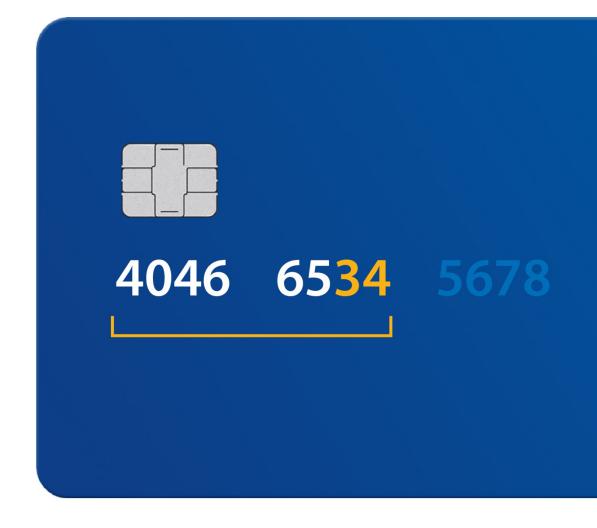
### **8-DIGIT BIN EXPANSION**







### 8-Digit BIN Expansion FAQ

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## Account Range



Will the nine-digit account range length change with the expansion to eight-digit BIN?



No Account ranges will remain the first nine digits of a PAN when the BIN is extended to eight digits. Eightdigit issuing BINs will have 10 individual account ranges and can therefore be used to identify up to 10 different products using the account range construct. Clients who currently use more than 10 account ranges within a single six-digit BIN may need multiple eight-digit BINs upon conversion.

#### Additional Information

## What is ISO? What role do they play?



The International Organization for Standardization (ISO) oversees the development of global standards across multiple industries to ensure interoperability. This encompasses standards in the payment industry including ISO/IEC 7812-1, Identification cards – Identification of issuers – Part 1: Numbering system which governs the format of the issuing BIN. ISO also contracts with the American Bankers Association (ABA) to oversee the pool of issuing BINs. The ABA administers the pool of issuing BINs globally, assigning them to individual entities such as financial institutions for proprietary card programs, or to entities such as payment schemes who in turn may license them to their stakeholders.

What changes is EMVCo proposing and how will this affect what Visa is doing around the movement from six to eight-digit BIN?



EMVco specifications are on EMVco website and reflect any changes they have made to support the 8 digit expansion. As it relates to Visa's contact/contactless card and terminal specifications the introduction of 8 digits has no impact.

Are any product types exempt from this mandate?



No. All product types are included included in the 8-digit BIN mandate.

#### **General Overview**

#### What is the first step to prepare for the eight-digit BIN migration?



The first step to prepare for the migration to eight-digit issuing BINs is to conduct an assessment across all functions of your organization. It is highly recommended to assemble a project team. Some examples where impacts from expanding the issuing BIN may occur include billing, reporting, user interfaces, application interfaces, enrollment forms or anything that currently uses the six-digit ISO BIN.

To assist in this effort, Visa worked closely with a representative set of clients to develop the Numerics Initiative: Acquiring & Issuing Impacts, Discovery Interview Findings, which provides a comprehensive overview of potential client impacts of the issuing BIN expansion. While this report touches upon a number of impact areas, it highlights that each clients' assessment approach should be customized to their organization, as well as their third parties, given each clients' set ups are unique. The report and accompanying questionnaires are designed to assist with clients' impact analysis and can be found on Visa.com/8digitBIN or the Numerics Initiative page on VOL.

#### What are the consequences if a processor or acquirer have not made changes necessary to work with 8-digit BINs by April 2022?



Risks of negative consequences increase as more issuers adopt 8-digit BINs since it will no longer be possible to rely on the first 6 digits of the PAN (e.g., for transaction processing or routing). Failure points and severity will vary depending on the specific usage of the issuing BIN, set up of the supporting technology, dependencies across service providers and downstream process flows and associated outputs. Visa will not be able to protect its clients from these consequences as they will not be visible within VisaNet.

## Is consultation with my processor required?



Yes. All acquirers and issuers must include their processors as part of their overall eight-digit BIN project planning to ensure coordination for all processing and downstream system changes. This applies for new eight-digit BIN assignments as well as converting current six-digit BINs. It is also imperative to work with all third parties you work with.

