

# DecentralizedDebit API - Transaction Processing

Gabriel Ruoff, geruoff@syr.edu

## Legend

- Merchant public/secret key



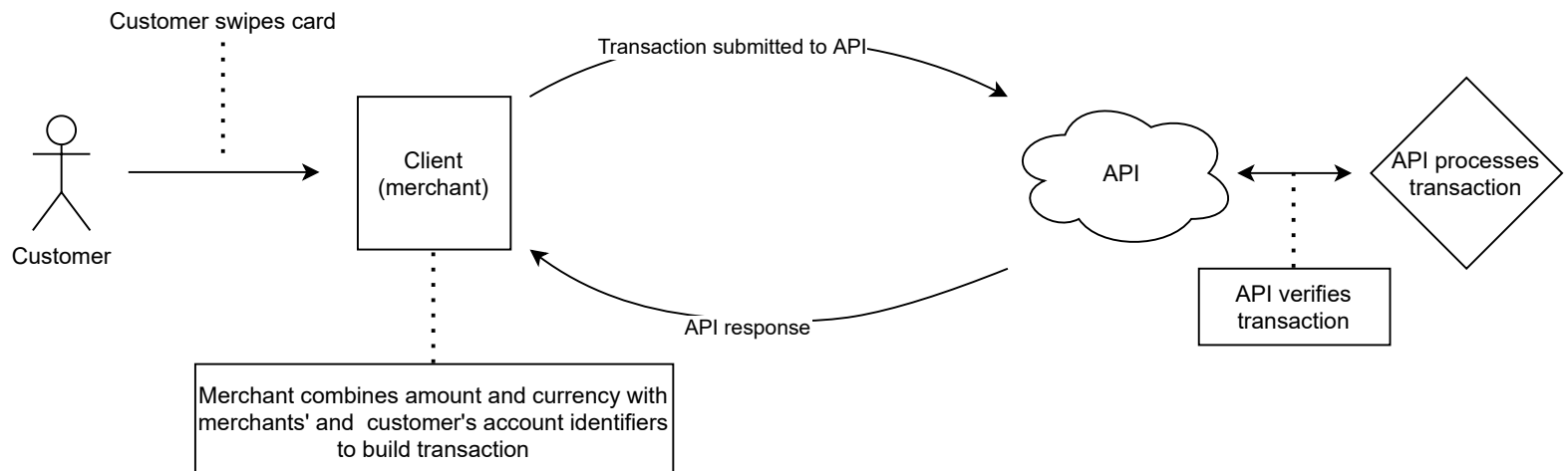
- Server public/secret key



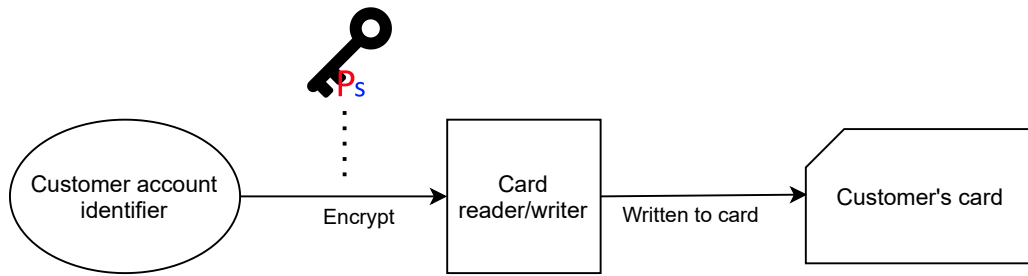
## Terminology

- amount: transaction amount, determined by merchant at POS
- currency: the currency in which to pay, determined by customer at POS
- txdata: encrypted data identifying the customer's user account. Stored on card
- rxdata: encrypted data describing the merchant's user account, amount, and currency
- checksum: hash of rxdata and txdata used to verify a transaction's integrity
- transaction blockchain: blockchain containing all previously processed transaction data. Stored on server side and used to verify the originality of submitted transactions

