

***FedNow[®] Service
Operating Procedures***

April 2026
Version 3.6

FedNow[®]
24/7
INSTANT PAYMENTS

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1. FedNow Service Terms

Authorized Connection Profile (ACP) – A profile that defines connectivity settings to the FedNow Service¹ for a Participant or Service Provider, which are used to process and manage messages and payments on behalf of one or multiple RTNs.

Connection Party – A role played by a Participant or Service Provider that maintains an electronic connection to the FedNow Service through which the organization enables one or more RTNs to access the FedNow Service.

Connection Point – The grouping of endpoints maintained by a Participant or Service Provider in their role as a Connection Party that enables them to communicate with the FedNow Service.

Correspondent – A financial institution (FI) that maintains a Master Account with a Federal Reserve Bank and has agreed to maintain a Settlement Account for another FedNow Participant.

FedNow Participant – An FI authorized by a Federal Reserve Bank to send, receive or settle messages through the FedNow Service. Also referred to as Participant throughout Operating Procedures.

FedNow Service Funds Transfer Business Day – The funds transfer business day for the FedNow Service as detailed on the FRBservices.org website. Throughout the Operating Procedures will also be referred to as “FedNow Service cycle day” or “cycle day.”

Instant Payment Message – A payment order sent by or received by a FedNow Participant, other than payment orders that are liquidity management transfer (LMT) Payment Messages.

LMT Payment Message – A payment order sent by or received by a FedNow Participant instructing a Federal Reserve Bank to effect a Liquidity Management Transfer.

Nonvalue Messages – Messages sent through the FedNow Service that are not payments and do not generate any accounting entry by the FedNow Service on the books of any Federal Reserve Bank.

On Behalf Of (OBO) Account Holder – A non-bank account holder at a FedNow Participant that sends and/or receives instant payments on behalf of third parties. The FedNow Participant may authorize an OBO Account Holder to act as its Service Provider, as such term is defined below.

Ping - Participant Broadcast Message that the Participant uses to check its connection to the FedNow Service.

Queue (Endpoint) – The FedNow Service uses queues to send and receive messages. Queues are defined as either “to-FedNow” or “from-FedNow” to provide clarity on the direction of the messages.

Respondent – An FI that uses the Settlement Account of a Correspondent to settle FedNow Service transactions.

Service Provider – A party authorized by a FedNow Participant to do one or more of the following on the FedNow Participant’s behalf: initiate, transmit or receive messages on behalf of that FedNow Participant; operate or otherwise manage the Electronic Connection used to send or receive messages on behalf of that FedNow Participant; select the security procedure, profile settings or processing options on behalf of that FedNow Participant; or obtain access to information related to the FedNow Participant through the FedNow Service.

¹ Does not include any FedLine® connectivity information.

Value Message – Value messages are pacs.008 (Customer Credit Transfer), pacs.004 (Payment Return) and pacs.009 (Financial Institution Credit Transfer) messages sent as payment orders through the FedNow Service.

2. Introduction

The FedNow Service is an interbank 24x7x365 real-time gross settlement (RTGS) service with integrated clearing functionality that helps enable financial institutions to deliver end-to-end instant payments to their customers. Like other payment and settlement services offered by the Federal Reserve, the service settles obligations between financial institutions by generating entries to Federal Reserve Bank Master Accounts. Through financial institutions participating in the FedNow Service, end customers can send and receive payments any time, any day, anywhere, and have full access to those funds immediately.

The Federal Reserve Banks may change these Operating Procedures at any time and will endeavor to provide at least 30 days' prior notice for material changes.

a. Terms and Conditions

The terms governing the FedNow Service, including the Federal Reserve Banks' applicable Operating Circulars, govern to the extent of any inconsistency between these Operating Procedures and those terms.

b. Purpose

This document provides an operational description of the FedNow Service, including expectations, requirements and guidance for FedNow Participants on the use of the service. The Operating Procedures should be used in combination with the key documents listed in the table below to provide a comprehensive understanding of the FedNow Service. Additional supporting documentation is available on the FedNow DevRel resource to support Participants and Service Providers.

Document	Purpose	Available Location
FedNow Operating Circular 8 and other applicable Operating Circulars	Governs the terms of the FedNow Service and other related terms.	FRBservices.org
FedNow Service Operating Procedures	Details about the FedNow Service, including expectations, requirements and guidance to be followed by FedNow Participants.	FedNow DevRel resource; public version with redacted sections on FRBservices.org
FedNow Service ISO 20022 Message Specifications	ISO 20022 message implementation guidelines for the FedNow Service, the FedNow Service ISO 20022 Implementation Guide and ISO 20022 Message Flows. This document is itself a technical specification for the FedNow Service which, in combination with the FedNow Service Technical Specifications document, describes how to execute message processing to and from the FedNow Service.	FedNow DevRel resource
FedNow Service Technical Specifications	Provides technical details needed for application development with the FedNow Service.	FedNow DevRel resource

	This must be used in combination with the FedNow Service ISO 20022 Message Specifications document to execute message processing with the FedNow Service.	
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c. Service Eligibility

The Federal Reserve Banks may grant FedNow Service access to any organization eligible to maintain a Master Account with a Federal Reserve Bank. This generally includes, but is not limited to, depository institutions, member banks, U.S. branches and agencies of foreign banks, Edge and agreement corporations, and certain organizations for which a Federal Reserve Bank acts as a fiscal agent.

Each Federal Reserve Bank will exercise its discretion in determining whether an organization that is legally eligible for a Master Account will be permitted to use the service.

d. Roles in the FedNow Service

A financial institution can play one role or a combination of roles in the FedNow Service.

- a. FedNow Participant: Has a FedNow Participant Profile to receive and/or send and receive (instant payments, Liquidity Management Transfers, nonvalue messages, etc.) and has accounting information established for payment settlement, either via a Master Account or Correspondent.
- b. Service Provider: Acts as an agent of a FedNow Participant and is authorized by that Participant to do one or more of the following:
 - Initiate, transmit or receive messages on behalf of the Participant;
 - Operate or otherwise manage the Electronic Connection used to send or receive messages on behalf of the Participant; or
 - Obtain information, select the security procedure, profile settings or processing options on behalf of the Participant.
- c. Correspondent: Maintains a Master Account with a Federal Reserve Bank and has agreed to maintain a Settlement Account for another FedNow Participant.

An organization that is not a financial institution can be a Service Provider in the FedNow Service. To the extent a FedNow Participant uses a Service Provider(s), requirements in these Operating Procedures otherwise applicable to FedNow Participants also apply to the Service Provider when it performs functions as an agent on behalf of a FedNow Participant.²

For all instant payments, the originators and beneficiaries must either be FedNow Participants or must have a direct U.S. deposit account relationship with a FedNow Participant. The FedNow Service supports instant payments by OBO Account Holders at FedNow Participants on behalf of third parties so long as:

- The OBO Account Holder identified as the originator or beneficiary in the instant payment sends or receives the instant payment on behalf of another person that is the ultimate sender or recipient (the “Ultimate End Customer”);
- The OBO Account Holder is acting as an agent for the Ultimate End Customer or has entered into an agreement with the Ultimate End Customer to send and/or receive payments on its behalf;
- No intermediary bank other than a Reserve Bank is involved in the funds transfer;
- Any payment received by the OBO Account Holder on behalf of the Ultimate End Customer satisfies the payor’s obligation to the Ultimate End Customer; and
 - o The Ultimate End Customer: Is a resident or otherwise domiciled in the United States; and
 - o Will have immediate access to any funds received through the FedNow Service by the OBO Account Holder as beneficiary.

² See FedNow Profile section for additional considerations related to multiple Service Providers and correspondents.

3. Anti-Money Laundering and Sanctions Compliance

a. Compliance

Under the terms of the service, the Federal Reserve Banks impose compliance-related requirements on FedNow Participants that use the service on behalf of their customers. Participants must maintain:

- a. Compliance programs that are consistent with applicable anti-money laundering and sanctions laws and reasonably designed to manage compliance risks associated with FedNow Service activity;
- b. Customer due diligence programs consistent with Financial Crimes Enforcement Network (FinCEN) standards; and
- c. Reasonable procedures for screening customer information against current sanction lists and updated lists to the extent customers might be a party to a FedNow Service transaction.³

These requirements are independent of, and do not supersede, any obligation a prospective Participant has under applicable law. However, they also are generally consistent with requirements placed on federally supervised financial institutions under applicable law and supervisory standards.

The Federal Reserve Banks maintain the right to terminate or restrict a Participant's access to the service, including if a Participant fails to comply with the Federal Reserve Bank's Operating Circular requirements or applicable law.

³ The Federal Reserve Banks do not require real-time transaction screening in their terms, but a FedNow receiver that conducts such screening under its compliance program may use the accept-without-posting feature (ACWP) to facilitate its compliance processes. For more information on use of an ACWP response, refer to the value messages section.

4. General

These Operating Procedures outline requirements and guidelines for Participants and their correspondent banks and Service Providers with respect to the FedNow Service. These organizations are expected to read, understand and adhere to these expectations in connection with each Participant's use of the FedNow Service.

The Federal Reserve Banks reserve the right to terminate, restrict access, impose conditions or adopt controls associated with a Participant's access to the FedNow Service, use of a correspondent bank for settlement, and use of a Service Provider, particularly where such access or use exposes the Federal Reserve Bank or others to risk. These Operating Procedures outline the general steps the Federal Reserve Banks expect to take in managing the service. Nothing in these Operating Procedures limits the Federal Reserve Bank's discretion to take actions beyond those outlined in these procedures. The Board of Governors' Regulation J and the Federal Reserve Banks' Operating Circular 8 supersede these Operating Procedures to the extent of any inconsistency.

Moreover, the Federal Reserve Banks exercise discretion in determining the appropriate course of action in response to the failure by a Participant, correspondent bank, or Service Provider to meet the expectations outlined in these Operating Procedures. A Federal Reserve Bank may choose not to take corrective actions following immaterial and isolated failures by a Participant, correspondent bank, or Service Provider. Material or ongoing failures may trigger more immediate responses by Federal Reserve Banks, which may include but is not limited to contacting the Participant's management, disabling the Participant from sending and/or receiving value messages, suspending the Participant from sending or receiving other messages, or terminating the Participant from the FedNow Service.

a. Settlement

Participants using the FedNow Service are required to settle all FedNow transactions in their own Master Account or that of a single Correspondent.⁴ The service validates the settlement relationship when settling each transaction.

Settlement of value messages becomes final at the earlier of when the FedNow Service records the transaction's debit or credit, or when the FedNow Service sends an Advice of Credit message, pacs.002 with the FedNow Service⁵ as the Instructing Agent for instant payments, or pacs.009 for LMT.

b. Account Balance Management

Participants in the FedNow Service are expected to manage their Master Account balances in compliance with Federal Reserve policies, including managing their activities to avoid negative balances at the close of each business day (i.e., to avoid overnight overdrafts) and to stay within intraday overdraft capacity. The Federal Reserve Banks may reject FedNow value messages (pacs.008, pacs.004, pacs.009) based on a Participant's insufficient balance or overdraft capacity. Additionally, a Federal Reserve Bank may temporarily prevent the Participant from sending value messages through the service if a Participant's intraday overdraft reaches a level that in a Federal Reserve Bank's discretion poses heightened risk to that Federal Reserve Bank. If a Federal Reserve Bank prevents a Participant from sending value messages through the service, the Federal Reserve Banks will notify the Participant.

⁴ Settlement relationships are managed by the National Accounting and Customer Support (NACS) area of the Financial Support Office (FSO), and can be established, updated or terminated by completing the [Operating Circular 1, Appendix 2 - Transaction and Service Fee Settlement Authorization Form \(FRBservices.org\)](#).

⁵ See Payment Status section for additional details on pacs.002 from the FedNow Service.

c. Service Level Expectations

The Service Level Expectations⁶ are established to define expectations for Participants to support a healthy and viable instant payments network for all users of the FedNow Service.

The Service Level Expectations are reviewed at the financial institution level. Meaning if a financial institution has multiple RTNs on the FedNow Service, the Service Level Expectations are calculated across all RTNs on the Service. In exercising discretion to determine the appropriate course of action in response to the Participant's failure to meet the Service Level Expectations, the Federal Reserve Banks may take such action at either the RTN or FI level.

d. Responding to Messages

Participants are expected to respond to all messages based on the guidelines outlined in these Operating Procedures. This includes responding to inquiries and requests sent from FedNow Participants or the FedNow Service.

e. FedNow Interface via FedLine Advantage[®]

The FedNow interface is accessible to appropriately credentialed subscribers via FedLine Advantage using a WAN or VPN device. The FedNow interface enables Participants, or Service Providers acting on their behalf, to pull reports, execute queries, manage components of participation types and manage risk mitigation tools.⁷ All Participants are required to have subscribers with access to the FedNow interface or enable their Service Provider to have access to the FedNow interface on their behalf to update components of participation types and settings, as needed.

f. Customer Testing Environment and Testing Requirements

The FedNow Service Customer Testing Environment enables FedNow Participants and Service Providers to test their implementation and ability to use the service. Participants and Service Providers gain access to the Customer Testing Environment as part of the onboarding process. The Customer Testing Environment generally resembles the FedNow Service production environment. FedNow Participants and Service Providers must test their ability to use the FedNow Service before moving into the production environment. Additionally, Participants and Service Providers must test after making changes to supported functionality, operations, hardware or software that might affect the FedNow Participant's or Service Provider's use of the FedNow Service. All Participants and Service Providers are expected to execute tests to confirm their ability to use the FedNow Service and any of their organization's downstream applications or services. Participants and Service Providers are also expected to receive and respond to messages based on their expected volume.

All Connection Parties, either FI or Service Provider, responsible for message processing must be set up for both the test environment and the production environment. It is strongly recommended that Participants and Service Providers simulate their production setup in the Customer Testing Environment (profile settings, participation type(s), etc.) for initial certification. While the production setup can be replicated, the testing environment has unique certificates, connection points and queues. Additional details on testing requirements, recommendations, tools and differences between the Customer Testing Environment and Production can be found in the FedNow Service Customer Testing Program documentation.⁸

⁶ For details on the Service Level Expectations, see the Appendix on Service Level Expectations.

⁷ As defined in the Participant Profile section.

⁸ Available on the FedNow DevRel resource.

g. Contact Management

Financial institutions and Service Providers are required to maintain contacts provided to the Federal Reserve Banks for their institution. Contact information is collected for multiple categories (e.g., Urgent Operational Outreach, General Service Information, Fraud Notifications, etc.) to support different outreach and communication needs related to the FedNow Service. Contacts can include distribution groups or individual contacts⁹ and may vary across contact categories.

Fraud Notification Contacts

When needed, the Federal Reserve Banks utilize the Fraud Notification Contacts to inform the FedNow Participant of reported fraudulent activity. Additionally, a list of all Fraud Notification Contacts is published on the FedNow DevRel resource to facilitate communication and error resolution between Participants.

Participants with Fedline Advantage, Fedline Direct[®] or Fedline Command[®]

Participants with FLA/FLD/FLC utilize the *FedNow Setup in FedLine Home*¹⁰ to view and make changes to contact information. End User Authorization Contacts (EUACs) can add, update or delete contacts. Any user that is a FedNow subscriber or EUAC can view existing contacts.

Participants without Fedline Advantage, Fedline Direct or Fedline Command

Participants can call or email the Support Center to retrieve a list of existing contacts. If contacts need to be added, updated or deleted, an authorized signer from the Official Authorized List (OAL) for the institution must submit a [FedNow Service Communications Contact Form](#).¹¹

⁹ Contacts must be business contacts.

¹⁰ Accessed via FedLine Home.

¹¹ Available on [FRBservices.org](https://www.frb.org/services).

5. Participant and FedNow Service Availability Expectations

- a. Participant Availability – Planned Downtime
- b. Participant Availability – Unplanned Downtime
- c. Retrieving and Reviewing Dropped Messages
- d. FedNow Service Availability

The FedNow Service is a 24x7x365 service with no expectations of planned downtime.

Each FedNow Participant and Service Provider should maintain the ability to receive and, if applicable, send messages through the FedNow Service. They must also make funds immediately available, as soon as practicable, but no longer than a few seconds, to its customers on a 24-hour basis each calendar day, including weekends and Federal Reserve holidays.

Liquidity Management Transfer Only Participants¹² are only expected to be available when the LMT window is open.¹³

a. Participant Availability – Planned Downtime

Participants and Service Providers may need downtime for planned maintenance. Participants' planned downtime should not exceed two sequential hours or 24 hours total per quarter, and any planned downtime must be scheduled on Sundays between 2 a.m. and 6 a.m. ET. Participants and Service Providers are expected to take steps to reduce their need for planned downtime that better accommodates continuous operations over time.

For planned downtime, Participants enabled to receive instant payments (Credit Transfer Send and Receive or Receive Only participation types) must sign off via Participant broadcast message (admi.004) or the FedNow interface if they cannot respond to pacs.008 and pacs.004 messages within the reserved response time or make funds immediately available.

Upon acknowledgment of a Participant's request to sign off either via Participant broadcast message (admi.004) or the FedNow interface, the FedNow Service communicates within seconds to all Connection Parties via a FedNow Broadcast Message (admi.004) and the FedNow Service rejects any instant payments (pacs.008 and pacs.004) that are sent to the signed-off Participant. The FedNow Service continues to send all other messages to the relevant queue(s) for the signed-off Participant to retrieve. An indication that the Receiver FI may be taking planned downtime is a delay in the Receiver FI sending the receipt acknowledgement (admi.007) after receiving a nonvalue message.¹⁴ The Receiver FI is required to send a receipt acknowledgement (admi.007) after receiving any nonvalue messages. While signed off from receiving instant payments, Participants may still respond to other messages and initiate all message types.¹⁵ If applicable, Participants should implement internal processes to disable sending messages during their planned maintenance.

The Federal Reserve Banks expect all Participants to meet the above expectations related to availability and will contact Participants not meeting these expectations. Participants should communicate directly with their customers about downtime if their experience is affected.

b. Participant Availability – Unplanned Downtime

Participants and Service Providers must establish appropriate monitoring and alerting capabilities to resolve availability issues that may arise. The FedNow Participant should contact the Support Center for guidance on unplanned downtime and any action to be taken. If the downtime affects Participants' ability to

¹² Participants that have the participation type of LMT Send and Receive or LMT Receive Only.

¹³ See Network Limits section for additional details.

¹⁴ See Receipt Acknowledgement (admi.007) section for additional details.

¹⁵ See Participant Broadcast for additional details on sign off.

respond to pacs.008 and pacs.004 messages within the reserved response time or affects their ability to immediately make the funds available, Participants should sign off from the service to minimize impact to other Participants and end customers. It is also recommended that Participants implement internal processes to disable sending messages during the unplanned downtime, if applicable.

The Federal Reserve Banks reserve the right to sign off Participant(s) who are unreachable, unresponsive or have continued negative impact to the network and its Participants. The Federal Reserve Banks will endeavor to contact the Participant or its Service Provider prior to signing off. Outreach by the Federal Reserve Banks will be either via phone or email to the Urgent Operations contact(s) provided by the customer.¹⁶

Participants are expected to reconcile all messages delivered by the FedNow Service and respond to applicable messages delivered by the FedNow Service within the required or recommended response times, or as promptly as possible.¹⁷ This includes messages delivered when the Participant is in unplanned downtime. Participants also are responsible for reconciling and responding to any messages that are dropped from the queue(s) during downtime.

c. Retrieving and Reviewing Dropped Messages

Participants are expected to retrieve and review all relevant messages delivered by the FedNow Service, including messages that were dropped from queues (e.g., due to message expiration or exceeding the queue depth¹⁸). Upon review, Participants must respond to applicable messages delivered by the FedNow Service within the recommended response times¹⁹ or as soon as possible if the recommended time has elapsed.

To retrieve messages and perform reconciliation, Participants can utilize various FedNow Service reports and messages, detailed below.

1. Request the Account Activity Totals Report via the FedNow interface or camt.060.
 - i. If requesting intraday, use code IATR.
 - ii. If requesting at end of day, use code AATR²⁰ (if not enrolled to automatically receive the report at the end of day).
2. Compare the total count of messages received to Participant's internal system count.
3. If there is a discrepancy, or more details are needed:
 - i. After the cycle day has rolled, request the Account Activity Details Report (AADR) via the FedNow interface or camt.060.
 - ii. At any time, send a retrieval request (admi.006)²¹ for a copy of the message(s).
 - iii. At any time, use the Adhoc Query Tool for message details filtering by message ID(s) or by time frame.
4. If a message was sent by the Participant but is not reflected in the reports or Adhoc Query Tool, the FedNow Service did not receive and process the message. The Participant should ensure the message is not a duplicate²² and if the participant wants to resend the message, it should ensure the message includes a new unique message ID.

To retrieve messages and perform reconciliation, Correspondents can utilize FedNow Service reports, detailed below.

1. Request the Correspondent Account Activity Totals Report via the FedNow interface or via camt.060.
 - i. If requesting intraday, use code CITR.

¹⁶ See Contact Management section or additional details.

¹⁷ See Recommended Response Times section for additional details.

¹⁸ See the FedNow Service Technical Specifications, available on the FedNow DevRel resource, for details on queue expiration and depth.

¹⁹ See Recommended Response Times section for additional details.

²⁰ See Reports and Reconciliation section for additional details.

²¹ See Retrieval Request (admi.006) section for additional details.

²² See Value Message section for additional details.

- ii. If requesting at end of day, use code CATR²³ (if not enrolled to automatically receive the report at the end of day).
2. Compare the total count of messages received to Correspondent's internal system count.
3. If there is a discrepancy or more details are needed, request the Correspondent Account Activity Details Report (CADR) via the FedNow interface or camt.060 after the cycle day rollover.

d. FedNow Service Availability

The FedNow Service operating hours can be found on FRBservices.org. The FedNow Service is a 24x7x365 service. If the FedNow Service experiences operational interruptions, the Federal Reserve Banks will endeavor to notify Participants through its FRBservices.org Service Status webpage, direct communication or otherwise. FedNow Participants should monitor such communications and be prepared to act on instructions from the Federal Reserve Bank under such circumstances. Instructions may include, but are not limited to, implementing internal processes to avoid sending messages, accessing the FedNow interface to download a new FedNow public key or requesting an intraday summary report to reconcile activity. When the service resumes, Participants should reconcile any messages that may have been in flight when the outage occurred, using reporting, inquiry requests, etc.

²³ See Reports and Reconciliation section for additional details.

6. FedNow Service Funds Transfer Business Day Rollover (FedNow Service Cycle Day Rollover)

- a. Overview
- b. Additional Details
- c. Process of Cycle Day Rollover

a. Overview

The FedNow Service processes messages continuously, 24 hours a day, every day of the year. Liquidity Management Transfer (LMT) messaging is limited to the specified times as detailed in the FedNow Service operating hours.²⁴ LMT messages are rejected if received outside the specified times. The FedNow Service does not close; however, for accounting and reconciliation purposes, the FedNow Service Funds Transfer Business Day²⁵ closes and moves to the next cycle day. Accounting end-of-day processes begin once all Federal Reserve debit and credit processing has been completed for the cycle day. The scheduled FedNow Service end of cycle day generally aligns with the close of the Fedwire® Funds Service, which is at approximately 7 p.m. ET. If the Fedwire Funds Service extends, FedNow Service's cycle day extends accordingly, but real-time processing of messaging through the FedNow Service is not impacted. On holidays and weekends when Fedwire Funds is unavailable, the FedNow Service rollover is at approximately 7 p.m. ET. The start of each FedNow Service cycle day immediately follows the end of the previous cycle day, with no disruption in message or transaction processing. The cycle day will differ from the calendar date between cycle day rollover and midnight ET each day. Settlement dates are based on the cycle day rather than the calendar date.

b. Additional Details

Informing Participants of Cycle Day Rollover

The FedNow Service sends a broadcast message (admi.004) to all Connection Parties advising them of the cycle day change. If the Fedwire Funds cycle day is extended, then the FedNow Service cycle day is also extended. A FedNow broadcast message (admi.004) informs Connection Parties of the extension and a subsequent FedNow broadcast (admi.004) is sent once the cycle day changes. Note: FedNow transactions will continue to process and settle, regardless of cycle day rollover timing.

In addition to intaking broadcasts related to cycle day rollover, Participants should use the time stamps included in messages sent from the FedNow Service to confirm the date processed.

The FedNow Service may not roll at the same time every day and there may be a delay in the FedNow Service rollover compared to the Fedwire timing.

Processing Messages During Cycle Day Rollover

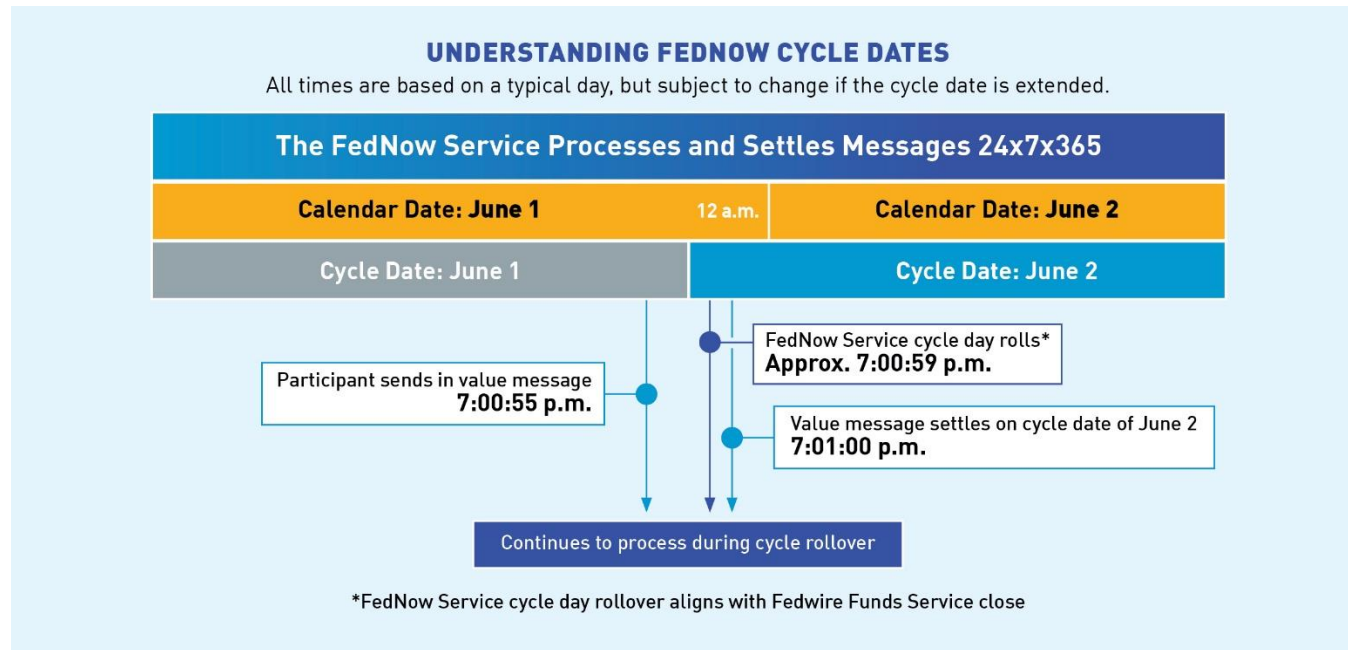
The FedNow Service continues to process payments and other messages before, during and after the cycle day rollover. The cycle day and calendar date are different for messages processed between the funds transfer day rollover and midnight. Messages received during the rollover are not rejected by the FedNow Service unless the message is rejected for failing either technical or business validations.

For example, as depicted below, if a payment is sent at 7:00:55 p.m. ET on June 1 and the cycle day changes at 7:00:59 p.m. ET, the payment, which is accepted/settled at 7:01:00 p.m. ET, would have a cycle day of June 2 because the cycle day rollover occurred before the settlement time stamp. The FedNow

²⁴ See Network Limits section for additional details.

²⁵ Will be referred to as cycle day throughout the Operating Procedures.

Service assigns the applicable cycle day to the transaction and includes it in the advice of credit message (pacs.002/pacs.009) and notifications (camt.054). Participants should always reference the cycle day rather than the calendar date to align with FedNow Service accounting and reporting.



* All times specified above are based on a typical day, but subject to change if processing times for the Fedwire Funds Service are extended.

FedNow Service Reporting During Cycle Day Rollover

Participants or their Service Providers who have been granted permission by their Participant(s) may request account balances and FedNow Service activity totals at any time. When the cycle day rolls to a new cycle day at approximately 7:00:59 p.m. ET, a provisional balance for the account balance report may be provided until approximately 9:00 p.m. ET. On non-standard business days, such as weekends and holidays, the provisional balance remains until the next standard business day.²⁶

Daylight Saving Time

The FedNow Service adheres to daylight saving time, impacting the timing of cycle day rollover and related end-of-day reporting activities, when applicable. The time stamps used in the various messages originated by the FedNow Service always contain the offset from UTC, making it easier for Participants to properly identify the time stamp.

²⁶ See the Reporting and Reconciliation section for additional details.

c. Process of Cycle Day Rollover

The final column includes potential corrective actions the Participant's system can take to resolve an issue.

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	Sends FedNow Service Broadcast Message (admi.004) with the Service Event Code ROLL to all Connection Parties to inform them of the cycle day closure and rollover.	Connection Parties receive the broadcast message (admi.004) and provide to Participants as needed.	Connection Party does not receive broadcast message.	<ul style="list-style-type: none"> Check cycle day in sent or received messages (Interbank Settlement Date element)
	Deliver daily FedNow Service end-of-day Account Activity Reports, typically between 7 p.m. ET and 9 p.m. ET, dependent on report, ²⁷ to Participants that have enabled these reports.	FedNow Service Reports are delivered to Participants.	Participant does not receive enabled reports.	<ul style="list-style-type: none"> Validate that the Participant's profile is set up to receive end-of-day reports from the FedNow Service Check broadcast messages to determine if the cycle day was extended. If so, this may delay the availability of end-of-day reports. After end-of-day processing is complete, Participants can download the reports via the FedNow interface or request them for each enabled RTN via report request (camt.060).

²⁷ See Reports and Reconciliation section for additional details.

7. Message Signing

- a. Overview
- b. Managing Participant Key Pairs
- c. FedNow Service Key Pairs

a. Overview

The FedNow Service requires that all messages, sent via Message Queuing (MQ) or Application Programming Interface (API), exchanged with the FedNow Service are cryptographically signed, except for the Participant Broadcast Ping (admi.004) message and API Ping.²⁸ Additional information on message signing, including message format and rules, can be found in the FedNow Service Technical Specifications, including the REST API Technical Documentation, available on the FedNow DevRel resource.

b. Managing Participant Key Pairs

Message signing uses key pairs, a combination of public and private keys, to provide a layer of security controls to help verify the integrity and authenticity of messages sent and received through the FedNow Service. Key pairs are created locally and exchanged via the FedNow interface or by Message Queuing (MQ). Key pairs are owned by the Connection Party associated with an Authorized Connection Profile. The key pairs must follow the Technical Specifications, available on the FedNow DevRel resource, defined by the FedNow Service. All messages must be signed with the Sender's private key and validated by the Receiver using the public key of the Sender. If the message is not signed, signed with an expired key or signed with a key not recognized by the FedNow Service, the message is rejected (admi.002) with the applicable error code.²⁹

All dates related to key pairs, expiration and activation are based on calendar date.

Establishing a New Key Pair

There are two separate processes for establishing a new key pair. If the key pair owner is establishing the first key pair or a new key pair after all key pairs have expired, the key pair must be established via the FedNow interface.³⁰ The initial key pair, defined by the first key loaded onto the FedNow Service or established when there are no active keys, is validated by the Support Center and a subscriber that holds a supervisor, manager or technical role within the FedNow interface via a phone call.