**MERCHANTS General Overview** 



#### When will Visa start assigning and supporting eight-digit issuing BINs?



Visa has been assigning eight-digits issuing BINs since 2019. In addition, a number of issuers have already migrated their existing six-digit BINs to eight-digit BINs.

If our processor confirms they will be ready for the issuing BIN migration, is there anything else needed to prepare for the migration?



Yes, all stakeholders (including your organization) need to ensure they are ready to support eight-digit BINs prior to the migration. While your processor may be ready, there could be other partners (e.g. merchants, card personalizers) or systems (e.g. billing or reporting) that you work with or manage, which will need to be ready as well.

With further clarification on PCI impacts being recent, is there a plan for Visa to extend the April 2022 mandate date?



Visa's mandate continues to be April 2022, in support of the industry standard change.

**MERCHANTS** 

#### **Issuers**

Given that issuers can set their own timeline for migration to eight-digit BINs, how will this impact the POS and what is Visa doing to mitigate this?

A

The ISO industry standard acknowledges that six-digit BINs will continue to exist alongside eight-digit BINs for the foreseeable future. Acquirers, merchants and service providers should be prepared to support both BIN lengths simultaneously. Visa is supporting a transition to the new standard based on all stakeholder's needs and schedules in recognition of the complexities of this change. Visa guidance recommends client use the 9-digit account range for transaction processing rather than the six- or eight-digit issuing BIN.

Will the change in issuing BIN length apply to all channels (card-present and card-not-present) and product types?

A

Yes. The change in BIN length is an industry change which is irrespective of channel and product; it is relevant for all issuing credentials.

**Does Visa have any plans to introduce issuing BINs that begin with a number other than "4"?** 



No. Visa has an ample supply of issuing BINs with the "4" prefix. Visa is the only payment scheme with exclusive rights to one block of numbers and has no plans to request a new block of BINs from ISO.

# Primary Account Number (PAN) Length

**Q** Do cardholders need to update merchants that manage recurring payments that the issuing BIN number is expanding?



No. Since Primary Account Numbers (PANs) are not changing as a result of the BIN expansion, there is no need to alert recurring merchants. Acquirers will need to work with their merchants to ensure their infrastructure is ready to support the new standard; cardholders will not need to be informed.

Will there be any changes in display of PAN numbers on the card?



No. There is no change to the length of the PAN.

With the expansion of the BIN length, does continued support for a 16- or 19- digit PAN create concerns about PAN supply?



No. Issuers manage their own PAN supply but this has not been raised with Visa or at any industry body as an issue. For example, existing 16-digit PANs support capacity for over 99 trillion unique PANs.

### **Processing**



Will Visa make changes to timeframes for accepting both trailing activity and chargebacks on the existing structure?



Trailing activity and dispute processing will continue following established processes and not be impacted by the migration. All returned eight-digit BINs will be held for a defined period in the system to manage trailing activity as is done today with any BIN delete.

# What data should clients be using for routing and clearing of Visa transactions and why?



For proper routing of Visa transactions, clients should use the Visa-supplied routing tables (for example, Visa, Plus, Interlink, etc. routing tables). The ARDEF table should never be used for routing purposes, Since it is possible for issuers to use different processing endpoints for authorization versus clearing or for issuers to establish routing preferences beyond the nine digits, using the ARDEF table could result in authorization requests not being routed as expected.

For proper clearing of Visa transactions, acquirers who are not routing all transactions through Visa should use the ARDEF table to populate transaction data such as the product attributes. If acquirers do not use the Visa ARDEF table, the transaction may not clear as expected.

Merchants may want to use the Visa BIN Attribute Sharing Service (VBASS) if they have a need to know the product attributes.

Use of incorrect tables or failure to keep tables updated may result in unnecessary declines, rejections or misrouting as well as increased reconciliation costs. This is particularly true as issuers utilize their assigned six-digit/eight-digit issuing BINs by using one or more nine-digit account ranges to differentiate specific products and/or processing parameters.

#### Will there be any impact to domestic or international transactions?



There will be no processing impacts

# How can merchants or other payment providers identify if a BIN is 6 digits or 8 digits?



If even necessary, as most merchants do not have a need for this information, we recommend that merchants work with their third parties, such as processors and/or service providers, to identify reporting options to identify BIN length and other BIN attributes needed for your business purposes. Please ensure that you are only using authorized BIN tables from your third parties. Research shows that BIN tables purchased off the internet are only approximately 30% accurate.

