



# The State of Play in U.S. Faster Payments

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FPC Network Committee



# The State of Play in U.S. Faster Payments – A Network Perspective

- Introduction
- The State of Play in U.S. Faster Payments – Use Cases
- Understanding Faster Payment Networks
- Update on U.S. Faster Payment Networks



# The State of Play in U.S. Faster Payments – A Network Perspective

Consumers and businesses in the United States have a choice of networks that provide faster payments. These networks have different characteristics, which have implications for the variety of use cases faster payments enables. This range of features allows financial institutions and payment service providers to choose the networks that best meet their needs. Providers of payment services often use multiple networks to extend the capabilities of their offerings. The choice among networks provides a rich platform for innovative solutions that no single network can offer.

This report provides an update on the market for instant and immediate payment services in the United States in 2020, focusing on the underlying payment networks. For this report, we have defined a payment network as a network that connects financial institutions for the purpose of making funds transfers. A network in which the transmission of the payment message and the availability of final funds to the payee occur in real-time or near real-time on as near to a 24-hour and seven-day (24/7) basis as possible is considered to be either instant or immediate, depending upon the settlement mechanism. We will also include both core clearing and settlement networks and value-added networks or overlays built on top of core payments infrastructure.

The profiles included in this report are provided by networks represented in the U.S. Faster Payments Council. We believe these networks offer a broad profile of faster payment options in the United States.

# Faster Payments are Enabling a Variety of Use Cases

## P2P/C2B

- Paying neighbors for consolidated grocery store trips & errands
- Transfers to friends & family who have lost jobs\*
- Private landlords collecting rent without visiting tenants\*
- Cross-border remittances to family locked down in other countries\*
- Individuals paying for services to SMBs (e.g. plumber)
- Bill payments\*\*

## B2B

- Payments to expedite shipments – to suppliers, trucking firms, drivers
- Mortgage closings without exchanging checks

## A2A

- Expedited merchant settlement to improve cash flow\*
- Transfers to move CARES Act Economic Impact Payments between accounts\*

## Disbursements

- Payroll Protection Plan loan disbursements\*
- Instant insurance claim payments
- Payouts to sellers on marketplaces

## Wages

- Gig workers paid on demand
- “Touchless” tips to employees handling curbside pickup\*
- Expedited payroll
- Cashless payments to individuals providing home services\*

# U.S. Consumers and Businesses Have a Choice of Faster Payment Networks

These networks have different characteristics, which have implications for the variety of use cases that faster payments enables.

## Routing Mechanisms

- Account number and routing number
- Card number
- Social alias (phone number, email address)

## User Experience

- Network defines user experience and use cases
- Network sets baseline, providers design user experience and use case specific features

## Other Services

- Directories
- Payment request
- Remittance data
- Anti-fraud and compliance
- Account validation
- FX or cross-border payments



# Understanding Faster Payment Networks

Faster payment networks offer a broad range of features. Users and payment service providers can choose the networks that provide the functionality they need for the use cases and user experience they need. These distinctive characteristics help users understand the faster payment network options available in the United States. Defining characteristics of faster payment networks include:

- **Credits and debits** – Does the network support credit transfers, debits, or both?
- **Speed** – How fast are payments cleared, and how soon are funds available to the payee?
- **Settlement** – How are payments settled (e.g., deferred net settlement, real-time gross settlement) and how soon after initiation?
- **Payment finality** – Can payments be revoked, reversed or returned, for what reasons, and for how long after initiation?
- **Payment confirmation**— Does the network provide confirmation of payment to payers, to payees, and when? Is it provided?
- **Additional message functionality** – What non-payment messages (e.g., request for payment, account verification) and extended data capabilities does the network provide?
- **Payment routing** – How are payments routed over the network (account number and routing number, card number, social alias, token, etc.)?
- **Directories** – Does the network use a directory of recipients to support network routing or risk management? And if so, how?
- **Links to other networks** – Does the network use other networks to clear or settle transactions, to expand its reach, or for other purposes?
- **User experience** – What elements of the user experience does the network control through rules, technical specifications, user interface requirements, etc.?
- **Fraud and risk controls** – Does the network have built-in compliance and other anti-money laundering checks?
- **Rules** – Does the payment network have defined rules to support each use case, channel, and customer type?



# Network Characteristics

# Network Characteristics – At a Glance

	FedNow <sup>SM</sup>	Junifunds <sup>®</sup>	Mastercard Send	Open Payment Network OPN <sup>®</sup>	RTP <sup>®</sup> Network	Visa Direct	Zelle <sup>®</sup>
Credits and Debits	Credit transfers	Credit transfers	Credits and debits	Credit transfers, pre-authorized payments	Credit transfers	Credits and debits	Credit transfers
Payment Routing	Routing number and account number	Routing number and account number	Card credentials (primary account number)	Routing number and account number, social alias (email etc.)	Routing number and account number	Card credentials (primary account number) or routing number and account number	Social aliases (e.g., email or phone number)
Speed	Within seconds	Typically, seconds up to 30 minutes	Typically, seconds up to 30 minutes	Immediate	Average 2-3 seconds, up to 15 seconds	Typically, seconds up to 30 minutes	Typically, within seconds when the recipient is already enrolled
Settlement	Real-time gross settlement	Real-time gross settlement	The acquirer is responsible for settlement	Immediate	Real-time gross settlement	Deferred net settlement	ACH, Visa Direct and Mastercard Send, and RTP
Payment Finality	Immediate, irrevocable	Immediate, irrevocable	Immediate, irrevocable	Immediate, irrevocable	Immediate, irrevocable	Immediate, irrevocable	Immediate, irrevocable
Payment Confirmation	Within seconds for sender and receiver	Within seconds for sender and receiver	Synchronous response with status	Occurring immediately with initiation and receipt	Within seconds for sender and receiver	Pre-transaction	Typically, within seconds for the sender and receiver



# Network Characteristics – At a Glance

	FedNow <sup>SM</sup>	Junifunds <sup>®</sup>	Mastercard Send	Open Payment Network	RTP <sup>®</sup> Network	Visa Direct	Zelle <sup>®</sup>
Additional Messaging Functionality	Request for payment and other non-payment messages	Link to external documents	Eligibility check; transaction limits and thresholds	Full API with support for multiple message formats and program interfaces	Request for payment and other non-payment messages	Dynamic controls including transaction limits and velocity limits	Request, unregistered notifications, alerts, and reminders
Directories	N/A	N/A	N/A	Integrated and updated in real time with context-sensitive security and interoperable with other directories (e.g., social media, contacts, routing, and account number, etc.)	N/A	N/A	Social alias directory
Fraud and Risk Controls	See detailed network characteristics	See detailed network characteristics	See detailed network characteristics	Limits, authorized transfers, etc. See detailed network characteristics for more information.	See detailed network characteristics	See detailed network characteristics	See detailed network characteristics



# Network Profiles

# Network Profile – FedNow<sup>SM</sup> Service

The FedNow Service is being developed by the Federal Reserve to enable financial institutions of every size, and in every community across America, to provide safe and efficient instant payment services around the clock, 365 days a year. The target release date of the service is 2023 or 2024.

The FedNow Service will provide core clearing and settlement capabilities to support a range of transaction types and use cases. Developed with industry input, the service is being designed to advance the Fed's public mission.



**Accessibility**



**Safety**



**Efficiency**



# Network Profile – FedNow<sup>SM</sup> Service

The Federal Reserve's broad reach, encompassing connections and service relationships with more than 10,000 financial institutions, supports a nationwide infrastructure for instant payments.

