The FedNow Service Operating Procedures provide operational details for the FedNow Service. 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. The terms governing the FedNow Service will govern to the extent of any inconsistency between these Operating Procedures and those terms. The Financial Services logo, “FedNow,” “Fedwire” and “FedLine” are service marks of the Federal Reserve Banks. A list of marks related to financial services products that are offered to financial institutions by the Federal Reserve Banks is available at FRBservices.org®. “ISO 20022®” is a registered service mark of the International Organization for Standardization.

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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 in the FedNow Service Schedule published by the Federal Reserve Banks 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 LMT Payment Messages.

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

**Nonvalue Messages** – Messages sent through the FedNow Service that do not generate an accounting entry. A nonvalue message is a request pertaining to the details or status of an instant payment message, request for reporting, or message retrieval of any kind which can either be sent from a Participant to the FedNow Service or exchanged between a Sender FI and Receiver FI.

**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.

**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.

¹ Does not include any FedLine® connectivity information.
2. Introduction

The FedNow Service is an interbank 7 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 will settle 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 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, will 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 documents listed in the table below to provide a comprehensive understanding of the FedNow Service.

<table>
<thead>
<tr>
<th>Document</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>FedNow Operating Circular 8 and other applicable Operating Circulars</td>
<td>Governs the terms of the FedNow Service and other related terms.</td>
</tr>
<tr>
<td>FedNow Service Operating Procedures</td>
<td>Details about the FedNow Service, including expectations, requirements and guidance to be followed by FedNow Participants.</td>
</tr>
<tr>
<td></td>
<td>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/from the FedNow Service.</td>
</tr>
<tr>
<td></td>
<td>This must be used in combination with the FedNow Service ISO 20022 Message Specifications document to execute message processing with the FedNow Service.</td>
</tr>
</tbody>
</table>

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 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

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.

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\(^3\) 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, please refer to the value messages section.
4. General Expectations

The Operating Procedures outline operational expectations and best practices. Participants are expected to read, understand and adhere to these expectations before using the FedNow Service, and revisit them as needed.

When expectations are not met or procedures are not followed, the Federal Reserve Banks have the right to discuss and enforce actions on the Participant based on the infraction. It is at the discretion of the Federal Reserve Banks as to whether enforcement occurs after the first infraction or following multiple or continuous infractions. Ongoing infractions may cause the Federal Reserve Bank to take additional steps, such as contacting the Participant, disabling the Participant from sending and/or receiving value messages, suspending the Participant from sending or receiving messages, or terminating the Participant from the FedNow Service.

a. Operating Rules

Settlement

Participants using the FedNow Service will be required to settle all FedNow transactions in their own Master Account or that of a single Correspondent. The service will validate the settlement arrangement 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 and or when the FedNow Service sends an Advice of Credit message (pacs.002 for instant payments or pacs.009 for LMT).

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.

FedNow Interface via FedLine Advantage

The FedNow interface is accessible to credentialed subscribers via FedLine Advantage. The FedNow interface enables Participants, or Service Providers acting on their behalf, to pull reports, execute queries and manage components of participation types and settings. 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.
5. Participant and FedNow Service Availability Expectations

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 should be scheduled during hours with expected minimal transaction volume. The Federal Reserve Banks have not established specific downtime windows, which provides Participants and Service Providers with the flexibility to perform maintenance on a schedule that works best for each organization. In the future, the Federal Reserve Banks will advise on optimal windows for downtime based on its FedNow Service operating experience. 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 that are enabled to receive instant payments (Customer Credit Transfer Send and Receive orReceive Only participation types) are required to sign off via a Participant broadcast message (admi.004) or through the FedNow interface, if the downtime will affect its ability to respond to pacs.008 and pacs.004 messages within the reserved response time or affect its ability to immediately make the funds 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 will reject any instant payments (pacs.008 and pacs.004) that are sent to the signed-off Participant. The FedNow Service will continue to send all other messages to the relevant queue(s) for the signed off Participant to retrieve. While signed off from receiving instant payments, Participants may still respond to other messages and initiate all message types.

An indication that the Receiver FI is taking planned downtime is a delay in the Receiver FI sending the receipt acknowledgment (admi.007) after receiving a nonvalue message. The Receiver FI is required to send a receipt acknowledgment (admi.007) after receiving any nonvalue messages.