# Will the same six-digit prefix exist simultaneously as both a six-digit BIN and an eight-digit BIN?



Not under the existing standards. A BIN will not exist as both, say, "412345" and "41234567." The same six-digit prefix will not be assigned to both BIN lengths simultaneously. Once a six-digit BIN is split to eight-digits, it will cease to exist as a six-digit BIN. Further, Visa will not issue an eight-digit BIN if the six-digit prefix is already assigned as an issuing BIN. If there are future changes to this protocol, Visa will communicate accordingly.

Example: BIN 412345 is split into 100 eight-digit BINs, BINs 41234500-41234599. The issuer will return any unused eight-digit BINs, which will eventually be reassigned to new issuers. BIN 412345 will no longer exist as a six-digit BIN and will not be assigned to any issuer in the future as a six-digit BIN.

Because returned eight-digit BINs may be licensed to new issuers, and those BINs will share the same six-digit prefix as the eight-digit BINs retained by the original issuer, it is critical that all stakeholders can identify BINs out to the eighth digit (at a minimum) or to the nine-digit account range (preferred).

# Will Visa maintain its existing pre-defined ranges for certain product types, such as HSA, FSA, and Fleet?



Designated ranges for specific product categories will continue to exist as is. However, BINs within these ranges will be subject to the same expectations as other BINs. After April 2022, new BINs from these designated ranges will be assigned as 8-digit BINs vs. 6-digit BINs. In addition, issuers within these designated BIN ranges will have the option to migrate existing 6-digit BINs to 8-digits, like with other product categories.

#### Is BIN length in the ISO messages?



No, as BIN is not used in VisaNet processing, BIN length information is therefore not included in the ISO messages. Please note that BIN length information is not part of any of the Visa tables. As such, If BIN information is needed, please work with your authorized BIN table providers on updates to reporting to accommodate expanded BIN lengths.

Alternatively, Visa offers a solution, Visa BIN Attribute Sharing Service (VBASS) which contains BIN information, such as BIN length.

## Processors / Acquirers



What will happen if acquirers and processors are not ready by April 2022?



Acquirers and processors that are not able to handle eight-digit issuing BINs will be unable to support their clients. Acquirers risk failed transactions and longer resolution times and costs to complete transactions. Processors could lose clients as they are unable to compete in a fast-paced market.

**MERCHANTS Product** 

### **Product**



What is the impact of the eight-digit BIN on 3DS?



3DS settings are established at the Issuing Identifier level, so there is no impact.

## Reporting & Documentation



Are there documents that can be shared with merchants on this topic?



Yes, Visa public materials are available on Visa.com/8digitbin.

#### How can a client differentiate between a six-digit and an eight-digit issuing BIN number?



All Visa products and applications that use or consume the issuing BIN versus one or more of our processing identifiers have been articulated in the Issuing BIN Product and Application Impact Report which can be found on the Numerics Initiative page on Visa Online along with other helpful tools that will assist you in performing your internal analysis. Clients who otherwise have a need to know whether a BIN has six or eight digits have two other sources for this information:

The Visa Client Directory which is available for subscription and facilitates client-to-client communications and supports back-office operations such as processing transaction copy requests, chargebacks and disputes and fraud management. In the data file, the six-digit BIN field will remain unchanged and a new eight-digit BIN field has been added; and

The Visa BIN Attribute Sharing Service (VBASS) is an available API that enables sharing of Visa BIN Attributes to improve merchant processes and checkout experiences within the allowed use cases. The service offers two methods to obtain BIN Attribute data: Direct Access from Visa and Indirect Access through an acquirer or acquirer sponsored third party.

Merchants who need access to this information should work with their authorized third party BIN file providers to ensure information in the files is being updated to reflect expanded BIN lengths. Note that BIN tables should not be purchased off the internet as these are shown to only be approximately 30% accurate.

## Security & PCI



Is there a change in Payment Card Industry Data Security Standards (PCI DSS) requirements for masking or truncating data?



PCI currently outlines impacts as follows:

- Data Presented on Screens and Reports: Provisions allow users with a legitimate business need to see any or all of the PAN digits.
- Data at Rest: Rule 3.4 has been recently updated to allow exposure of up to, but no more than, the first 8 digits and any other 4 digits in a 16 digit PAN. Please work with a Qualified Security Assessor on any changes you plan to make to your internal systems.