If the key pair owner has at least one active key pair established, the key pair owner must add new key pairs via MQ Messaging.³¹ The FedNow Service validates the new key pair and stores validated public keys for message verification. The FedNow Service then returns a success or failure notification to the Sender within seconds.

Revoking Keys

Key pair owners may revoke their keys at any point before the expiration date via the FedNow interface³² or MQ Messaging. If key pair owners are revoking due to a suspected or confirmed compromise of a key, they should do so immediately and notify the Support Center.

²⁸ See the Participant Broadcast section for additional details.

²⁹ See the Error and Warning Codes and Descriptions section for additional details.

³⁰ See FedNow interface How-To Guide for additional details.

³¹ See the FedNow Service Technical Specifications, available on the FedNow DevRel resource, for additional details.

³² See FedNow interface How-To Guide for additional details.

To revoke a key pair via MQ Messaging, the owner should follow the same process as establishing a new key pair when at least one active key pair exists and include *Revoke/Compromise* as the action.³³ If only one key pair exists, the key pair must be revoked via the FedNow interface.

Active Key Management

Participants may establish as many key pairs as desired. Key pair owners are required to have at least two active key pairs with unique expiration dates at all times to reduce the risk that all keys expire.

Connection Parties can use the same key for all RTNs or have different sets of keys for each RTN (Target RTN). The Federal Reserve Banks will contact the key pair owner if another owner tries to establish the same key pair. In this case, it is recommended that the owner of the existing key pair revoke its key immediately.

The FedNow interface displays all the key pair owner's active keys and the previous six months of revoked or expired keys.

Key Expiration

Key pairs established via the FedNow interface automatically expire 364 days after established unless their owner designates an earlier expiration date upon creation. Key pairs established via MQ messaging require an expiration date to be included, up to 364 days. Key pair owners can see their active keys and expiration dates in the FedNow interface. Key pair owners are responsible for ensuring there are always at least two active keys, and that all keys do not expire. Key pair owners do not need to take action to ensure keys expire on the designated date. Key pair owners do not receive a reminder message before expiration. After the expiration date, a message signed with the expired key is rejected with the applicable error code.

Private Key Storage

Key pair owners only exchange public keys with the FedNow Service and must keep their private keys secure. Key pair owners need to maintain the confidentiality of private keys, consistent with the Federal Reserve Banks' Operating Circular No. 5 and any other agreement with the Federal Reserve Banks that imposes confidentiality or information security obligations on a Participant. This includes, but is not limited to, abiding by the Participant's internal information security requirements. At a minimum, key pair owners are required to take all commercially reasonable steps to protect the information. The private key should never be shared outside the organization.

FedNow Service Production Versus Test Environment

Participants are required to sign all messages, except the Participant Broadcast Ping (admi.004) message and Ping (API), in both the production and the test environment. Key pair requirements are the same in both environments. However, the same key pair should not be used in both the test environment and the production environment. The management and processes of key pairs also are the same in both environments, including establishment, revoking and managing active keys, as well as private key storage. If a key pair that is used for the production or test environment is compromised, the Participant should revoke it and notify the Support Center.

c. FedNow Service Key Pairs

FedNow Service Keys

The FedNow Service has multiple key pairs active at a given time and each has a 364-day expiration. Participants are required to maintain a list of all active FedNow Service public keys. The FedNow Service keys are not specific to Participants. Participants must initially use the FedNow interface to obtain the FedNow Service public key to properly authenticate messages received from the FedNow Service. After the Participants have the initial list, they can use the FedNow interface or MQ Messaging to maintain the list. The FedNow Service sends a FedNow Broadcast message (admi.004) with the code FNKY when it establishes a new FedNow Service public key. When Participants receive the FedNow Broadcast message informing of a new key, they should check if any FedNow Service

³³ See the Technical Specifications, available on the FedNow DevRel resource, for additional details.

public keys have expired or were revoked and to adjust your system accordingly. If the FedNow Service revokes all FedNow Service public keys at once, Participants must retrieve the new FedNow public keys via the FedNow interface.

The FedNow interface displays all active FedNow Service public keys. The FedNow Service typically uses the oldest key pair when signing messages. When the expiration date nears, the FedNow Service switches to the next oldest key.

FedNow Service key components include the key, key name and the key ID. The FedNow Service key name is the same value as the FedNow Service key ID.

Messages Signed by the FedNow Service

All messages originated by the FedNow Service are signed with the FedNow Service's active, internal private keys and must be validated by the Receiver FI using the corresponding public key. At any time, if Participants suspect a message received is unsigned or is signed with an invalid key, the Participant must follow the below steps related to rejecting and reporting the message.

When a Participant receives messages from the FedNow Service, it must:

- a. Ensure the key ID matches a key in its list of active FedNow Service public keys.
- b. Validate the signature using the FedNow Service public key before acting on the message.

Both steps above must be completed before the Receiver FI processes the message. If either of these steps fail, then the Participant should:

- a. Obtain the latest list of FedNow Service public keys via the FedNow interface.
- b. Respond to the message with Message Reject (admi.002), with appropriate reason code, indicating the received message was rejected.³⁴
- c. Call the Support Center with notification that it received messages unsigned, signed with expired keys, or signed with an unrecognized key pair from the FedNow Service.

The FedNow Service does not respond to or process admi.002 messages sent from Participants. If a Participant needs to send a Message Reject (admi.002) to the FedNow Service, they must call the Support Center.

³⁴ See details on the error codes to use in the Error and Warning Codes and Descriptions section.

8. FedNow Service Profiles Overview

The FedNow Service profile requirements are based on a Participant's or Service Provider's role. A financial institution can play one or a combination of the following roles in the FedNow Service:

- a. **FedNow Participant:** A financial institution that is authorized by the Federal Reserve Bank to receive and/or send and receive messages (e.g., instant payments, Liquidity Management Transfers, reports) and has established accounting information for payment settlement, either via a Master Account or Correspondent.
- b. **Service Provider:** Acts as an agent of a FedNow Participant authorized by that Participant to do one or more of the following:
 - Initiate, transmit or receive messages on behalf of the Participant;
 - Operate or otherwise manage the Electronic Connection used to send or receive messages on behalf of the Participant; or
 - Obtain information, select the security procedure, profile settings or processing options on behalf of the Participant.
- c. **Correspondent:** Maintains a Master Account with a Federal Reserve Bank and has agreed to maintain a Settlement Account for another FedNow Participant.

An organization that is not a financial institution can be a Service Provider in the FedNow Service. To the extent a FedNow Participant uses Service Provider(s), requirements in these Operating Procedures otherwise applicable to FedNow Participants also apply to the Service Provider when it performs functions as an agent on behalf of a FedNow Participant.

Participant Using Multiple Service Providers (for the same RTN)

Participants have the option to utilize one or more Service Providers to support the functions listed above. If a Participant uses multiple Service Providers to support the same RTN (i.e., the Participant Profile is connected to the FedNow Service via multiple Connection Parties owned by different Service Providers), the Participant must consider the following:

- Service Providers that are granted permission to access the FedNow interface³⁵ for a Participant can view the other Service Provider's Connection Party Name, ID and permissions assigned by the Participant. Additionally, they can view message details via the Adhoc Query Tool for all activity for the Participant, regardless of which Service Provider processed the messages.
- Service Providers that are granted permission to receive reports by a Participant (via FedNow interface and ISO messaging) will receive reports containing all activity for the Participant, regardless of which Service Provider processed the messages.

FedNow Service Profile Types

The FedNow Service offers two profile types: a Participant Profile and an Authorized Connection Profile (ACP). One or both are required by all Participants and Service Providers, except for Correspondents that only settle for respondents and choose not to have a Participant Profile.

A Participant Profile is required for each RTN that a financial institution uses to receive and/or send and receive payments and messaging through the FedNow Service, regardless of whether it connects to the FedNow Service directly or via Service Provider(s). Each Participant Profile is associated with a single RTN, and institutions can have multiple RTNs/Profiles enabled on the FedNow Service. The Participant Profile defines the settings and features in the FedNow Service that are enabled for each RTN. A Participant Profile contains participation type(s), components of participation type(s), settings and permissions for a Connection Party.

³⁵ FedNow interface options for general account management are no access, View or Edit access.

All financial institutions are required to have subscribers with access to the FedNow interface and/or enable their Service Providers to have access to the FedNow interface to update components of participation type(s) and settings, as needed.

Correspondents are required to have a FedNow Participant Profile if the Correspondent wants the ability to set net send limits³⁶ on their direct respondents' activity, or to send or receive messages, including receiving account debit/credit notifications and reporting via ISO 20022 messaging from the FedNow Service. If a Correspondent does not wish to set net send limits, receive messages (including reports) from the FedNow Service or gain access to the FedNow interface, they do not need a Participant Profile.

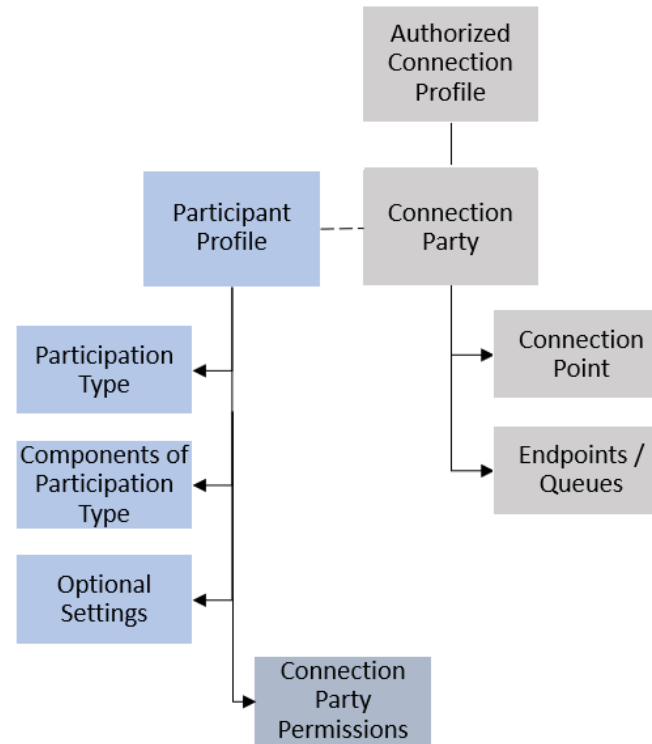
The Authorized Connection Profile defines FedNow Service connectivity settings used to access the FedNow interface and send or receive messaging via the FedNow Service, on behalf of one or multiple Participants (RTNs). All Participants are required to own an Authorized Connection Profile or to be connected to one via Service Provider(s). The Connection Party provides the Authorized Connection Profile a central MQ connection setup, and if desired, central API setup. Each Participant Profile maps to a Connection Party, owned by an Authorized Connection Profile, allowing messages to flow to and from the FedNow Service, based on the Connection Party Permissions³⁷ enabled by the Participant Profile.

FedNow Service profiles have multiple components that are configured based on the Participant's and, if applicable, the Service Provider's preferences and usage of the FedNow Service. A Participant Profile is established at the RTN level, and an Authorized Connection Profile is established at the RTN or Electronic Transaction Identifier (ETI) level. The profiles are mapped to each other via a Connection Party, as shown in Figure A.

³⁶ See the Correspondent Net Send Limit section for additional details.

³⁷ See the Connection Party permissions section below.

Figure A



Profile requirements are based on the organization’s type, role and connection setup. The following table shows some common combinations of Participant type and connection setups, with the applicable profile requirements.³⁸

Organization Type	Acting as a ...	Connection Setup Options	Profile Requirements for the Organization Type
Financial Institution	Financial Institution	Direct – FI connects directly to the FedNow Service.	<ul style="list-style-type: none"> Participant Profile Authorized Connection Profile
		Service Provider – FI connects to the FedNow Service via one or more Service Providers.	Participant Profile
		Direct and Service Provider – FI connects directly to the FedNow Service and via one or more Service Providers.	<ul style="list-style-type: none"> Participant Profile Authorized Connection Profile
Financial Institution	Correspondent	Direct – Correspondent connects directly to the FedNow Service.	<ul style="list-style-type: none"> Participant Profile Authorized Connection Profile

³⁸ This list is not exhaustive.

		Service Provider – Correspondent connects to the FedNow Service via a Service Provider.	<ul style="list-style-type: none"> Participant Profile
		Direct and Service Provider – Correspondent connects directly to the FedNow Service and via a Service Provider.	<ul style="list-style-type: none"> Participant Profile Authorized Connection Profile
		No connection – Correspondent is not connected to the FedNow Service, nor does it have a FedNow Profile. Is not able to receive any messages or reports directly from the FedNow Service.	No profile necessary
Financial Institution	Service Provider	Direct – Service Provider connects directly to the FedNow Service on behalf of one or more FedNow Participants.	Authorized Connection Profile
Service Provider	Service Provider	Direct – Service Provider connects directly to the FedNow Service on behalf of one or more FedNow Participants.	Authorized Connection Profile

8.1. FedNow Participant Profiles

- a. Parts of Participant Profile
- b. Participant Profile Status

a. Parts of Participant Profile

1. Participation Type

- **Applicable to:** All Participant Profiles
- **Configured by:** Federal Reserve Banks, based on a request from the Participant or Service Provider. Components configured by the Federal Reserve Banks must be confirmed by Participants.
- **Viewable in:** FedNow interface

The participation type defines the type of service(s) the Participant uses within the FedNow Service. The three categories of participation include: Credit Transfer, Liquidity Management Transfer (LMT) and Settlement Only. FIs that enable Credit Transfer are automatically opted in to LMT and have the ability to opt out if needed. For Participants using a Correspondent, the Correspondent can independently determine whether individual respondents will be allowed to send or receive LMT messages.³⁹

The participation types within the categories and related details are shown in the following table.

Participation Types	Details	Configurable Components of Participation Type
Credit Transfer Receive Only	<ul style="list-style-type: none"> • Participant must be able to receive Credit Transfer messages (pacs.008) • Participant can send and receive payment returns (pacs.004) • Participants can send RFP (pain.013) 	<ul style="list-style-type: none"> • Reserved Receiver FI Response Time • Receive Account Debit/Credit Notifications
Credit Transfer Send and Receive	<ul style="list-style-type: none"> • Participant must be able to send and receive pacs.008 messages • Participant must be able to send and receive payment returns (pacs.004) • Participants can send RFP (pain.013) 	<ul style="list-style-type: none"> • Maximum transaction value limit –Credit Transfers • Reserved Receiver FI Response Time • Receive Account Debit/Credit Notifications
Credit Transfer Send, Receive and Receive Request for Payment (RFP)	<ul style="list-style-type: none"> • Participant must be able to send and receive pacs.008 messages • Participant must be able to send and receive payment returns (pacs.004) • Participants must be able receive RFP (pain.013), present RFPs to end customers, respond with RFP Response (pain.014) • Participants can send RFP (pain.013) 	<ul style="list-style-type: none"> • Maximum transaction value limit –Credit Transfers (must be reasonable relative to anticipated need for RFP responses) • Reserved Receiver FI Response Time • Receive Account Debit/Credit Notifications

³⁹ See Profile Considerations section for additional details.

Liquidity Management Transfer Receive Only	<ul style="list-style-type: none"> Participant must be able to receive LMT messages (pacs.009) 	<ul style="list-style-type: none"> Receive Account Debit/Credit Notifications
Liquidity Management Transfer Send and Receive	<ul style="list-style-type: none"> Participant must be able to send and receive LMT messages (pacs.009) 	<ul style="list-style-type: none"> Maximum transaction value limit – LMT Receive Account Debit/Credit Notifications
Settlement Only	<ul style="list-style-type: none"> Participant (Correspondent) can receive reporting and notifications via ISO 20022 messaging from the FedNow Service 	<ul style="list-style-type: none"> Receive Account Debit/Credit Notifications

2. Components of Participation Type

- **Applicable to:** All Participant Profiles
- **Configured by:** Participants or Service Providers
- **Editable in:** FedNow interface

Components of Participation Type	Applicable to
Maximum Transaction Value Limit – Credit Transfer	Credit Transfer Send and Receive ⁴⁰ Credit Transfer Send, Receive and Receive Request for Payment
Reserved Receiver FI Response Time	Credit Transfer Receive Only Credit Transfer Send and Receive Credit Transfer Send, Receive and Receive Request for Payment
Maximum Transaction Value Limit – LMT	Liquidity Management Transfer Send and Receive
Receive Account Debit/Credit Notifications (Correspondent)	All, if acting as Correspondent

Maximum Transaction Value Limit

The maximum transaction value limit is a configurable amount set by Participants and/or Service Provider(s) on their behalf for both Customer Credit Transfers (pacs.008) and Liquidity Management Transfers (pacs.009). It applies to all pacs.008 or pacs.009 messages originating from the RTN associated with a Participant Profile. This field is disabled if the participation type for the Participant RTN is Receive Only.

The FedNow Service sets a default value lower than the network limit for pacs.008 and pacs.009 messages.⁴¹ Participants can adjust these limits via the FedNow interface by selecting Other Amount and entering a value that must be:

- Equal to or less than the network dollar limit
- A whole number
- A numeric value
- A positive value
- Greater than or equal to \$1.00

⁴⁰ The maximum transaction value limit is only applied when sending a pacs.008 message.

⁴¹ See the Network Limits section for additional details.

Reserved Receiver FI Response Time

The FedNow Service uses a payment timeout clock to provide Participants and Service Providers with a predictable time frame to expect payment settlement or rejection.⁴² To provide the Receiver FI with a minimum amount of time to indicate whether it intends to accept or reject an instant payment (pacs.008 or pacs.004), the FedNow Service allows the Participant and/or Service Provider to configure a response time frame up to a maximum of five seconds. They can set the response time to any value between one and five seconds based on their ability to process and respond within the selected time. Before sending an instant payment to a Receiver FI, the FedNow Service verifies the remaining time meets or exceeds the Receiver FI's reserved time. Setting a lower number reduces the receiving institution's reserved time but also reduces the chance of a payment timeout rejection before the FI receives or can act on the payment message.

The Receiver FI must be prepared to respond within the indicated reserved response time, although it may have additional time to respond depending on the status of the payment timeout clock when the message is received. The FedNow Service rejects the message if the timeout clock expires before the Receiver FI responds.

The reserved response time does not apply to Liquidity Management Transfers (pacs.009) because the Receiver FI does not provide a response in the message flow.

Account Debit/Credit Notifications

Any Participant that is a Correspondent of a FedNow Participant may enable real time notification of respondents' FedNow debits/credits to its account. By default, the notification is disabled. A Correspondent can enable these account debit/credit notifications (camt.054) in its Participant Profile. The setting can be enabled within the Settlement Only Participation Type or under Settings for Participants with Credit Transfer and/or Liquidity Management Transfer Participation Types.⁴³

⁴² See the Value Messages section for additional details on the payment timeout clock.

⁴³ See the FedNow interface How-To Guide for additional details.

3. Settings

Settings	Applicable to	Configured by	Viewable or Editable (in the FedNow interface)
Daily Reports	All Participant Profiles	Participant and/or Service Provider	Editable

Daily Reports⁴⁴

The Daily Reports setting refers to automatic distribution of an Account Activity Totals Report and Account Activity Details Report at the end of each day after the FedNow Service cycle day rollover. The FedNow Service sends these reports to enabled Participants via the camt.052 message. By default, the Account Activity Totals Report is enabled, and the Account Activity Details Report is not enabled. The Participant and/or Service Provider(s) on their behalf may adjust these settings to meet their needs and those of each eligible RTN.

Settlement Only Correspondents use the Daily Reports setting for end-of-day distribution of Correspondent reports, as well. The Correspondent Account Activity Totals Report is a combined report, listing summaries for each respondent RTN enabled on the service. The details report is provided for each respondent RTN and contains fewer details than the standard reports for Participants. By default, the Correspondent Account Activity Totals Report is enabled, and the Correspondent Account Activity Details Report is not enabled. The Participant and/or Service Provider(s) on their behalf may adjust these settings to meet their needs and those of each eligible RTN.

4. Risk Mitigation

The FedNow Service provides tools that allow Participants and/or Correspondents to implement risk mitigation functionality.

Risk Mitigation	Applicable to	Configured by	Viewable or Editable (in the FedNow interface)
Correspondent Net Send Limit	<ul style="list-style-type: none"> All, if acting as Correspondent 	Correspondent and/or Service Provider	Editable
Participant Negative List	<ul style="list-style-type: none"> Credit Transfer Receive Only Credit Transfer Send and Receive Credit Transfer Send, Receive and Receive Request for Payment 	Participant or Service Provider, after being set up by the Federal Reserve Banks	Editable
Account Activity Thresholds	<ul style="list-style-type: none"> Credit Transfer Send and Receive Credit Transfer Send, Receive and Receive Request for Payment 	Participant or Service Provider, after being set up by the Federal Reserve Banks. Note the Federal Reserve Banks automatically populate default cumulative value criteria ⁴⁵	Editable
<u>Network Intelligence</u>	<ul style="list-style-type: none"> <u>Credit Transfer Send and Receive</u> 	<u>Federal Reserve Banks, based on a request from Participant or Service Provider</u>	<u>Viewable</u>

⁴⁴ See the Reporting and Reconciliation section for additional details.

⁴⁵ See the Fraud Mitigation Tools - Account Activity Thresholds section for additional details.

Correspondent Net Send Limit

The FedNow Service offers Correspondents the option to set a net send limit on their direct respondent(s).⁴⁶

Participant Negative List

~~To help mitigate fraud,~~ The FedNow Service offers Participants the option to establish a negative list⁴⁷ to reject transactions either coming from or going to specific accounts based on a Participant negative list. RTNs with a credit transfer participation type are enabled to use the negative list at the time of onboarding through the selection of an administrative RTN and creation of a managed RTN group.⁴⁸

Account Activity Thresholds

~~To help mitigate fraud,~~ The FedNow Service automatically populates default cumulative value criteria for send-enabled Participants. The FedNow Service rejects credit transfers (pacs.008) based on the configured criteria values.⁴⁹ An appropriately credentialed subscriber may make changes to these thresholds at any time.

Network Intelligence

[Network Intelligence allows sending financial institutions to request information, data insights, via an API to help them better assess the overall risk of a potential payment. The Network Intelligence API is enabled by the Federal Reserve Banks, based on a request from a Participant or Service Provider.](#)⁵⁰

4.5. Connection Party Permissions

- **Applicable to:** All Mappings Between Participant Profiles and Connection Parties
- **Configured by:** Federal Reserve Banks, based on request from Participant or Service Provider. Components configured by the Federal Reserve Banks must be confirmed by Participants.
- **Viewable in:** FedNow interface

Permissions provide the ability to send and receive message types and/or provide the access level to the FedNow interface. Permissions are configured by the Federal Reserve Banks for every Connection Party that is mapped to the Participant Profile. If the Participant Profile has only one Connection Party mapped to it, then it is enabled for all relevant permissions. A Participant Profile with multiple Connection Parties using multiple Authorized Connection Profiles can grant permissions to specific Connection Parties. Only permissions that are relevant based on the enabled participation type(s) are configurable. For example, if the participation type is Liquidity Management Transfer Send and Receive, the permissions to send and receive Credit Transfers and Payment Returns are not applicable.

Considerations for a Participant with multiple connection parties:

- Only one Connection Party is permissioned for *Credit Transfer and Payment Return Receiving* and *Nonvalue Message Receiving*. However, when the Receiving FI has multiple Connection Parties, the FedNow Service attempts to send certain nonvalue messages to the Connection Party related to the message flow which may be different than the Connection Party permissioned for *Receiving Credit Transfer and Payment Return* and *Nonvalue Message Receiving*. See table in the *Queue* section below for more information.

⁴⁶ [See the Correspondent Net Send Limit section for additional details.](#)

⁴⁷ See the Fraud Mitigation Tools - Participant Negative List section for additional details.

⁴⁸ See the FedNow interface How-To Guide for additional details.

⁴⁹ See the Fraud Mitigation Tools - Account Activity Thresholds section for additional details.

⁵⁰ [See the Fraud Mitigation Tools – Network Intelligence section for additional details.](#)

- Only one Connection Party is permitted for *Receiving LMT Messages*.
- Only two Connection Parties are permitted for *Receiving Correspondent Debit/Credit Notification*.
- A Connection Party that is permitted to receive EOD reporting receives reports containing **all** activity for the Participant, regardless of which Connection Party processed the messages.
- A Connection Party that is permitted to access the FedNow interface via General Account Management permissions for a Participant can view message details via the Adhoc Query Tool for **all** activity for the Participant, regardless of which Connection Party processed the messages.
- A Connection Party with *General Account Management – Edit* permission can submit requests for changes to profiles that are configured by the Federal Reserve Banks. A Connection Party with *General Account Management – View* cannot make these requests.

The Connection Party permissions are as follows:

Permissions	Description	Credit Transfer	LMT	Settlement Only
Credit Transfer and Payment Return Message Origination	Send pacs.008 and pacs.004 messages	X		
Credit Transfer and Payment Return Message Receiving	Receive pacs.008, pacs.004 and related pacs.002 messages	X		
LMT Message Origination	Send pacs.009 messages		X	
LMT Message Receiving	Receive pacs.009 related pacs.002 messages		X	
Nonvalue Message Origination	Send camt.056, camt.029, pain.013, pain.014, pacs.028, camt.055, camt.026, camt.028 and admi.007	X	X	
Nonvalue Message Receiving ⁵¹	Receive camt.056, camt.029, pain.013, pain.014, pacs.028, camt.055, camt.026, camt.028 and admi.007	X	X	
Account Balance Report Request Origination	Send camt.060 (ABAR)and receive camt.052; and/or Send FedNow Account Balance API request and receive response	X	X	X
Activity Reports Request Origination	Send camt.060 (AATR, AADR, IATR, CATR, CADR, CITR) Receive camt.052	X	X	X
Report EOD Receiving	Receive the Activity Reports automatically at the end of the day (dependent on daily reports setting)	X	X	X
Administrative Origination	Send admi.004 (Participant broadcast)	X	X	X
Administrative Receiving	Receive admi.004 and admi.011	X	X	X
General Account Management – Edit	Edit applicable setting in the FedNow interface. Request changes to profile that are configured by the Federal Reserve Banks.	X	X	X
General Account Management – View	View access to the FedNow interface	X	X	X
Correspondent Debit/Credit Notification Receiving	Receive camt.054	X	X	X
Correspondent Net Send Limit – Edit	Create and edit net send limit for respondent activity	X	X	X

⁵¹ If multiple Connection Parties, specific nonvalue messages are not sent to the Connection Party with *Credit Transfer and Payment Return* and *Nonvalue Message Receiving* permissions. See table in the Queue section below for more information.

Negative List – Edit	Create and edit a negative list for blocking external activity	X		
Account Activity Thresholds – Edit	Create and edit criteria for restricting account-level credit transfer activity	X		

If the *General Account Management – Edit* or the *General Account Management – View* permissions are **not** granted, the Connection Party will have no access to the FedNow interface. *Correspondent Net Send Limit – Edit*, *Negative List – Edit* and *Account Activity Thresholds - Edit* allow a Connection Party to edit these functions, regardless of the *General Account Management* access level (Edit or View). There is no view access option for these risk mitigation functions.

b. Participant Profile Status

- **Applicable to:** All Participant Profiles
- **Configured by:** Federal Reserve Banks, determined by Participant or Federal Reserve Bank (dependent on situation)
- **Viewable in:** FedNow interface

Participant Profiles have different statuses that determine if the Participant can operate in the FedNow Service, send/receive messages or access the FedNow interface. All Participant Profile status changes are managed by the Federal Reserve Banks.

Customer Credit Transfer Send and Receive or Receive only Participants are also required to sign on/off the FedNow Service⁵².

Status	Description of Participant Status
Inactive	<ul style="list-style-type: none"> • A status for a Participant Profile that is initially created • The Participant⁵³ and Federal Reserve Bank can update the profile via the FedNow interface while in inactive status • Messages cannot be sent and/or received • Status remains inactive until the profile setup is complete and effective date⁵⁴ is set
Pending Activation	<ul style="list-style-type: none"> • A status for a Participant Profile that has an effective activation date set • The Participant⁵⁵ and Federal Reserve Bank can update the profile via the FedNow interface while in pending activation status • Messages cannot be sent and/or received • Status remains as pending activation until the FedNow Service cycle day rollover to the indicated effective date, typically 7:01 p.m. ET
Active	<ul style="list-style-type: none"> • A status for a Participant Profile once the effective cycle day has commenced • The Participant⁵⁶ and Federal Reserve Bank can update the profile via the FedNow interface while in active status • Messages can be sent and/or received • Participants that are Customer Credit Transfer Send and Receive or Receive Only must also sign onto the FedNow Service⁵⁷
Pending Deactivation	<ul style="list-style-type: none"> • A status for a Participant Profile that has a deactivation date set

⁵² See Participant Broadcast for additional details.

⁵³ User's ability to update profiles is controlled by subscriber-level access and permissions.

⁵⁴ Effective date is decided by the Participant.

⁵⁵ User's ability to update profiles is controlled by subscriber-level access and permissions.

⁵⁶ User's ability to update profiles is controlled by subscriber-level access and permissions.

⁵⁷ See the Participant Broadcast section for additional details about signing on.

	<ul style="list-style-type: none"> • The Participant⁵⁸ and Federal Reserve Bank can update the profile via the FedNow interface while in pending deactivation status • Messages can be sent and/or received • Status remains as pending deactivation until the FedNow Service funds transfer day rollover to the indicated deactivate date, typically at 7:01 p.m. ET
Deactivated	<ul style="list-style-type: none"> • A deactivated status when the existing Participant Profile (RTN) is no longer in use for the FedNow Service and occurs when the effective cycle day has commenced • Messages cannot be sent and/or received • Participant is unable to access the FedNow interface • Participants that are Customer Credit Transfer Send and Receive or Receive Only will be signed off the FedNow Service⁵⁹ • Participant Profile can only be reactivated by going through the onboarding process
Suspended	<ul style="list-style-type: none"> • A status that restricts⁶⁰ a Participant's access to the FedNow Service for any reason • Messages cannot be sent and/or received • Participant is unable to access the FedNow interface • Participants that are Customer Credit Transfer Send and Receive or Receive Only are signed off the FedNow Service⁶¹ <ul style="list-style-type: none"> ○ Once the suspension is lifted, the Participant Profiles need to sign back onto the FedNow Service to receive instant payments

⁵⁸ User's ability to update profiles is controlled by subscriber-level access and permissions.

⁵⁹ See the Participant Broadcast section for additional details about signing on.

⁶⁰ The Federal Reserve Banks maintain the right to terminate or restrict a Participant's access to the FedNow Service for any reason.

⁶¹ See the Participant Broadcast section for additional details about signing on.

