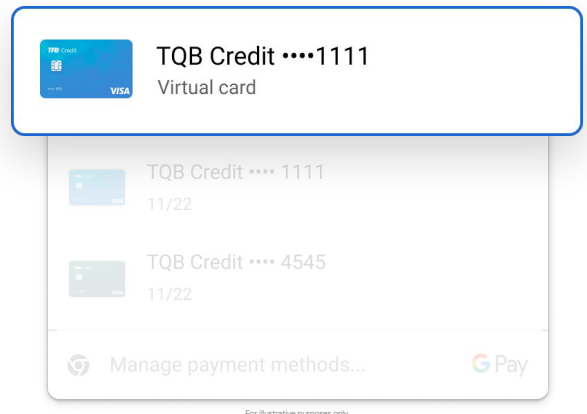




Virtual Card Numbers: Merchants

What is a virtual card number?

- A virtual card is a randomly generated, unique set of a PAN, expiry and CVV that replaces a cardholder's physical credit card credentials during online checkout on Chrome Autofill.
- Chrome Autofill facilitates the creation of a unique virtual card number for each eligible credit card, and during guest checkout at an online merchant, populates the payment field with a virtual card number and instead of requiring CVV entry inserts a randomized CVV to complete the purchase
- Virtual card numbers help reduce the risk to cardholders of fraud that results from the unwanted exposure of underlying card credentials.



How do virtual card numbers work?

Enrollment

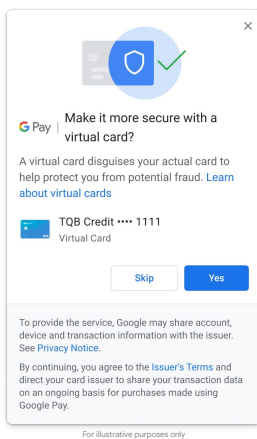


Transaction

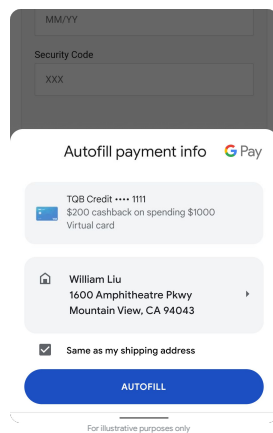


Card Management & Service Channels

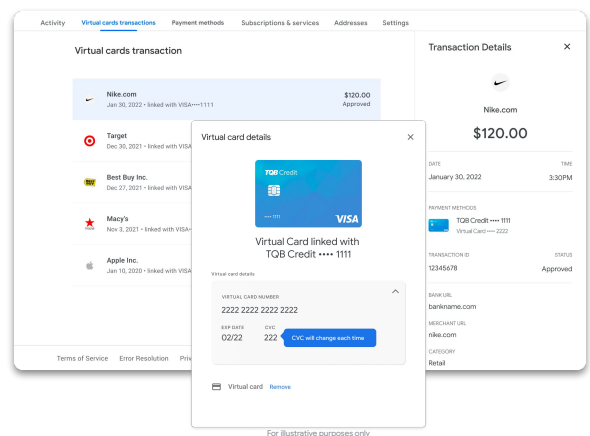
Google facilitates cardholder enrollment to virtual card numbers in Chrome Autofill*



Chrome Autofill populates virtual card number information to complete transactions



Pay.google.com provides a management hub where cardholders can view their transactions



Google and Issuers will provide additional information regarding transactions through service channels

Cardholders enable virtual card numbers for eligible cards

Cardholder prompted to turn on virtual card number when saving or using an eligible card with Chrome Autofill

Issuer approves virtual card number issuance

**The virtual card number is generated via the applicable network or issuer. Google only stores the last four digits of the virtual card number.*

Cardholders use virtual card numbers for fast and secure online purchases

Cardholder selects the virtual card during guest checkout using Chrome Autofill

Merchant receives the virtual card number for processing

Issuer performs enhanced risk assessment for added security

Cardholders can view transaction history and manage virtual card numbers

Cardholder can view the virtual card number details and review the list of recent virtual card number transactions in the management hub

Support is provided to all involved stakeholders

Cardholders can receive support from Google Pay Help Center (e.g. virtual card number transaction history, disabling cards)

Cardholders can manage business as usual concerns (e.g., return, disputes) directly with the **Issuer's** supported channels, e.g., call center, website, app, etc.



Virtual Card Numbers: Merchants

What are the benefits of virtual card numbers?

- 1 Improved Shopping Cart Conversion**

Amplify the checkout benefits of Chrome Autofill by removing need for cardholders to manually enter CVV
- 2 Decreased Exposure to Data Breaches**

Eliminates disruption to a cardholder's online shopping activity in the event of a data breach as virtual cards are shared in place of physical card credentials
- 3 Authorization Lift**

Improved authorization rates expected as a result of real-time risk-based issuer authentication

Top Questions for Merchants

What is required of merchants to accept virtual card numbers?

The solution is designed to be seamless for all merchants, and there is no merchant integration effort required to accept virtual card numbers.

What payment credentials will merchants receive during a transaction?

Google will deliver the complete virtual card number to the merchant. The merchant will also receive the last four digits of the cardholder's PAN in the transaction authorization response.

How will virtual card numbers impact a merchant's ability to manage internal processes that rely on PANs?

Merchant processes that anticipate receipt of underlying PANs (e.g. loyalty, fraud monitoring) may need to be updated to reflect the virtual card number that is associated with an underlying credit card number or last four digits of a PAN.

Returns, reversals, disputes are all supported on tokens. Payment Account Reference (PAR), a solution launched in 2016 by EMVCo, is also available as a means to link tokens and the account number associated with the same cardholder account.

In addition, Visa will continue to provide PSPs Token BIN ranges for the purpose of identifying token-backed virtual card numbers. For additional details on PAR or Token BIN ranges, please contact your network provider.

How does this impact use cases such as in-store returns and pick-ups, where a merchant may need to match the card number on a receipt (virtual card number) to the consumer's physical card number?

Virtual card numbers map automatically to the underlying card account so should not impact returns. Merchants also have the option of including both the virtual card number and the last four of the PAN on a customer's receipt. In the event that the cardholder faces a problem with a return, they will have access to a virtual card number Management Hub (pay.google.com) which will show the mapping between the physical card number and the virtual card number and its corresponding transaction information for that number. If necessary, cardholders will be able to show this mapping to an in-store clerk in order to complete the return.

How will Google educate consumers on this feature?

Google has created a straightforward, intuitive user experience that readily provides user education on virtual card numbers before, during and after a cardholder has enrolled a virtual card number. During the checkout process, when a cardholder clicks into the card selection field, eligible cards that can be enrolled as a virtual card will be clearly indicated. Further, users can learn what a virtual card number is through Chrome Autofill prompts and can easily activate it for an existing credit card within Chrome browser settings or on a new Management Hub (pay.google.com).

After a cardholder has enrolled a virtual card number for an existing credit card, Google will continue to provide visual identifiers in the payment drop-down list to provide easy differentiation between PAN-only cards and virtual card numbers. Outside of the payment experience, cardholders will have access to Google's Management Hub (pay.google.com) where they can view virtual card number transactions and will also have access to the Google Pay Help Center, where they can access frequently asked questions such as how to return a product purchased with virtual card numbers, how to delete a virtual card number, and other key questions.