# Can Visa provide direction on PCI compliant methodologies for PAN storage?



Clients need to review any changes to how they plan to protect their date with a PCI trained Qualified Security Assessor (QSA). Because Visa does not use the BIN field in transaction processing or have visibility into all merchant environments, we do not have a specific recommendation for how clients who need to expose the full BIN (for their own business reasons) should manage their data protection.

# What PCI requirement applies when an 8-digit BIN PAN is transmitted (data in flight)?



PCI DSS requirement 4.1 for transmission of PAN (e.g., data in flight) over public networks. No impact, as 4.1 currently requires all data in flight to be encrypted.

Are we able to also show first 8, any other 4 in data masking situations? Why are the standards different between masking and truncation? If I want to mask only 4, will I have to add another method of security?



PCI DSS requirement 3.3 for masking already allows for the display of more than the first 6 and last 4 digits, up to the display of the full 16-digit PAN as long as there are documented business justifications to do so.

#### Why are the standards different between masking and truncation?



Masking requirements deals with the data when displayed on a screen or on paper and PANs are generally displayed in support of post transaction business processes like in situations where customer service reps need to access the transaction details. For the intent and purpose of identifying transactions, first 6 and last 4 is sufficient. These systems are also still in scope for annual PCI DSS reviews. Truncation requirements, on the other hand, deals with the storage of data and it provides the incremental benefit of allowing for a descoping of the environment from annual PCI DSS audits per PCI FAQ 1117: "Are truncated Primary Account Numbers (PAN) required to be protected in accordance with PCI DSS?"

#### For receipt printing, are we able to show the first 8 and any other 4?



Yes, however there must be documented business justification to support the display of more than the first 6 and last 4.

#### Can you talk more about the impacts to P2PE and Format Preserving Encryption as it relates to these standards and needing to look at the first 8 digits of the PAN?

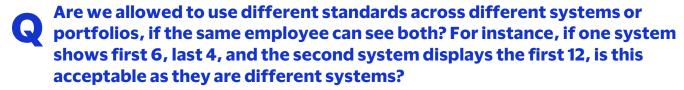


P2PE solutions encrypt the entire cardholder data at the Point of Interaction and only decrypts it at the other end. Hence, there is typically no impact from the migration to 8-digit BINs. Format Preserving Encryption solutions, on the other hand, may require changes regarding which digits have been encrypted and require working with the individual service providers' technical team for these changes.

There are use cases where a merchant needs to do an 8-digit BIN lookup preauth for product identification, such as FSA, to determine which SKUs are eligible. What is Visa's position on PCI/P2PE scope impact for these types of pre-auth scenarios.



Encryption of the PAN via P2PE solutions doesn't impact the scope of PCI DSS audits. See PCI FAQ 1086: "How does encrypted cardholder data impact PCI DSS scope?"





From a masking point of view, yes, the various systems meet PCI requirement 3.3. However, to display more than the first 6 and last 4, there needs to be a business justification for that second system to display the first 12 and will be the responsibility of the QSA to determine if acceptable.

Our institution creates reports based on first 6/last 4 today for analysis and business operations. Which PCI requirement does Reporting fall into? If we expand our reports to look at the first 8 digits, and the last 4 digits, will I need to add additional security layers, or does report display fall into 3.3?



Yes, requirement 3.3 applies. It requires display of the first 6 and last 4 unless there is a business need to display more digits of the PAN. Requirements for storage versus display of the PAN are separate and distinct and each requirement would be evaluated on its own during an assessment. It is recommended to work with the acquirer to determine the business need for the report.

# Do we have to make a change, or can we continue to use first 6 last 4 for Data at Rest?



You can continue to use the first 6 / last 4 for Data at Rest. Refer to PCI FAQ 1091.

Consider: Many entities do not need information from BINs for their business processes and hence do not need to make any changes with the migration to 8-digit BINs. Hence, the first thing Visa recommends is to understand if there is any business process where there is a need to extract information from the BIN. If that assessment shows that there is no such need to extract information from a BIN, then no changes are required.

Are we allowed to store the first 8 digits of the card number, even though the BIN is 6 digits, or can we store with a standard of first 8, any other 4 regardless of BIN length?



