PCI Participating Payment Brands

PAN / BIN Length	Payment Brand	Acceptable PAN Truncation Formats
16-digit PAN (with either 6- or 8-digit BIN)	Discover JCB Mastercard UnionPay VISA	At least 4 digits removed. Maximum digits which may be retained: "First 8, any other 4"
15-digit PAN	American Express	At least 5 digits removed. Maximum digits which may be retained: "First 6, last 4"
<15 digit PAN	Discover	Maximum digits which may be retained: "First 6, any other 4"

Applying Formats

- FAQ #1492: How to meet the PCI DSS masking and truncation requirements when using 8-digit BINs
- Understand the business purpose
- Ensure only the minimum number of digits are displayed or retained



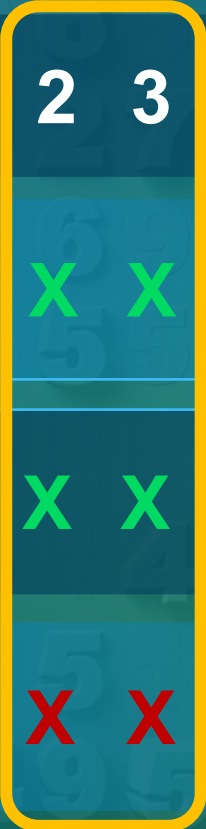
Multiple Truncation Formats

- Confirm that each individual truncation method meets truncation format requirements
- The cumulative impact of different truncation formats also needs to be considered
- If the combination of exposed digits exceeds the maximum allowed, the PAN can no longer be considered truncated

Multiple Formats Example



Original PAN	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7
System #1 truncation First 8, last 4	1	2	3	4	5	6	7	8	X	X	X	X	4	5	6	7
System #2 truncation First 10, last 2	1	2	3	4	5	6	7	8	9	1	X	X	X	X	6	7
Cumulative exposure of PAN First 10, last 4	1	2	3	4	5	6	7	8	9	1	X	X	4	5	6	7



Where To Begin?

- Proactively assess your environment
- Examine all flows of payment card data
- Work with acquirers, processors, vendors, and other third parties
- Implement truncation and masking formats that support business needs with minimum exposed digits
- Address cumulative exposures
- Document all instances and formats of truncation and masking used

Considerations For PTS POI Devices



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Q: Can devices approved to the PCI PTS POI requirements support truncation of PANs with 8-digit BINs, where the truncation method may exceed first six / last four?

A: Yes. PCI PTS POI devices have a number of different options for the support of PAN truncation with eight-digit BINs.

What Does This Mean For POI Vendors?

- All versions of PTS POI supported
- Refer to the Technical FAQs for the version of PTS POI that your device is validated to
- Follow delta change process for any firmware updates

Resources

- [FAQs](#)
- [Blog post](#)
- [PTS POI Technical FAQs](#)
- [PCI DSS Guidance column for masking and truncation requirements](#)

Summary



- The introduction of 8-digit BINs may require some changes in your configurations
- Work with your partners to understand and manage any changes
- Refer to PCI SSC FAQs and standards for guidance on how to meet truncation and masking requirements