8.2. Authorized Connection Profile

- a. Overview
- b. Parts of Authorized Connection Profile
- c. Authorized Connection Profile Status

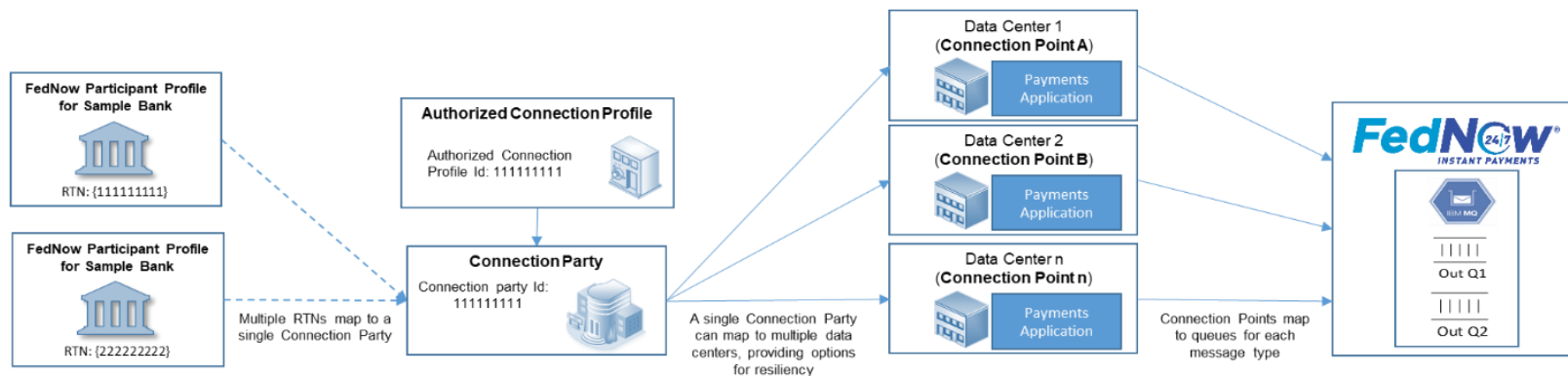
a. Overview

The Authorized Connection Profile defines FedNow Service connectivity settings used to access the FedNow interface and send or receive messaging via the FedNow Service, on behalf of one or multiple Participants (RTNs). All Participants are required to own an Authorized Connection Profile or to be connected to one via Service Provider(s). The FedNow Service supports two methods of data exchange with Participants: Message Queueing (MQ) and Application Programming Interface (API).

Message Queueing (MQ)

MQ is the primary model for data exchange with the FedNow Service and other Participants. It is required for receiving and sending ISO Messages to and from the FedNow Service. To utilize MQ, Participants and Service Providers must have FedLine Advantage or FedLine Direct® with an Authorized Connection Profile, Connection Party, Connection Point and Queues (relationship depicted in Figure D below). All Participant Profiles must be connected to at least one Authorized Connection Profile that supports MQ messaging. Additional details on each component can be found in the following section.

Figure D



Application Programming Interface (API)

APIs are an optional model for data exchange with the FedNow Service. An API client is required for sending API requests and receiving a response from the FedNow Service. To utilize APIs, Participants and Service Providers must have FedLine Advantage or FedLine Direct with an Authorized Connection Profile, Connection Party, Connection Point and an API endpoint. APIs allow Participants and Service Providers to programmatically update or receive data via the FedNow

Service with a seamless request and response. The message types supported by APIs are not inclusive of all messages needed to operate on the FedNow Service.⁶²

b. Parts of Authorized Connection Profile

1. Connection Party

- **Applicable to:** All Authorized Connection Profiles
- **Configured by:** Federal Reserve Banks, based on request from Participant or Service Provider. Components configured by the Federal Reserve Banks must be confirmed by Participants or Service Providers.
- **Viewable in:** FedNow interface

Each Authorized Connection Profile has a Connection Party that maps to one or more Participant Profiles. The Connection Party provides the Authorized Connection Profile a central connection for MQ setup, API setup and FedNow interface access. Each Participant Profile maps to a Connection Party, owned by an Authorized Connection Profile, allowing messages to flow to and from the FedNow Service, based on the Connection Party Permissions⁶³ enabled by the Participant Profile. The Connection Party is used to maintain all connection information, including queue names and message categories for MQ messaging and the API endpoint ID.

The Connection Party ID defaults to the RTN or ETI of the Participant or Service Provider. If the Connection Party ID needs to be changed, contact the Support Center. The Connection Party ID is used to identify the Authorized Connection Profile in either the To or From elements of the Business Application Header (bah.001) for every ISO 20022 message exchanged with the service, which depends on whether the Participant sends or receives the message, respectively.

There is a one-to-one relationship between an Authorized Connection Profile and a Connection Party.

2. Connection Point

- **Applicable to:** All Authorized Connection Profiles for MQ messaging and APIs.
- **Configured by:** Federal Reserve Banks, based on request from Participant or Service Provider. Components configured by the Federal Reserve Banks must be confirmed by Participants or Service Providers.
- **Viewable in:** FedNow interface

A Connection Point is a grouping of queues (also referred to as endpoints) maintained by a Connection Party that enables it to communicate with the FedNow Service. A Connection Party that operates independent data centers may use Connection Points to map queues to a specific data center, enabling data center affinity. A Connection Party with multiple Connection Points can disconnect or connect its Connection Points when conducting maintenance by sending a Participant Broadcast message (admi.004).⁶⁴

The Participant or Service Provider that owns the Connection Party must name the Connection Point (a maximum of 35 alpha-numeric characters) and can name and configure queues that are outgoing from the FedNow Service. The queue setup for each of the Connection Points for a single Connection Party is the same. The Connection Point ID is auto-generated by the FedNow Service.

There is a one-to-many relationship between the Connection Party and Connection Point.

⁶² See Operating Procedures section, FedNow Service Messaging – APIs, for the messages supported by API.

⁶³ See the Connection Party permissions section below.

⁶⁴ Participant Broadcast message admi.004 with code FPCD and FPCR. See the Participant Broadcast section for additional details.

3. Queues (Endpoints)

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

c. Authorized Connection Profile Status

- **Applicable to:** All Authorized Connection Profiles
- **Configured by:** Federal Reserve Banks, determined by Participant, Service Provider or Federal Reserve Bank (dependent on situation)
- **Viewable in:** FedNow interface

Authorized Connection Profiles have different statuses that determine if the Participant or Service Provider can operate in the FedNow Service, send/receive messages or access the FedNow interface. All Authorized Connection Profile status changes are handled by the Federal Reserve Banks.

Status	Description of Authorized Connection Profile Status
Inactive	<ul style="list-style-type: none"> • A status for an initial Authorized Connection Profile • The Participant⁶⁵ and Federal Reserve Bank can update the Participant Profile via the FedNow interface while in inactive status • Messages cannot be sent and/or received • Status remains inactive until the profile setup is complete and an effective date⁶⁶ is set
Pending Activation	<ul style="list-style-type: none"> • A status for an Authorized Connection Profile that has been assigned an effective activation date • The Participant⁶⁷ and Federal Reserve Bank can update the Participant Profile via the FedNow interface while in pending activation status • Messages cannot be sent and/or received • Status remains pending activation until the FedNow Service funds transfer day rollover to the indicated effective date, typically 7:01 p.m. ET
Active	<ul style="list-style-type: none"> • A status for an Authorized Connection Profile once the effective cycle day has commenced • The Participant⁶⁸ and Federal Reserve Bank can update the Participant Profile via the FedNow interface while in active status • Enables the Participant to use the FedNow Service if its Participant Profile is also active • If the Authorized Connection Profile has permissions to receive instant payments, the Authorized Connection Profile must also sign onto the FedNow Service to begin receiving instant payments (pacs.008 and pacs.004)
Pending Deactivation	<ul style="list-style-type: none"> • A status for an Authorized Connection Profile that has a deactivation date set • The Participant⁶⁹ and Federal Reserve Bank can update the Participant Profile via the FedNow interface while in pending deactivation status • Messages can be sent and/or received • Status remains pending deactivation until the FedNow Service funds transfer day rollover to the indicated deactivation date, typically at 7:01 p.m. ET

⁶⁵ User's ability to update profiles is controlled by subscriber level-access and permissions.

⁶⁶ Effective date is decided by the Participant.

⁶⁷ User's ability to update profiles is controlled by subscriber-level access and permissions.

⁶⁸ User's ability to update profiles is controlled by subscriber-level access and permissions.

⁶⁹ User's ability to update profiles is controlled by subscriber-level access and permissions.

Deactivated	<ul style="list-style-type: none"> • A deactivated status when the existing RTN/ETI is no longer in use for the FedNow Service occurs when the effective cycle day has commenced • Participant Profiles mapped to the Authorized Connection Profile will no longer be able to use the connection • Authorized Connection Profile subscribers cannot access the FedNow interface • When an Authorized Connection Profile is deactivated but it has permission to receive instant payments, the FedNow Service signs off those Participant Profiles • An Authorized Connection Profile can be reactivated only by going through the onboarding process
Suspended	<ul style="list-style-type: none"> • A status that restricts⁷⁰ a Participant's access to the FedNow Service for any reason • Messages cannot be sent and/or received using this Authorized Connection Profile • Authorized Connection Profile subscribers cannot access the FedNow interface • When an Authorized Connection Profile is suspended but it has permission to receive instant payments, the FedNow Service signs off those Participant Profiles <ul style="list-style-type: none"> ○ Once the profile is unsuspended, if the Authorized Connection Profile has permission to receive instant payments, the Participant Profiles will need to sign back onto the FedNow Service to receive instant payments

⁷⁰ The Federal Reserve Banks maintain the right to terminate or restrict a Participant's access to the FedNow Service for any reason.

8.3. How to Configure or Request Profile Changes

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

8.4. FedNow Profile Considerations (Service Providers and Multiple Profiles)

- a. Service Providers and Participants using Service Providers
- b. Participants using a Correspondent
- c. Participant with One Participant Profile Mapped to Multiple Connection Parties
- d. Participant with Multiple Participant Profiles

a. Service Providers and Participants using Service Providers

A Service Provider and its Participant financial institution (FI) need to coordinate ownership of activities related to profiles and connections. The Service Provider can be responsible for all Participant Profile management activities or play a more limited role.

FedNow Interface Permissions

The Service Provider(s) and Participant must coordinate how permissions and responsibilities are managed, especially if a Participant is using multiple Service Providers. This includes determining who can edit Participant Profile configurations through the FedNow interface, send and/or receive different message types, and request and receive reports. If the Service Provider has FedNow interface edit access for a Participant Profile, the Service Provider must inform the Participant about changes made in the FedNow interface on behalf of the Participant (e.g., if the maximum transaction value limit was modified), as needed.

Multiple Service Providers may have the ability to edit the FedNow interface for a Participant. It is the responsibility of the Participant and Service Provider(s) to manage the communication about changes made. A Participant that enables⁷¹ a Service Provider(s) to edit the FedNow interface is allowing the Service Provider(s) to update its Participant Profile and request changes that the Federal Reserve Banks configure. If multiple Service Providers have view or edit access to a Participant profile in the FedNow interface, the Service Provider can view the other Service Provider's Connection Party Name, ID and assigned permissions.

Broadcast Messages and Reports

The FedNow Service sends broadcast messages as well as end of day and adhoc reports for RTN activity to the Connection Party. The Service Provider is responsible for conveying all relevant messages and reports (or report alternatives) to its Participant(s).

Suspension

If a Participant Profile that connects via a Service Provider's Authorized Connection Profile is suspended, the Support Center will work to inform the Service Provider of the suspension. The Service Provider also can see the profile is suspended using the FedNow interface. If the Participant is a Customer Credit Transfer Send and Receive or Receive Only Participant, the Service Provider receives a FedNow broadcast (admi.004) that the Participant has signed off.

b. Participants using a Correspondent

Liquidity Management Transfers (LMT)

For a Participant using a Correspondent for settlement, its Correspondent may choose to allow LMT Send and Receive or LMT Receive Only participation types to be enabled for the respondent by reaching out to the Support Center. If LMT capabilities are allowed by the Correspondent, the respondent may request the desired LMT participation type to be enabled by contacting the Support Center.

⁷¹ See the Connection Party permissions in the FedNow Participant Profile section.

Net Send Limit (NSL)

For Participants using a Correspondent for settlement, the Correspondent may choose to set a net send limit on the direct respondent's instant payment activity by entering a threshold value in the FedNow interface. If a net send limit is set for the direct respondent, the direct respondent, including subaccounts and OSRTNs, can view the limit in the FedNow interface. Direct respondents should contact their Correspondents for any questions related to the net send limit and/or rejections observed due to the existence of a net send limit.

Correspondents Managing Profiles

Participants may have Correspondents that are acting as a Service Provider to manage their Participant Profile. If the Correspondent respondent relationship is terminated, it is the responsibility of the respondent to ensure that the Correspondent no longer has access to manage their profile, if applicable. Respondents can determine via the FedNow interface, if they have access, or reach out to Support Center.

c. Participant with One Participant Profile Mapped to Multiple Connection Parties

A Participant may have multiple Connection Parties mapped to a Participant Profile.

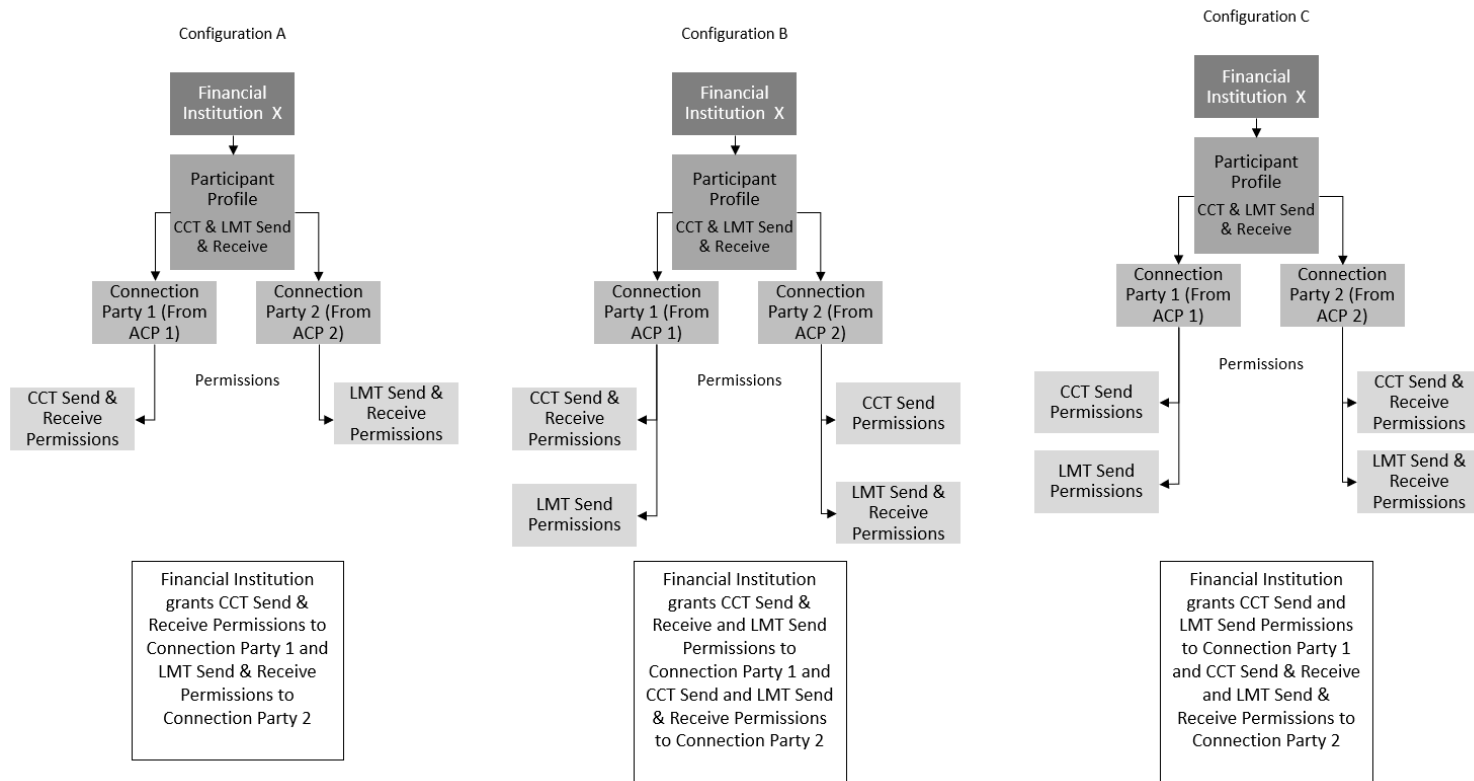
Considerations for a Participant with multiple connection parties:

- Only one Connection Party is permitted for *Receiving Credit Transfer and Payment Return* and *Nonvalue Message Receiving*. However, when the Receiving FI has multiple Connection Parties, the FedNow Service attempts to send certain nonvalue messages to the Connection Party related to the message flow which may be different than the Connection Party permitted for *Receiving Credit Transfer and Payment Return* and *Nonvalue Message Receiving*. See table in the *Queue* section below for more information.
- Only one Connection Party is permitted for *Receiving LMT Messages*.
- Only two Connection Parties are permitted for *Receiving Correspondent Debit/Credit Notification*.
- A Connection Party that is permitted to receive EOD reporting receives reports containing **all** activity for the Participant, regardless of which Connection Party processed the messages.
- A Connection Party that is permitted to access the FedNow interface via General Account Management permissions for a Participant can view some message details via the Adhoc Query Tool for **all** activity for the Participant, regardless of which Connection Party processed the messages.

For example, Financial Institution X has a Participant Profile with a participation type of Customer Credit Transfer Send and Receive and Liquidity Management Transfer Send and Receive. Financial institution X is mapped to two Connection Parties. Both Connection Parties can send all value messages (pacs.008, pacs.004 and pacs.009). However, both Connection Parties cannot receive all value messages. Only one Connection Party can have permission to receive all pacs.008 and pacs.004 messages (including nonvalue messages) and only one (either the same or different) can receive all LMT messages (pacs.009).

Figure F displays three examples of configuration options for a Participant with multiple Connection Parties.

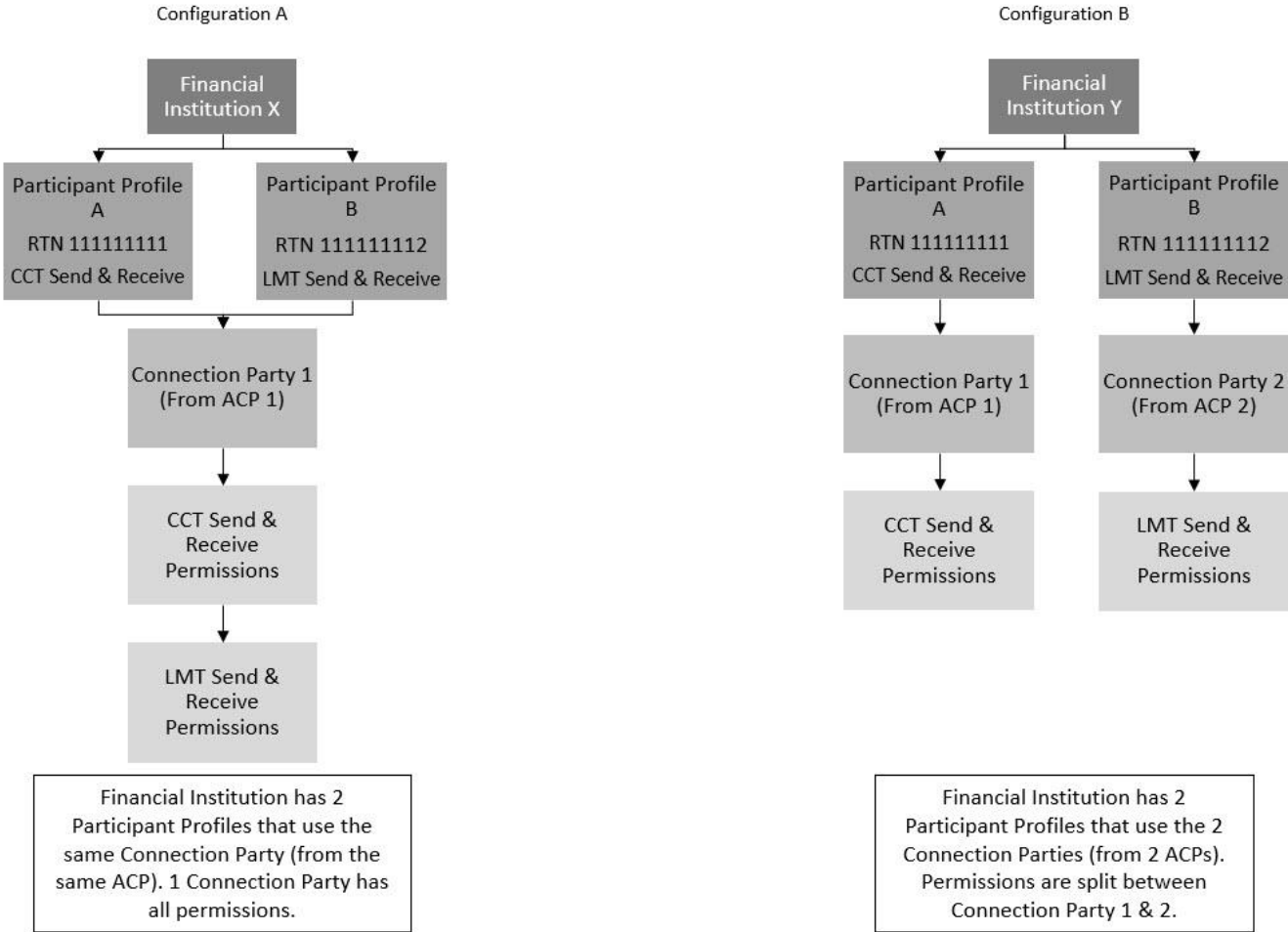
Figure F



d. Participant with Multiple Participant Profiles

A financial institution can have multiple Participant Profiles if it has multiple RTNs enabled on the FedNow Service. A financial institution with multiple Participant Profiles can be mapped to one or more Connection Parties. Figure G shows two examples of configuration options for a financial institution with more than one Participant Profile.

Figure G



9. FedNow Interface on FedLine Solution Overview

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

10. Risk Mitigation

The FedNow Service provides tools that allow Participants and/or Correspondents to implement risk mitigation functionality such as Correspondent net send limit and fraud mitigation tools. ~~These tools are can be managed via the FedNow interface using the Risk Mitigation role and specific Connection Party permissions.~~

10.1. Correspondent Net Send Limit

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

10.2. Fraud Mitigation Tools

- a. Overview
- b. Setup and Requirements
- c. Special Characters in Fraud Mitigation Tools
- d. Error and Warning Codes

a. Overview

The FedNow Service offers Participants tools to help mitigate fraud risk. ~~through the usage of a negative list or account activity thresholds.~~ These tools are intended to augment the Participant's internal fraud mitigation practices. ~~The negative list and account activity thresholds provide Participants an opportunity to include an additional business validation check during payment processing to identify and reject certain value messages.~~

Negative List

The negative list tool can reject instant payments (pacs.008 or pacs.004) going to or coming from an RTN and account number combination (an entry pair). The FedNow Service checks the entry pair within the message and compares it to the sending or receiving financial institution's negative list. If the entry pair exactly matches an entry pair on the sending or receiving FI's negative lists, the FedNow Service rejects the message. A Participant with a credit transfer participation type may create a single negative list applicable for all RTNs that belong to its managed RTN group.⁷²

Account Activity Thresholds

Account activity thresholds can reject a pacs.008 sent across the FedNow Service by an eligible sender RTN⁷³ and account number which exceeds a defined set of criteria. These criteria reject credit transfers based on velocity (count) and/or cumulative value (whole dollar amount) totals that occur within a chosen time frame. Three cumulative value criteria are automatically populated with default configurations when a Participant chooses Credit Transfer Send and Receive as its participation type.

Network Intelligence

~~Network Intelligence helps FedNow Participants identify the risk of a potential payment with receiver account level data, data insights, observed over the FedNow Service. To retrieve data insights, FedNow Participants can send a Network Intelligence API request before initiating a customer credit transfer (pacs.008). A Participant with Credit Transfer Send and Receive as its participation type may use Network Intelligence.~~

b. Setup and Requirements

Administrative RTN

Financial institutions select an RTN associated with a Participant Profile that is enabled on the FedNow Service to serve as the administrative RTN. The administrative RTN manages fraud risk mitigation functionality and ensures consistent fraud mitigation actions are applied across all the FI's managed RTNs. An institution can decide to change the administrative RTN to another managed RTN, if needed, and any fraud tool configurations persist.

⁷² See FedNow interface How-To Guide for additional details.

⁷³ See Setup and Requirements section for additional details.

Managed RTN(s)

Financial institutions with credit transfer participation types are required to add each RTN enabled on the FedNow Service to a managed RTN group at the time of onboarding. The ~~use of fraud mitigation tools business validations related to fraud mitigation are performed on is~~ applied to all RTNs that are members of an administrative RTN's managed RTN group. A list of managed RTNs, including the administrative RTN, may be viewed within the Managed RTN Group via the FedNow interface. Addition or removal of RTNs can be requested through the *FedNow Setup via FedLine Home*.

Management of Fraud Mitigation Tools Connection Party Permissions

~~The negative list and account activity thresholds are managed~~ ~~Fraud mitigation tools are managed~~ by Participants, or Service Providers on their behalf, via the FedNow interface. Only the Connection Party with the following permissions enabled for the administrative RTN can view or edit the fraud mitigation tools that are applied to all managed RTNs.

- To manage the negative list: *Negative List – Edit* and *General Account Management – Edit* or the *General Account Management – View*
- To manage Account Activity Thresholds: *Account Activity Thresholds – Edit* and *General Account Management – Edit* or the *General Account Management – View*

The Network Intelligence API is enabled at the managed RTN group level by the Federal Reserve Banks, based on a request from a Participant or Service Provider.

Risk Mitigation Role

In addition to the Connection Party Permissions, the Connection Party managing the ~~negative list and account activity thresholds tools~~ must have at least one subscriber with the Risk Mitigation access level. All credit transfer participation types are required to have a subscriber with the Risk Mitigation access level.

c. Special Characters in Fraud Mitigation Tools

The account number field ~~in the entry pair~~ allows for acceptable characters to be included.⁷⁴ The majority of special characters are considered as part of the account number. As it relates to any spaces, dashes or forward slashes, these characters are considered differently ~~Special characters and are not considered part of the account number for fraud mitigation tools. Special characters~~ They can be included in the account number field when sending a value message or, Network Intelligence API request, or uploading the negative list in to the FedNow interface. ~~or sending a value message; however, these characters are not considered part of the account number for the negative list or account activity threshold validation checks during message processing.~~

When uploading the negative list to the FedNow interface, if a Participant attempts to add multiple entry pairs to its negative list that have the same RTN and account numbers, but are only different due to spaces, dashes or forward slashes, only one entry pair is included on the negative list. Any additional are rejected as duplicate entry pairs. If the sample entry pairs below are uploaded to the FedNow interface as a negative list, the following table indicates the result.

Entry pair uploaded via FedNow interface	Upload Validation Result	Used during negative list validation in message processing
RTN: 999999999 Account Number: 1-234-56-789	RTN: 999999999 Account Number: 123456789 (accepted)	RTN: 999999999 Account Number: 123456789
RTN: 999999999	RTN: 999999999	N/A

⁷⁴ See FedNow Service ISO 20022 Implementation Guide for list of acceptable characters.

Account Number: 123/456/789

Account Number: 123456789 (rejected as duplicate)

d. Fraud Error and Warning Codes

When applicable messages are checked against the Sender FI's negative list or account activity thresholds and rejected as a result of the validation, the Sender FI receives a FedNow payment status rejection (pacs.002) including an error code to inform the FI that the transaction was rejected because of fraud controls.

For transactions that are rejected because of the Sender FI's negative list controls:

- Sender FI receives a FedNow payment status rejection (pacs.002) with reason code F002 indicating the rejection is due to the entry pair matching its own negative list with a send restriction.

For transactions that are rejected because of other fraud controls:

- Sender FI receives a FedNow payment status rejection (pacs.002) with reason code F101 indicating the rejection is because of a fraud control setting.

For transactions that are rejected because of a Sender FI's cumulative value criteria:

- Sender FI receives a FedNow payment status rejection (pacs.002) with reason code F008 indicating that the rejection is due to a transaction's dollar value exceeding the allowed aggregated dollar amount within a specified time frame for an RTN, account number and account type — provided that the account type is specified by the Sender FI in the message.

For transactions that are rejected because of a Sender FI's velocity criteria:

- Sender FI receives a FedNow payment status rejection (pacs.002) with reason code F009 indicating that the rejection is due to a transaction exceeding the allowed total count of transactions within a specified time frame for an RTN, account number and account type — provided that the account type is specified by the Sender FI in the message.

Reporting of Rejected Messages

Messages that were rejected due to negative list matches or account activity threshold breaches are listed in the Sender FI's end-of-day Account Activity Details Report (F002, F101, F008, F009). In addition to the Account Activity Details Report (AADR), the Sender FI also can check the status of messages related to fraud mitigation tools checking via the Adhoc Query Tool in the FedNow interface.

Messages that Bypass Fraud Mitigation Tools Validation

Negative list and account activity threshold checks take place within the business validation phase of payment processing and are subject to a time threshold within the payment timeout clock.⁷⁵ If the checking process exceeds the time limitation for one, some or all of the fraud mitigation tools, the message is not checked against the tool that exceeded the time limitation and continues processing with the potential to settle. In these scenarios, the FedNow Service logs a warning code. The warning code is available for Participants to view in the AADR or via the Adhoc Query Tool in the FedNow interface.

If the FedNow Service is experiencing an operational issue ~~with negative list or account activity thresholds and they and any of the fraud mitigation tools~~ become unavailable for any reason, the Federal Reserve Banks will endeavor to inform any affected Participants with sufficient details regarding any sent or received transactions that were processed but not checked against the tool(s). Messages that are not checked by ~~these fraud mitigation~~ tools due to an operational issue are not reflected as having missed the validation in the AADR or Adhoc Query Tool. The Support Center will endeavor to provide the information after the end-of-cycle-day rollover on which the affected tool was unavailable.

⁷⁵ For additional details on timeout clock, see Value Messages section.

10.3. Fraud Mitigation Tools - Participant Negative List

- a. Overview
- b. Negative List – Functionality
- c. Processing Instant Payments Using the Negative List

a. Overview

The FedNow Service offers Participants an option to help mitigate fraud using a negative list. This option is intended to augment the Participant's internal fraud mitigation practices. The negative list provides Participants an option to include an additional business validation check during payment processing to reject instant payment messages (pacs.008 and pacs.004) going to or coming from an RTN and account number (an entry pair) in precise elements that match a specific entry pair included in the sending or receiving financial institution's negative list. Each Participant setup for fraud mitigation tools will have a single negative list applicable for all of that Participant's managed RTNs.

The negative list is managed by Participants through uploading the file to the FedNow Service interface. The negative list is applied to transactions for any of the Participant's in the managed RTN group; it is not applied to all transactions across the network. The FedNow interface provides appropriately credentialed subscribers the ability to look up an exact matching record of an entry pair within their negative list.

The FedNow Service determines which negative list(s) to apply to a given transaction by looking at the instructing agent RTN (Sender FI) and instructed agent RTN (Receiver FI). If neither the instructing agent RTN nor instructed agent RTN are members of a managed RTN group, then a negative list check does not occur for that transaction. When a message is sent, the FedNow Service validates the message against the entry pairs from a determined negative list by pulling the debtor agent RTN with Sender account number (Sender) and the creditor agent RTN with Receiver account number (Recipient). Within FedNow ISO 20022 messages, the instructing agent and debtor agent should be the same RTN and the instructed agent and creditor agent should be the same RTN.⁷⁶

b. Negative List – Functionality

Once setup, all instant payment messages sent to or from the managed RTN(s) are checked against the Participant's negative list. For each entry pair, the Participant provides instructions for transfer restrictions, such as:

- **Restrict send only** (messages sent to this entry pair are rejected)
- **Restrict receive only** (messages received from this entry pair are rejected)
- **Restrict both send and receive activity** (messages where this entry pair is either the sender or the receiver are rejected)

A message rejected by the Sender FI's negative list results in a FedNow payment status rejection (pacs.002) to the Sender FI with a code indicating that the Sender's negative list was the reason for rejection. A message rejected by the Receiver FI's negative list results in a FedNow payment status rejection (pacs.002) to the Sender FI with a code indicating fraud controls were the reason for rejection. In a situation where the Receiver FI chooses only to restrict receiving messages from an entry pair, the Receiver FI is not made aware of a rejection via ISO message or reporting.