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.

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8 As soon as practicable, but no longer than a few seconds
9 Participants that have the participation type of LMT Send and Receive or LMT Receive Only.
10 See Network Limits section for additional details.
11 See Participant Broadcast for additional details on sign off.
12 See Receipt Acknowledgment (admi.007) section for additional details.
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 FRB Services Support Center (1-833-FRS-SVCS (377-7827)) for guidance on unplanned downtime and any action to be taken. If applicable, the Participant should sign off from the service so that the FedNow Service can inform other Participants of their status. 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 soon as able to. This includes messages delivered when the Participant is in unplanned downtime. Participants also are responsible for reconciling and responding to any message that are dropped from the queue during its 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 (i.e., due to message expiration or exceeding the queue depth). Upon review, Participants must respond to applicable messages delivered by the FedNow Service within the recommended response times or as soon as possible if the recommended time has elapsed.

To retrieve and respond to messages that are dropped from the queue, the Participant should follow the steps below. Additional details can be found by referencing sections noted in the footnotes.

1. Request the Account Activity Totals Report once back online or at the end of cycle day via the FedNow interface or via camt.060 with code AATR (if not enrolled to automatically receive the report at the end of day).
2. Compare the total count of messages received (by type) to Participant's internal system count.
3. If there is a discrepancy, request the Account Activity Details Report, which is available after end-of-day processing is complete via the FedNow interface or via camt.060 with code AADR to identify the details for the message(s). If the Participant needs additional information on a specific message or is required to respond to a message, the Participant should send a retrieval request (admi.006) using the message ID(s) in the Account Activity Details Report. The Participant can use the FedNow interface Adhoc Query tool to obtain some details of the message as well.

One retrieval request (admi.006) can be used to request up to 50 messages. Participants can use the retrieval request to retrieve messages for the current or prior seven business days only. If a message was sent by the Participant but is not reflected in the report, the FedNow Service did not receive and process the message. The Participant should ensure the message is not a duplicate and then resend it to the FedNow Service with a unique message ID.

Participants also can search the Adhoc Query Tool via the FedNow interface, and filter by time, to see messages that were sent to the FedNow Service and validated before they were sent to the Participant.

d. FedNow Service Availability

The FedNow Service Schedule can be found on FRBservices.org. The FedNow Service is a 24x7x365 service with no expectations of planned downtime. In the unlikely event the FedNow Service experiences an operational disruption, the Federal Reserve Banks will notify Participants through its FRBservices.org Service.
Status webpage. FedNow Participants should monitor such communications and be prepared to act on instructions from the Federal Reserve Bank under such circumstances.

### a. Overview of the FedNow Service Customer Testing Environment

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 or continue to use the FedNow Service before moving into the production environment. This includes 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.

Participants and Service Providers 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.

### b. FedNow Service Required Certification

A Financial Institution or Service Provider may only move into the production environment after the Financial Institution or Service Provider completes the necessary steps for certification.

For Financial Institutions, certification is completed at the institution level and therefore FIs are not required to complete this process for every RTN.

For organizations acting as Service Providers, certification is completed at the organization level and therefore Service Providers are not required to complete this process for every ACP or application onboarded.

While certification is not required for each application connecting to the FedNow Service, it is the responsibility of the Service Provider to ensure all their application(s) meet the FedNow Service certification requirements (as detailed below) and perform any testing necessary before moving the application into the FedNow Service production environment. For support or validation of additional applications, Service Providers can reach out to FRB Services Support Center (1-833-FRS-SVCS (377-7827)).

The certification process includes:

1. **Certification of Messaging**: The Financial Institution and/or Service Provider certifies it is able to send and receive all required messages in the test environment for the participation type(s) that the Financial Institution and/or Service Provider will enable in production.

2. **Certification of Operational Readiness**: The Financial Institution and/or Service Provider certifies that it understands the requirements set forth in the Operating Circulars, Operating Procedures and Technical Specifications applicable to the FedNow Service and is prepared to meet the requirements.
Certification of Messaging
Financial Institutions and Service Providers that own Authorized Connection Profile(s) are required to certify they have tested and can successfully send and receive all required ISO 20022 messages for the highest requested participation type. Participation type levels are based on the ISO 20022 messages that the Financial Institution or Service Provider is required to support, as listed below. Financial Institutions or Service Providers may have either one or a combination of Customer Credit Transfer and LMT enabled, for one RTN or for multiple RTNs the institution supports. If both, the Financial Institution or Service Provider needs to complete the applicable certification processes for each.