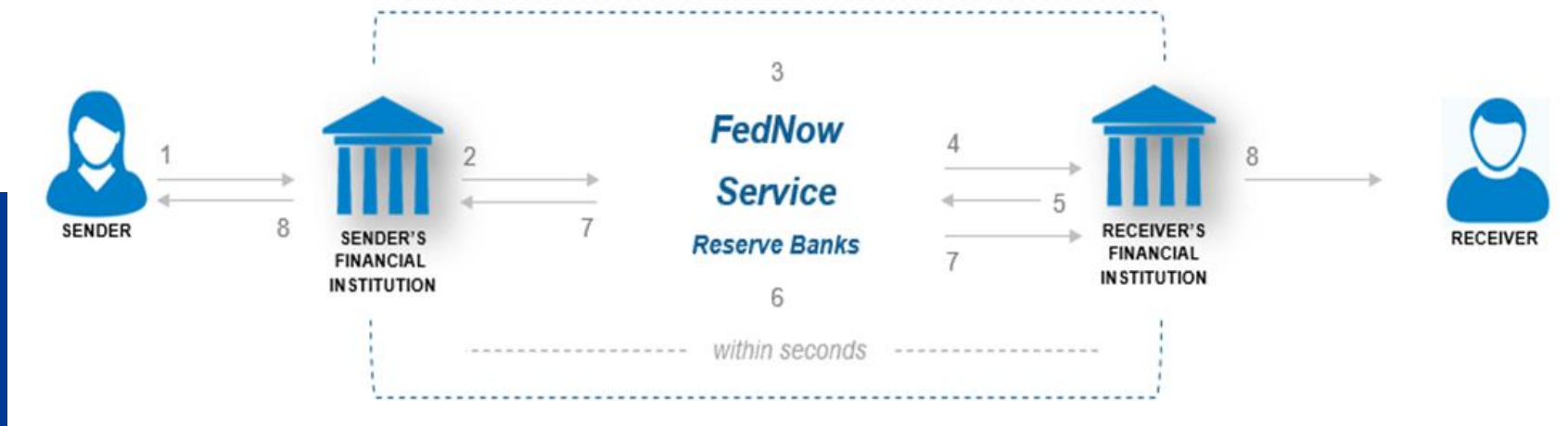


**FedNow**<sup>SM</sup>  
24/7  
INSTANT PAYMENTS

- Use of the **ISO 20022 standard** will facilitate industry interoperability.
- **Request-for-payment** capability enables bill payment and other key use cases.
- A broad range of **message types and reports** support payment inquiries, reconciliation, certain exceptions, and returns.
- Tools, including **transaction value limits and reporting features**, help combat fraud, and support payment integrity.
- A **liquidity management tool** allows the transfer of funds between participants.

# Network Profile – FedNow<sup>SM</sup> Service

The figure below illustrates a completed payment over the FedNow Service in its simplest form. This process is designed to take place within seconds.



1. Sender initiates payment.
2. Sender's financial institution submits payment message to FedNow Service.
3. FedNow Service validates payment message.
4. FedNow Service sends contents of the payment message to receiver's financial institution.
5. Receiver's institution confirms that it intends to accept the payment message.
6. FedNow Service debits and credits the designated master accounts of the sender's and receiver's institutions.
7. FedNow Service sends a payment message to the receiver's institution with an advice of credit and an acknowledgement of settlement to the sender's institution.
8. Sender's and receiver's accounts are debited and credited, respectively, outside the service.

# Network Profile – FedNow<sup>SM</sup> Service

Feature	Description
Recent Development and Initiatives	<ul style="list-style-type: none"> <li>• Aug. 6, 2020: The Federal Reserve announced the features and functionality planned for the initial release of the FedNow Service via a <i>Federal Register</i> notice.</li> <li>• Oct. 13, 2020: the Federal Reserve announced and solicited interest for the FedNow Pilot Program to support development, testing, and adoption of the FedNow Service. The program is slated to kick off in early 2021.</li> <li>• July-Nov. 2020: The FedNow Community and associated working groups collaborated to assist with finalizing FedNow ISO 20022 message specifications and defining participant reconciliation needs.</li> </ul>
Access and Distribution Model	<p>The FedNow Service will be broadly available to all depository institutions in the United States, provided they are eligible to hold accounts at the Federal Reserve Banks under applicable federal statutes and Federal Reserve rules, policies, and procedures. Financial institutions will connect to the service using the FedLine<sup>®</sup> Access Solution. Participants will be able to designate a service provider or agent to submit or receive payment instructions on their behalf and may choose to settle payments in the account of a correspondent. Merchants, consumers, or non-bank payment service providers can access the service through depository institutions as they do with other Federal Reserve payment services.</p>
Additional Information	<p>The FedNow Community is composed of industry leaders with expertise across the payments ecosystem who help inform and evolve the development of the FedNow Service. There are currently more than 700 FedNow Community members.</p> <p>The latest service information, along with instant payments educational materials, is available at <a href="https://FedNow.org">FedNow.org</a>.</p>



# Network Profile – Junifunds® Network



Over 3,000 financial institutions use the Juniper Network.



Outsourcing and automating wires, ACH, faster payments, check, real-time ledger, and international for correspondents, financial institutions, banks, and corporates.



U.S. \$3 billion transacted daily on Juniper, Federal Reserve, and networks worldwide.

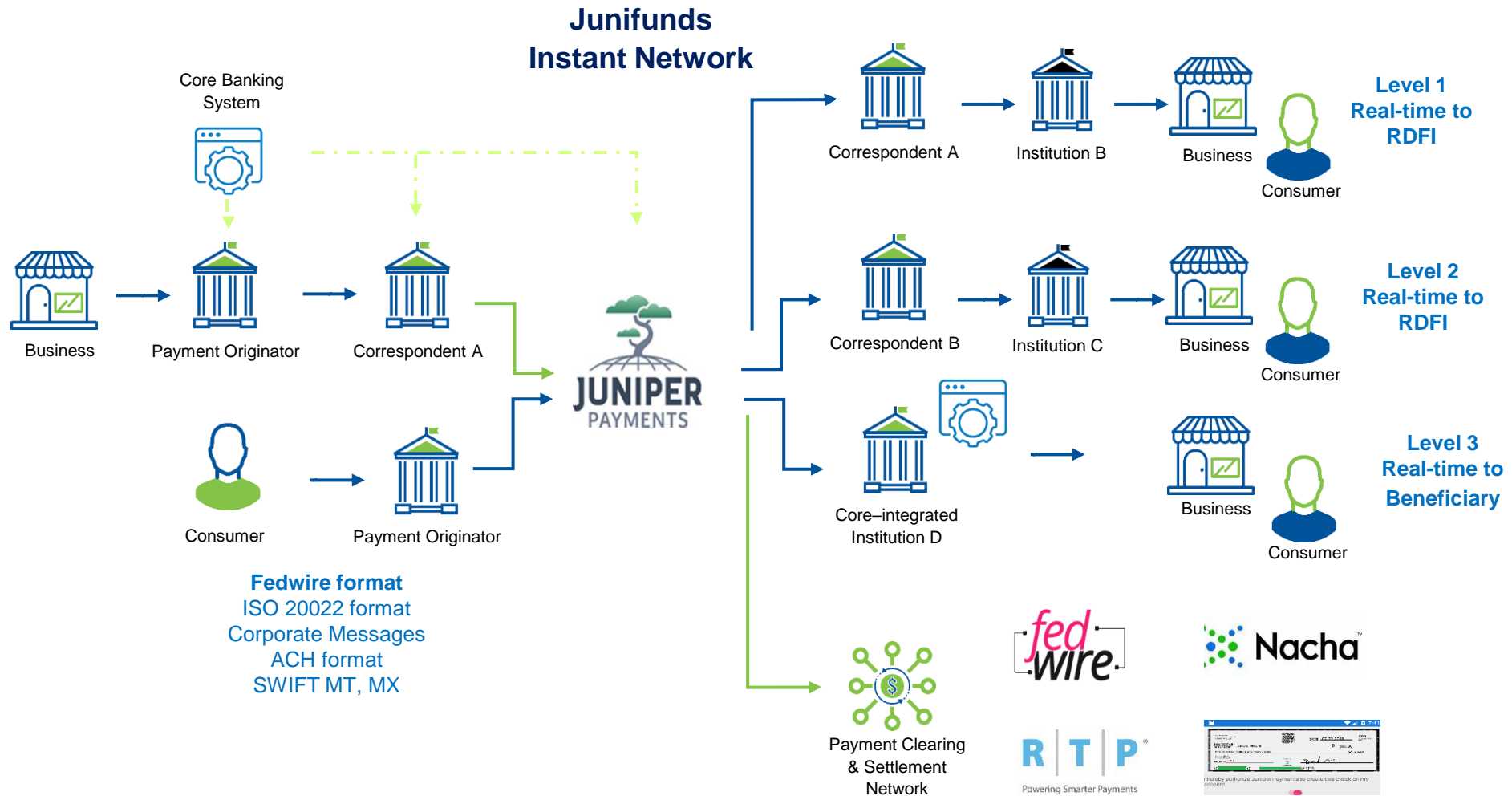
*Audited by the Federal Reserve, the OCC, NCUA, and FDIC.*