The acceptable PAN truncation format of first 8 and any 4 digits applies to both 6-digit BINs and 8-digit BINs. Visa recommends storing only the information required.

# How are PCI standards adjusted with tokenization? Does tokenization make the PAN PCI ineligible?



Yes, a payment token that is defined and used in accordance with the EMV Payment Tokenization Specification, and that exists outside of the Token Service Provider's token data environment is not considered Account Data and is therefore not in scope for PCI DSS. Please see PCI FAQ 1326: "How does PCI DSS apply to EMVCo Payment Tokens?"

# Are we able to store up to the first 12 digits of the PAN instead of first 8 last 4?



PCI requirements for truncation allows for the first 8 and any other 4 digits to be stored. Storing up to the first 12 digits would satisfy this requirement.

Can you speak to why not all brands have the same PCI standards? Do you have a recommendation for how to manage if you process cards from different brands with different standards?



All the major payment brands acknowledge PCI DSS Security Standards. How payment brands enforce the standard is up to their individual programs. Visa can only speak to our requirements. Each brand will make individual decisions based on internal risk analysis. Please work with these brands directly on options to update their standards for alignment.

**Do the same truncation and masking standards apply if the PAN length is longer or shorter than 16-digits?** 



Yes, the same requirement applies for PAN lengths other than 16 digits.

If the company is outside PCI scope today, but is using BINs for analytical purposes, are we now allowed to receive and store the first 8-digits without moving to within PCI scope? What if we want to keep first 8, last 4?



The storing of truncated PAN may enable the descoping of the environment from PCI DSS validation. However, given that each environment is quite different, please contact your QSA to provide final confirmation.

**MERCHANTS Security & PCI** 



Am I allowed to return the first 8 and last 4 digits of a 16-digit PAN in API responses to merchants?



An API response that truncates first 8, any 4 of the PAN meets the truncation requirements making that PAN unreadable.

Am I allowed to display the first 8 plus last 4 of the card number on client facing applications?



Yes, although you will be required to document business justifications to display more than the first 6 and last 4 digits. Most payments providers can satisfy their business process to identify transactions with the first 6 and last 4.

# Are there other cardholder elements that need to be secured outside of PAN?



The requirement for encryption during storage applies to only PAN. Although it is a good practice to encrypt all data when stored.

- If we encrypt and store only the first 9 digits, or account range, is that still within the current standards?
- If the data is truncated to only the first 9 digits, it meets the PCI truncation requirement of first 8 and any 4.
- If we've already been certified with PCI-DSS for 6- digit BIN, do we need to be certified again for 8-digit BIN requirement?
- No as this would be covered as part of your annual PCI DSS process. There is no requirement to conduct out of cycle PCI DSS audits to meet the ISO BIN mandate.
- If we process data and transactions on a mainframe with an encryption disk, do we also need to have PAN encryption?
- PCI requirement 3.4 requires that PAN be made unreadable. Hence encrypting the entire disk would meet the requirement. Since each environment is quite different, please contact your QSA for final confirmation.
- Are there concerns on data security with the display of up to 2 additional digits?
- There are no concerns of being able to obtain the full 16-digit PAN because the PAN data in and of itself does not enable a successful payment transaction to occur.

**MERCHANTS Security & PCI** 



How do I document, and obtain approval of, the business justification, if needed, to display more digits?



Clients should have the business justification documented and available for their assessor. The assessor will follow the testing procedure associated with requirement 3.3.

**MERCHANTS Token** 

# Token



**Q** How is tokenization impacted by this mandate?



Tokens will continue to be supported at the 9-digit account range.

# VSDC Certificate Authority (VSDC CA), Issuer Public Key (IPK) Certificates, and Offline Data Authentication (ODA)

Can I request an 8-digit BIN level test IPK certificate on a non-migrate 6-digit BIN for testing purposes?

A

Yes, you can. You may receive an error message but you can proceed with the submission.

How will the eight-digit migration affect IPK functionality at terminals?

A

There is no change in terminal functionality or processing to support IPK for eight-digit BINs. Terminals must continue to maintain Visa Public Key Tables and be compliant with EMVCo requirements, which do not change based on six versus eight-digit BINs. There are no changes that merchants need to make to support IPK on eight-digit BINs, and there is no change to the cardholder experience.