For managed RTN(s) setup for the negative list processing option, the negative list check occurs within a timed threshold during the FedNow Service validation phase of message processing. If the negative list checking process exceeds the time limitation, a warning code is logged to indicate a timeout, and the message is

⁷⁶ See the FedNow Service ISO 20022 Implementation Guide for details on debtor and creditor agents.

not checked against the negative list and continues processing.⁷⁷ This check is performed within the payment timeout clock time restrictions.⁷⁸ Participants should review their Account Activity Details Report (AADR) or use the Adhoc Query Tool in the FedNow interface to view these messages and any associated timeout warning codes (F004).

Negative List Maintenance

An FI may view or update its negative list at any time via the designated administrative RTN. Participants set up for the negative list must ensure that they have sufficient subscribers for the administrative RTN to manage their negative list without support from the Federal Reserve Banks.

Participants designate specific entry pairs (RTNs and account numbers) from other financial institutions to be checked during the processing of all pacs.008 and pacs.004 messages for managed RTNs, which is designed to help mitigate risks due to a suspicious counterparty. The Participant is not permitted to add a negative list entry pair from its own institution, as the negative list is not designed to manage which accounts within an FI can send or receive transactions.

Entry addition or removal can occur at any time and become effective in near-real-time. For each entry pair added to the negative list, the following information is required:

- **Entry Pair**
 - Financial institution Routing Transit Number (RTN)
 - Account number (case-sensitive)
- **Transfer Restriction:** Indicates whether the identified entry pair cannot send and/or receive instant payment messages
 - **Restrict send only** (messages sent to this entry pair are rejected)
 - **Restrict receive only** (messages received from this entry pair are rejected)
 - **Restrict both send and receive activity** (messages where this entry pair is either the sender or the receiver are rejected)⁷⁹

Participants can add or delete multiple entry pairs by logging in to the Participant Profile of the administrative RTN and uploading a batch file through the FedNow interface. If a change to an existing entry pair is required, it should be deleted in one batch file upload, then added with the new restrictions in a subsequent batch file upload. A template of the batch file is available for Participants to download via the FedNow interface. Participants can generate an export of their current negative list at any time through the FedNow interface.⁸⁰ Participants should review their negative list summary via the FedNow interface prior to — and after — uploading a new negative list so that changes between the two can be identified and/or confirmed. Before adding a new negative list, it is recommended that Participants download their existing list. For additional historical data control, it is recommended for Participants to maintain previously uploaded negative lists.⁸¹

While both the Sender FI's and Receiver FI's negative lists are checked during message processing, entries within each list are not shared with other Participants in the FedNow Service network.

As referenced in Operating Circular 8, the Federal Reserve Banks maintain the right to add or remove entries from a negative list for any reason, including to improve processing efficiency of the FedNow Service or address other operational issues.

⁷⁷ In the unlikely event that a pacs.008 or pacs.004 message is sent through the FedNow Service and should be screened by a Sender or Receiver FI's negative list but fails to do so, and a timeout warning message is not logged, the Federal Reserve Banks will endeavor to inform any affected Participants with sufficient details regarding any sent or received transactions that were processed but not checked against the negative list.

⁷⁸ See the Payment Timeout Clock in the Value Messages section for complete details.

⁷⁹ Refer to the FedNow Technical Specifications, available on the FedNow DevRel resource, for complete details.

⁸⁰ See FedNow interface How-To Guide for additional details.

⁸¹ The negative list and any previous entry pairs are removed and irretrievable from the FedNow Service if, and when, all RTNs are removed from a managed RTN group.

c. Processing Instant Payments Using the Negative List

After FI setup and creation of the negative list by the administrative RTN, messages are checked for all managed RTNs.

Processing steps using the negative list	
Step 1:	Sender FI sends pacs.008 or pacs.004 message to the FedNow Service.
Step 2:	FedNow Service receives the instant payment message and begins the negative list checking process.
Step 3:	As part of the negative list checking process, the FedNow Service determines if either the Sender (instructing agent) RTN or Receiver (instructed agent) RTN is in the managed RTN group for the negative list. Where one or both RTNs are in a managed RTN group, the service performs a validation check of the entry pairs (with spaces, dashes and forward slashes omitted) in the message against the negative list(s) established by the FI(s) for the applicable RTN(s).
Step 4:	The sender and receiver entry pairs (debtor agent and creditor agent RTNs) in the instant payment message ⁸² are checked against the entry pairs in each Participant's negative list. The service either forwards the message for processing or, if there is an exact entry pair match, rejects the message according to the Participant's specified transfer restrictions (Restrict Send Only, Restrict Receive Only or Restrict Both Send and Receive).
Step 5a:	If the pacs.008/pacs.004 message successfully passes negative list validation (i.e., neither Sender FI nor Receiver FI has an exact match in either negative list), the message passes through the remaining FedNow Service validations and continues processing.
Step 5b:	If the negative list(s) processing exceeds the allotted time threshold before completing the negative list validation , the message bypasses the negative list validation and continues message processing.
Step 5c:	If the pacs.008 or pacs.004 messages contain an entry pair that exactly matches an entry pair in an applicable negative list , it is rejected by the FedNow Service based on the specified transfer restrictions. The Sender FI receives a FedNow payment status rejection (pacs.002) with the appropriate error code (see below) . ⁸³ <ul style="list-style-type: none"> If a Participant has questions about the processing or rejection of an instant payment message, it can contact the Support Center.

⁸² For a pacs.004 to be checked against the negative list, the FI must populate the Debtor Agent element under the Party header of the ISO message.

⁸³ [See Error Codes and Descriptions Appendix for additional details.](#)

10.4. Fraud Mitigation Tools - Account Activity Thresholds

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

10.5 Fraud Mitigation Tools – Network Intelligence

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

11. Fraud Reporting

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

12. Request for Payment Warranties and Expectations

- a. RFP Warranties
- b. Expectations on Sender FI
- c. Suspected Breaches of the RFP Warranty
- d. Process to Address Disputes and Seek a Return of Funds

a. RFP Warranties

A Request for Payment (RFP) allows a Participant, on behalf of itself or its end customer, to request a payment from another Participant or their end customer.⁸⁴ The Request for Payment (RFP) Warranty, which is set forth in the Operating Circular 8 section related to nonvalue messages, requires that RFPs are sent by Participants only for legitimate purposes.

Whether an RFP is sent for a legitimate purpose may depend on the nature of the underlying transaction for which payment is sought. If the customer of the Sender FI is a business, an RFP is not sent by the Sender FI for a legitimate purpose if its business customer seeks payment for anything other than: (i) a current sale or transaction; or (ii) an amount that is due, owed or otherwise previously agreed by the Receiver FI's customer to be paid to the Sender FI's business customer. Alternatively, if the customer of the Sender FI is an individual, an RFP is sent in breach of the RFP Warranty if it is not reasonable for the Receiver FI's customer to have expected to receive the RFP. Further, for the avoidance of doubt, any use of RFP contrary to requirements under applicable law, including laws prohibiting unfair, deceptive, or abusive acts or practices, would not be for a legitimate purpose.

Dissatisfaction with the quality or delivery of goods and services should not give rise to a breach of the RFP Warranty unless additional circumstances indicate the RFP was not sent for a legitimate purpose.

b. Expectations on Sender FI

Under Operating Circular 8, Sender FIs (FIs sending the RFP) are expected to monitor use of RFP to identify abuses by themselves and/or their customers. At minimum, monitoring must include risk-based procedures to track the volume of RFPs sent by customers to identify potential anomalous activity. In addition, Sender FIs must review, and incorporate into their monitoring, any reports or other information received regarding a customer's use of RFP.

In addition to monitoring, Sender FIs must also have procedures in place to investigate anomalous activity related to RFP use by itself or its customers. Such procedures must include, at a minimum, an inquiry with the relevant customers to confirm that the customers' use of RFP aligns with requirements established by the Sender FI. In addition, such procedures should provide for remedial action that may be taken to address misuse of RFP by customers.

c. Suspected Breaches of the RFP Warranty

If a Participant receives an RFP, sends a corresponding credit transfer (pacs.008) that is settled, and subsequently determines that the RFP warranty was breached, the Participant may seek a return of funds by sending an ISO 20022 Request for Return (camt.056) (code **WNTB**) message. Return Request (camt.056) messages sent with a WarrantyBreach (**WNTB**) reason code are not cancellation requests for purposes of UCC Article 4A.

If the Participant does not have the camt.056 message enabled, the Participant may contact the Support Center to obtain instructions for an alternative means for seeking a return of funds.

⁸⁴ See Request for Payment (RFP) (pain.013) section for additional details.

If applicable, the Participant must also report any instances of suspected fraud,⁸⁵ per Appendix C of the Operating Circular in accordance with the procedures outlined in the section, Fraud Reporting: Submission Methods.

d. Process to Address Disputes and Seek a Return of Funds

Participants may seek a return of funds sent in response to an RFP that they reasonably believe was in breach of the RFP Warranty. This is done via Return Request (camt.056) or through alternative procedures obtained by contacting the Support Center. Both processes are designed to relay information between FIs regarding whether an RFP was sent in breach of the RFP Warranty. The claim must be submitted within 95 calendar days of the date the credit transfer was settled. If no credit transfer was sent in response to an RFP that the Receiver FI believes may have been sent in breach of the RFP Warranty, the Receiver FI should nevertheless inform the Sender FI of the allegedly breaching RFP to enable the Sender FI to incorporate the report into its monitoring procedures.

If the process outlined below is insufficient to resolve the dispute, the matter must be addressed outside the FedNow Service.⁸⁶ Note, the Reserve Banks will not make any determination regarding the sufficiency of a claim that an RFP Warranty was breached, or otherwise evaluate claims.

Prior to initiating a claim for breach of the RFP Warranty, the Receiver FI must make a determination, based on facts collected through reasonable diligence, that the RFP Warranty was breached.

The following table provides instructions for the process to seek a return of funds associated with an alleged breach of warranty.

Method	Required Steps
Return Request (camt.056) Message ⁸⁷	<p>Receiver of the RFP:</p> <ol style="list-style-type: none"> 1. Initiate a Return Request (camt.056)⁸⁸ to request a return of funds within 95 calendar days of the date the underlying credit transfer settled. Within the camt.056, the Participant must set the reason code to “WNTB” and additionally include: <ol style="list-style-type: none"> 1. ISO Message ID of the underlying Credit Transfer. 2. End-to-End ID of the underlying Credit Transfer. 3. Relevant contact information at the Receiver FI that is responsible for receiving messages concerning this request. 4. In the Additional Information element of the camt.056 message, include: <ol style="list-style-type: none"> a. Any information from its end customer, the Receiver FI’s diligence or elsewhere which supports its claim. b. The reason why the Receiver FI determined that the RFP Warranty was, in fact, breached. c. If the Receiver FI believes the RFP Warranty was breached for a reason that includes fraud, also include the associated Fraud Type Code⁸⁹. 1. Any information that cannot be accommodated within the camt.056 should be communicated bilaterally between the Receiver FI and the Sender FI outside of the FedNow Service. <p>Sender of the RFP:</p> <ol style="list-style-type: none"> 2. Investigate the claim of the breach of the RFP Warranty.

⁸⁵ See Fraud Reporting section for additional details.

⁸⁶ FedNow Participants can utilize the [Exception Resolution Service \(ERS\)](#) to communicate with other FedNow participants.

⁸⁷ See Payment Return and Return Request section for additional details.

⁸⁸ Refer to the Return Request section of the FedNow Service Operating Procedures. This process will be the same but must be sent within 95 calendar days of the date the corresponding credit transfer was sent.

⁸⁹ [See As defined in Section 12.b](#)-Fraud Reporting: Preparation [section for information on including fraud type codes.](#)

- a. To obtain any information not included within the camt.056 message, the Sender FI should refer to the contact information included in the camt.056 message provided by the Receiver FI.
3. Respond to the claim within 20 business days of receipt of the camt.056 with one of the following responses:
 - a. Accept the return request:
 - I. Respond with a Return Request Response Accepted (IPAY) via camt.029 and include relevant contact information of the Sender FI who is responsible for receiving messages concerning the claim.
 - II. Return the funds with a corresponding payment return (pacs.004) or return the funds outside the FedNow Service.
 - b. Reject the return request:
 - I. Respond with a Return Request Response (RJCR) via camt.029 and include relevant contact information of the Sender FI who is responsible for receiving messages concerning the claim, as well as:
 - a. A statement as to why RFP Warranty was not breached; or
 - b. A statement, and any supporting information, if available, that the Sender FI has already provided the Receiving FI a remedy in at least the full amount of the payment. The statement should have sufficient specificity to allow the Receiver FI to confirm that the remedy was provided.

13. FedNow Service Messaging

The FedNow Service offers two methods for exchanging data with the FedNow Service: APIs and MQ. Both of these methods of data exchange support specific messages: API requests and FedNow ISO 20022 messaging. Currently, APIs are optional, while FedNow ISO 20022 messaging is required.

13.1. FedNow Service Messaging – APIs⁹⁰

- a. Overview
- b. System Preparation for APIs
- c. APIs

a. Overview

All API requests sent to the FedNow Service must follow the FedNow Service Technical Specifications, including the REST API Technical Documentation (available on the FedNow DevRel resource) to ensure that the request passes FedNow Service validations.

b. System Preparation for APIs

System preparation applies to all Participants intending to send API requests and receive responses from the FedNow Service; therefore, these requirements must be implemented and integrated into Participant applications before sending API requests. System preparation and requirements for APIs ~~are as follows~~include:

- Connection to the FedNow Service, including meeting technical, operational and security protocols.
- API certificate.
- Active public key(s) for API signature.
- Connection Party enabled for APIs and FedNow Endpoint ID included in API request header.

c. APIs

APIs supported by the FedNow Service are listed in the table below.

APIs	Used by	Functionality
Ping	Participants	The Ping API provides confirmation of the Participant's connectivity to the FedNow Service's API.
Participant List	Participants	Provides the Participant List (admi.998) on demand. ⁹¹ The Participant List API can be called at any time, although the list changes only at the start of each FedNow Service cycle day.
FedNow Account Balance	Participants	Provides account balance reports for Master Accounts and a subset of the account balance report for subaccounts.
<u>Network Intelligence</u>	<u>Participants</u>	<u>The Network Intelligence API⁹² allows sending financial institutions to request information, data insights, via an API to help better assess the overall risk of a potential payment.</u>

⁹⁰ API usage is optional for FedNow Service Participants and Service Providers.

⁹¹ See Participant List section for additional details.

⁹² See [Fraud Mitigation Tools – Network Intelligence](#) section for additional details.

13.2. FedNow Service Messaging - FedNow ISO 20022 Messages⁹³

- a. Overview
- b. System Preparation for ISO 20022 Messages
- c. Duplicate Messages
- d. Business Application Header
- e. Value Messages
- f. Nonvalue Messages
- g. System Messages
- h. Reporting Messages

a. Overview

All messages sent to the FedNow Service must follow FedNow Service ISO 20022 message specifications⁹⁴ and FedNow Service Technical Specifications⁹⁵ to ensure the messages pass the FedNow Service validations. This section provides a general description of the ISO 20022 messages in scope for the FedNow Service. These are split into four categories: value, nonvalue, system and account reporting messages.

b. System Preparation for ISO 20022 Messages

System preparation applies to all Participants intending to receive or send and receive ISO 20022 messages to the FedNow Service and therefore, these requirements must be implemented and integrated into Participant applications before sending or receiving messages. System preparation and requirements to send and receive ISO 20022 messages over the FedNow Service ~~are as follows~~include:

When sending ISO 20022 Messages, ensure:

- Accuracy of the message contents prior to sending the message to the FedNow Service.
- Participant Profile (RTN) has an active status and is enabled to send or receive the message.
- Connection to the FedNow Service, including meeting technical, operational and security protocols.
- Message queues (endpoints) are established with the FedNow Service.
- Active public key(s) for message signature.
- Use of a reliable time server.
- A unique message identifier,⁹⁶ also referred to as the unique message ID, assigned to each new message.
- Message follows message size requirements.
- XML syntax is followed.
- Sender FI is an authorized sender.
- FedNow Service ISO 20022 schema rules are followed.
- Sending and Receiving FIs are FedNow Participants.

⁹³ FedNow ISO 20022 messaging is required for FedNow Service Participants and Service Providers.

⁹⁴ Published on the Federal Reserve Financial Services' [MyStandards web portal](#).

⁹⁵ See the FedNow Service Technical Specifications, available on the FedNow DevRel resource, which provide additional details that are required to send a completed FedNow Service message.

⁹⁶ See the ISO 20022 Specifications for additional details.

When receiving ISO 2022 Messages, ensure:

- Message is signed with an active FedNow Service public key.⁹⁷
- Message has a unique message ID in the Business Applications Header.⁹⁸
- XML syntax is followed⁹⁹.

c. Duplicate Messages

Duplicate Messages from Participants

FedNow Participants must use a unique message identifier for ISO 2022 messages, including when resubmitting a message that was previously rejected. The FedNow Service rejects messages that do not have a unique ID, responding with a message reject (admi.002) and applicable reason code.¹⁰⁰ If the Participant is unsure of the message status after the payment timeout clock¹⁰¹ has expired, the Participant should take the following actions before submitting another message:

1. Inquire about the message status using a payment status request (pacs.028) to the FedNow Service or use the search function in the Adhoc Query Tool via the FedNow interface to retrieve the status.
 - a. If the FedNow Service has received and processed the message, the Participant receives a FedNow payment status (pacs.002) or the Adhoc Query Tool search displays the status.¹⁰²
 - If additional details on the message are needed, use the Adhoc Query Tool or the Account Activity Details Report (AADR).
 - If needed, send a retrieval request (admi.006) indicating the unique message ID of the message to be retrieved. The FedNow Service returns a copy of the original message.
 - b. If the payment status request (pacs.028) returns an error indicating no message was found or if the Adhoc Query Tool search does not return the message, the FedNow Service likely did not process the message. If the Participant wants to resend the message then they should ensure it includes a new unique message ID.
 - c. If issues persist, the Participant should call the Support Center to inquire about the status.

Duplicate Messages from the FedNow Service

Participants must validate that all messages received from the FedNow Service have a unique message ID in the Business Application Header. There is a potential for Participants to receive a duplicate message for any message type from the FedNow Service. Participants must be prepared to recognize and not process such messages in order to avoid processing the message more than once. The duplicate message will be an identical copy of the previously delivered message, including the Business Application Header¹⁰³ and the message ID in the Business Application Header. Participants must take the following steps to ensure the message is unique:

1. Confirm the message ID in the Business Application Header is unique.
 - a. If unique, continue processing.
 - b. If a duplicate message, do not process:

⁹⁷ For steps to follow if not signed with an active public key, see Message Signing section.

⁹⁸ For steps to follow if not unique message ID, see Duplicate Messages from the FedNow Service section.

⁹⁹ For steps to follow if not in proper format, see Error Code and Description section.

¹⁰⁰ See Error and Warning Codes and Descriptions for additional details.

¹⁰¹ See Value Message Overview Section for timeout clock details.

¹⁰² See Adhoc Query Tool section for additional details.

¹⁰³ The Possible Duplicate warning will not be indicated in the BAH.

- For instant payments: Participants must match the original payment message (pacs.008 or pacs.004) with the settlement notification, FedNow payment status (pacs.002). If the Participant receives a duplicate settlement notification, the duplicate must be ignored.
- For Liquidity Management Transfers: The Sender FI must match the original payment message (pacs.009) with the settlement notification, FedNow payment status (pacs.002). The Receiver FI must review the message ID of the pacs.009 and confirm it is not a duplicate before posting.
- For nonvalue and system messages: Participants must review the message ID and ignore duplicates.

d. Business Application Header

A Business Application Header (BAH) is required for all ISO 2022 messages sent through the FedNow Service, whether sent by FedNow Participants or the FedNow Service.

ISO 2022 Message	Used by	Message Functionality
head.001 Business Application Header (BAH)	FedNow Service Participants	Contains information the FedNow Service or Participant uses to determine appropriate processing of the business message (pacs.008, pain.013, etc.). It is used to serve as a bridge between the business content of an ISO 2022 message and the protocols (technical and connectivity requirements) used to transmit the message. ¹⁰⁴

e. Value Messages

Value messages initiate a funds transfer and are processed and settled through the FedNow Service via the Master Account of the Participant or its Correspondent.

ISO 2022 Message	Used by	Message Functionality
pacs.008 Customer Credit Transfer	Participants	Instructs the FedNow Service about a single instant payment where either the initial sender or final receiver, or both, are not FIs.
pacs.004 Payment return	Participants	Return of previously received funds. May be used to fulfill obligations to report fraudulent Customer Credit Transfers by including the Fraudulent Payment (FR01) reason code.
pacs.009 Liquidity Management Transfer	Participants	Instructs a single payment where both sender and receiver are financial institutions.

¹⁰⁴ Reference the FedNow Service ISO 2022 Implementation Guide for additional details on the Business Application Header and the FedNow Service Technical Specifications, available on the FedNow DevRel resource, for additional details on the protocols.

f. Nonvalue Messages

Nonvalue messages are used to request payment, report the processing status of previously exchanged funds transfer messages, request returns, request more information, and respond to those various requests.

The FedNow Service groups nonvalue messages into an inquiry sub-category. This additional category is used for queue management when sending inquiries to the FedNow Service that do not require another Participant to respond – account report requests (camt.052) and payment status requests to FedNow Service (pacs.028).

ISO Message	Used by	Message Functionality
pain.013 RFP	Participant	Request funds on behalf of a recipient.
pain.014 RFP response	Participant	Processing status of an RFP previously sent through the FedNow Service.
camt.055 RFP cancellation request	Participant	Request to cancel a previously sent RFP (pain.013).
camt.029 RFP cancellation request response	Participant	Processing status of an RFP cancellation request.
camt.026 Information request	Participant	Request the Participant or customer to provide further information on a previously sent Customer Credit Transfer (pacs.008), payment return (pacs.004) or request for payment instruction (pain.013).
camt.029 Information request response	Participant	Processing status of a previously received information request (camt.026).
camt.028 Additional payment information	Participant	Respond to an information request (camt.026) with additional information about the initial Customer Credit Transfer (pacs.008), return of funds (pacs.004) or request for payment instruction (pain.013).
camt.056 Return request	Participant	Request a Participant to return some or all of a previously settled instant payment or LMT. Also, may be used to meet fraud reporting obligations by indicating a fraudulent transaction using the fraudulent (FRAD) reason code.
camt.029 Return request response	Participant	Processing status of a previously sent return request (camt.056).
pacs.028 Payment status request	Participant	Request the processing status of a previously sent pacs.008, pacs.009 or pacs.004 message from the FedNow Service.
pacs.028 Payment status request	Participant	Request the processing status of a previously sent pacs.008, pacs.004 or pain.013 message from another Participant.
pacs.002 Participant payment status	Participant	In response to a previously received instant payment (pacs.008/pacs.004), inform the FedNow Service about the processing status of a previously received instant payment (pacs.008/pacs.004).
pacs.002 FedNow payment status	FedNow Service	Informs the recipient of the processing status of a value message (pacs.008, pacs.009, pacs.004). Indicates the final state of a transaction and whether the transaction has settled (funds transferred between master accounts) or was rejected (no movement of funds).

g. System Messages

System and administrative messages are used by either the FedNow Service or Participants to communicate Participant status, events or the rejection of messages sent through the FedNow Service.

ISO Message	Used by	Message Functionality
admi.002 Message reject	Participant	Inform the FedNow Service that the Participant cannot process the message sent by FedNow Service.
admi.002 Message reject	FedNow Service	Inform the Participant that the FedNow Service has rejected the message.
admi.004 FedNow broadcast	FedNow Service	Notify FedNow Participants via their Connection Party(ies) of a FedNow Service or FedNow Participant event.
admi.004 Participant broadcast	Participant	Notify the FedNow Service of a Participant event or query whether there is a connection (ping) to the FedNow Service.
admi.006 Retrieval request	Participant	Request copies of messages previously sent or received.
admi.011 FedNow system response	FedNow Service	Respond to a FedNow Participant broadcast (admi.004).
admi.007 Receipt acknowledgement	FedNow Service	Inform the Participant that a previously sent message was successfully processed by the FedNow Service and delivered to the intended receiver.
admi.007 Receipt acknowledgement	Participant	Inform Sender FI that a previously sent message has been received by the Receiver FI.
admi.998 FedNow Participant file	FedNow Service	A list of active Participants and the FedNow services enabled, including the ability to send and/or receive Customer Credit Transfers and receive requests for payment.

h. Reporting Messages

The FedNow Service provides reports on each RTN's activity, including value and nonvalue messages. Reports can be provided at the master/primary RTN, subaccount RTN or other secondary RTN (OSRTN) levels.

ISO 20022 Message	Used by	Message Functionality
camt.060 Account Reporting Request (Participant and Correspondent)	Participant	Request the FedNow Service to send one of the following account reports. <ul style="list-style-type: none"> • Account Balance Report: Provides account balance reports for Master Accounts and a subset of the account balance report for subaccounts. • Account Activity Totals Report: Provides account activity totals, including value messages and nonvalue messages. • Intraday Account Activity Totals Report: Provides account activity totals on demand throughout a cycle day, including value messages and nonvalue messages. • Account Activity Details Report: Provides account activity details, including value messages and nonvalue messages. • Correspondent Account Activity Totals Report: Provides Correspondents with total account activity for all value messages successfully processed for all respondents. • Correspondent Intraday Account Activity Totals Report: Provides account activity totals on demand throughout a cycle day, including value messages. • Correspondent Account Activity Details Report: Provides Correspondents with details on account activity for all value messages successfully processed within the Correspondent's account.
camt.052 Account Reports (Totals and Details)	FedNow Service	Provides the requested report based on report code to the Participant or Correspondent.
camt.054 Account Debit/Credit Notification	FedNow Service	Provides a Correspondent with real-time notification of a value message (pacs.008, pacs.004 and pacs.009) that was settled by the FedNow Service for its respondent.

14. System Messages

System and administrative messages are used by either the FedNow Service or Participants to communicate Participant status, events or the rejection of messages sent through the FedNow Service. All ISO messages, including system messages, are subject to the FedNow Service ISO 20022 rules and guidelines, security procedures and processing standards. System preparation and requirements¹⁰⁵ for ISO 20022 messages apply to all Participants intending to send system messages to the FedNow Service and therefore should be implemented before sending messages.

¹⁰⁵ See the FedNow ISO 20022 Messages section for details on requirements.

14.1. Participant Broadcast Message (admi.004)

- a. Overview
- b. Additional Details
- c. Participant Broadcast Message Flows

a. Overview

A Participant broadcast message notifies the FedNow Service of a Participant event. Participant broadcast messages all use the ISO 20022 message admi.004 but include different codes to add detail on the purpose of the broadcast.

b. Additional Details

Broadcast Message Events

The table below outlines the events that would require a FedNow Service Participant to send a broadcast message to the FedNow Service. The table also includes the event code that is included in the admi.004 message, description and occurrence.

Code	Event	Description	Occurrence
PING ¹⁰⁶	Connection Check	FedNow Participant checks connection to the FedNow Service	<ul style="list-style-type: none"> Following initial setup on FedNow Service Only as required to check connectivity
FPOF*	Participant Offline	A FedNow Participant or FedNow Service Connection Party signing off from the FedNow Service	<ul style="list-style-type: none"> As needed
FPON*	Participant Online	A FedNow Participant or FedNow Service Connection Party signing on to the FedNow Service	<ul style="list-style-type: none"> When first signing onto the FedNow Service As needed after signing off
FPCD	Connection Point Disconnect	A FedNow Participant disconnecting a Connection Point from the FedNow Service	<ul style="list-style-type: none"> Required for additional Connection Points¹⁰⁷ As needed
FPCR	Connection Point Reconnect	A FedNow Participant reconnecting a Connection Point to the FedNow Service	<ul style="list-style-type: none"> As needed after disconnecting

* A Participant event that results in a FedNow Service broadcast message to all other Connection Parties.

Connectivity Check (Ping)

The connectivity check message (admi.004 code PING) can be used to ping the FedNow Service to verify connectivity. If the Participant is connected, the FedNow Service responds within seconds with a FedNow Service system response (admi.011). The ping (admi.004) is the first message Participants send to the FedNow Service to validate their initial active connections. The ping message may be used if a Participant did not receive the expected message to confirm connectivity. However, Participants are not expected to ping the FedNow Service with any regularity. The FedNow Service does not validate the message signature of a ping.

¹⁰⁶ Ping for API Connection is also available. See the FedNow Service Technical Specifications, including the REST API Technical Documentation, available on the FedNow DevRel resource.

¹⁰⁷ Need to disconnect until setup is completed.

Participant/Connection Party Sign On or Sign Off

The functionality of signing on and off (via adm.004 code FPON or FPOF) is reserved for Participants and Connection Parties¹⁰⁸ that are enabled (via Participation Type and Connection Party Permissions¹⁰⁹) to receive instant payments (pacs.008 and pacs.004). Therefore, only these Participants and Connection Parties are required to be signed on to the FedNow Service. LMT only or Settlement only Participants do not need to sign onto the FedNow Service to receive and/or send messages. If a Participant or Connection Party without receive-enabled Credit Transfers tries to sign on, the FedNow Service rejects the message. When an instant payment is sent to a Participant, the FedNow Service validates that both the Participant Profile and Connection Party are signed on; if either is signed off, the instant payment is rejected as shown in the following table.

Scenario (All scenarios assume the Connection Party has Credit Transfer and Payment Return permissions)	Result after last step
1. RTN (Participant Profile) is signed on 2. Connection Party signs off	Instant payments sent to RTN are rejected due to Connection Party being signed off
1. RTN is signed on 2. Connection Party signs off 3. Connection Party signs back on	Instant payments sent to RTN are NOT rejected
1. RTN is signed on 2. Connection Party signs off 3. RTN signs off 4. Connection Party signs back on	Instant payments sent to RTN are rejected due to RTN being signed off
1. RTN is signed off 2. Connection Party is signed off 3. RTN signs on	Instant payments sent to RTN are rejected due to Connection Party being signed off
1. RTN is signed off 2. Connection Party signs on	Instant payments sent to RTN are rejected due to RTN being signed off
1. RTN is signed off 2. Connection Party signs on 3. RTN signs on	Instant payments sent to RTN are NOT rejected

Upon activation, all Participant Profiles are signed off by default and therefore must be signed on before the Participant can start receiving instant payments. Upon activation, all Connection Parties are defaulted to signed on. An initial sign on message is not needed for the Connection Party.

After signing on via adm.004 code FPON, a Connection Party or Participant can sign off via adm.004 code FPOF or via the FedNow interface. When ready to sign back on to the FedNow Service, this must be done via adm.004 code FPON and cannot be done via the FedNow interface.

A Participant Profile or Connection Party may use the sign off message (adm.004 code FPOF) during maintenance windows or other events when it cannot receive and respond to instant payment messages (pacs.008 and pacs.004). If necessary, the Federal Reserve Banks will sign off a Participant or Connection Party on their behalf. Signing off from the FedNow Service instructs the FedNow Service to reject any instant payments to a Receiver FI that is an impacted RTN. All other

¹⁰⁸ A Connection Party can be owned either by a Participant or Service Provider. See the Authorized Connection Profile section for additional details.