[OPENBANKINGU.S.A.COM](https://openbanking.us)



# Network Profile – Junifunds® Network



**Processing 24x7 and Settled in real-time**

# Network Profile – Junifunds® Network

Feature	Description
Overview	<p>Operated by Juniper Payments. The Junifunds network is an immediate message transfer, clearing, and settlement network for U.S. financial institutions.</p> <p>The system has 3 levels.</p> <ul style="list-style-type: none"><li>• Level 1: transfer where clearing financial institutions have same correspondent.</li><li>• Level 2: transfer where clearing financial institutions may be using different correspondents for settlement, but both are part of the Junifunds network.</li><li>• Level 3: transfer where the financial institution is part of Junifunds network and beneficiary will receive the transaction in under 30 seconds.</li></ul>
User Experience	<p>Junifunds network rules define requirements for end-user funds availability, cost of receipt timeliness of payment notification, and finality of payment. Other aspects of user experience such as user interface are determined by the participating financial institution or payment service provider.</p>
Links to Other Networks	<p>Junifunds is working on interconnection with foreign ACH and central banks to facilitate efficient global payments.</p>
Access and Distribution Model	<p>Any U.S. depository financial institution is eligible to participate in the network. All financial institutions on the network are full participants. Financial institutions can connect directly to the network or can use an approved third-party financial institution sponsor.</p>
Recent Development and Initiatives	<p>The Junifunds network Level 1 and Level 3 are currently available in pilot mode. Level 2 is expected to go live in 2021.</p>



# Network Profile – Mastercard Send

People and businesses expect quick, convenient, and secure payments to enable their increasingly fast-paced digital lives.



## Speed

- Consumers want to be able to pay and be paid instantly.
- Businesses increasingly recognize value of disbursing funds in near real time.



## Convenience

- Consumers expect an intuitive, seamless payments experience.
- Businesses want to offer their consumers the easiest, most convenient way to receive disbursements.



## Choice

- Consumers want to choose how they send and receive funds.
- Businesses want the flexibility to disburse funds across multiple channels.



## Security

- Consumers and businesses expect their data and their money to be protected at all times.

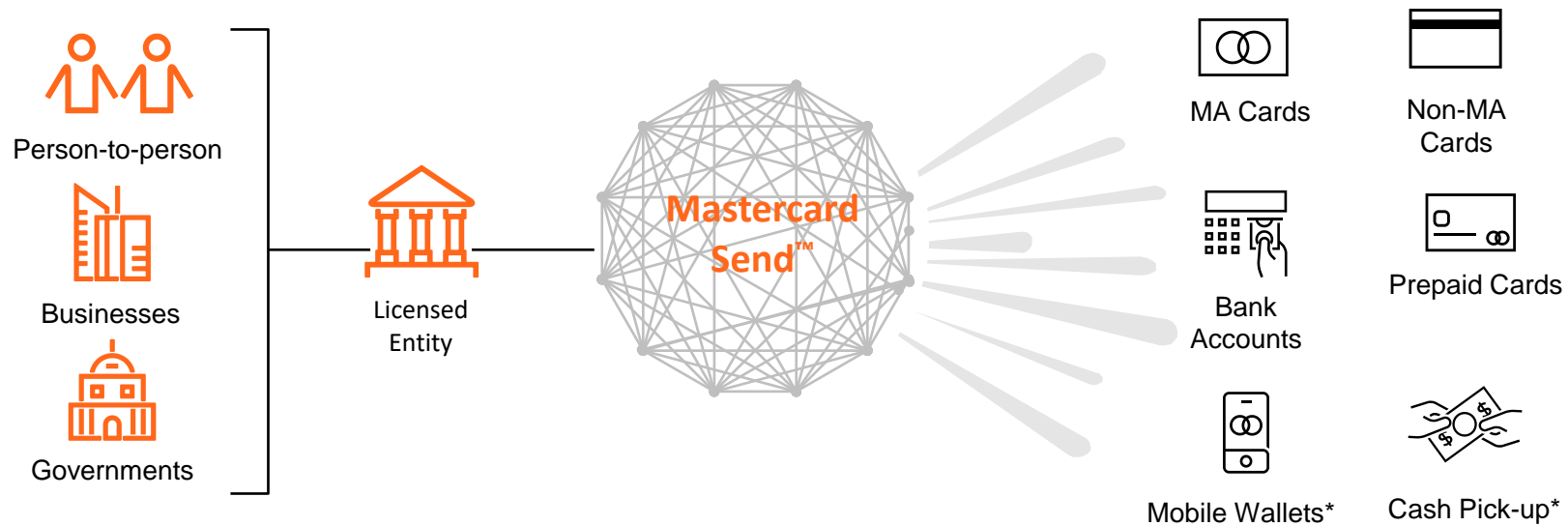
\*Actual posting times for approved transactions will depend on the receiving financial institution.



# Network Profile – Mastercard Send

## Mastercard Send digitizes payment transfers

Mastercard Send™ is a multi-rail platform that enables near real-time payment transfers to and from billions of card, bank, and digital accounts globally.



\*Limited to specific markets



# Network Profile – Mastercard Send

And enables a new set of everyday spend categories\*



Note: B2C denotes Business-to-Consumer, P2P denotes Person-to-Person, A2A denotes Account-to-Account and G2C denotes Government-to-Consumer. \*Non-exhaustive list of use cases.