## General Overview

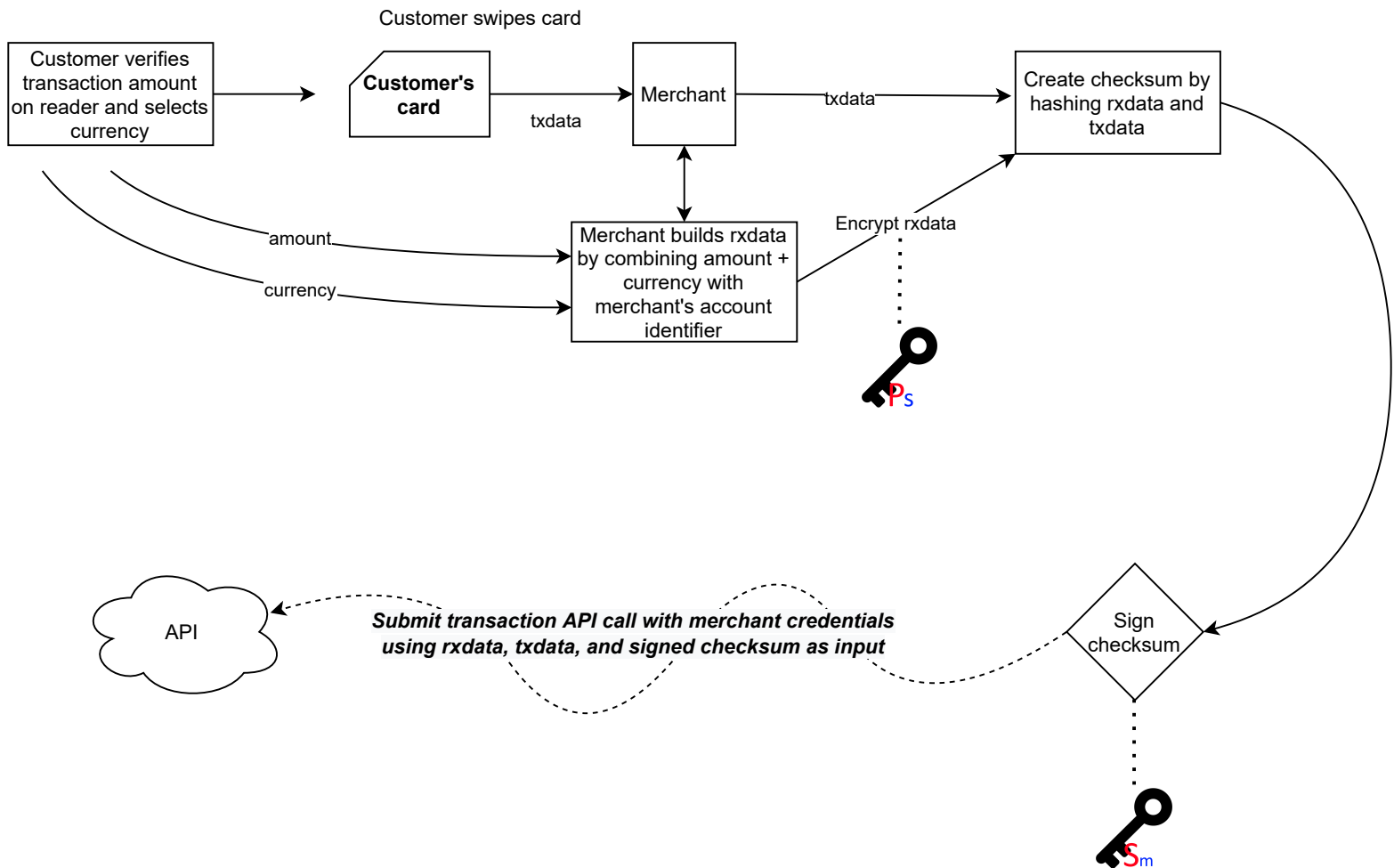


## Card Preparation



## Transaction Creation

Merchant Side



# Transaction Processing

Merchant Side