¹⁰⁹ See the FedNow Profile section for additional details.

messages continue to flow to the RTN, and the RTN may initiate any message while signed off, including value messages. A Participant or Connection Party should limit the time that it is signed off in accordance with the service level expectations.¹¹⁰

When an individual Participant Profile is signed on/off, a FedNow broadcast (admi.004 code FPON or FPOF) is sent to all Connection Parties including the Participant Profile’s Connection Party, informing them of the sign on/off. When a Connection Party is signed on/off, a FedNow broadcast (admi.004 code FPON or FPOF) is sent to all other Connection Parties listing the impacted RTNs. The Connection Party is required to communicate with the Participants they support as needed. The Connection Party that signed on/off is not sent the FedNow broadcast.

Participants and their Service Providers should check to see if the Receiver FI is active on the service and signed on before sending an instant payment to the Receiver FI. While other messages are sent to the signed-off Participant, processing and responding to other types of messages potentially may be delayed if the FI is performing maintenance, with potential implications for customer experience.

The guidelines to distinguish signing on/off via a Participant broadcast (admi.004 code FPON or FPOF) to a Participant Profile (RTN) versus a Connection Party:

How to sign on: Sign-on via ISO message (admi.004 FPON):			
Profile Type	Message Details	Additional Information	Example
Participant Profile	The Event Parameter element must contain the Routing Transit Number (RTN) that needs to be signed on	<ul style="list-style-type: none"> Signs on the Participant Profile listed in the Event Parameter element. Participant Profiles need to be signed on individually. 	<pre><EvtInf> <EvtCd>FPON</EvtCd> <EvtParam>XXXXXXXXXX</EvtParam> <EvtTm>2022-09-27T15:13:06.5872283-04:00</EvtTm> </EvtInf></pre>
Connection Party	The Event Parameter element must be left blank	<ul style="list-style-type: none"> Signs on the Connection Party and all applicable Participant Profiles under that Connection Party that were not signed off at a Participant Profile level. If the Participant Profile was signed off prior to signing on the Connection Party, the Participant Profile remains signed off until a sign-on is sent with the RTN in the Event Parameter element. 	<pre><EvtInf> <EvtCd>FPON</EvtCd> <EvtTm>2022-09-27T15:13:06.5872283-04:00</EvtTm> </EvtInf></pre>
How to sign off: Sign-off via ISO message (admi.004 FPOF):			
Profile Type	Message Details	Additional Information	Example
Participant Profile	The Event Parameter element must contain the RTN that needs to be signed off	<ul style="list-style-type: none"> Signs off the Participant Profile listed in the Event Parameter element. Participant Profiles need to be signed off individually. 	<pre><EvtInf> <EvtCd>FPOF</EvtCd> <EvtParam>XXXXXXXXXX</EvtParam> <EvtTm>2022-09-27T15:13:06.5872283-04:00</EvtTm> </EvtInf></pre>

¹¹⁰ For additional details, see Service Level Expectations Appendix.

Connection Party	The Event Parameter element must be left blank.	<ul style="list-style-type: none"> Signs off the Connection Party and all applicable Participant Profiles under that Connection Party. 	<pre><EvtInf> <EvtCd>FPOF</EvtCd> <EvtTm>2022-09-27T15:13:06.5872283-04:00</EvtTm> </EvtInf></pre>
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Connection Point Disconnect/Reconnect

The purpose of the Connection Point disconnect/reconnect (via admi.004 code FPCD or FPCR) is to allow a Connection Party with multiple connection points to perform maintenance on a Connection Point while allowing messages to flow to its other Connection Points.¹¹¹ While the Connection Point is disconnected, the FedNow Service sends new messages to other Connection Points associated with the Connection Party. If a Connection Party with only one Connection Point tries to disconnect, the admi.004 is rejected by the FedNow Service.

To disconnect, the Connection Party sends an admi.004 with code FPCD, which the FedNow Service acknowledges with an admi.011 message. The Connection Party reconnects its Connection Point by sending an admi.004 with code FPCR and the FedNow Service responds with an admi.011 message. Connection Point disconnections and reconnections can occur only via ISO messaging, not the FedNow interface. The FedNow Service does not send a broadcast message to other Connection Parties about a connect or disconnect.

Connection Points default to connected. If a Connection Party that is operating in the production environment adds an additional Connection Point, these Connection Points must be disconnected via admi.004 with code FPCD until the setup is complete.

c. Participant Broadcast Message Flows

Connectivity Check (Ping)

Who	Required Steps
Sender FI	Sends a Participant broadcast message (admi.004) to the FedNow Service to check connectivity, include the appropriate report identification code PING .
FedNow Service	<p>If connected, the FedNow Service:</p> <ol style="list-style-type: none"> Receives the broadcast message from the Participant. Within seconds, sends a FedNow Service system response (admi.011) to the Participant to confirm its connection to the FedNow Service. Limited validations are run on the ping message. <p>If not connected, the FedNow Service does not respond.</p>

Sign On/Off

Sign-off is denoted throughout in parenthesis

Who	Required Steps
Sender FI	Send a broadcast message to the FedNow Service to sign on (or sign off). Include the appropriate report identification code FPON for sign on (FPOF for sign off).
FedNow Service	Receives broadcast message (admi.004) from Sender FI and runs through all applicable validations: <ul style="list-style-type: none"> ✓ Valid message signature

¹¹¹ See the Technical Specifications, available on the FedNow DevRel resource, for additional details.

	<ul style="list-style-type: none"> ✓ Valid message size ✓ XML Syntax ✓ Authorized sender ✓ Confirm unique message ID ✓ FedNow Service ISO 20022 schema rules are followed ✓ Valid participation type if signing on/off an RTN ✓ Valid connection party permission if signing on/off a connection party ✓ Event time not future dated <p>If message fails validations, the FedNow Service rejects the message immediately and send the Sender FI a Message Reject (admi.002) with the appropriate reason code.</p>
FedNow Service	<p>If message passes validations:</p> <ol style="list-style-type: none"> 1. Signs the Participant on (off) the FedNow Service and updates its profile and status in the FedNow interface. 2. Sends a FedNow Service response (admi.011) to the Participant to confirm the successful sign on (sign off) to the FedNow Service. 3. Sends a FedNow Service broadcast (admi.004) to all other Connection Parties to inform them that the Participant¹¹² is now signed on (off).

Connection Point Disconnect/Reconnect

Reconnect is denoted throughout in parenthesis

Who	Required Steps
Sender FI	<p>Send a broadcast message to the FedNow Service to disconnect (reconnect) a Connection Point. Include the appropriate report identification code FPCD (FPCR reconnect).</p>
FedNow Service	<p>Receives broadcast message (admi.004) from Sender FI and runs through all applicable validations</p> <ul style="list-style-type: none"> ✓ Valid Message Signature ✓ Valid Message Size ✓ XML Syntax ✓ Authorized Sender ✓ Confirm Unique Message ID ✓ FedNow Service ISO 20022 Schema Rules followed ✓ Not disconnecting only (or last) connection point; at least one connection point must remain connected ✓ Event time not future dated <p>If message fails validations, FedNow Service rejects the message immediately and send a Message Reject (admi.002) with the appropriate reason code to the Sender FI.</p>
FedNow Service	<p>If message passes validations:</p> <ol style="list-style-type: none"> 1. Disconnects (reconnects) the indicated Connection Point. 2. Sends a FedNow Service system response (admi.011) to the FedNow Participant to confirm the successful Connection Point disconnect (reconnect) from the FedNow Service. 3. The FedNow Service routes new messages from the disconnected Connection Party to one of the other Connection Points associated with the Connection Party. When reconnected, the FedNow Service routes messages to any of the connected Connection Points.

¹¹² If the Connection Party is signing off, the FedNow broadcast does not go to the signed off Connection Party.

14.2. FedNow Service Broadcast Messages (admi.004)

- a. Overview
- b. Additional Details

a. Overview

A FedNow Service broadcast message notifies FedNow Participants via their Connection Parties of a FedNow Service or Participant event. Connection Parties are expected to share relevant information with their Participants. FedNow broadcast messages have unique message IDs; Participants with multiple Connection Parties may receive multiple broadcast messages with the same message ID. Connection Parties should automatically ingest these messages into their system and take necessary action.

If the FedNow Service's broadcast message is unavailable at any point in time, it is possible that broadcast messages will then be sent out of sequence. It is recommended that Participants note the time stamp of broadcast messages in order to take any necessary action.

b. Additional Details

Broadcast Message Events

The table below outlines events that would require the FedNow Service to send broadcast messages, which are sent to all Connection Parties regardless of permissions.

Code	Event	Description	Occurrence
FPOF	Participant Offline	A FedNow Participant has signed off and cannot receive instant payments messages (pacs.008 and pacs.004).	As needed
FPON	Participant Online	A FedNow Participant has signed on to the FedNow Service and can receive instant payments (pacs.008 and pacs.004).	As needed
EXTN	System Extension	The FedNow Service cycle day has been extended. Note: Only one broadcast message is sent to inform of an extension.	As needed
ROLL	System Rollover	The FedNow Service has rolled over to the next cycle day.	Daily
FNKY	FedNow Keys	The FedNow Service has established a new key for message signing.	As needed

Participant Offline and Online

To avoid rejections, Sender FIs should not send instant payments to signed-off Participants when they receive a FedNow Service broadcast message indicating the Participant has signed off. Once the Participant signs back on again, a new FedNow Service broadcast message informs all Connection Parties that instant payments can again be sent to the Participant.

If a Participant or ACP is suspended, the FedNow Service signs them off, as applicable. A FedNow Service broadcast for Participant Offline (FPOF) is sent and includes the list of RTNs that use this ACP to receive Customer Credit Transfers (pacs.008 and pacs.004).

System Rollover and Extension

When the FedNow Service rolls to the next cycle day, a FedNow Service broadcast is sent at approximately 7 p.m. ET to inform all Connection Parties about the cycle roll. If the FedNow Service cycle day is extended (e.g., due to a Fedwire extension), a FedNow Service broadcast message informs Connection Parties but does not indicate new timing. Instead, a second system rollover broadcast is sent when the cycle day rolls.

FedNow Keys

Connection Parties receive a broadcast message when the FedNow Service establishes a new key pair. When Participants receive the FedNow Broadcast message informing of a new key, they should check if any FedNow Service public keys have expired or were revoked. The FedNow Service may start using the new key immediately, so Participants should be prepared to use it to validate messages sent by the FedNow Service. See the required actions below:

Who	Required Steps
FedNow Service	<ol style="list-style-type: none"> 1. Establishes a new key pair 2. Sends a FedNow Broadcast message (admi.004) to all Connection Parties with code FNKY
FedNow Participant	<ol style="list-style-type: none"> 3. Receive FedNow Broadcast message (admi.004) 4. Retrieve the latest active FedNow public keys via the FedNow interface or send <i>Get FedNow Service active keys</i> MQ message¹¹³

¹¹³ See the Technical Specifications, available on the FedNow DevRel resource, for additional details.

14.3. FedNow Participant List (admi.998)

- a. Overview
- b. Additional Details

a. Overview

The FedNow Participant list (admi.998) is the message that provides a daily list of all active¹¹⁴ FedNow Participants who can receive or send and receive instant payments (pacs.008 and pacs.004) or receive requests for payment. The FedNow Service automatically sends the Participant list at the start of the FedNow Service cycle day. The Participant List can also be retrieved via the FedNow interface or API request.¹¹⁵

b. Additional Details

Participant List Content

The list captures all RTNs activated on the FedNow Service that are enrolled in specific participation types (listed below). Details in the Participant list include:

- FI Name
- FI RTN
- Enrolled participation in at least one of the following:
 - **Credit Transfer Receive Only (CTRO):** Participants allowed to receive instant payments (pacs.008 and pacs.004) through the FedNow Service or send payment returns (pacs.004) through the FedNow Service.
 - **Credit Transfer Send and Receive (CTSR):** Participants that may both send and receive instant payments (pacs.008 and pacs.004) through the FedNow Service.
 - **Request for Payment Receive (RFPR):** *If applicable*, Participants can receive a request for payment (pain.013), present it to the end customer and respond to the request for payment (pain.014). Without this service enabled, an RFP message sent to the Participant is rejected by the FedNow Service.

Participant list does **not** include:

- RTNs only enabled for Liquidity Management Transfers (LMTs) or Settlement Only
- Signed-on or signed-off Status
 - This status is communicated with a FedNow Service broadcast message (admi.004) to all Participants
 - Once a Connection Party is activated on the FedNow Service, the Participant Broadcast message (admi.004) (FPON/FPOF) is used to determine and continuously track the signed-on or signed-off status of other Participants.

Participant List Implementation

The Participant list is used to identify active FedNow Participants and specific enrolled services. To ensure a Receiver FI is enabled to receive a given message type, Sender FI systems should check the latest Participant list and FedNow broadcast (admi.004) messages before sending instant payments or RFP messages to the FedNow Service.

For new Participants, their RTN and Participation Type details are available on the Participant List the day the profile is activated. Once activated, they must send a sign-on broadcast in order to start receiving any instant payments. For current Participants, their RTN and Participation Type details are available on the Participant

¹¹⁴ Includes Participants with the Participant Profile status of active, suspended or pending deactivation.

¹¹⁵ See the FedNow Service Technical Specifications, including the REST API Technical Documentation, available on the FedNow DevRel resource.

List when their profile is in an active state. They may sign off and on the FedNow Service at any time throughout the day. All Participants should store their latest sign on/off status to check before sending instant payments or RFP messages to the FedNow Service.

Delivery of Participant List

The Participant list is delivered to all Connection Parties at the start of a new FedNow Service cycle day. Delivery of the report from the FedNow Service is expected to be no longer than 10 minutes following the cycle day rollover. Connection Parties are expected to share the list with all Participants they connect to the FedNow Service as needed. The Participant list can be requested via API or downloaded in XML format via the FedNow interface, at any time, although the list changes only at the start of each FedNow Service cycle day.

If a Participant changes their participation type intraday, a Sender FI receives a rejection if the new participation type does not support the message sent. For example, if a Participant changes from Credit Transfer Send and Receive with RFP to Credit Transfer Send and Receive intraday, the participation type change is effective immediately and is reflected in the Participant list at the start of the new cycle day. If a Sender FI tries to send an RFP (pain.013) after the participation type has changed, the message is rejected by the FedNow Service. The Sender FI should check the Participant list at the start of the next cycle day.

14.4. Receipt Acknowledgement (admi.007)

- a. Overview
- b. Receipt Acknowledgement from the FedNow Service
- c. Receipt Acknowledgement from the Receiver FI
- d. Receipt Acknowledgement in the Operating Procedures

a. Overview

The receipt acknowledgement (admi.007) is used by both the FedNow Service and Participants. Its purpose is to inform the message sender that the message was received and is being processed, for messages not bound by the timeout clock. All Participants are required to send the receipt acknowledgement (admi.007) as soon as they receive any nonvalue message listed below:

- Request for payment (RFP) (pain.013)
- RFP response (pain.014)
- RFP cancellation request (camt.055)
- RFP cancellation request response (camt.029)
- Information request (camt.026)
- Information request response (camt.029)
- Additional payment information (camt.028)
- Return request (camt.056)
- Return request response (camt.029)
- Payment status request to Participant (pacs.028)

b. Receipt Acknowledgement from the FedNow Service

A receipt acknowledgement (admi.007) sent by the FedNow Service to the Sender FI confirms the sender's nonvalue message passed the required FedNow Service validations, was successfully processed and delivered to the intended Receiver FI. If the Sender FI does not receive this receipt acknowledgement, the FedNow Service likely did not process the message. The Sender FI should send a new request with a unique message ID. If the Participant repeatedly does not receive the admi.007 from the FedNow Service, the Participant should check the connection to the FedNow Service with a ping (admi.004) message.

c. Receipt Acknowledgement from the Receiver FI

A receipt acknowledgement (admi.007) sent by the Receiver FI to the Sender FI acknowledges message receipt. For messages that require additional responses and more time, the recommended response times¹¹⁶ should be followed in addition to the required admi.007 (for example, the responses in relation to an RFP are still recommended in addition to the admi.007).

The admi.007 sent by the Receiver FI must reference an ISO message the FedNow Service has record of for the FedNow Service to send the admi.007 to the Sender FI.

If the Participant does not receive a receipt acknowledgement from the Receiver FI, the Sender FI should assume the Receiver FI did not receive the message. This could be caused by Receiver FI downtime that causes the message to expire or be dropped from the Receiver FI queue. If the Participant did not receive an admi.007 as expected, follow the guidelines below:

- For requests (pain.013, camt.055, camt.026, camt.056 or pacs.028 messages) the Sender FI can send a new request with a unique message ID.
- For request responses (pain.014, camt.029 and camt.028) the Participant does not need to send an additional response. The Sender FI is responsible for retrieving and reviewing response messages.

If the Participant does not receive any admi.007s from various Receiver FIs or the FedNow Service, the Participant should check its connection to the FedNow Service with the ping (admi.004) message.

d. Receipt Acknowledgement in the Operating Procedures

Multiple message flows described in these Operating Procedures include receipt acknowledgement (admi.007) sending and receiving from both the FedNow Service and Receiver FI. The admi.007 is not included in the step-by-step flows. Instead, see the callout at the beginning of the applicable message flows.

¹¹⁶ See Consolidated Response Times Appendix for additional details.

14.5. Retrieval Request (admi.006)

- a. Overview
- b. Retrieval Request – Functionality
- c. How to Process a Retrieval Request (admi.006)

a. Overview

Participants use a retrieval request message (admi.006) to obtain a copy of messages¹¹⁷ previously sent or received. This capability can be useful to support Participants' operational processes — for example, the ability to retrieve copies of messages for reconciliation reviews. Correspondents cannot use the retrieval request to retrieve copies of messages sent by Respondents.

b. Retrieval Request – Functionality

Profile Requirements

When a retrieval request is sent, the FedNow Service validates that the Connection Party sending the retrieval request was a party in the message that is being requested. If not, the request fails.

Time Frame

Message retrieval requests are available for messages sent and received that have passed FedNow Service validations within the current calendar day or up to seven prior calendar days.

Number of Messages Retrieved

In a single request, the Participant can retrieve up to 50 individual messages sent or received. Larger quantities require multiple retrieval requests. The unique message ID must be included for each message copy requested. The FedNow Service responds with a separate message for each retrieved copy or an admi.002 for those not found.

Guidelines for requesting multiple retrieval requests:

Retrieval Request	Result
Request for copies of 50 messages. FedNow Service can return all messages.	Participant receives 50 individual copies for each message.
Request for copies of 50 messages. FedNow Service can return 48 of 50 messages.	Participant receives 48 individual copies for each message available and two rejects (admi.002) for those not available or found. Rejection includes the Reason Description field which indicates the message ID(s) that cannot be provided.
Request for copies of multiple messages. The retrieval request fails message validations.	Participant receives 1 rejection message (admi.002) indicating the retrieval request failed a validation.

The Participant should confirm message ID accuracy before resubmitting any retrieval requests. Contact the Support Center for additional support, as needed.

¹¹⁷ Detailed list of messages that are available via retrieval request listed in below section.

Retrieval Request Versus Payment Status Request

A retrieval request (admi.006) may *not* be used to inquire about the status of a recently sent message, as the response to an admi.006 is a copy of the original message (does not include the final status). Instead, Participants should use a payment status request (pacs.028) or the Adhoc Query Tool via the FedNow interface to obtain the processing status of a previously sent message.¹¹⁸

Available Retrieval Request Messages

The table below lists messages that can and cannot be retrieved using a retrieval request (admi.006). For messages where an FI is both the Sender and Receiver FI of the message, the retrieval request returns the message they sent.

For messages that cannot be retrieved with an admi.006, Participants can resubmit the message, if applicable. For nonvalue messages, an admi.006 can only be used for the nonvalue messages from another Participant; the retrieval request cannot be used for retrieving a message the FedNow Service sent to reject the request (pain.014 and camt.029). The pacs.028 message under Excluded Messages can be obtained from the Adhoc Query Tool.

INCLUDED VALUE MESSAGES		INCLUDED NONVALUE MESSAGES ¹¹⁹		EXCLUDED MESSAGES	
ISO Code	Description	ISO Code	Description	ISO Code	Description
pacs.008	Customer Credit Transfer	pain.013	RFP	pacs.028	Payment status request - to FedNow and to Receiver FI
pacs.009	LMT	pain.014	RFP response	pacs.002	FedNow or Participant payment status
pacs.004	Payment return	camt.056	Return request	admi.002	Message reject
		camt.029	Return request response	admi.004	Participant and FedNow broadcast
		camt.055	RFP cancellation request	admi.006	Retrieval request
		camt.029	RFP cancellation request response	admi.007	Receipt acknowledgement
		camt.026	Request for information	admi.011	FedNow system response
		camt.029	Request for information response	admi.998	Participant list
		camt.028	Additional payment information	camt.052	Account activity reports
				camt.054	Account credit/debit notifications
				camt.060	Account reporting request

¹¹⁸ See the Value Messages section of the FedNow Service Operating Procedures for more on payment status request messages.

¹¹⁹ For nonvalue messages, an admi.006 can only be used for the nonvalue messages from another Participant; the retrieval request cannot be used for retrieving a message the FedNow Service sent to reject the request (pain.014 and camt.029).

c. How to Process a Retrieval Request (admi.006)

1. Validation Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Sender FI	Send the retrieval request (admi.006) to the FedNow Service, including the message ID and message name for every message copy requested up to a limit of 50 per request.	FedNow Service receives request with all necessary details.	FedNow Service does not receive the retrieval request.	If a response from the FedNow Service is not received within seconds, submit a new request. Note: If the request includes multiple message IDs, response from the FedNow Service could take longer.
FedNow Service	Receive the retrieval request (admi.006) message from Sender FI and run through all applicable validations (listed below).	Message passes all validations.	Message fails validation and the FedNow Service rejects the message and sends a Message Reject (admi.002) with the appropriate reason code to the Sender FI. The validations are listed below.	<ol style="list-style-type: none"> Review the error code description, details in Error Codes and Descriptions section. Take necessary steps to correct the error identified and ensure all subsequent messages sent to FedNow Service meet requirements. If necessary, resend the retrieval request (admi.006).

Validations for Retrieval Request (admi.006)	
<ul style="list-style-type: none"> Valid Message Signature Valid Message Size XML Syntax Authorized Sender Valid Message ID with associated message name 	<ul style="list-style-type: none"> FedNow Service ISO 2022 Schema Rules followed Request includes a maximum of 50 messages requested Connection Party requesting was a Connection Party in the original message Original messages were processed with the current calendar day or up to seven prior calendar days

2. Response Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	Respond to a successfully validated retrieval request message (admi.006) with a copy of each of the requested message(s) within seconds.	The FedNow Service sends copies of the original messages.	If the retrieval request was not successfully processed, the FedNow Service sends a message reject (admi.002) to the FedNow Participant OR No response from the FedNow Service.	<ol style="list-style-type: none"> 1. Review the error code description; details in Error Codes and Descriptions section. 2. Take necessary steps to correct the error identified and ensure all subsequent messages sent to FedNow Service meet requirements to send a new message, as needed. <p>OR</p> <p>If a response from the FedNow Service is not received within seconds, submit a new request.</p> <p>Note: If the request includes multiple message IDs, response from the FedNow Service could take longer.</p>

15. Value Messages

- a. Value Message
- b. Payment Timeout Clock
- c. FedNow Service Rejections
- d. Accept Without Posting (ACWP)
- e. Payment Status (pacs.002)
- f. Payment Status Request (pacs.028)**
- f.g. Account Validation**

a. Value Messages

Value messages instruct funds to be moved between Participants and are processed and settled through the FedNow Service in the Master Account of the Participant or its Correspondent. It is recommended that Participants enable all accounts at their institution to receive value payments, but it is at the discretion of the financial institution.

All ISO 20022 messages, including value messages, are subject to FedNow Service ISO rules and guidelines, security procedures and processing standards. System preparation applies to all Participants intending to send or receive FedNow Service value messages and therefore must be implemented before sending messages. This includes following the requirements for all ISO 20022 messages¹²⁰ and additional value message requirements:

- Ensure an active Participant Profile is set to one of the below, as appropriate:
 - Credit Transfer Send and Receive OR Credit Transfer Receive Only.
 - LMT Send and Receive OR LMT Receive Only.
- Reference the Participant list and Broadcast Messages to validate that the intended Receiver FI is active and signed on.
- Include the time stamp(s) to determine start of the timeout clock. The time stamp¹²¹ is indicated either in the message header or a creation date time element in the BAH if a time stamp¹²² if not in the message header.
- Adhere to the FedNow Service network limits.
- Ensure that the value message is \$0.01 or greater.
- Implement system to support defined receiver response time expectations.
- Validate that all messages received from the FedNow Service have a unique message ID in the Business Application Header.

b. Payment Timeout Clock

All value messages (pacs.008, pacs.004 and pacs.009) are subject to the FedNow Service payment timeout clock, which sets expectations for those involved in the transaction.

¹²⁰ See the FedNow ISO 20022 Messages section for details on requirements.

¹²¹ Note: the creation date time element in the BAH is always required.

¹²² See the Technical Specifications, available on the FedNow DevRel resource, for additional details.

For instant payments, the payment timeout clock starts based on the time stamp included in the message header or the business application header and ends when the FedNow Service receives a response from the Receiver FI, as long as the payment timeout clock has not expired. If the payment timeout clock expires before sending to the Receiver FI, the FedNow Service rejects the message and sends a FedNow payment status rejection (pacs.002) to the Sender FI.

If the clock expires after the Receiver FI receives, and potentially responds, to the instant payment but before settlement occurs, the FedNow Service sends a FedNow payment status rejection (pacs.002) to the Receiver FI as well.

For LMT (pacs.009) messages, the payment timeout clock starts based on the time stamp included in the message header or the business application header and ends when the FedNow Service settles the transaction.

If the payment timeout clock expires on a value message due to a Sender FI, Receiver FI or the FedNow Service, the payment is rejected and Participants receive a rejection message. If the Sender FI wants to resend the payment message, they should ensure it includes a new unique message ID.

c. FedNow Service Rejections

If a message fails validation(s), the FedNow Service can reject value messages using message reject (admi.002) or the FedNow payment status (pacs.002) with code RJCT. The message used depends on the reason for the rejection. All rejection messages from the FedNow Service include an error code(s) to inform the Participant why the message was rejected.¹²³

d. Accept Without Posting (ACWP)¹²⁴

Accept Without Posting (ACWP) is one of the three available responses a Receiver FI can use in its initial response to an instant payment (pacs.008 or pacs.004). When ACWP is used in response to an instant payment, the FedNow Service settles the transaction with finality recording a Participant or Correspondent Master Account debit and credit to the Sender FI and Receiver FI.

Some Participants conduct real-time screening of transactions processed through the FedNow Service for legal or compliance reasons. If a Participant's screening software generates a match that could indicate the identified recipient is not entitled or permitted to receive the payment, the Participant may respond with an Accept Without Posting (ACWP) transaction in response to a request for confirmation of the credit transfer message (pacs.008/004). As a result of its ACWP response, the Participant is relieved of its corresponding obligation to make funds immediately available to its customer, providing an opportunity for it to investigate.

The Federal Reserve Banks require a Participant using the ACWP response to reject the transaction (and return funds) or make funds available to the intended recipient by midnight Eastern Time of the next standard business day¹²⁵ (Monday through Friday, except holidays), unless the Participant continues to be concerned that the recipient is not entitled to receive the payment and taking either action would be impermissible under applicable law. In this case, the Federal Reserve Banks require the Participant to provide a pending (PDNG) response to the FedNow Service sender by the ACWP availability deadline. A status update also is required upon resolution of the Participant's investigation and in response to inquiries from the FedNow Service sender.

¹²³ See the Error and Warning Codes and Descriptions section for additional details.

¹²⁴ See the Anti-Money Laundering and Sanction Compliance section for additional details.

¹²⁵ The FedNow Service sends the pacs.008 to the FedNow Receiver for response (ACTC, RJCT, ACWP). If the FedNow Receiver responds with Accept Without Posting (ACWP) at 11:59 p.m. ET on a Wednesday (that is not a holiday), the FedNow Receiver has to investigate and resolve the concerns it had identified with the related pacs.008 by midnight ET on the next FedNow Service Funds Transfer Business Day (in this example, Thursday, that is not a holiday), unless the FedNow Receiver believes it would be or might be impermissible to reject or accept the Instant Payment Message under applicable law.

e. Payment Status (pacs.002)

The FedNow Service supports two types of payment status messages (pacs.002): FedNow payment status and Participant payment status. The payment status message serves different purposes based on the sender of the payment status, which is differentiated based on Instructing Agent of the pacs.002.

FedNow Payment Status

The purpose of the FedNow payment status is to either:

- a. Inform the receiver and/or sender of the final state of Customer Credit Transfer (pacs.008), payment return (pacs.004) or liquidity management transfer (pacs.009).
- b. Provide a response to a payment status request (pacs.028).

FedNow payment status messages identify the FedNow Service as the sender of the message in the Instructing Agent field of the pacs.028 using the Federal Reserve Bank identifier, i.e., 021150706. FedNow payment status message statuses are either accepted (ACSC), accepted without posting (ACWP) or rejected (RJCT). The FedNow payment status indicates the final state of a transaction and whether the transaction has settled and funds have transferred between master accounts (ACSC or ACWP) or that the transaction was rejected and there is no movement of funds (RJCT). Regardless of any previous or subsequent Participant payment status messages, the final state of funds transferring is limited to the payment status from the FedNow Service. If the FI is unsure of the final status of a transaction, they can:

- a. Send a payment status request (pacs.028) to the FedNow Service, if within current or previous cycle day
- b. Use the Adhoc Query tool in the FedNow interface, if within the past seven cycle days
- c. Use the Account Activity Details Report via ISO messaging or the FedNow interface, if within 90 cycle days

Participant Payment Status

The purpose of the Participant payment status is to:

- a. Inform the FedNow Service of the Receiver FI's intent to accept the transaction (ACTC), accept the transaction without posting the funds (ACWP) or reject the transaction (RJCT).
- b. Provide a subsequent status to an accepted transaction (ACSC), informing the Sender FI that funds have been posted to the end customer (ACCC)¹²⁶.
- c. Provide a subsequent status to an accepted without posting (ACWP), informing the Sender FI that funds have been posted to the end customer (ACCC), the transaction is rejected after investigation (RJCT), the transaction is blocked after investigation (BLCK) or the investigation is still pending (PDNG).¹²⁷
- d. Provide a response to a payment status request (pacs.028) from another FI.

The Instructing Agent field for the Participant payment status is the Participant RTN. The Receiver FI should only provide subsequent statuses in alignment with the above. Any pacs.002 that is received with the Participant RTN as the Instructing Agent (b–d in above) provides supplement status information for Participants; there is no impact to settlement.

¹²⁶ Limited validations are performed for these pacs.002s.

¹²⁷ Limited validations are performed for these pacs.002s.

f. Payment Status Request (pacs.028)

The payment status request (pacs.028) is used to inquire about the status of a previously sent message¹²⁸. The pacs.028 can either be sent to the FedNow Service or to the Receiver FI.

When inquiring about a value message, a Participant should only send a pacs.028 after the payment timeout clock has elapsed plus a few additional seconds to allow for the message to complete processing. The FedNow Service rejects the pacs.028 if the payment status request is sent while the message is still in process or before the timeout clock expires.

If the Participant needs to retrieve details of the message, the Participant should use the Adhoc Query Tool or the Account Activity Details Report (AADR). If the Participant needs a copy of the message, the Participant can send a retrieval request (admi.006).

Payment Status Request to the FedNow Service

A pacs.028 can be sent by a Participant to the FedNow Service to inquire on the status of a previously sent pacs.008, pacs.004 or pacs.009. In addition, a pacs.028 can be sent by a Participant to the FedNow Service to inquire on the status of a previously received pacs.008 or pacs.004. The FedNow Service runs through validations of the pacs.028, which includes checking that the requesting FI was a party in the original message and that the original message was sent on the current or previous calendar day. After successful completion of the validations, the FedNow Service responds to the request with a pacs.002 within seconds.