# Network Profile – Mastercard Send

Feature	Description
Overview	Mastercard Send Domestic enables transaction originators to send domestic payments for various use cases, including person-to-person payments as well as business and government disbursements to recipients located in the same country, regardless of card brand.
Links to Other Networks	Mastercard Push Payment Gateway Service allows senders (disbursers or P2P providers) to send funds to receivers (individual consumers or businesses) on one of five receiver networks: Mastercard, Visa, STAR, NYCE, or Pulse, with 24/7 availability. Mastercard Send provides one single API connection into debit networks to optimize transfers so that funds are delivered in real time in most cases, using just one single API connection.
User Experience	Mastercard offers Mastercard Send as a B2B2C solution. Transaction originators control the user experience of the disbursers; receiving networks control the user experience of the recipient. Mastercard provides best practices and data and services solutions to advise customers to create and maintain best-in-class user experience, customized by end-user segment. Mastercard also administers the network's integrity, mandating for example standards of know your customer (KYC) requirements, sanctions screening, consumer disclosures, transactions limits, etc. Mastercard Send programs and payment transfer activities are governed by the Mastercard rules and Mastercard Send domestic program guidelines.
Access and Distribution Model	Mastercard Send leverages existing Mastercard relationships with 24,000 financial institutions in over 200 countries and territories. Besides card endpoints, in select markets Send can also deliver funds to bank accounts, mobile wallets, and cash pick-up locations.
Recent Development and Initiatives	<ul style="list-style-type: none"> <li>• Transfast: In 2019, Mastercard acquired Transfast, the global cross-border payments network provider serving over 125 countries across Asia, Europe, Africa, Americas, and Australia, and integrated with 300+ banks and other financial institutions. This acquisition enables banks to send and receive money cross-border, reaching over 90% of the world's bank accounts.</li> <li>• Finicity: In 2020, Mastercard entered into an agreement to acquire Finicity, a leading North American provider of real-time access to financial data and insights. This planned acquisition will enhance Mastercard's existing open banking solutions, streamline the credit decisioning process for consumers and small businesses, and deliver real-time payments experience via account validation tools.</li> </ul>
Statistics	Mastercard Send enables secure, near real-time payment transfers to and from billions of card, bank, and digital accounts around the world.

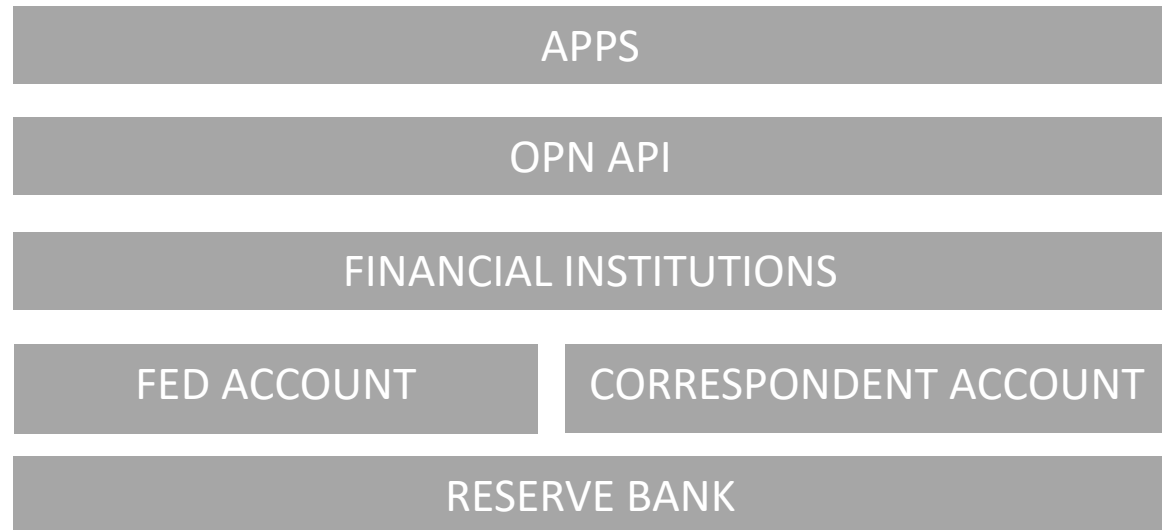


# Network Profile – Open Payment Network

## OPN Open Payment Network®

### VALUE-ADDED SERVICES & APPLICATIONS

OPN's technology stack allows financial institutions to **innovate more rapidly** by enabling approved developers (i.e., FinTechs) to individually connect to an open API and create solutions that then can be offered to the financial institution's customers.



# Network Profile – Open Payment Network

## OPN Open Payment Network®

### KEY ATTRIBUTES OF OPN

OPN has an extensive open API that developers and financial institutions can utilize to provide innovative financial solutions to their customers.



DIRECTORY SERVICE



FLEXIBLE DESIGN

01100  
10110  
11110

RICH DATA FORMAT



CONFIGURABLE WORKFLOWS



RAPIDLY SCALABLE

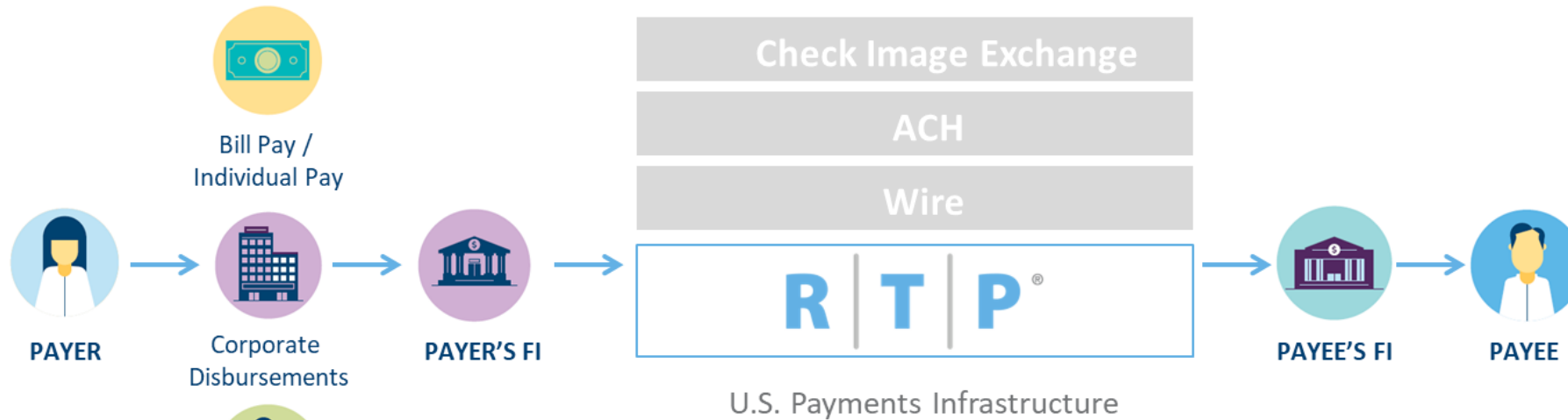


GOOD FUNDS

# Network Profile – Open Payment Network

Feature	Description
Overview	Open Payment Network (OPN <sup>®</sup> ) is a real-time payment network for financial institutions and their customers. It supports low cost, immediate transfers in good funds, 24/7/365 for both wholesale and retail payments in all currencies.
User Experience	OPN's end user experience is optimized by value added developers using OPN's API. In many cases, the end user is aware that their financial institution is providing the user experience and may not be aware that OPN is providing the underlying network.
Links to Other Networks	OPN is interoperable with the payment card networks (e.g., Shazam, Visa) using standard ISO 8583 message format, FedACH using NACHA format, and other networks using more updated ISO 20022 message format.
Access and Distribution Model	OPN's network services are distributed by participating institutions or their authorized agents and accessible through value added applications by their customers without direct integration with the participating institution's core.

# Network Profile – RTP® Network



The RTP® network is a real-time payment system that provides immediate clearing, settlement, and message delivery to financial institutions to support a variety of use cases.

The RTP® network does not provide service directly to end users – that is done by banks, credit unions, and other payment firms.

The RTP® network is open to every U.S. depository financial institution.



# Network Profile – RTP® Network

## RTP® messages: building blocks for payment products



### Credit Transfer

- Payer controls timing and sending.
- Increased transparency and immediate indication of success or failure.
- Payment in good and final funds.



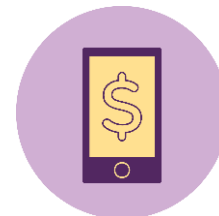
### Request for Information

- Allows questions to be asked in context in response to the payment made.
- Increased security and automation potential.



### Request for Payment

- Non-obligatory “ask” for a payment.
- Bank-grade security for transferring invoice and bill detail.
- Enables straight through processing.



### Invoice/Remittance Detail

- This detail can be included in each message or as a standalone addenda.
- Supports links to existing data stores and transfer of full remittance detail.



### Receipt Confirmation

- Payee can directly let the payer know they have received and posted the transaction.
- Reduced customer service calls and increase in transparency.

- All messages are based on ISO 20022 standard.
- Confirmed delivery – all messages are immediately accepted or rejected.
- XML format and confirmed delivery make RTP a good fit for API-based deployment.

# Network Profile – RTP<sup>®</sup> Network

## How RTP<sup>®</sup> capabilities are being used today



**A2A**



**Loan  
Funding**



**Gig  
Economy**



**B2B**



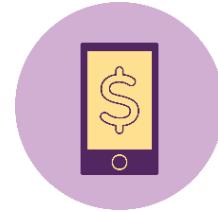
**Payroll**



**Merchant  
Funding**



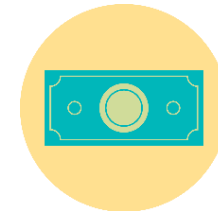
**Title  
Companies**



**Wallets**



**Insurance  
Claims**



**Cash  
Concentration**

# Network Profile – RTP® Network





Feature	Description
Overview	Operated by The Clearing House (TCH). The RTP® network is an immediate message transfer, clearing, and settlement network of U.S. financial institutions.
User Experience	RTP network rules define requirements for end user funds availability, timeliness of payment notification, and finality of payment. Other aspects of user experience such as user interface are determined by the participating financial institution or payment service provider.
Links to Other Networks	The Zelle® network supports RTP payments.
Access & Distribution Model	Any U.S. depository financial institution (see RTP rules for formal definition) is eligible to participate in the RTP network. All financial institutions on the network are full participants. Financial institutions can connect directly to the network or can use an approved third-party processor. Financial institutions can also pre-fund their position in the joint account directly or can rely on another financial institution such as a bankers' bank or corporate credit union to do so. Non-bank payment service providers can use the RTP network via participating financial institutions. Those that are considered money transmitters by the Financial Crimes Enforcement Network (FinCEN) agree to abide by a schedule of safety and consumer protection provisions under RTP rules.
Recent Development & Initiatives	Projects are underway for financial institutions to route Zelle transactions over the RTP network, and to pilot use of requests for payment to present and pay consumer bills.
Statistics	The RTP network clears and settles millions of payments, for billions of dollars, monthly. Average transaction value is \$350-\$400.

RTP rules and specifications are published on The Clearing House website at <https://www.theclearinghouse.org/payment-systems/rtp/document-library>






# Network Profile – Visa Direct

Visa Direct helps power trusted “open money movement” ecosystem

**Payout Enablers**  
Single operational connection efficiency



-  Acquirers
-  Processors
-  Gateways
-  Banks

**Commerce Platforms**  
Scaled, global distribution channels



-  Marketplaces
-  Mobile
-  Messaging
-  Payroll
-  ERP



**Global Endpoints**  
Wide-reaching, real-time money movement

-  Cards – Debit/Credit/Prepaid
-  Bank Accounts

**Network of Networks**  
Trusted, “Open” Network

-  Card Networks
-  ACH/RTP
-  Member Banks
-  Regional Networks

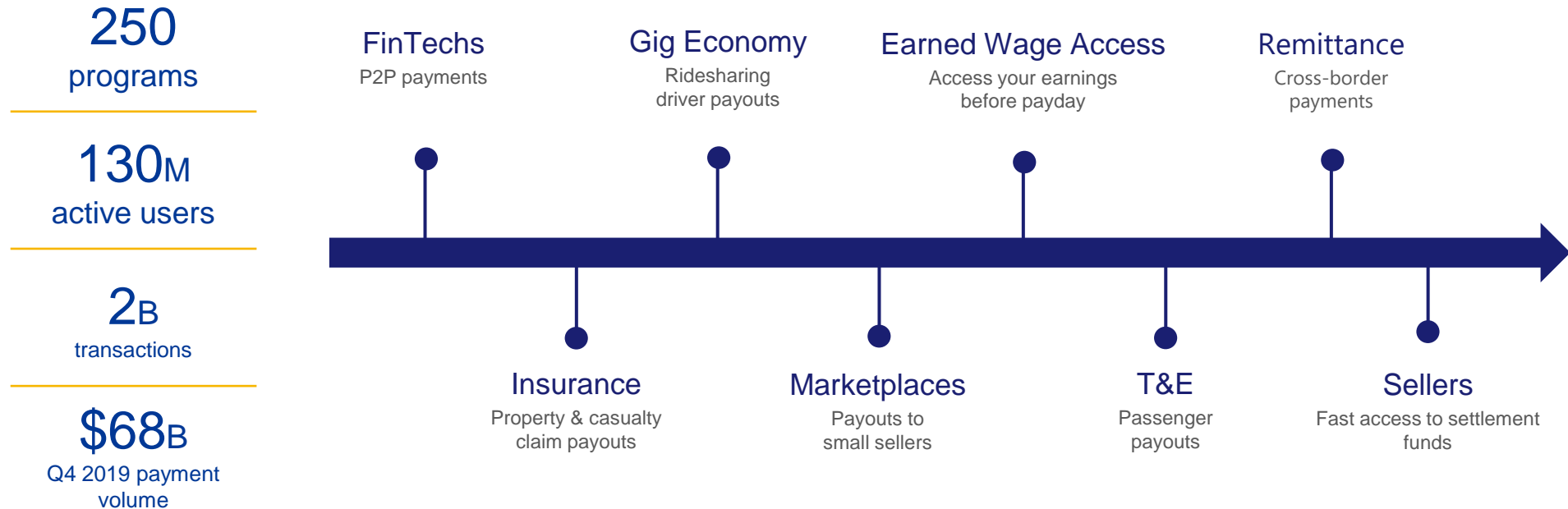
Note: Visa offers the Visa Push Payment Gateway Service to enable push-to-card capabilities for non-Visa cards in the U.S. Actual fund availability varies by receiving financial institution, receiving account type, region, and whether transaction is domestic or cross-border



# Network Profile – Visa Direct

## Visa Direct growth and evolution

Use cases across multiple industries are powered by Visa Direct and help millions of consumers move money in real-time\* through billions of transactions annually.