In response to a pacs.028 sent to the FedNow Service, the pacs.002 response contains the status when the FedNow Service completed processing the payment message. For example, if a Receiver FI response to a pacs.008 message is Accept Without Posting (ACWP), and the FedNow Service settled the transaction and confirmed with status ACWP, then, this status is the FedNow Service response to the pacs.028, even if the Receiver FI in the meantime offered a subsequent status update (PDNG, BLCK, etc.).

Payment Status Request to another Participant

A pacs.028 can be sent to the Receiver FI to inquire on the status of a previously sent pacs.008, pacs.004 or pain.013. The Receiver FI should respond to a payment status request immediately.

In response to a pacs.028 sent to the Receiver FI, the pacs.002 or pain.014 response contains the latest status that the Receiver FI has. For example, if a pacs.008 message was accepted by a Receiver FI with an ACWP status, the follow-up status will either be PDNG, BLCK, RJCT or ACCC. If the Receiver FI cannot trace the payment for which a status update is requested, then the Participant should send a pacs.002 RJCT with reason code AG09 (Payment Not Received) or NARR (Narrative).¹²⁹

¹²⁸ Can only be used to inquire on the status of a value message or RFP.

¹²⁹ Codes from the ISO 20022 externalized *StatusReason1Code* list. For more information refer to the FedNow Service ISO 20022 Implementation Guide.

g. Account Validation

The Federal Reserve considers a microdeposit to be a customer credit transfer that does not exceed the value of \$1.00 and is sent for the purpose of account validation. Participants may send a microdeposit to verify ownership or status of a receiver account before making a payment. Microdeposits are allowed only if the sender or their customer already has, or is forming, a relationship with the receiver. When sending a microdeposit, a Sender FI should follow the guidelines below to provide the receiver with information to support proper processing of the transaction:

- Provide financially relevant or recognizable information for use by the receiver (i.e., utilize the *Unstructured Remittance* field to provide additional information)
- Populate the *Service Level Proprietary* element with code *VERI*
- Populate the *Purpose Code* element with code *MDEP*
- If the sender is not the party with, or seeking to form, a relationship with the receiver, populate the *Initiating Party* element with the Party that has, or is seeking such relationship

15.1. Customer Credit Transfer (pacs.008)

- a. Overview
- b. How to Process a Customer Credit Transfer (pacs.008)

a. Overview

Participants use the Customer Credit Transfer message (pacs.008) to send funds between financial institutions' end user customers. To process a payment across the FedNow Service, the Federal Reserve Banks transfer funds between Master Accounts of the Participants or Participants' Correspondent.

b. How to Process a Customer Credit Transfer (pacs.008)

Processing of pacs.008 occurs in four sequential stages. Steps within each stage are detailed below, along with expected outcomes, potential outcomes if exceptions or errors occur,¹³⁰ and Participant system actions that can resolve the issues described.

1. Validation Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Sender FI	<p>Sends the pacs.008 to the FedNow Service.</p> <p>(See system and message preparation requirements in the value messages section of these Operating Procedures.)</p>	FedNow Service receives pacs.008 from Sender FI.	FedNow Service does not receive pacs.008 from Sender FI.	<p>Sender FI should wait a minimum of 25 seconds from the payment message time stamp to inquire about its status. This can be done by:</p> <ol style="list-style-type: none"> 1. Sending a payment status request to the FedNow Service (pacs.028) or searching in the FedNow interface Adhoc Query Tool <ol style="list-style-type: none"> a. Status is provided if the message was received and processed by the FedNow Service. b. If FedNow Service responds, "message is not found," Participant can resend the message with the same message ID used for the previously sent message. c. If FedNow Service does not respond, check connection via Ping (admi.004) message.¹³¹ 2. If issues persist, contact the Support Center.

¹³⁰ The list of exceptions is not exhaustive.

¹³¹ See the Participant Broadcast section for additional details.

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	Receives pacs.008 message from Sender FI and runs through all applicable validations listed below.	Message passes all validations and is sent to the Receiver FI.	Message fails a validation. Depending on the reason, the FedNow Service: 1. Rejects the message immediately and sends a message reject (admi.002) with the appropriate reason code to the Sender FI. 2. Continues processing through validations to collect any additional errors. The FedNow Service then sends a FedNow payment status message (pacs.002) with the consolidated ¹³² appropriate error reason code(s).	1. Review the error code description. ¹³³ 2. Correct the identified error to ensure subsequent messages sent to the service meet requirements. 3. If needed, send a new message with a new unique message ID.

Validations for Customer Credit Transfer	
<ul style="list-style-type: none"> ✓ Valid message signature ✓ Valid message size ✓ XML syntax ✓ Authorized sender ✓ Confirm unique message ID ✓ FedNow Service ISO 20022 schema rules followed ✓ Sending and Receiving FIs are FedNow Participants ✓ Payment timeout clock has not been exceeded ✓ Message is not future dated 	<ul style="list-style-type: none"> ✓ Within Receiver FI reserved response time ✓ Within FedNow Service network transaction limit or Sender FI transaction limit, if configured to be less than the FedNow Service limit ✓ Receiver FI is active/signed on and profile is set to send/receive or receive only for credit transfers ✓ Sender FI is active and profile is set to send and receive credit transfers ✓ Sender and Receiver FIs have valid settlement relationships ✓ If enabled: Negative list, account activity threshold and Correspondent net send limit check(s)

2. Response Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Receiver FI	Receives and begins to validate pacs.008 message from FedNow Service.	Able to open and read the pacs.008 from the FedNow Service.	Unable to validate the FedNow Service message (e.g., unable to read, technical error).	Receiver FI: 1. Checks to ensure the FedNow Service public keys list is up to date. 2. Responds to the message with the Message Reject (admi.002) indicating the received message was rejected. ¹³⁴ 3. If issues persist, contact the Support Center.


¹³² The FedNow Service consolidates validation failures when possible.

¹³³ See Error and Warning Codes and Descriptions section of these Operating Procedures.

¹³⁴ Receiver FI should also call the Support Center with notification that it rejected with an admi.002. The FedNow Service does not respond to or process admi.002 messages sent from Participants.

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Receiver FI	<p>Reviews message and responds with:</p> <ul style="list-style-type: none"> • (ACTC) Accept • (ACWP) Accept Without Posting • (RJCT) Reject <p>Receiver FI should be prepared to send a response to the FedNow Service within its configured reserved response time.</p> <p>Retains the pacs.008 to use for reconciliation.</p>	Receiver FI indicates its planned acceptance by sending a Participant payment status (pacs.002) with code ACTC to the FedNow Service before the payment timeout clock expires.	<p>If the Receiver FI does not accept, the Receiver FI can:</p> <ol style="list-style-type: none"> 1. Indicate its planned rejection by sending a Participant payment status (pacs.002) with code RJCT to the FedNow Service along with the reason for rejection. The rejection code is used in the FedNow Service payment status rejection sent to both Sender FI and Receiver FI. 2. Send a Participant payment status (pacs.002) with code ACWP to the FedNow Service to indicate the pacs.008 requires further investigation. 3. Not respond before the payment timeout clock or allowable reserved time expires and then the FedNow Service rejects the payment. 	N/A

3. Settlement Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	Processes the Participant payment status (pacs.002) from the Receiver FI and runs through all applicable validations.	Message passes all applicable validations.	<ul style="list-style-type: none"> • Participant payment status (pacs.002) failed one or more of the validations. • Receiver FI receives a reject message (admi.002) based on the failed error codes. 	<p>If there is ample time remaining on the payment timeout clock, the FedNow Service sends the rejection message only to the Receiver FI to provide the opportunity to:</p> <ul style="list-style-type: none"> • Review failed validations. • Correct error(s). • Resend a valid Participant payment status (pacs.002). <p>If there is not ample time remaining, the FedNow Service sends a rejection message to both the Sender FI and Receiver FI. If the Sender FI wants to resend the message, they must use a unique message ID.</p>
FedNow Service	<p>Checks that the payment timeout clock has not expired for the pacs.008.</p>  <p>Payment Timeout Clock Stops</p>	FedNow Service prepares to settle transaction.	FedNow Service rejects pacs.008 due to timeout and sends FedNow payment status (pacs.002) with rejection code indicating the payment timeout clock expiration to Sender FI and Receiver FI.	Sender FI should send a pacs.008 message with a new unique message ID.

FedNow Service	Confirms settlement relationships, assigns a settlement date and settles the transaction by recording it.	The transaction settles with finality when the FedNow Service records the respective Master Account debit and credit for the Sender FI, Receiver FI or their respective Correspondents. <small>135</small>	Unable to verify settlement relationship(s) and sends FedNow payment status (pacs.002) with rejection code to Sender FI and Receiver FI.	Sender and Receiver FI should use the FedNow interface to confirm an accurate settlement account is associated with the applicable RTN within the message.
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4. Notification Stage (post-settlement)

The following table outlines the notification stage for two separate scenarios – when the Receiver FI responded with “accept” or “accept without posting” response to a pacs.008. *Each of these are separate flows.*

Who	Required Steps <i>(required unless otherwise noted in orange text)</i>	If No Exceptions Occur	If Exceptions Occur	Action(s) to Correct Failure
Process if Receiver FI Accepted (ACTC) pacs.008				
FedNow Service	Sends FedNow payment status report (pacs.002) with code ACSC, within seconds, as confirmation to Sender and Receiver FIs (acknowledgment to the Sender FI and advice of credit to the Receiver FI).	Sender FI and Receiver FI receive FedNow payment status (pacs.002) confirmation that the pacs.008 settled. The FedNow payment status (pacs.002) ¹³⁶ and pacs.008 are both used to reconcile the transaction.	1. Sender or Receiver FI does not receive FedNow payment status (pacs.002) message. Or 2. The Receiver FI tries to send an additional Participant payment status, pacs.002, with code ACTC or ACWP after the transaction is in a finalized status of ACSC. In this case, the additional pacs.002 is dropped with no additional response.	The Participant (either Sender or Receiver FI) should wait a minimum of 25 seconds from the payment message creation date/time stamp to inquire about its status. 1. Sending a payment status request to the FedNow Service (pacs.028) or searching in the FedNow interface Adhoc Query Tool. a. If message was received and processed by the FedNow Service, a status is provided. b. If no response from the FedNow Service, check connection via Ping (admi.004) message. ¹³⁷ 2. If issues persist, contact the Support Center.

¹³⁵ Timing of debits and/or credits in the Master Accounts may lag payment settlement.

¹³⁶ See Payment Status (pacs.002) section for details on the difference between FedNow payment status and Participant payment status.

¹³⁷ See the Participant broadcast section for additional details.

Who	Required Steps <i>(required unless otherwise noted in orange text)</i>	If No Exceptions Occur	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	If applicable and enabled,¹³⁸ sends respective Correspondent(s) an account debit/credit notification (camt.054)	Notifies Correspondent in real time that correspondent activity settled in the Correspondent's Master Account.	Correspondent does not receive the camt.054.	Correspondent can look up settled messages in the activity reports after end-of-day processing is complete.
Sender FI	Best practice: Upon receipt of acknowledgment (FedNow payment status, pacs.002), notify end customer of successful or unsuccessful transaction.	End customer is made aware of status of the payment transfer.	End customer is not made aware of the status of the payment.	N/A
Receiver FI	Upon receipt of advice of credit (FedNow payment status, pacs.002) and matching it to the pacs.008, makes the funds available to the recipient immediately. ¹³⁹	Funds are available.	N/A	N/A
	Best practice: Notify recipient of funds availability.	Recipient is made aware of transfer and funds availability.	Recipient is not made aware of the transfer and funds availability.	N/A

¹³⁸ Only applicable for Correspondents.

¹³⁹ As soon as practicable, but no longer than a few seconds.

Who	Required Steps <i>(required unless otherwise noted in orange text)</i>	If No Exceptions Occur	If Exceptions Occur	Action(s) to Correct Failure
	Best practice: Send Participant payment status (pacs.002) with code ACCC to the FedNow Service indicating funds have been made available to the end recipient (confirmation of posting).	FedNow Service receives Participant payment status (pacs.002), validates message. If successful, provides status update to Sender FI.	FedNow Service is not aware that the funds have been made available and therefore, cannot inform Sender FI. -or- Participant payment status (pacs.002) fails validation.	Receiver FI can: 1. Review the error code description. ¹⁴⁰ 2. Correct the identified error(s) to ensure subsequent messages sent to FedNow Service meet requirements. 3. As needed, send a new message with a new unique message ID.
FedNow Service	If provided by Receiver FI, delivers the confirmation of posting Participant payment status (pacs.002) with code 'ACCC' to the Sender FI regarding availability of funds ¹⁴¹ .	FedNow Service sends message to the Sender FI that recipient has received funds from the transaction.	Sender FI does not receive a message to confirm funds were received.	N/A
Sender FI	Best practice: Notify end customer of payment status after receiving the final confirmation of posting (Participant payment status, pacs.002) from the FedNow Service. ¹⁴²	End customer knows recipient received funds.	End customer is not aware of the completed transaction and funds availability.	N/A

¹⁴⁰ See Error and Warning Codes and Descriptions section of these Operating Procedures.

¹⁴¹ Can only happen if the Receiver FI has informed FedNow Service.

¹⁴² Can only happen if the Receiver FI has informed the FedNow Service.

Who	Required Steps <i>(required unless otherwise noted in orange text)</i>	If No Exceptions Occur	If Exceptions Occur	Action(s) to Correct Failure
Process if Receiver FI Responds with Accept Without Posting (ACWP) to pacs.008				
FedNow Service	Sends FedNow payment status report (pacs.002) with code ACWP, within seconds, as confirmation to Sender and Receiver FIs (acknowledgment to the Sender FI and advice to the Receiver FI).	Sender FI and Receiver FI receive confirmation that the pacs.008 settled with a status of ACWP.	1. Sender or Receiver FI does not receive FedNow payment status (pacs.002) message. Or 2. The Receiver FI tries to send an additional Participant payment status, pacs.002, with code ACTC or ACWP after the transaction is in a finalized status of ACWP. In this case, the additional pacs.002 is dropped with no additional response.	The Participant (either Sender or Receiver FI) can inquire on the status but should wait a minimum of 25 seconds from the payment message creation date/time stamp. 1. Sending a payment status request to the FedNow Service (pacs.028) or searching in the FedNow interface Adhoc Query Tool a. If message was received and processed by the FedNow Service, a status is provided. b. If no response from the FedNow Service, check connection via Ping (admi.004) message. ¹⁴³ 2. If issues persist, contact the Support Center.
Receiver FI	Investigate pacs.008 and provide a Participant payment status (pacs.002) (ACCC, BLCK, RJCT, PDNG) to the FedNow Service by midnight (ET) of the next standard day (M-F, except holidays).	FedNow Service receives Participant payment status (pacs.002), validates message and provides to Sender FI for a status update.	FedNow Service does not receive Participant payment status (pacs.002) so the Sender FI and customer are not aware of transaction status. -or- Participant payment status (pacs.002) fails validation(s).	Sender FI should submit a payment status request (pacs.028) to the Receiver FI if it has not received the status before the initial deadline.
Receiver FI	Applicable if a payment status request (pacs.028) is sent by the Sender FI Must respond to a payment status request (pacs.028) sent by the Sender FI regarding a pacs.008 with a status of 'ACWP.'	FedNow Service sends receipt acknowledgement (admi.007) to the sender of pacs.028 and passes the status update through to the Sender FI. Receiver FI provides latest status.	Receiver FI does not respond to pacs.028 and the Sender FI is not aware of the status of the transaction.	Sender FI can submit another payment status request (pacs.028) to the Receiver FI if it has not received a response.

¹⁴³ See Participant Broadcast for additional details.

Who	Required Steps <i>(required unless otherwise noted in orange text)</i>	If No Exceptions Occur	If Exceptions Occur	Action(s) to Correct Failure
Receiver FI	After review is complete, if the Receiver FI accepts the transaction, it sends Participant payment status (pacs.002) with code 'ACCC' to FedNow Service.	Receiver FI makes funds available to end customer and process above for "accepted" (ACCC) is followed.	Receiver FI chooses to block the funds and sends Participant payment status (pacs.002) with code 'BLCK' to FedNow Service. -or- Rejects transaction and sends Participant payment status (pacs.002) with code 'RJCT' to FedNow Service. -or- Receiver FI never finalizes the ACWP status of a transaction.	<ul style="list-style-type: none"> • If Receiver FI blocks or rejects the pacs.008, it should include justification reason in the Participant payment status (pacs.002) message for Sender FI to review. FIs can discuss as needed. • If Receiver FI rejects the pacs.008, it must also return the funds. Funds should be returned via a payment return (pacs.004) message that includes reference to the original pacs.008 message and justification.

15.2. Return Request (camt.056) and Payment Return (pacs.004)

- a. Overview
- b. Additional Details
- c. How to Process a Return Request
- d. How to Process a Payment Return

a. Overview

The FedNow Service supports an exception handling process to return funds from a previously received payment.

A Customer Credit Transfer (pacs.008) can be returned either when a FedNow Participant decides to honor a return request (camt.056) message or when the FedNow Participant cannot apply the funds it received, for example, when rejecting a payment after initially responding with an accept without posting status. If needed, a return request (camt.056) should be sent within 60 calendar days¹⁴⁴ from when the pacs.008 settled. Once a payment return (pacs.004) is initiated, the message follows the same end-to-end processing across the FedNow Service as a pacs.008.

A liquidity management transfer (pacs.009) can be returned if Participants determine it is necessary. When returning a settled LMT (pacs.009), a new LMT (pacs.009) is used.

Payment returns for funds initially sent via the FedNow Service should be returned via the FedNow Service to facilitate reconciliation processes. If the Participant decides to accept the return request, the return can either be for the full amount of the original payment received or a portion of it.

b. Additional Details

Eligible FedNow Service Participation Types

To send a payment return, a Participant's profile must be configured to include one of the below participation types:

- Credit Transfer Receive Only
- Credit Transfer Send and Receive
- If returning LMT – LMT Send and Receive

Message Description Details

The message descriptions below explain how payment return and return request messages work within the FedNow Service, including details on the functionality of message types related to the payment return process.

Note: Each of these messages are independent of one another. The Participant that sends the return request (camt.056) is responsible for appropriately referring to the original pacs.008 within the message.

ISO 20022 Message	Message Descriptions
Return request (camt.056)	Participants use a return request to ask another Participant to return a portion or full amount of a previously settled pacs.008 or pacs.009 message.

¹⁴⁴ Camt.056 messages used to report fraud or an RFP warranty breach are not subject to the 60-day guideline. Additional information on expectations for these use cases can be found in the Fraud Reporting and Request for Payment Warranties and Expectations sections, respectively.

Return request response (camt.029)	The FedNow Service ¹⁴⁵ or Participant uses a return request response to communicate: <ul style="list-style-type: none"> • Return request accepted (IPAY) and funds will be returned. • Return request rejected (RJCR) and funds will <i>not</i> be returned. • Return request pending investigation (PDCR) by the financial institution. • Partially executed return request (PECR) where a portion of requested funds will be returned.
Payment return (pacs.004)	A Participant uses a payment return message to return funds of a previously accepted pacs.008 to another Participant. Payment return can be used after accepting a return request or it can be initiated without first receiving a return request, such as when a Participant cannot apply the funds it previously received (even if a return request was not received).
Liquidity management transfer (pacs.009)	To return a previously received LMT, a new LMT (pacs.009) must be sent instead of payment return message (pacs.004). The Participant can reference the original pacs.009 in the End To End reference or in the remittance information.

Payment Return Value Limit Validation

A payment return (pacs.004) is validated against the FedNow Service network limit. The payment return is not validated against the Participant's value limit even if this is less than the network limit.

Fraud Reporting with Return Request and Payment Return

Return request (camt.056) and Payment Return (pacs.004) messages also can be used to report fraud. If a Participant sends an instant payment and later identifies fraud, it can send a camt.056 and include reason code FRAD. In the case of a Participant receiving an instant payment identified as fraud, a pacs.004 can be initiated with reason code FR01. These messages are processed as noted in Sections C and D below and fulfill the FedNow Service fraud reporting requirement.¹⁴⁶ Camt.056 messages used to report fraud or an RFP warranty breach are not subject to the 60-day guideline.

Return Request with RFP Warranty Claim

If a reportable transfer is sent in response to a Request for Payment (RFP), and the return request is being sent to initiate a claim of breach of RFP warranty, the appropriate code for breach of warranty (WNTB) is used. In addition to the WNTB code,¹⁴⁷ use the fraud classifier code in the "Additional Information" element to indicate the type of suspected fraud and the suspicious actor, consistent with use of the "FRAD" code when reporting fraud on a Customer Credit Transfer.¹⁴⁸

Response Time

The table below outlines the strongly recommended response guidelines for messages related to the payment return process. This table does not include the required receipt acknowledgement (admi.007) that is sent by the FIs receiving the return request (camt.056) and return request response (camt.029). Participants should consider that the response times may differ if the Participant receiving the message is signed off or otherwise not able to respond due to maintenance or other conditions.

¹⁴⁵ A negative return request response is sent by the FedNow Service if the return request fails business validations.

¹⁴⁶ See the Fraud Reporting section for additional details, including alternative options for reporting confirmed fraud.

¹⁴⁷ See Request for Payment Warranties section for additional details.

¹⁴⁸ See the Fraud Reporting section for additional details, including alternative options for reporting confirmed fraud.

Return Request & Response Time Guidelines			
Participant Action	ISO 2022 Message	Response Code	Response Guideline
Participant sends return request	Return request (camt.056)	N/A	A return request should be sent within 60 days of the credit transfer settlement.
FI that receives the return request should provide a response within the given time frame to the FI that sent the request.	Return request response (camt.029)	Return request accepted (IPAY) -or- Partially executed return request (PECR)	(Final response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). Participant should immediately: <ol style="list-style-type: none"> 1. Provide final response (either IPAY or PECR) 2. Simultaneously, initiate a payment return
		Return request rejected (RJCR)	(Final response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays)
		Return request pending (PDCR)	(Initial response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays) <ul style="list-style-type: none"> • (Final response) - Final response to PDCR will be IPAY, PECR or RJCR as soon as the FI has concluded the investigation for further information, or within 10 standard business days (M-F, except holidays)

c. How to Process a Return Request (camt.056)

This outlines the process for a return request (camt.056) and is followed by the return process in Section D below if the request was accepted.

Processing of return requests (camt.056) occurs in three sequential stages. Steps within each stage, expected outcomes and potential outcomes if exceptions or errors occur¹⁴⁹ are explained below. Return request is a nonvalue message, and Participant requirements are detailed in the nonvalue message section. Below is an example of a Participant that sent the pacs.008 and later requests to have the payment returned by sending a return request (camt.056).

Not included in the message flow: The FedNow Service sends a receipt acknowledgement (admi.007) to the FedNow Sender to acknowledge processing of specific nonvalue messages (including camt.029 and camt.056). Additionally, the Receiver FI is required to send a receipt acknowledgement (admi.007) to the Sender FI acknowledging the receipt of the nonvalue message (including camt.029 and camt.056).¹⁵⁰

1. Validation Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Sender FI	Sends the return request (camt.056) to the FedNow Service, including:	FedNow Service receives camt.056 from Sender FI.	FedNow Service does not receive camt.056 from Sender FI.	<ul style="list-style-type: none"> • If the admi.007 is not received, the Sender FI should resend the camt.056 .

¹⁴⁹ The list of exceptions is not exhaustive.

¹⁵⁰ See the receipt acknowledgement (admi.007) section for additional details.

	<ul style="list-style-type: none"> Return request Reason code. Message details for the original pacs.008 or pacs.009. 			<ul style="list-style-type: none"> If multiple admi.007 are not received, Sender FI should check its connection to the FedNow Service with a ping (admi.004).
FedNow Service	Receives return request (camt.056) message from Sender FI and runs through all applicable validations listed below.	Message passes all validations and is sent to the Receiver FI.	<p>Message fails validation. Depending on the reasons, the FedNow Service:</p> <ol style="list-style-type: none"> Rejects the message immediately and sends a message reject (admi.002) with the appropriate reason code to the Sender FI. Continues processing through validations to collect any additional errors. The FedNow Service sends a negative return request response (camt.029) with all¹⁵¹ applicable error reason codes. 	<p>The Participant should:</p> <ol style="list-style-type: none"> Review the error code description.¹⁵² Correct the identified error(s) to ensure all subsequent messages sent to FedNow Service meet requirements. If needed, send a new message with a new unique message ID.

Validations for Return Request

<ul style="list-style-type: none"> ✓ Valid Message Signature ✓ Valid Message Size ✓ XML Syntax 	<ul style="list-style-type: none"> ✓ Authorized Sender ✓ Confirm Unique Message ID ✓ FedNow Service ISO 20022 Schema Rules followed
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2. Response Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Receiver FI	Receives return request (camt.056) message from FedNow Service and begins to validate the message	Able to open and read the camt.056 from the FedNow Service.	Not able to validate message from FedNow Service (unable to read, digital signature, technical error, etc.).	<ol style="list-style-type: none"> Ensure the Participant's internal FedNow Service public keys list is up to date. Respond with a message reject (admi.002) indicating the received message was rejected.¹⁵³ If issues persist, contact the Support Center.
Receiver FI	Reviews message to determine if it intends to accept the message	Sends FedNow Service a return request response (camt.029) with code IPAY indicating it intends to accept	<p>Intends to reject return request (camt.056) and responds to the FedNow Service with return request response (camt.029) with code RJCR to FedNow Service along with the reason for rejection.</p> <p>-or-</p> <p>Return request (camt.056) requires further review and responds to the FedNow Service</p>	N/A

¹⁵¹ FedNow Service consolidates validation failures when possible.

¹⁵² See Error and Warning Codes and Descriptions section of these Operating Procedures.

¹⁵³ Receiver FI should also call the Support Center with notification that it rejected with an admi.002. Initially, the FedNow Service does not respond to or process admi.002 messages sent from Participants. The FedNow Service anticipates being able to process the admi.002 message at a later date.

		<p>the return request. -or- Sends FedNow Service a return request response (camt.029) with code PECR indicating it intends to partially accept the return request.</p>	<p>with return request response (camt.029) with code PDCR to FedNow Service.</p>	
<p>FedNow Service</p>	<p>Validate return request response (camt.029) from Receiver FI and passes through to Sender FI.</p>	<p>Sender FI is informed of the status of the return request.</p>	<p>Return request response (camt.029) fails validations. -or- Sender FI does not receive the return request response (camt.029).</p>	<p>If the request response (camt.029) fails validations, the Receiver FI should:</p> <ol style="list-style-type: none"> 1. Review the error code description.¹⁵⁴ 2. Take necessary steps to correct the error identified and ensure that all subsequent messages sent to FedNow Service meet requirements. 3. Send a new message, as needed, with a new unique message ID. <p>-or- If the message receipt (admi.007) has been received from the Receiver FI, the Sender FI should wait for the receiving FedNow Participant to respond with a camt.029 message indicating their intention to either honor or reject the request or communicate that a request is still pending. If no response is received by midnight (ET) of the next standard business day (M-F, except holidays), then another return request (camt.056) may be sent.</p>

3. Payment Return Stage

For the return request message flow, this stage is only applicable if the Receiver FI responded with IPAY or PECR. If the Receiver FI intends to return the payment, they should initiate a payment return (pacs.004) message immediately. If the Receiver FI responded with reject (RJCR), then the Payment Return process has concluded at the Response Stage.

Payment returns for funds initially sent via the FedNow Service should be returned via the FedNow Service to facilitate reconciliation processes.

¹⁵⁴ See Error and Warning Codes and Descriptions section of these Operating Procedures.

d. How to Process a Payment Return (pacs.004)

Processing of payment returns (pacs.004) occurs in four sequential stages. Initiating and subsequent message flow for a payment return (pacs.004) follows the same end-to-end processing across the FedNow Service as a pacs.008. See *How to Process a Customer Credit Transfer (pacs.008)* for the steps, exceptions and Participant system actions that can resolve the issues described.

15.3. Liquidity Management Transfer (Financial Institution Credit Transfer) (pacs.009)

- a. Overview
- b. Additional Details
- c. How to Process an LMT (pacs.009)

a. Overview

A Liquidity Management Transfer (LMT), also referred to as a Financial Institution Credit Transfer, is used to transfer funds between the Master Accounts or Correspondent account(s) of two FedNow Participants, or between a FedNow Participant's Master Account and a joint account. Excess Balance Account (EBA) agents may also use LMTs to transfer funds between an EBA account and the EBA agent's Master Account, in support of liquidity needs associated with instant payment activity.

b. Additional Details

Usage and Availability of LMT

LMTs (pacs.009) are limited to transfer liquidity between FIs in support of liquidity needs associated with instant payments activity. The FI that is receiving the LMT (pacs.009) is not required to respond to the transfer with an accept or reject. They receive a pacs.009 when the payment has been settled in their Master Account, if the pacs.009 passes all FedNow Service validations.

Liquidity Management Transfers are allowed during specific windows.¹⁵⁵ The FedNow Service offers the option for FIs to participate in the FedNow Service for the sole purpose of supporting liquidity management transfers and funding or defunding Participants' joint account.

Joint Account Funding

FIs who participate in a private-sector instant payment service backed by a joint account maintained by the Federal Reserve Banks may use the FedNow Service for sending and receiving LMTs to and from a Master Account or Correspondent account, and the joint account. The joint account agent needs to request the enablement of the liquidity management transfer feature of the FedNow Service to send, receive and settle LMT messages sent through the FedNow Service. FIs in the private-sector service need to enable the LMT Participation Type in their FedNow Service Participant Profile to receive or send and receive FedNow Service LMTs.

Returning an LMT

If a Participant needs to return a previously received pacs.009, the Participant must initiate a new pacs.009. This can be after receiving a return request (camt.056) or if the initial Receiver FI determines that the LMT must be returned. The Participant can reference the original pacs.009 in the End To End reference or in the remittance information.

LMT Specific Risk Mitigant Controls

Liquidity Management Transfer (LMT) Maximum Transaction Value Limit¹⁵⁶

- pacs.009 messages that contain a dollar value that exceeds the limit are rejected by the FedNow Service.

¹⁵⁵ See Network Limits section for additional details.

¹⁵⁶ See Network Limits for LMT Maximum Transaction Value Limit.

- Participants can configure their maximum LMT limit to be less than the Network limit set by the FedNow Service.

c. How to Process an LMT (pacs.009)

Processing of LMTs (pacs.009) occurs in three sequential stages. Steps within each stage are detailed below, along with a column with expected outcomes, potential outcomes if exceptions or errors occur,¹⁵⁷ and Participant system actions that can resolve the issues described.

Note: Unlike the process for Customer Credit Transfers, the FedNow Service does *not* seek confirmation of Receiver FI's intention to accept before settling an LMT. The FedNow Service delivers a pacs.009 to confirm processing and as an advice of credit to the Receiver FI.

1. Validation Stage:

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Sender FI	<p>Sends the LMT (pacs.009) to the FedNow Service.</p> <p>See system and message preparation guidelines in the value messages section of these Operating Procedures.</p>	<p>FedNow Service receives pacs.009 from the Sender FI.</p>	<p>FedNow Service does not receive pacs.009 from the Sender FI.</p>	<p>The Sender FI should wait a minimum of 25 seconds from the payment message creation date/time stamp to check message status by:</p> <ol style="list-style-type: none"> 1. Sending a payment status request to the FedNow Service (pacs.028) or searching in the FedNow interface Adhoc Query Tool <ol style="list-style-type: none"> a. If the message was received and processed by the FedNow Service, a status is provided. b. If the response message is not found, the Participant can resend it with the same message ID as the previously sent message. c. If no response from the FedNow Service, check connection via Ping (admi.004) message.¹⁵⁸ 2. If issues persist, contact the Support Center.