Sources: [Visa 2020 Investor Day](#), FY 2019 Visa Historical Reports; Visa Operating Certificates; VisaNet data. Note: All brand names and logos are the property of their respective owners, are used for identification purposes only, and do not imply product endorsement. Use cases are for illustrative purposes only. Program providers are responsible for their programs and compliance with any applicable laws and regulations. \*Actual fund availability depends on receiving financial institution and region

# Network Profile – Visa Direct

Feature	Description
Overview	Operated by Visa. Visa Direct is Visa’s global real-time* money movement platform supporting money flows to consumers and businesses.
User Experience	Visa does not control elements of the user experience—as acquirers, service providers, and merchants provide the user experience for their customers. Instead, Visa does offer guidance and best practices around user experience (e.g., card capture, design), research, risk considerations, proof points, developing product identity, messaging examples, consumer preference testing, FAQ recommendations, marketing/communications, and launch plans.
Links to Other Networks	The Visa Push Payment Gateway Service (PPGS) allows acquirers, service providers, and merchants to send their account funding transactions (AFTs) and original credit transactions (OCTs) to Visa for routing to multiple debit networks in the United States, as well as account-based schemes in 88 countries and territories. The service provides authorization, clearing, settlement, reporting, and exception processing support for Accel, CU24, Maestro, NYCE, Pulse, STAR, and Mastercard PPGS.
Access and Distribution Model	Visa Direct can be used to send transactions to recipient accounts for consumers and small business addressing an estimated \$65T+ in new flows. By the end of 2019, Visa payments network <sup>1</sup> : 3.5B cards in force, 61M merchants, over 15K financial institutions supporting over \$8T of payments volume. Visa Direct took this same network and reversed it by allowing Visa clients to enable consumers and small businesses to receive money through card as a network endpoint.
Recent Development and Initiatives	<p>Visa has invested to provide robust network capabilities - allowing senders and receivers to enable and transform a variety of domestic and cross-border move money use cases. These investments are intended to allow Visa to go beyond cards to support an “open” money movement network that connects to and utilizes existing global payments infrastructures.</p> <ul style="list-style-type: none"> <li>• Visa Payments Limited (formerly Earthport)<sup>2</sup> – provides cross-border payment services via a network that connects with local ACH systems in 88 countries and territories. Visa recently launched a push to account capability for Visa Direct, which will extend its reach to bank accounts in many markets.</li> <li>• Token ID (formerly Bell ID) – provides tokenization services for both card and accounts. Tokenization of sensitive information helps devalue data and reduce fraud.</li> </ul>
Statistics	Visa Direct has a global reach to over 200 countries and territories, 99% coverage of banked consumers and small businesses in 88 countries, 130 countries enabled for real-time payouts, and 75 countries enabled for real-time XB payouts. In FY19, Visa Direct launched over 250 programs globally, risen to over 130MM active users, generated over 2B annual transactions globally, and grew quarterly payment volume to \$68B in Q4 2019, which is an 85% CAGR. <sup>2</sup>

1. Visa Fact Sheet: <https://usa.visa.com/dam/VCOM/global/about-visa/documents/aboutvisafactsheet.pdf>; 2. Visa 2020 Investor Day, FY 2019 Visa Historical Reports; Visa Operating Certificates; \*Actual fund availability varies by receiving financial institution, receiving account type, region, and whether transaction is domestic or cross-border.

# Network Profile – Zelle®

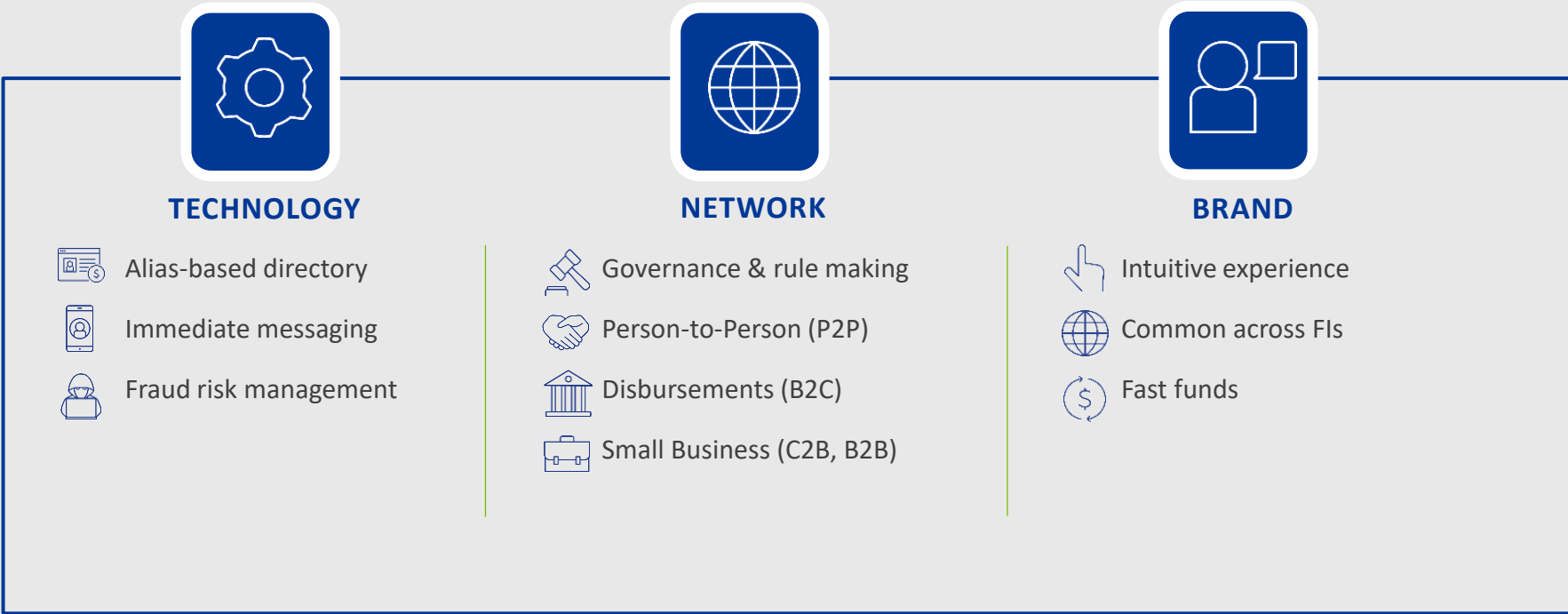
**zelle®**

**WE MAKE MONEY MOVE  
FAST, SAFE AND EASY.  
SO, LIFE HAPPENS.**



# Network Profile – Zelle®

## What is Zelle®?





# Network Profile – Zelle®

Feature	Description
Overview	Operated by Early Warning, the Zelle Network® enables consumers and businesses to easily pay others using a social token (email or mobile number). Funds are available directly in bank accounts generally within minutes when the recipient is already enrolled with Zelle.
User Experience	The Zelle experience is found within participating financial institutions' mobile and online banking services as well as the standalone Zelle app for out-of-network participants. User experience is defined by the Zelle Network for Zelle financial institution participants.
Links to Other Networks	The Zelle Network enables settlement over ACH, Mastercard, Visa, and The Clearing House's RTP Network.
Access and Distribution Model	U.S. financial institutions may join the Zelle Network directly through Early Warning or through reseller partners including FIS, Fiserv, and Jack Henry & Associates.
Recent Development and Initiatives	Zelle is now available to send and receive money from eligible small businesses, as well as for disbursements from companies and government entities to customers who have bank accounts in the United States. Early Warning is in the process of defining a bill pay experience with Zelle.
Statistics	Over 1,000 direct financial institutions are signed to participate in the Zelle Network with over 730 live and over 7,400 financial institutions represented via their customers using the Zelle app. There were 323 million payments representing \$84 billion in Q3 2020.



# Detailed Network Characteristics

# Network Characteristics – Debits & Credits

Network	Description
FedNow <sup>SM</sup> Service	Credit transfers only; service transaction limit to be determined prior to launch.
Junifunds <sup>®</sup> Network	Level 1 and Level 2 have no limit, Level 3 is \$1 Million USD.
Mastercard Send	Mastercard Send offers both funding (pull) and payment (push) transactions in near real time. Funding transactions facilitate pulling funds (debit) from an eligible debit card for the purpose of either (a) funding a subsequent and linked funds transfer from the sender to another person or entity; or (b) transferring funds into another eligible financial account held by the sender. Push transactions facilitate pushing funds (credit) to consumer and small business debit and prepaid cards.
Open Payment Network	Credit transfers.
RTP <sup>®</sup> Network	Credit transfer up to \$100,000.
Visa Direct	Visa Direct works through Visa’s card systems using two types of VisaNet financial transactions: original credit transactions (OCTs) and account funding transactions (AFTs). OCTs are used to push funds (“credit”) to an eligible debit, credit, or prepaid card, and AFTs are used to pull funds (“debit”). Whereas purchase transactions are used to fund a merchant for purchase of goods/services, AFTs are used to fund another financial account or to fund a P2P transfer. Information in this document is specific to OCTs except where noted.
Zelle <sup>®</sup>	Zelle is a good funds network where the sending financial institution debits the sender’s account and the receiving financial institution credits the receiver generally within minutes when the recipient’s email address or U.S. mobile number is already enrolled. Settlement occurs later either through ACH, debit, or RTP.

# Network Characteristics – Speed

Network	Description
FedNow <sup>SM</sup> Service	Transfers are expected to be completed within seconds. Participants will agree to make funds available to receivers immediately upon receipt.
Junifunds <sup>®</sup> Network	Immediate between financial institutions. Level 1 and Level 2: Most interbank transfers are completed within 10 seconds. Receivers have access to funds within 30 minutes, a service level defined by network rules. Level 3: Most transfers are completed within 10 seconds. Receivers have access to funds within 30 seconds.
Mastercard Send	Mastercard Send transactions can be routed to a variety of receive networks. Posting time is governed by the receive network and may also vary by issuer. MoneySend Payment Transaction routed through the Mastercard Network to eligible cards are required to post within 30 minutes of Authorization approval. In the United States, typically, funds are made available to the recipient in near real time.
Open Payment Network	Immediate for on-network transfers. A good-funds invitation is created when transfers are initiated to a recipient off-network. Good funds are immediately available to the recipient upon acceptance of the invitation.
RTP <sup>®</sup> Network	Immediate. Most transfers are completed within 2-3 seconds, with a maximum of 15 seconds before transactions time out. Receivers have access to funds within seconds, a service level defined by network rules.
Visa Direct	The original credit transaction (OCT) uses Visa’s real-time information network. Issuers approve OCTs in real time. So, the sender of funds will know within seconds whether the issuer will accept the funds and deliver money to the recipient account. The Visa “fast funds” rule requires issuers to make the funds available to the cardholder in 30 minutes or less of approving the OCT. Typically, funds are available in real time (actual fund availability depends on receiving financial institution and region). Cross-border transactions to account vary by country and receiving financial institution.
Zelle <sup>®</sup>	Transactions typically occur in seconds when the recipient’s email address or U.S. mobile number is already enrolled with Zelle.



# Network Characteristics – Settlement

Network	Description
FedNow <sup>SM</sup> Service	Real-time gross settlement through debit and credit entries to balances in participants' reserve bank accounts (or an account of a correspondent).
Junifunds <sup>®</sup> Network	Level 1, 3 (financial institutions using same correspondent): Real-time gross settlement backed by pre-funded balances in an account at correspondent financial institution of choice. Level 2, 3 (financial institutions using different correspondent in Junifunds): Real-time gross settlement. Settled at the Federal Reserve Bank of New York.
Mastercard Send	Mastercard Send operates on a good funds model. The transaction originator must have sufficient funds available for settlement of the payment transaction prior to its submission to Mastercard Send. The acquirer or sponsor bank is responsible for settlement of payment transactions.
Open Payment Network	Real-time gross settlement with prefunded account balances at participating institutions with deferred net settlement as needed between financial institutions.
RTP <sup>®</sup> Network	Real-time gross settlement backed by pre-funded balances in a joint account at the Federal Reserve Bank of New York.
Visa Direct	Net settlement, once per day. Visa manages settlement with the acquirer (the sending entity's bank) and the issuer (the recipient's bank). Visa collects funds from the acquirer and delivers funds to the issuer.
Zelle <sup>®</sup>	Zelle enables financial institutions to settle on existing and future settlement services. Today, financial institutions may settle transactions via ACH, Mastercard Send or Visa Direct, and RTP.



# Network Characteristics – Payment Finality

Network	Description
FedNow <sup>SM</sup> Service	Immediate, irrevocable.
Junifunds <sup>®</sup> Network	Immediate, irrevocable.
Mastercard Send	Immediate, irrevocable. Both P2P and disbursement transactions are irrevocable and cannot be reversed. The transaction originator (P2P provider or disburser) must ensure that all payment information is correct before sending a transaction via Mastercard Send. Exception items are supported but resolved based on agreement.
Open Payment Network	Immediate, irrevocable.
RTP <sup>®</sup> Network	Immediate, irrevocable.
Visa Direct	Immediate, irrevocable. The Visa system does support a process for exception items for original credit transactions (OCTs) – notably originator errors, or situations where recipient does not receive funds – but all adjustments associated with these exception items are agreed upon with the recipient issuer.
Zelle <sup>®</sup>	Immediate, irrevocable.

# Network Characteristics – Payment Confirmation

Network	Description
FedNow <sup>SM</sup> Service	Sending and receiving institutions will receive acknowledgement of receipt of a payment message and an advice of credit, respectively, within seconds, notifying them that settlement is complete.
Junifunds <sup>®</sup> Network	Sending and receiving financial institutions typically receive confirmation within 10 seconds. Junifunds rules require confirmation to payers and payees within 10 seconds over available electronic channels.
Mastercard Send	Mastercard Send provides a synchronous response with status indicating the receiving institution's authorization decision. Transaction originators have the option to utilize the status and notify the sender and/or the beneficiary.
Open Payment Network	Payment confirmation is sent to sender, receiver, and other parties concurrent with execution of the transfer as specified by the transfer's workflow configuration.
RTP <sup>®</sup> Network	Sending and receiving financial institutions typically receive confirmation within 2-3 seconds, with a maximum of 15 seconds. RTP rules require confirmation to payers and payees within seconds over available electronic channels.
Visa Direct	Visa Direct provides a synchronous response with status indicating the receiving institution's authorization decision. Transaction originators have the option to utilize the status and notify the sender and/or the beneficiary.
Zelle <sup>®</sup>	Sending and receiving financial institutions typically receive confirmation within seconds.