¹⁵⁷ The list of exceptions is not exhaustive.

¹⁵⁸ See the Participant broadcast section for additional details.


Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	Receives (pacs.009) message from Sender FI and runs through all applicable validations listed below.	Message passes all validations and is sent to the Receiver FI.	<p>Message fails a validation. Depending on the reason, the FedNow Service:</p> <ol style="list-style-type: none"> 1. Rejects the message immediately and sends a Message reject (admi.002) with the appropriate reason code to the Sender FI. 2. Continues processing through validations to collect any additional errors. The FedNow Service then sends a FedNow payment status (pacs.002) with the consolidated¹⁵⁹ error reason codes. 	<p>The Participant should:</p> <ol style="list-style-type: none"> 1. Review the error code description.¹⁶⁰ 2. Correct the identified error(s) to ensure subsequent messages service meet requirements. 3. If needed, send a new message with a new unique message ID.

Validations for LMT	
<ul style="list-style-type: none"> ✓ Valid message signature ✓ Valid message size ✓ XML syntax ✓ Authorized sender ✓ Confirm unique message ID ✓ FedNow Service ISO 20022 schema rules followed ✓ Sending and Receiving FIs are Participants ✓ Payment timeout clock has not been exceeded ✓ Message is not future dated 	<ul style="list-style-type: none"> ✓ Within the FedNow Service transaction limit for LMT or the Sender FI transaction limit for LMT if configured for less than the FedNow Service limit ✓ Receiver FI is active and profile is set to Send and Receive or Receive Liquidity Management Transfers ✓ Sender FI is active and profile is set to Send and Receive Liquidity Management Transfers ✓ Sender and Receiver FIs have valid settlement relationships ✓ LMT is sent within the valid LMT window ✓ <i>If enabled: Correspondent net send limit check</i>

¹⁵⁹ FedNow Service consolidates validation failures when possible.

¹⁶⁰ See the Error and Warning Codes and Descriptions section of these Operating Procedures.

2. Settlement Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	<p>Confirms settlement relationships, assigns a settlement date and settles transaction by recording it.</p>  <p>Payment Timeout Clock Stops</p>	The transaction settles with finality when the FedNow Service records the debit and credit to the Sender FI and Receiver FI designated master or joint accounts, respectively. ¹⁶¹	N/A	N/A

3. Notification Stage (Post-Settlement)

Who	Required Steps	If No Exceptions Occur	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	Sends FedNow payment status (pacs.002) with code ACSC, within seconds, as confirmation to Sender FI and LMT (pacs.009) to the Receiver FI.	Sender FI and Receiver FI receive pacs.002 and pacs.009, respectively, from the FedNow Service.	Sender or Receiver FI does not receive FedNow payment status, pacs.002, or Liquidity Management Transfer, pacs.009, messages from the FedNow Service.	To inquire about the status of an LMT (pacs.009), the Sender FI can send a payment status request (pacs.028) but would receive a response only after the payment timeout clock has elapsed plus a few additional seconds to allow for the message to complete processing. The Receiver FI can use the Adhoc Query Tool for details on the message, send a retrieval request (admi.006) to receive a copy of the pacs.009, or contact the Sender FI for additional information.

¹⁶¹ Timing of debits and/or credits in the Master Accounts may lag payment settlement.

16. Nonvalue Messages

a. Nonvalue Messages

The FedNow Service processes nonvalue messages that do not generate an accounting entry. Nonvalue messages include request for payment, request for information, request for return of funds, request for payment cancellation, and other administrative messages and can be sent from a Participant either to another Participant or to the FedNow Service. All ISO 20022 messages, including nonvalue messages, are subject to the FedNow Service ISO rules and guidelines, security procedures and processing standards. System preparation and compliance with ISO message requirements¹⁶² apply to all Participants intending to send nonvalue messages to the FedNow Service.

¹⁶² See the FedNow ISO 20022 Messages section for details on requirements.

16.1. Request for Payment (RFP) (pain.013)

- a. Overview
- b. Zero-dollar RFP
- c. RFP and RFP Cancellation Request Usage
- d. RFP Processing Recommended Response Time Guidelines
- e. How to Process an RFP
- f. How to Process and RFP Cancellation Request

a. Overview

A Request for Payment (RFP) allows a Participant, on behalf of itself or its end customer, to request a payment from another Participant or their end customer. If accepted, the Participant must initiate a Customer Credit Transfer (pacs.008). All Participants enabled for Credit Transfers can send an RFP to a Receiver FI. The Receiver FI must have the appropriate FedNow Service participation type enabled to receive RFPs, i.e., Credit Transfer Send and Receive with Receive Request for Payment and have the ability to present the RFP to the end customer.

b. Zero-dollar RFP

The zero-dollar RFP market practice provides end users (e.g., billers) an opportunity to assess other end users' (e.g., customers) readiness to receive and act upon RFPs prior to sending them actual RFPs. While it is not required, the use of zero-dollar RFP messages prior to sending regular RFPs is recommended to improve the overall biller/customer experience with RFP onboarding. The zero-dollar RFP market practice is based on the existing RFP message flow and uses a subset of the RFP (pain.013) and RFP response (pain.014) messages.¹⁶³

The processing of a zero-dollar RFP is similar to processing RFPs, with some simplified steps. A few of the differences are listed below. For full details on the processing of zero-dollar RFPs, see the Zero-dollar RFP Market Practice Guide.¹⁶⁴

1. Admi.007 messages: admi.007 is not required from the Receiver FI, but the FedNow Service will still send the admi.007 upon receipt of pain.013 and pain.014.
2. Recommended response timelines: Zero-dollar RFP response should be sent instantly (whereas the response to regular RFPs may depend on the requested execution date, among other things).
3. Message codes: Only two response codes are used for zero-dollar RFP responses: Accepted (ACTC) and Rejected (RJCT). FIs should not use the codes: Received (RCVD) and Presented (PRES) for Zero-Dollar RFPs, since the RFP is not actually presented to the end user.

c. RFP and RFP Cancellation Request Usage

Below is a high-level description of RFP messages, potential use cases and message status codes.¹⁶⁵

¹⁶³ The FedNow Service applies the same validation for zero-dollar RFPs as for regular RFP messages. Absence or presence of elements that are required or not desired, respectively, from a zero-dollar RFP market practice or regular RFP message, does not cause the FedNow Service to reject the message.

¹⁶⁴ The FedNow Service zero-dollar RFP market practice guide available on the [MyStandards web portal](#).

¹⁶⁵ See the FedNow Service ISO 20022 Implementation Guide for additional details.

Message	RFP Message Description	Potential Usage ¹⁶⁶
Request for payment (RFP) (pain.013)	Sender FI requests funds.	<p>A Sender FI can initiate an RFP on behalf of itself or its end customer, which can be:</p> <ul style="list-style-type: none"> • Individuals • Businesses • Government agencies <p>RFPs can request an immediate payment or payment in the future for services that include:</p> <ul style="list-style-type: none"> • Payment or repayment of a debt between two individuals • Bill pay • Tax or fee collection.
RFP response (pain.014)	Receiver FI informs Sender FI about an RFP message's processing status.	<p>RFP response options:</p> <ul style="list-style-type: none"> • Received (RCVD): Confirms RFP was received by the Receiver FI. • Presented (PRES): RFP was presented to the end customer for response. • Accepted (ACTC): Forthcoming payment via pacs.008. • Rejected (RJCT): Account ineligible, an issue with the RFP or end customer rejected/will not pay, etc.

Below is a high-level description of RFP Cancellation Request messages, potential use cases and status codes.¹⁶⁷

Message	RFP Cancellation Message Description	Potential Usage ¹⁶⁸
RFP cancellation request (camt.055)	Sender FI asks to cancel a previously sent RFP (pain.013).	<p>An RFP cannot be changed. Instead, Sender FI must cancel the initial RFP and submit a new RFP to address:</p> <ul style="list-style-type: none"> • Duplicate RFP. • Error in initial RFP. • RFP is no longer applicable. • RFP was paid via another channel, etc.
RFP cancellation request response ¹⁶⁹ (camt.029)	Receiver FI informs Sender FI about the processing status of a previous RFP cancellation request (camt.055).	<p>RFP cancellation request response options:</p> <ul style="list-style-type: none"> • Cancelled (CNCL): RFP was cancelled by Receiver FI. • Rejection of cancellation (RJCR): Either the RFP will be sent by the Receiver FI, or the RFP was previously rejected. • Pending investigation (PDCR): Additional messages to follow.

¹⁶⁶ Not all inclusive.

¹⁶⁷ See the FedNow Service ISO 20022 Implementation Guide for additional details.

¹⁶⁸ Not all inclusive.

¹⁶⁹ Participant can inquire about the status using an information request (camt.026). See the Information Request section for additional details.

d. RFP Processing Recommended Response Time Guidelines

Key Term ¹⁷⁰	Description
Expiry date	Indicates the date – or date and time (ET) – by which the end customer or Receiver FI should accept or reject the RFP. An expiry date without a time has a default value of midnight ET on the specified date. This action is based on calendar date, not cycle day. For example, an RFP with a requested expiry date of Friday, Oct. 15, the Receiver FI should allow the end customer to act upon the RFP until 23:59:59 ET on Friday, Oct. 15. Note this date/time may be later than or equal to the requested execution date to accommodate late payments, for example.
Requested execution date	Indicates the date – or date and time (ET) – by which the end customer or Receiver FI should initiate the Customer Credit Transfer (pacs.008), assuming the RFP was accepted. This action is based on calendar date, not cycle day. This is similar to the due date.

Below, see guidelines for Participants to respond to RFP and RFP cancellation request messages. These guidelines are a strong recommendation for Participants responding to the indicated message. Response times may differ if the Participant receiving the message is signed off from the service or unable to respond due to maintenance or other conditions.

RFP Response Time Guidelines			
Participant Action	Message	Response Code ¹⁷¹	Recommended Response Time
Receiver FI provides an initial RFP response to the Sender FI. <i>This optional step is recommended</i>	Initial RFP Response (pain.014)	Received (RCVD)	<ul style="list-style-type: none"> Immediately: Receiver FI should inform the Sender FI that the request for payment was received. Follow up as soon as possible after status is determined: When the initial RFP response (pain.014) is RCVD, the Receiver FI should provide a status update to the Sender FI when the Accepted (ACTC) or Rejected (RJCT) status is determined. If automatically accepted: If automatic approval is enabled between the Receiver FI and its customer, there is no need to include the interim received or presented responses.
		Presented (PRES)	<ul style="list-style-type: none"> As soon as possible: Receiver FI should inform the Sender FI once the RFP (pain.013) is presented. Follow up as soon as possible after status is determined: When the initial RFP response (pain.014) is Presented (PRES), the Receiver FI should provide a status update to the Sender FI when the Accepted (ACTC) or Rejected (RJCT) status is determined. If automatically accepted: If automatic approval is enabled between the Receiver FI and its customer, there is no need to include the interim received or presented responses.
Receiver FI provides a final RFP response to the Sender FI.	Final RFP Response (pain.014)	Accepted (ACTC)	Up to the RFP expiry date (pain.013), the Receiver FI must send the pacs.008 immediately or by the requested execution date.
		Rejected (RJCT)	<ul style="list-style-type: none"> Immediately, if the Receiver FI is the rejecting party (include the reason code¹⁷²). As soon as possible, if the Receiver FI's end customer is the rejecting party (include reason code).

¹⁷⁰ See the FedNow Service ISO 2022 Implementation Guide for additional details.

¹⁷¹ See the FedNow Service ISO 2022 Implementation Guide for additional details.

¹⁷² See the FedNow Service ISO 2022 specifications for a list of reason codes.

RFP Cancellation Request Response Time Guidelines			
Participant Action	ISO 2022 Message	Response Code	Recommended Response Time
Sender FI asks Receiver FI to cancel a previous RFP.	RFP cancellation request (camt.055)	N/A	A Sender FI can request an RFP cancellation if the payment has not been made.
Receiver FI provides an initial response to the Sender FI. <i>This optional step is recommended.</i>	Initial RFP cancellation request response (camt.029)	Pending (PDCR)	Immediately: Receiver FI should inform the Sender FI that the request is being investigated.
Receiver FI provides a final response to Sender FI that payment has been executed.	Final RFP cancellation request response (camt.029)	Cancelled (CNCL)	Immediately or up to the requested execution date of the initial RFP (pain.013).
		Rejected (RJCR)	<ul style="list-style-type: none"> Immediately on confirmation from the customer/Receiver FI. Required if status is PDCR pending.

e. How to Process an RFP

Requests for payment and requests for payment response requirements are detailed in the nonvalue message section of these Operating Procedures.

Not included in the message flow below: The FedNow Service sends a receipt acknowledgement (admi.007) to the FedNow Sender to acknowledge successful processing of specific nonvalue messages, including pain.013 and pain.014. Additionally, the Receiving FI is required to send a receipt acknowledgement (admi.007) to the FedNow Sender acknowledging the receipt of the nonvalue messages, including pain.013 and pain.014.¹⁷³

¹⁷³ See the receipt acknowledgement (admi.007) section for additional details.

1. Sending and Validation Stage

Who	Required Steps
Sender FI	Sends the RFP (pain.013) to the FedNow Service.
FedNow Service	<ol style="list-style-type: none"> 1. Receives RFP (pain.013) from the Sender FI and runs through all applicable validations listed below. 2. If the message passes all validations, the pain.013 is sent to the Receiver FI. 3. If the message fails validation, depending on the reason, the FedNow Service: <ul style="list-style-type: none"> ○ Rejects the message immediately and sends a Message Reject (admi.002) with the appropriate reason code to the Sender FI. ○ Continues processing through additional validations to collect any additional errors and send a negative RFP Response (pain.014) with the consolidated¹⁷⁴ appropriate error reason codes.¹⁷⁵

Validations for RFP (pain.013)

<ul style="list-style-type: none"> ✓ Valid message signature ✓ Valid message size ✓ XML syntax 	<ul style="list-style-type: none"> ✓ Authorized sender ✓ Confirm unique message ID ✓ FedNow Service ISO 20022 schema rules followed ✓ Receiver FI is enabled to receive RFP
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2. Response Stage

Who	Required Steps
Receiver FI	<ol style="list-style-type: none"> 1. Receives the RFP (pain.013). 2. Validates the message content based on the Receiver FI's criteria. The Receiver FI can reject the message for technical or business reasons (e.g., wrong account or invalid account number). 3. Notifies the end customer of the RFP (pain.013) as soon as possible following the response time guidelines: <ul style="list-style-type: none"> • Respond to the Sender FI with an RFP response (pain.014) indicating the RFP (pain.013) has been received (RCVD). And (as separate message) / or • Respond to the Sender FI with an RFP response (pain.014), including its Presented (PRES) status to indicate the end customer has viewed the RFP.
Receiver FI accepts the RFP	<ol style="list-style-type: none"> 1. The end customer informs the Receiver FI that it accepts the RFP. 2. The Receiver FI sends a pain.014 with the ACTC code to the FedNow Service. 3. The pain.014 must pass all validations before the FedNow Service forwards it to the Sender FI. 4. The Receiver FI prepares and sends the Customer Credit Transfer (pacs.008) to the Sender FI by midnight ET of the requested execution date in the original RFP. <p><i>This completes the RFP transaction. No further action is necessary on the pain.013 or pain.014 messages.</i></p>

¹⁷⁴ The FedNow Service consolidates validation failures when possible.

¹⁷⁵ See the Error and Warning Codes and Descriptions section for additional details.

Receiver FI rejects the RFP	<ol style="list-style-type: none"> 1. The end customer informs the Receiver FI that it rejects the RFP. 2. The Receiver FI sends a pain.014 with the RJCT code and reason code(s) to the FedNow Service. 3. The pain.014 must pass all validations before the FedNow Service forwards it to the Sender FI. <p><i>This completes the RFP transaction. Any additional discussion between the Sender and Receiver FI should occur offline.</i></p>
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f. How to Process an RFP Cancellation Request

Requirements for RFP cancellation requests and RFP cancellation request response are detailed in the nonvalue message section.

Not included in the message flow below: The FedNow Service sends a receipt acknowledgement (admi.007) to the Sender FI to acknowledge successful processing of specific nonvalue messages, including camt.055 and camt.029. Additionally, the Receiver FI is required to send a receipt acknowledgement (admi.007) to the FedNow Sender acknowledging the receipt of the nonvalue message, including camt.055 and camt.029.¹⁷⁶

1. Sending and Validation Stage

Who	Required Steps
Sender FI	<ol style="list-style-type: none"> 1. The Sender FI or its end customer wants to cancel the RFP it initiated. Before sending a cancellation the Sender FI should confirm: <ul style="list-style-type: none"> The initial RFP (pain.013) has not been rejected by the Receiver FI or its end customer (status may be Received (RCVD) or Presented (PRES)). A pacs.008 was not received in relation to the RFP. The expiry date has not elapsed or been exceeded 2. After above are confirmed, Sender FI sends an RFP cancellation request (camt.055) to the FedNow Service.
FedNow Service	<ol style="list-style-type: none"> 1. Receives an RFP cancellation request (camt.055) from the Sender FI and runs through all applicable validations listed below. 2. If the message passes all validations, the FedNow Service sends the camt.055 to the Receiver FI. 3. If the message fails validation, the FedNow Service: <ul style="list-style-type: none"> Rejects the message immediately and sends a message reject (admi.002) with the appropriate reason code(s) to the Sender FI. Continues processing through additional validations to collect any additional errors and send a negative RFP Cancellation Request Response (camt.029) with the consolidated¹⁷⁷ appropriate error reason code(s).¹⁷⁸

Validations for RFP Cancellation Request (camt.055)

<ul style="list-style-type: none"> ✓ Valid message signature ✓ Valid message size ✓ XML syntax 	<ul style="list-style-type: none"> ✓ Authorized sender ✓ Confirm unique message ID ✓ FedNow Service ISO 20022 schema rules followed
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¹⁷⁶ See the receipt acknowledgement (admi.007) section for additional details.

¹⁷⁷ The FedNow Service consolidates validation failures when possible.

¹⁷⁸ See the Error and Warning Codes and Descriptions section for details on error codes.

2. Response Stage

Who	Required Steps
Receiver FI	<ol style="list-style-type: none"> Receives the RFP cancellation request (camt.055) and verifies the below: <ul style="list-style-type: none"> The initial RFP (pain.013) has not been rejected (status may be Received (RCVD) or Presented (PRES)). A pacs.008 has not been sent in relation to the RFP. It is recommended that the Receiver FI sends an RFP cancellation request response (camt.029) of pending (PDCR) if an immediate accept (CNCL) or reject (RJCR) is not possible.
Receiver FI honors the cancellation request	<p>The Receiver FI should:</p> <ol style="list-style-type: none"> Cancel the original RFP (pain.013) it received. Send an RFP cancellation request response (camt.029) with a cancelled (CNCL) response code to the FedNow Service. If the message passes all validations, the FedNow Service forwards the camt.029 to the Sender FI.
Sender FI	<ol style="list-style-type: none"> The Sender FI receives the RFP cancellation request response (camt.029) message with the RFP cancellation request response code CNCL indicating the request was cancelled. The Sender FI should notify its end customer of the request status. <p><i>No further action is needed.</i></p>
Receiver FI does not honor the cancellation request	<ol style="list-style-type: none"> The Receiver FI sends an RFP cancellation request response (camt.029) with a rejection (RJCR) response code to the FedNow Service indicating the initial RFP cancellation request is rejected. If the message passes all validations, the FedNow Service forwards the camt.029 message to the Sender FI.
Sender FI	<ol style="list-style-type: none"> The Sender FI receives the RFP cancellation request response (camt.029) with the RFP cancellation request response code RJCR indicating the request was rejected. The Sender FI should notify its end customer of the request status. <p><i>Any additional discussion between the Sender and Receiver FI should occur offline. If the payment was sent, the Sender FI may use the payment return (pacs.004) process to return the Customer Credit Transfer (pacs.008).</i></p>

16.2. Information Request (camt.026)

- a. Overview
- b. Additional Details
- c. Information Request Processing Recommended Response Time Guidelines
- d. How to Process an Information Request (camt.026)

a. Overview

An information request is used by a Sender FI, Receiver FI or on behalf of their end customer to communicate with another Participant for more information on an instant payment (pacs.008 or pacs.004) or an RFP (pain.013).

b. Additional Details

Information Request Overview and Usage

Below is a high-level description of information request messages, potential use cases and message status codes.¹⁷⁹ Subsequent sections provide the more detailed message flow.

ISO 2022 Message	Message Descriptions	Potential Usage ¹⁸⁰
Information Request (camt.026)	Receiver FI asks the Sender FI to provide further information on a previously sent Customer Credit Transfer (pacs.008), payment return (pacs.004) or RFP instruction (pain.013).	<p>For a pacs.008 or pacs.004, the Receiver FI or end customer:</p> <ul style="list-style-type: none"> • Responds with Accept Without Posting (ACWP) and needs more information for further investigation due to legal or compliance reasons. • Responds with accept (ACTC) but requires more information about the payment source or amount. <p>For the RFP (pain.013), the Receiver FI or end customer:</p> <ul style="list-style-type: none"> • Finds the payment request contains missing or incorrect information. • Requires further information on the payment amount or payment request expiry date. • Requests an extension of the expiration date.
Information Request Response (camt.029)	Sender FI informs the Receiver FI about the processing status of a previously received information request (camt.026) message.	<p>Information request response options:</p> <ul style="list-style-type: none"> • Pending (PDNG): Information request is being reviewed. • Payment instruction is duplicate (IDUP). • Additional information will be sent (INFO) in an additional payment information message (camt.028) • Payment initiated (IPAY)

¹⁷⁹ See FedNow Service ISO 2022 Implementation Guide for additional details.

¹⁸⁰ Not all inclusive.

		<ul style="list-style-type: none"> No further information available (NINF)
Additional Payment Information (camt.028)	Sender FI provides additional information to the Receiver FI.	Used to provide additional information to the Receiver FI before or at the same time as an information request response message (camt.029).

c. Information Request Processing Recommended Response Time Guidelines

The table below outlines response guidelines for information request process messages. These guidelines are a strong recommendation for Participants responding to the indicated message. Participants should consider that the response time may differ if the Participant receiving the message is signed off from the service or not able to respond due to maintenance or other conditions.

Information Request Response Time Guidelines			
Participant Action	ISO 20022 Message	Response Code	Response Guideline
Sender FI provides initial response to Receiver FI, if needed.	Initial information request response (camt.029)	Pending (PDNG)	As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). <ul style="list-style-type: none"> Update every five standard business days (M-F, except holidays) until final response is provided.
Sender FI provides a response to the Receiver FI.	Initial or final information request response (camt.029)	Additional information sent (INFO)	As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays).
		No further information available (NINF)	
		Duplicate payment (IDUP)	As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). <ul style="list-style-type: none"> In case of IPAY, a payment must be initiated immediately.
Sender FI provides response to the Receiver FI if camt.029 code INFO was previously sent.	Additional Payment Information (camt.028)	Additional Information Sent (INFO)	Simultaneously with the information request response (camt.029).

d. How to Process an Information Request (camt.026)

Requirements for information request, information request response and additional payment information are detailed in the nonvalue message section.

Not included in the message flow below: The FedNow Service sends a receipt acknowledgement (admi.007) to the Sender FI to acknowledge successful processing of specific nonvalue messages, including camt.026, camt.029 and camt.028. Additionally, the Receiver FI is required to send a receipt acknowledgement (admi.007) to the FedNow Sender acknowledging the receipt of nonvalue messages, including camt.026, camt.029 and camt.028.¹⁸¹

1. Sending and Validation Stage

Who	Required Steps
Receiver FI	Sends an information request (camt.026) to the Sender FI to obtain more information about pacs.008, pacs.004 or pain.013 messages.
FedNow Service	<ol style="list-style-type: none"> 1. Receives information request (camt.026) from the Receiver FI and runs through all applicable validations listed below. 2. If the message passes all validations, sends the camt.026 to the Sender FI. 3. If the message fails validation, the FedNow Service rejects the message immediately and sends a message reject (admi.002) with the appropriate reason code to the Sender FI.

Validations for Information Request Messages	
<ul style="list-style-type: none"> ✓ Valid message signature ✓ Valid message size ✓ XML syntax 	<ul style="list-style-type: none"> ✓ Authorized sender ✓ Confirm unique message ID ✓ FedNow Service ISO 20022 schema rules followed

2. Response Stage

Who	Required Steps
Sender FI	<ol style="list-style-type: none"> 1. Receives the information request (camt.026) from the Receiver FI. 2. Notifies the end customer of the information request (camt.026). 3. Responds to the Receiver FI with an information request response (camt.029) message with information request response codes. 4. If the Sender FI responds with INFO, the information request response (camt.029) should be followed by an additional payment information (camt.028) message with the details. <p>Note: If the Sender FI is unable to retrieve or find the message specified in the camt.026 using the message ID, the Sender FI should respond with another camt.026 to explain that the message ID was not found and include the case identification of the original camt.026.</p>
FedNow Service	<ol style="list-style-type: none"> 1. Receives the information request response (camt.029) from the Sender FI and runs through all applicable validations (see above). 2. If the message passes all validations, the camt.029 is sent to the Receiver FI. 3. If the message fails validation, the FedNow Service rejects the message immediately and sends a message reject (admi.002) with the appropriate reason code to the Sender FI.
Receiver FI	<ol style="list-style-type: none"> 1. The Receiver FI and end customer determine action based on information received from the Sender FI. 2. A Receiver FI can reach out to the Sender FI offline for more information.

¹⁸¹ See the receipt acknowledgement (admi.007) section for additional details.

16.3. Account Credit/Debit Notification (camt.054)

- a. Overview
- b. How to Process an Account Credit/Debit Notifications (camt.054)

a. Overview

Correspondents with a Participant Profile can opt in to receive account debit/credit notifications.¹⁸² The FedNow Service uses an account credit/debit notification (camt.054) message to provide these Correspondents with real-time notice of a value payment (pacs.008, pacs.009, pacs.004) that was processed and settled by the FedNow Service. If the Correspondent enables the account credit/debit notification option, the Correspondent may permit up to two Connection Parties per Participant Profile to receive the credit/debit notifications.

The credit/debit notification (camt.054) shows settlement of funds. Transactions that are rejected and not settled do not generate a credit/debit notification (camt.054), nor will the transaction be included in Correspondent activity details/totals reports, as it has not been settled in the Master Account.

b. How to Process an Account Credit/Debit Notifications (camt.054)

The table below depicts the message flow of an account debit/credit notification via a one-way message from the FedNow Service directly to a Correspondent, as well as ways the Participant's system can resolve issues.

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Correspondent	Within the FedNow Service profile, enable credit/debit notifications (camt.054) to support reconciliation of respondents' activity.	Correspondent receives notifications for each credit or debit transaction settled across the FedNow Service for activity on its respondents' RTNs.	No notifications are received.	Confirm the credit/debit notifications (camt.054) service is enabled for the desired respondent RTN via the correspondent's Participant Profile settings and permissions.
Respondent	Sends or receives an instant payment message (pacs.008 or pacs.004) or a LMT (pacs.009) to be processed via the FedNow Service.	The FedNow Service processes and completes settlement of the transaction.	N/A	N/A
FedNow Service	Settles the transaction and notifies both the Sender and Receiver FIs of the transaction settlement.	The respondent receives the payment status notification (FedNow payment status, pacs.002, or Liquidity Management Transfer, pacs.009).	N/A	N/A
	Sends the Correspondent an account debit credit notification (camt.054 with identification ADCN) to confirm funds settlement, does not indicate ACSC or ACWP status.	Correspondent receives the camt.054.	Correspondent does not receive the notification.	Confirm the credit/debit notifications (camt.054) service is enabled for the respondent/Correspondent settlement relationship via their FedNow Service Participant Profile settings and permissions.

¹⁸² Also referred to as correspondent notifications.

17. Reports and Reconciliation

a. System Preparation for Sending Report Requests

The FedNow Service provides reports about RTN activity, including value and nonvalue messages. Reports can be retrieved via ISO 20022 messaging or the FedNow interface.

All ISO 20022 messages, including reporting messages, are subject to FedNow Service ISO rules and guidelines, security procedures and processing standards. System preparation applies to all Participants intending to send or receive FedNow Service reporting messages and therefore, must be implemented before sending or receiving messages. This includes following the requirements for all ISO 20022 messages¹⁸³ and additional reporting message requirements:

- Include the appropriate report identification code to ensure the FedNow Service responds with the appropriate report.

Code	Participant Report Name	Code	Correspondent Report Name
ABAR	• Account balance report	CATR	• Correspondent activity totals report
AATR	• Account activity totals report	CADR	• Correspondent activity details report
AADR	• Account activity details report	CITR	• Correspondent intraday totals report
IATR	• Intraday activity totals report		

- Identify single or multiple RTNs for the requested report.
- For an account balance report, identify the type of account, such as master (M) or single routing number (S).
- Identify who is requesting the report:
 - Account owner.
 - Service Provider on behalf of a Participant.
 - Correspondent on behalf of itself.
 - Correspondent on behalf of a respondent.
- Identify FedNow Service cycle day or range of dates for the activity totals/activity details report.

¹⁸³ See the FedNow ISO 20022 Messages section for details on requirements.

17.1. FedNow Service and Accounting Reports

- a. Overview
- b. Additional Details
- c. List of Available Reports (FedNow Service and Accounting)
- d. How to Initiate a FedNow Service Report Request (camt.060)

a. Overview

The FedNow Service provides reports so Participants can reconcile their FedNow Service activities. Participants must monitor their balances to ensure appropriate funding. Correspondents also can receive reports on their respondents' activities.

All reports can be requested via camt.060 messages, and reports are provided via camt.052 messages. Reports with the same information contained in the camt.052 message can be accessed via the FedNow interface. Four report categories support reconciliation of FedNow Service activity: FedNow Service reports, Correspondent reports, Adhoc Query Tool, and Accounting reports (which include FedNow account activity). Report access limitations via ISO messaging and the FedNow interface are based on Connection Party permissions.

b. Additional Details

Seven-day Accounting and Reconciliation

The FedNow Service operates on a seven-day accounting model, including weekends and holidays. Individual FIs are not required to adopt this model. Reports provided by the FedNow Service and accounting aid in account reconciliation.

Receiving FedNow Service Reports at EOD or On Demand

Participants may choose to receive account activity totals (AATR), account activity details (AADR), Correspondent activity totals (CATR) and/or Correspondent activity details (CADR) reports automatically at the end of the day via the FedNow interface setting. Account balance (ABAR), intraday activity totals (IATR) and Correspondent activity totals (CITR) reports can be requested intraday using ISO 20022 messaging (camt.060). Reports can be downloaded via the FedNow interface.¹⁸⁴ Account balance can also be retrieved via API request.¹⁸⁵

Only Participants that have both the setting enabled and an active profile will receive EOD reports automatically. If the setting is enabled to receive EOD reports, or if a Participant requests an intraday report and the Participant has had no activity on the FedNow Service for a given cycle day, a report is generated with zeroes in all fields.

Access to FedNow Service Reports¹⁸⁶

Access to Account Balance Report (Camt.052 (ABAR) or API) is available for master/primary account or subaccount. All other FedNow Service Reports are available to all account types.

¹⁸⁴ See FedNow interface How-To Guide for additional details.

¹⁸⁵ See the FedNow Service Technical Specifications, including the REST API Technical Documentation, available on the FedNow DevRel resource.

¹⁸⁶ Reference the Participant Profile section for additional details.

Participants may view their own account activity and that of RTNs associated with their accounts. To receive a report, the Participant must have Connection Party permissions related to request origination and/or EOD report receiving enabled.

A FedNow Participant Profile with multiple Connection Parties (owned by different Service Providers) may choose to allow multiple Service Providers report access. The reports include all activity for the Participant Profile (RTN), not specific to the activity through one Connection Party as reports are filtered at the Participant level and not by Connection Party.

A Connection Party mapped to multiple Participant Profiles can obtain activity reports for all Participant Profiles that have enabled the permission for the Connection Party.

When requesting a report via ISO message for an RTN without permissions enabled, the request is rejected. If requesting for multiple RTNs and some have permissions enabled, the reports are provided for the permissioned RTNs only.

Correspondents with a FedNow Participant Profile may receive account balance reports (camt.052) on demand and can automatically receive end-of-day Correspondent activity totals and activity detail reports, if enabled. Correspondents may choose to establish a settlement-only Participant Profile for the sole purpose of accessing these reports. Correspondents also may enable real-time credit/debit notifications (camt.054) for near-real-time reconciliation. Correspondents that do not have a Participant Profile or are not connected to the FedNow Service only receive reports related to FedNow Service activity for their respondent(s)' activity via Accounting Reports.

Account Activity Details Report Delivery and Correspondent Activity Details Report Delivery via ISO Messaging

The Account Activity Details Report (AADR) and Correspondent Activity Details Report (CADR) include transaction level information per RTN. The specifications for these reports call for pagination. Pagination for the details report follows the statements below:

- The Transactions Summary component is included on the first page.
- Each page of the AADR and CADR is provided as one Account Report (camt.052) and includes a page number, with a maximum of 15,000 messages.
 - The number of messages per camt.052 message (per page) is subject to change over time.
- The end of the report is indicated using the Last Page Indicator element.
- AADRs and CADRs that exceed one page of message details are only available in ISO message via MQ; they cannot be downloaded via the FedNow interface.
 - This is subject to change over time.

Example: If an AADR or CADR contains 35,000 messages, the Account Report comprises three camt.052 messages, including the Transaction Summary in the first message (page) and the Last Page Indicator in the third message (page).

Obtaining Historical FedNow Service Reports

Historical FedNow Service reports can be obtained via the account activity report request (camt.060 with code AATR, AADR, CATR, CADR) for the previous 90 cycle days.

The Adhoc Query Tool in the FedNow interface provides some details for historical messages for the current and previous seven cycle days.

If an AATR or AADR report request includes multiple dates or RTNs, the FedNow Service provides individual reports by RTN for each cycle day.

Guidelines for requesting historical account activity totals or detail reports for a specific date or range of dates:

Reporting Request	Result
1. Requests a report for a cycle day(s) when the Participant Profile was active (including suspended and pending deactivation) and had FedNow Service activity.	Separate report is sent for each cycle day.
2. Requests a report for a cycle day(s) when the Participant Profile was active (including suspended and pending deactivation) but did not have FedNow Service activity.	Separate report for each cycle day reflects zeroes in all fields.
3. Requests a report for a cycle day(s) when the Participant Profile was inactive (including pending activation and deactivated).	The Participant receives a message reject (admi.002) with an error code.
4. Requests a report for cycle days that include dates when the Participant Profile was active (including suspended and pending deactivation) and other dates when it was inactive (including pending activation and deactivated).	A report is sent for each cycle day the Participant was active (including suspended and pending deactivation) during the requested timeframe.

Accounting Reports

Appropriately credentialed Participants may access information about their FedNow Service activity via Accounting Reports offered through Account Management Information (AMI) with proper credentialing. For further information, see the [Account Management Guide](#) on FRBservices.org.

FedNow Service Reporting During Cycle Day Rollover

Participants or their Service Providers may request account balances and FedNow Service intraday activity totals at any time. When the cycle day rolls to a new cycle day at approximately 7:01 p.m. ET, a provisional balance for the account balance report may be provided until accounting has completed its end-of-day cycle process. On non-standard business days, such as weekends and holidays, the provisional balance remains until the next standard business day.

The FedNow Services adheres to daylight saving time, impacting the timing of cycle day rollover and related EOD reporting activities, when applicable. The time stamps used in the various messages originated by the FedNow Service always contain the offset from UTC, making easier for Participants to properly identify the time stamp.

Real-Time Notifications

Immediate reconciliation functions are supported by real-time advices, acknowledgments and notifications of credit/debit activity using the below. When Participants receive these, they must validate that the message ID is unique.¹⁸⁷

- For instant payments (pacs.008 and pacs.004) - advice of credit and acknowledgments (FedNow payment status, pacs.002).
- For liquidity management transfer – acknowledgment (FedNow payment status, pacs.002) and liquidity management transfer (pacs.009).
- For Correspondents - Credit/debit notifications (camt.054) show respondent settlement activity¹⁸⁸ for both instant payment and LMT.

¹⁸⁷ See Duplicate Messages in FedNow ISO 20022 ISO Messages section for additional details.

¹⁸⁸ See Account Credit Debit Notification section for additional details.

c. List of Available Reports (FedNow Service and Accounting)

Report Name	Default FedNow Profile Setting	Reporting Availability	Report Details
FedNow Service Reports Available via Account Report Request (camt.060) or the FedNow interface			
Account Balance Report ((camt.052) or API) Report code: ABAR	N/A	Intraday by request Download PDF via the FedNow interface	Data for each RTN is provided in real time at a summary level, including account balance and related information for the Master Account RTN and subaccount(s). This report includes balance information for: <ul style="list-style-type: none"> • FedNow Service • Fedwire Funds Service • Fedwire Securities Service • National Settlement Services • Prefunded ACH • All other activity settling in the account Account balance reports are not available to Service Providers or subaccount holders unless the accounting form is completed to grant affiliate access to the Master Account.
Account activity totals report (camt.052) Report code: AATR	Enabled for automatic end-of-day distribution by default; can be disabled by Participants and/or Service Providers.	Generated after cycle day rollover and typically distributed by 7:30 p.m. ET (unless the cycle date is extended) Download XML, CSV or PDF via the FedNow interface	Data is at a summary level per RTN. Account activity totals reports include both value messages and nonvalue messages. Account activity totals report data elements: <ul style="list-style-type: none"> • Total debit amount accepted • Total number of debit transactions accepted • Total number of value messages rejected • Total credit amount accepted • Total number of credit transactions accepted • Total number of rejected value messages sent • Value messages include: <ul style="list-style-type: none"> • Instant payments (pacs.008 and pacs.004) • LMT (pacs.009) • Total number of nonvalue messages received • Total number of nonvalue messages sent • Nonvalue messages include: <ul style="list-style-type: none"> • Return request (camt.056) and return request response (camt.029) • RFP (pain.013) and RFP response (pain.014) • RFP cancellation request (camt.055) and RFP cancellation request response (camt.029) • Information request (camt.026) and information request response (camt.029) • Additional payment information (camt.028)
Intraday account activity totals report (camt.052) Report code: IATR	N/A	Intraday by request Download XML, CSV or PDF via the FedNow interface	Data for each RTN is provided in real time at a summary level, including account balance and related information for the Master Account RTN and subaccount(s). This report includes balance information for: <ul style="list-style-type: none"> • FedNow Service • Fedwire Funds Service • Fedwire Securities Service • National Settlement Services • Prefunded ACH • All other activity settling in the account Account balance reports are not available to Service Providers or subaccount holders unless the accounting form is completed to grant affiliate access to the Master Account.

<p>Account activity details report (camt.052)</p> <p>Report code: AADR</p>	<p>Disabled for automatic end-of-day distribution by default; can be enabled by Participants and/or Service Providers.</p>	<p>Generated after cycle day rollover and typically distributed by 9:00 p.m. ET (unless the cycle date is extended)</p> <p>Download XML via the FedNow interface¹⁸⁹</p>	<p>Data is at the transaction level per RTN. Includes successfully processed and rejected messages within the cycle day.</p> <p>Includes both value messages and nonvalue messages. Value messages and nonvalue messages are the same as in the account activity totals report:</p> <ul style="list-style-type: none"> • Message identification • Message type • Creation date/time • Business processing date/time • Acceptance date/time • Instructing agent • Instructed agent • Amount • Message status • Additional information¹⁹⁰
<p>Correspondent account activity totals report (camt.052)</p> <p>Report code: CATR</p>	<p>Enabled for automatic end-of-day distribution by default; can be disabled by Participants and/or Service Providers.</p>	<p>Generated after cycle day rollover and typically distributed by 7:30 p.m. ET (unless the cycle date is extended)</p> <p>Download XML, CSV or PDF via the FedNow interface</p>	<p>Correspondents can receive a Correspondent account activity totals report with all their respondent RTN totals:</p> <ul style="list-style-type: none"> • Sub-totaled by each direct respondent RTN. • Includes only the value messages that were successfully settled in the Correspondent's account. <p>Correspondents can request either their own activities report (AATR/IATR) or respondents' reports (CATR/CITR) using the account report request message (camt.060) or via the FedNow interface. If requesting for respondent's activity, the report includes activity for all respondents. If Correspondents have enabled automatic end-of-day distributions, they receive both AATR and CATR reports.</p>
<p>Correspondent intraday account activity totals report (camt.052)</p> <p>Report code: CITR</p>	<p>N/A</p>	<p>Intraday by request</p> <p>Download XML, CSV or PDF via the FedNow interface</p>	

¹⁸⁹ If the report size requires pagination, it is only available via ISO messaging. See details above on pagination specifications.

¹⁹⁰ For Participants using the negative list, the additional information field shows fraud rejection codes (F002, F101, F008, F009) or a timeout warning code (F004, F010, F011). See Fraud Mitigation Tools section for more information.

Correspondent account activity details report (camt.052) Report code: CADR	Disabled for automatic end-of-day distribution by default; can be enabled by Participants and/or Service Providers.	Generated after cycle day rollover, and typically distributed by 9:00 p.m. ET (unless the cycle date is extended) Download XML via the FedNow interface ¹⁹¹	Report contains the same account information as the Participant report above, except it only includes value messages that were successfully settled within the Correspondent's account. Includes an individual report for each Correspondent/Respondent RTN relationship. Correspondents may request reports on their own activities (AADR), reports for all their respondents (CADR) or a single respondent's report (CADR) using the account report request message (camt.060) or FedNow interface. If a Correspondent has automatic end-of-day distribution enabled, they receive their AADR and all their respondents' CADR.
Accounting Reports For details on how to access these reports, see the Account Management Guide on FRBservices.org .			
Daily statement of account	Automatically provided to Master Accounts; Non-Account Holders (including Subaccounts and Other Secondary RTNs) must subscribe via the Accounting Information Services (AIS) form.		<ul style="list-style-type: none"> • Available to Master Account holders and subscribing non-account holders. • Provides summary debit and credit totals (for all services) at the transaction code and RTN level (e.g., by their own, subaccount RTNs, other secondary RTNs (OSRTNs) and respondent RTNs.
Financial institution reconciliation data file FIRD file	Must subscribe to receive. In addition, must request to have FedNow Service detail included.		<ul style="list-style-type: none"> • Available to subscribing Master Account holders. • Allows automation of internal reconciliation and posting functions for Participants' convenience. • Designed to interface with an institution's internal accounting system. • Includes all transaction data in: <ul style="list-style-type: none"> • Daily statement of account • Fedwire Funds • Fedwire Securities • FedNow Service details can be included by subscription.
Statement of account spreadsheet file SASF	Must subscribe to receive. In addition, must request to have FedNow Service detail included.		<ul style="list-style-type: none"> • Available to subscribing Master Account holders. • Statement provided in spreadsheet format to assist with reconciliation functions. • Includes: <ul style="list-style-type: none"> • Credit/debit activity posted by Federal Reserve Banks • Detailed information about transactions for Master Accounts • Respondent activity for Correspondent FIs • Fedwire Funds, Fedwire Securities and FedNow Service details can be included within subscription

¹⁹¹ If the report size requires pagination, it is only available via ISO messaging. See details above on pagination specifications.

d. How to Initiate a FedNow Service Report Request (camt.060)

While FedNow Service reports vary in their timing, content and purpose, report requests and retrieval offer similar message flows and issue resolutions:

1. Sending and Validation Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
Sender FI	Sends the report request (camt.060) to the FedNow Service.	FedNow Service receives request with all necessary details.	Request cannot be processed due to missing or incorrect details.	<ol style="list-style-type: none"> Review the error code description.¹⁹² Correct the identified error(s) to ensure all subsequent messages sent to FedNow Service meet requirements. If needed, send a new message.
FedNow Service	Receives message from Sender FI and runs through all applicable validations listed below.	Message passes all validations.	Message fails validation. The FedNow Service rejects the message immediately and sends a Message Reject (admi.002) with the appropriate reason code to the Sender FI.	

Validations for Account Report Request (camt.060)

<ul style="list-style-type: none"> ✓ Valid message signature ✓ Valid message size ✓ XML syntax ✓ Authorized sender 	<ul style="list-style-type: none"> ✓ FedNow Service ISO 20022 schema rules followed ✓ Valid reporting period, as applicable ✓ Valid profile status
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2. Response Stage

Who	Required Steps	If No Exceptions	If Exceptions Occur	Action(s) to Correct Failure
FedNow Service	The FedNow Service delivers the requested camt.052 report with corresponding report code Report options.	Report(s) is received by Participant within seconds.	Report(s) is not received by Participant.	<p>The Participant should send a new request or can download the report via the FedNow interface.</p> <p>Note: If the request includes multiple historical reports, response from the FedNow Service could take longer.</p>

¹⁹² See the Error and Warning Codes and Descriptions section.

17.2. Adhoc Query Tool

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

Appendix

- a. Consolidated Response Times
- b. Support
- c. Network Limits
- d. Error and Warning Codes and Descriptions
- e. FedNow Service Required Test Cases for Certification
- f. FedNow Service ISO Messaging Charts
- g. Service Level Expectations

A. Consolidated Response Times

This section provides a consolidated view of the required and recommended response times for Participants on the FedNow Service. Information below is also included in the corresponding sections.

Below are message response requirements. The requirements are enforced by the FedNow Service and Federal Reserve Banks.

Instant Payment Response Time Requirements			
Participant Action	ISO 20022 Message	Response Code	Response Guidelines
Participant responds to the instant payment within the specified time frame.	Customer Credit Transfer (pacs.008) or Payment Return (pacs.004)	Accept (ACTC) Reject (RJCT)	(Final response) - Within Receiver FI reserved response time.
		Accept Without Posting (ACWP)	(Initial response) - Within Receiver FI reserved response time.
		Accept (ACCC)	(Optional additional response after ACSC) - As soon as possible, once funds are posted to end customer.
		Pending (PDNG) Reject (RJCT) Block (BLCK) Accept (ACCC)	(Final response, after ACWP) - No later than midnight (ET) of the next standard business day (M-F, except holidays), unless investigation is still pending. If investigation is ongoing response of pending (PDNG) must be provided.

Below are message response guidelines that we strongly recommend Participants follow. Participants should consider that response times may differ if the Participant receiving the message is signed off from the service or not able to respond due to maintenance or other conditions.

If an initial response or the admi.007 is not received after sending nonvalue message, the Participant can send a payment status request (pacs.028) or an information request (camt.026) at midnight (ET) of the next standard business day (M-F, except holidays).

Payment Status Request Response Time Guidelines			
Participant Action	ISO 20022 Message	Response Code	Response Guidelines
Participant sends a payment status request (pacs.028) to the Receiver FI.	Payment status request (pacs.028)	N/A	A payment status request can be sent within one year of the final status of the instant payment or request for payment.
Participant responds to the payment status request.	Participant payment status (pacs.002) or RFP response (pain.014)	Accept (ACCC) Reject (RJCT) Pending (PDNG) Reject (RJCT) Block (BLCK)	(Final response) - As soon as possible. Provide the latest status of the instant payment.
		Received (RCVD) Presented (PRES) Accepted (ACTC) Rejected (RJCT)	(Final response) - As soon as possible. Provide the latest status of the request for payment.

Return Request & Response (camt.029) Time Guidelines			
Participant Action	ISO 20022 Message	Response Code	Response Guidelines
Participant sends return request.	Return request (camt.056)	N/A	A return request should be sent within 60 days ¹⁹³ of the credit transfer settlement.
Participant responds to the return request sender.	Return request response (camt.029)	Return request accepted (IPAY) Partially executed return request (PECR)	(Final response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). Participant should immediately: 1. Provide final response (either IPAY or PECR). 2. Simultaneously, initiate a payment return.
		Return request rejected (RJCR)	(Final response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays).
		Return request pending (PDCR)	(Initial response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). (Final response) - Final response to PDCR will be IPAY, PECR or RJCR as soon as the FI has concluded its investigation, or within 10 standard business days (M-F, except holidays) of receiving the camt.056.

¹⁹³ Camt.056 messages used to report fraud or an RFP warranty breach are not subject to the 60-day guideline. Additional information on expectations for these use cases can be found in the Fraud Reporting and Request for Payment Warranties and Expectations sections, respectively.

RFP Response (pain.014) Time Guidelines			
Participant Action	Message	Response Code ¹⁹⁴	Recommended Response Time
Receiver FI provides an initial RFP response to the Sender FI. <i>This optional step is a recommended best practice.</i>	Initial RFP Response (pain.014)	Received (RCVD)	<ul style="list-style-type: none"> Immediately: Receiver FI should inform the Sender FI that the request for payment was received. Follow up as soon as possible after status is determined: When the initial RFP response (pain.014) is RCVD, the Receiver FI should provide a status update to the Sender FI when the Accepted (ACTC) or Rejected (RJCT) status is determined. If automatically accepted (ACTC): If automatic approval is enabled between the Receiver FI and its customer, there is no need to include the interim received or presented responses.
		Presented (PRES)	<ul style="list-style-type: none"> As soon as possible: Receiver FI should inform the Sender FI once the RFP (pain.013) is presented. Follow up as soon as possible after status is determined: When the initial RFP response (pain.014) is Presented (PRES), the Receiver FI should provide a status update to the Sender FI when the Accepted (ACTC) or Rejected (RJCT) status is determined. If automatically accepted (ACTC): If automatic approval is enabled between the Receiver FI and its customer, there is no need to include the interim received or presented responses.
Receiver FI provides a final RFP response to the Sender FI.	Final RFP Response (pain.014)	Accepted (ACTC)	Up to the RFP expiry date (pain.013), the Receiver FI must send the pacs.008 immediately or by the requested execution date.
		Rejected (RJCT)	<ul style="list-style-type: none"> Immediately, if the Receiver FI is the rejecting party (include the reason code¹⁹⁵). As soon as possible, if the Receiver FI's end customer is the rejecting party (include reason code).

RFP Cancellation Request Response (camt.055) Time Guidelines			
Participant Action	ISO 2022 Message	Response Code	Recommended Response Time
Sender FI asks Receiver FI to cancel a previous RFP.	RFP cancellation request (camt.055)	N/A	A Sender FI can request an RFP cancellation if the payment has not been made.

¹⁹⁴ See the FedNow Service ISO 2022 Implementation Guide for additional details.

¹⁹⁵ See the FedNow Service ISO 2022 specifications for a list of reason codes.

Receiver FI provides an initial response to the Sender FI. <i>This optional step is a recommended best practice.</i>	Initial RFP cancellation request response (camt.029)	Pending (PDCR)	Immediately: Receiver FI should inform the Sender FI that the request is being investigated.
Receiver FI provides a final response to Sender FI that payment has been executed.	FINAL RFP cancellation request response (camt.029)	Cancelled (CNCL)	Immediately or up to the requested execution date of the initial RFP (pain.013).
		Rejected (RJCR)	<ul style="list-style-type: none"> • Immediately on confirmation from the customer/Receiver FI. • Required if status is PDCR pending.

Information Request Response (camt.029) Time Guidelines

Participant Action	ISO 20022 Message	Response Code	Response Guideline
Sender FI provides initial response to Receiver FI, if needed.	Initial information request response (camt.029)	Pending (PDNG)	As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). Update every five standard business days (M-F, except holidays) until final response is provided.
Sender FI provides a response to the Receiver FI.	Initial or final information request response (camt.029)	Additional information sent (INFO)	As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays).
		No further information available (NINF)	
		Duplicate payment (IDUP)	
		Payment initiated (IPAY)	As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). In case of IPAY, a payment must be initiated immediately.
Sender FI provides response to the Receiver FI if camt.029 code INFO was previously sent.	Additional payment information (camt.028)	Additional information sent (INFO)	Simultaneously with the information request response (camt.029).

B. Support

Participants that connect to the FedNow Service via a Service Provider should contact that provider for questions or issues related to the connection or other activities the provider performs or manages. Participants or Service Providers with issues or questions that cannot be answered by the provided documentation should contact the Support Center.

If a Participant wishes to offboard from the FedNow Service, the Participant must contact the Support Center.

FedNow Service support is available via the Support Center 24x7x365. However, the list below summarizes the FedNow Service-related activities not fully available during weekends, holidays or specific hours due to activities extending beyond the FedNow Service. For additional support contacts, navigate to the [Find Your Contacts](#) page on FRBservices.org and search by RTN. These activities include, but are not limited to, the below.

Account Balances via FedNow Service

- There may be a short period where account balance reports are not available via either a FedNow Service ISO 20022 message (camt.060), FedNow interface or API. This typically occurs around 7:00 p.m. to 7:05 p.m. ET during the end-of-day rollover process on standard business days. If the balance is not available, the request is rejected. Participants either can resend the request after waiting a short time or request a FedNow Service account activity totals report via an ISO message (camt.060) or the FedNow interface.
- The account balance report may have up to a one-minute delay in FedNow activity captured, even though FedNow Service transactions are final and settled in real time.

Account Balances via Fedwire Funds

- The Account Balance report is available via Fedwire Funds, but FedNow Service activity is displayed with the All Other Available category.

Account Balances via Account Management Information (AMI)

- The Account balance report and drill-down capabilities to view FedNow Service totals in AMI may not be available during the end-of-day rollover process.
- AMI may not be available for short time periods on non-standard business days (weekends and holidays), but the account balance report is available via the FedNow interface.
- The account balance report in AMI may have up to a one-minute delay in FedNow activity captured, even though FedNow Service transactions are final and settled in real time.

Correspondent-Respondent Relationship Changes

- Support for activities related to Correspondent-respondent relationships is limited to standard business days and hours (Monday-Friday, except standard Federal Reserve Bank holidays).
- Updates or changes to Correspondent-respondent relationships can be made during standard business days and hours and scheduled to take effect outside standard business days and hours.

Mergers

- Support for activities related to mergers and acquisitions are limited to standard business days and hours (Monday-Friday, except standard Federal Reserve Bank holidays).
- Updates or changes related to mergers and acquisitions can be made during standard business days and hours and can be scheduled to take effect outside standard business days and hours.

Account Open and Closing

- Support for activities related to account open and closing are limited to standard business days and hours (Monday-Friday, except standard Federal Reserve Bank holidays).
- Updates or changes related to account opening and closing can be made during standard business days and hours and scheduled to take effect outside standard business days and hours.

C. Network Limits

Network limits are set by the FedNow Service, are subject to change and apply to all Participants and Service Providers that have enabled the related services. Participants may change some settings as long as they do not exceed the network limits.

Network Limits	Description	Value	Applicable to
Credit Transfer maximum transaction value limit	The maximum transaction value limit for a pacs.008. <ul style="list-style-type: none"> Pacs.008 messages exceeding the limit are rejected by the FedNow Service. The limit for Customer Credit Transfer is defaulted to \$100,000; Participants can configure their limit up to the Customer Credit Transfer maximum value limit. 	\$10,000,000	Participants that have any of the following participation types enabled in their Participant Profiles: <ul style="list-style-type: none"> Credit Transfer send and receive Credit Transfer send, receive and receive Request for Payment (RFP)
Payment Return maximum transaction value limit	The maximum transaction value limit for a payment return (pacs.004). <ul style="list-style-type: none"> Pacs.004 messages exceeding the limit are rejected by the FedNow Service. 	\$10,000,000	All Participants with a Credit Transfer participation type enabled in their Participant Profiles
Liquidity Management Transfer (LMT) maximum transaction value limit	The maximum transaction value limit for LMT (pacs.009). <ul style="list-style-type: none"> Pacs.009 messages exceeding the limit are rejected by the FedNow Service. The limit for LMT is defaulted to \$2,500,000; Participants can configure their limit up to the Liquidity Management Transfer (LMT) maximum transaction value limit. 	\$10,000,000	All Participants with a Liquidity Management Transfer participation type enabled in their Participant Profiles
Liquidity Management Transfer (LMT) operating hours	The hours in which Participants enrolled in LMT can send and/or receive Financial Institution Transfers (pacs.009). <ul style="list-style-type: none"> Pacs.009 messages sent outside these hours are rejected by the FedNow Service. 	See FedNow Service Operating Hours on FRBservices.org	All Participants with a Liquidity Management Transfer participation type enabled in their Participant Profiles
Timeout clock	Maximum allowable time for a transaction (pacs.008, pacs.004 or pacs.009) to settle or be rejected.	20 seconds	All Participants with Credit Transfer or LMT participation types enabled in their Participant Profiles

D. Error and Warning Codes and Descriptions

This section of the Operating Procedures contains confidential information and is not available on the public website. FedNow Participants will be provided access to this section during the FedNow Service onboarding process.

E. FedNow Service Required Test Cases for Certification

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F. FedNow Service ISO Messaging Charts¹⁹⁶

Table 1 – Customer Credit Transfers; table below outlines the requirements for coding based on participation type.

Customer Credit Transfer Messages	Credit Transfer Receive Only		Credit Transfer Send/Receive		Send/Receive with Receive RFP	
	Send	Receive	Send	Receive	Send	Receive
pac.008 – Customer Credit Transfer	Prohibited	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
pac.002 ACTC – Accepted Technical Validation	Mandatory	N/A	Mandatory	N/A	Mandatory	N/A
pac.002 ACSC – Accepted and Settled	N/A	Mandatory	N/A	Mandatory	N/A	Mandatory
pac.002 RJCT – Rejection	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
pac.002 ACWP – Accept Without Posting	Optional	Mandatory	Optional	Mandatory	Optional	Mandatory
pac.002 ACCC – Confirmation of posting	Optional	Conditional	Optional	Mandatory	Optional	Mandatory
pac.002 PDNG – Pending following ACWP	Optional	Conditional	Optional	Mandatory	Optional	Mandatory
pac.002 BLCK – Blocked following ACWP	Optional	Conditional	Optional	Mandatory	Optional	Mandatory
pac.028 – Payment Status Request	Optional	Mandatory	Optional	Mandatory	Optional	Mandatory
Payment Returns	Credit Transfer Receive Only		Credit Transfer Send/Receive		Send/Receive with Receive RFP	
	Send	Receive	Send	Receive	Send	Receive
camt.056 – Return Request	Optional	Mandatory	Optional	Mandatory	Mandatory	Mandatory
camt.029 – Return Request Response	Mandatory	Conditional	Mandatory	Conditional	Mandatory	Mandatory
pac.004 – Payment Return	Optional	Optional	Mandatory	Mandatory	Mandatory	Mandatory
Requests for Payment	Credit Transfer Receive Only		Credit Transfer Send/Receive		Send/Receive with Receive RFP	
	Send	Receive	Send	Receive	Send	Receive
pain.013 – Request for Payment (RFP)	Optional	Prohibited	Optional	Prohibited	Optional	Mandatory
pain.014 – Request for Payment Response	N/A	Conditional	N/A	Conditional	Mandatory	Conditional
camt.055 – RFP Cancellation Request	Optional	Prohibited	Optional	Prohibited	Optional	Mandatory
camt.029 – RFP Cancellation Request Response	N/A	Conditional	N/A	Conditional	Mandatory	Conditional

¹⁹⁶ Does not include any requirements for non-ISO messaging (i.e., MQ Messages)

Information Request Messages	Credit Transfer Receive Only		Credit Transfer Send/Receive		Send/Receive with Receive RFP	
	Send	Receive	Send	Receive	Send	Receive
camt.026 – Information Request	Optional	Mandatory	Optional	Mandatory	Optional	Mandatory
camt.029 – Information Request Response	Mandatory	Conditional	Mandatory	Conditional	Mandatory	Conditional
camt.028 – Additional Payment Information	Optional*	Conditional	Optional	Conditional	Optional	Conditional
Account Reporting Messages	Credit Transfer Receive Only		Credit Transfer Send/Receive		Send/Receive with Receive RFP	
	Send	Receive	Send	Receive	Send	Receive
camt.060 – Account Reporting Request	Optional	N/A	Optional	N/A	Optional	N/A
camt.052 – Account Balance Report	N/A	Optional	N/A	Optional	N/A	Optional
camt.052 – Account Activity Totals Report	N/A	Optional	N/A	Optional	N/A	Optional
camt.052 – Account Activity Details Report	N/A	Optional	N/A	Optional	N/A	Optional
camt.054 – Account Debit/Credit Notification	N/A	Optional	N/A	Optional	N/A	Optional
System Messages	Credit Transfer Receive Only		Credit Transfer Send/Receive		Send/Receive with Receive RFP	
	Send	Receive	Send	Receive	Send	Receive
admi.002 – Message Reject	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
admi.007 – Receipt Acknowledgement	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
admi.004 – FedNow Broadcast	N/A	Mandatory	N/A	Mandatory	N/A	Mandatory
admi.004 – Participant Broadcast	Mandatory	N/A	Mandatory	N/A	Mandatory	N/A
admi.011 – FedNow System Response	N/A	Mandatory	N/A	Mandatory	N/A	Mandatory
admi.006 – Retrieval Request	Optional	N/A	Optional	N/A	Optional	N/A
admi.998 – FedNow Participant File	N/A	Mandatory	N/A	Mandatory	N/A	Mandatory

*FIs should use the camt.028 when providing additional information to another Participant.

Table 2 – FI Credit Transfers – Liquidity Management Transfers; table below outlines the requirements for coding based on participation type.

Credit Transfer Messages	Settlement Only ¹⁹⁷		Liquidity Management Transfers (LMT) Receive Only		LMT Send/Receive	
	Send	Receive	Send	Receive	Send	Receive
pac.009 – FI Credit Transfer	Prohibited	Prohibited	Prohibited	Mandatory	Mandatory	Mandatory
pac.002 – FedNow Payment Status Report	Prohibited	Prohibited	N/A	N/A	N/A	Mandatory
pac.028 – Payment Status Request	Prohibited	Prohibited	Prohibited	N/A	Optional	N/A
Account Reporting Messages	Settlement only		LMT Receive Only		LMT Send/Receive	
	Send	Receive	Send	Receive	Send	Receive
camt.060 – Account Reporting Request	Optional	N/A	Optional	N/A	Optional	N/A
camt.052 – Account Balance Report	N/A	Optional	N/A	Optional	N/A	Optional
camt.052 – Account Activity Totals Report	N/A	Optional	N/A	Optional	N/A	Optional
camt.052 – Account Activity Details Report	N/A	Optional	N/A	Optional	N/A	Optional
camt.054 – Account Debit/Credit Notification	N/A	Optional	N/A	Optional	N/A	Optional
System Messages	Settlement only		LMT Receive Only		LMT Send/Receive	
	Send	Receive	Send	Receive	Send	Receive
admi.002 – Message Reject	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
admi.004 – FedNow Broadcast	N/A	Mandatory	N/A	Mandatory	N/A	Mandatory
admi.004 – Participant Broadcast	Prohibited	N/A	Mandatory	N/A	Mandatory	N/A
admi.011 – FedNow System Response	N/A	N/A	N/A	Mandatory	N/A	Mandatory
admi.006 – Retrieval Request	Optional	N/A	Optional	N/A	Optional	N/A
admi.998 – FedNow Participant File	N/A	Mandatory	N/A	Mandatory	N/A	Mandatory

¹⁹⁷ Stand-alone participation type.

G. Service Level Expectations

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