# Network Characteristics – Additional Message Functionality

Network	Description
FedNow <sup>SM</sup> Service	Request for payment, request for return (for payments sent in error), request for payment status, request for information, confirmation of posting, request for account balance, and account activity reports. All messages are based on the ISO 20022 standard.
Junifunds <sup>®</sup> Network	All messages receive a positive confirmation from the receiving financial institution. Credit transfers can include links to external documents (remittance data, involves, bills, etc.).
Mastercard Send	Mastercard Send checks eligibility of a recipient card to receive funds, including whether the card type is eligible in-market. Provides participants the flexibility to use custom fields and configure statement descriptor. Establishes transaction limits (daily and monthly per card) and checks every transaction against established limits. Send enables acquirers and sponsor banks to establish daily credit limits for any of their customers (transaction originators). Based on established thresholds, proactive notifications are generated to participants. Alleviates PCI compliance for participant with tokenization capability.
Open Payment Network	OPN supports multiple standard message formats (e.g., ISO 8583, ISO 20022), modern program interface message formats (e.g., JSON, XML, etc.), and design to migrate from older message formats to modern ones.
RTP <sup>®</sup> Network	Request for payment, acknowledgment of receipt, request for information, request for return of funds (for payments sent in error), and remittance advice. All messages receive a positive confirmation from the receiving financial institution. Credit transfers and requests for payment can include links to external documents (remittance data, involves, bills, etc.).
Visa Direct	Visa sets dynamic controls in the network overall, with transaction limits of \$10,000 and \$50,000, for most U.S. domestic consumer-funded (e.g., P2P) and cross-border, and U.S. domestic business-funded transactions (e.g., disbursements), respectively, and with some exceptions. Visa has set one-, seven-, and thirty-day count velocity limits on transaction funding to a single Visa card. In addition, issuers, acquirers, and processors may set limits based on a variety of characteristics to limit their risk. It is important to note that Visa actively monitors and frequently updates its risk policies and controls.
Zelle <sup>®</sup>	Zelle enables multiple messages including sending a payment and requesting funds. Alerts, notifications, and reminders are also part of the Zelle Network.



# Network Characteristics – Payment Routing

Network	Description
FedNow <sup>SM</sup> Service	Based on account number or proxy for account number (e.g., alias) of the receiver and routing number of the receiving bank.
Junifunds <sup>®</sup> Network	Account number and routing transit number. Alpha-numeric domain-controlled tokens will be supported in future.
Mastercard Send	Mastercard Send transmits funds into consumer and small business debit card, and eligible prepaid card accounts. Through API integration with Mastercard Send, program participants can leverage intelligent network routing capabilities for near real-time payments, eliminating the need to establish connections with multiple networks or build custom routing logic, and to optimize acceptance rates and fastest funds availability.
Open Payment Network	Account number and routing transit number, social alias routing, and domain alias routing are all supported.
RTP <sup>®</sup> Network	Account number and routing transit number. Alpha-numeric domain-controlled tokens will be supported in 2021.
Visa Direct	Card credentials or account number and routing transit number.
Zelle <sup>®</sup>	Alias based tokens are used to route payment.

# Network Characteristics – Directories

Network	Description
FedNow <sup>SM</sup> Service	Participants that leverage alias directories external to the FedNow Service to provide P2P or other services for their customers will be able to use the service as a platform for clearing and settling alias-based payments.
Junifunds <sup>®</sup> Network	The Junifunds network does not have an integrated directory.
Mastercard Send	Mastercard partners use their own directory to support payment process. Send provides mapping service to partners. This enables partners to tokenize the account credentials of senders/beneficiaries. The mapping service also enables partners to create and manage a directory of senders and recipients.
Open Payment Network	OPN has a tightly integrated global directory service that is updated in real time with contextual security and alias capability that allows end users to create, read, update, delete, and control their entries in the directory.
RTP <sup>®</sup> Network	The RTP network does not have an integrated directory. Independent third-party networks can provide alias or directory-based initiation of payments routed over the RTP network via routing number/account or token.
Visa Direct	Visa currently does not have an integrated directory in the United States. Partners use Visa Direct in conjunction with their proprietary directory for P2P payments or other use cases.
Zelle <sup>®</sup>	Early Warning maintains the Zelle directory which associates social tokens with financial institutions.



# Network Characteristics – Fraud & Risk Controls

Network	Description
FedNow <sup>SM</sup> Service	At launch, the service will allow participants to set lower limits and conditions for transaction rejection. Enhanced fraud prevention tools will be provided in subsequent releases of the service. In addition, the service is being designed to assist its participants with consumer protections and resolving errors.
Junifunds <sup>®</sup> Network	Rules require participating financial institutions to implement strong fraud detection/prevention, fraud reporting, and consumer protection policies.
Mastercard Send	<p>To maintain the integrity of each transaction, the Mastercard Send Domestic service performs transaction controls prior to routing payment transactions for processing: eligibility of a recipient card to receive funds; validation of use case by participant and market; proper field configuration in message; defined limits by use case, market and participant. Default limits in the United States are \$10,000 per card per day and per month for P2P transactions; and \$10,000 per card per day; and \$50,000 per card per month for disbursements.</p> <p>Send participants are subject to risk review by Mastercard. Acquirers and transaction originators shall perform all applicable anti-money laundering (AML) measures for each consumer/merchant for whom they submit payment transactions via the Mastercard Send Domestic service. Each program participant must ensure that its service providers and other agents, if any, that facilitate, initiate, or otherwise participate in Mastercard Send transactions for or on behalf of the acquirer or transaction originator have all licenses, permits, registrations, other governmental approvals, and satisfy all other requirements, including applicable money transmitter laws, necessary to engage in such activities. On the Mastercard network, additional controls and capabilities are available for banks to opt-in and configure.</p>
Open Payment Network	Participating financial institutions or their authorized agents are each responsible for anti-money laundering (AML), combating the financing of terrorism (CFT), and know your customer (KYC) for their customers. OPN has appropriate balance between privacy and transparency that allows participating institutions (and their agents) to comply with both legal and regulatory requirements to control and mitigate fraud and risks.

# Network Characteristics – Fraud & Risk Controls (continued)

Network	Description
RTP® Network	Rules require participating financial institutions and payment service providers to implement strong authentication, fraud detection/prevention, fraud reporting (to the network), and consumer protection policies. Lack of debit transactions limits potential fraud vectors; immediate confirmation provides transparency. All transactions are digitally signed and encrypted. The Clearing House tracks reported fraud and participating financial institutions are required to investigate suspected fraud.
Visa Direct	Originators, acquirers, and issuers need to manage multiple risks every time their customers pay/get paid. Visa Direct has multi-layered controls including: <ul style="list-style-type: none"><li>• Only members (issuers and acquirers) trusted and vetted by Visa can participate.</li><li>• Visa program approval and system-level risk controls and analytics including know your customer (KYC), anti-money laundering (AML), account takeover (ATO) protection, sanctions screening, transaction controls and monitoring, velocity limits, compliance, and risk management.</li><li>• Robust payment details in a single payment message.</li></ul>
Zelle®	The Zelle Network provides comprehensive risk management and is layered with the Zelle Network participating financial institution's controls. Key categories include due diligence, know your customer (KYC), anti-money laundering (AML), authentication of customers, transaction controls, blocking transactions before funds are sent, protecting consumers from sending money for fraud, and scams. Early Warning provides participants recommended best practices. Additionally, the Zelle Network provides education on safer payments to consumers.

# Contributors to The State of Play in U.S. Faster Payments



Thank you to the members of the FPC Network Committee who contributed to this industry report:

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