Note: Institutions that are only supporting RTNs with the Settlement Only participation type are not required to complete the certification of messaging, as this participation type has no required messages.

<table>
<thead>
<tr>
<th>Customer Credit Transfer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>Customer Credit Transfer Receive Only</td>
</tr>
<tr>
<td>Medium</td>
<td>Customer Credit Transfer Send and Receive</td>
</tr>
<tr>
<td>Highest</td>
<td>Customer Credit Transfer Send and Receive with RFP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liquidity Management Transfer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>Liquidity Management Transfer Receive Only</td>
</tr>
<tr>
<td>Highest</td>
<td>Liquidity Management Transfer Send and Receive</td>
</tr>
</tbody>
</table>

After the Financial Institution or Service Provider has completed the required certifications, the Federal Reserve Banks will validate the certification of messaging. Based on data in the test environment from the prior 30 cycle days, this process verifies that all required messages were successfully sent and received. Then, the Financial Institution or Service Provider is able to move into the FedNow Service production environment.

Financial Institutions and Service Providers are strongly encouraged to test additional scenarios that are not included in the certification process. These may include the sending and receiving of the optional and conditional FedNow ISO 20022 messages they will support in production.

If the Financial Institution or Service Provider fails to successfully complete certification, the Federal Reserve Banks will coordinate with the Financial Institution or Service Provider to determine next steps. The Financial Institution or Service Provider must either attempt the certification process again or enter production with a different participation type that was validated by the Federal Reserve Banks, which may be a lower participation type than initially desired.

Certification of Operational Readiness
Certification of operational readiness is required by all Financial Institution, whether or not using a Service Provider, as well as by all Service Providers. Again, certification at the institution level ensures Financial Institution and Service Providers do not need to do this more than once. If a Financial Institution uses a Service Provider, the FI is responsible for ensuring all requirements detailed in the Operating Circulars, Operating Procedures and Technical Specifications are followed.

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21 See FedNow Service Required Test Cases for Certification for additional details.

a. Overview

The FedNow Service processes messages continuously, 24 hours a day, every day of the year. LMT messages are processed and rejected if received outside the specified LMT window which is independent of the FedNow Service Funds Transfer Business Day. The FedNow Service does not close; however, for accounting and reconciliation purposes, the FedNow Service Funds Transfer Business Day closes and moves to the next cycle day. Accounting end-of-day processes begin once all Federal Reserve debit and credit processing has completed for the cycle day. The scheduled FedNow Service end of the 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® 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 cycle day has been extended, a FedNow broadcast message (admi.004) will inform Connection Parties of the extension and a subsequent FedNow broadcast (admi.004) is sent once the cycle day changes.

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

For example, as depicted below, a payment sent at 7:00:55 p.m. ET on June 1 and accepted/settled at 7:01:00 p.m. ET would have a cycle day of June 2, because the cycle day rollover was 7:00:59 p.m. ET. The FedNow 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.

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22 See the FedNow Service Schedule on FRBservices.org.

23 Will be referred to as cycle day throughout the Operating Procedures.
* 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 weekend and holidays, the provisional balance will remain until the next standard business day.24

**c. Process of Cycle Day Rollover**
The final column includes potential corrective actions the Participant’s system can take to resolve an issue.

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no exceptions</th>
<th>If exceptions occur</th>
<th>Action(s) to correct failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>FedNow Service</td>
<td>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.</td>
<td>Connection Parties receive the broadcast message (admi.004) and provide to</td>
<td>Connection Party does not receive broadcast message.</td>
<td>• Check cycle day in sent or received messages (Interbank Settlement Date field)</td>
</tr>
</tbody>
</table>

24 See the Reporting and Reconciliation section for additional details.
| Deliver daily FedNow Service end-of-day Account Activity Reports, typically between 7 p.m. ET and 9 p.m. ET, dependent on report,\(^{25}\) to Participants that have enabled these reports. | FedNow Service Reports will be delivered to Participants. | Participant does not receive enabled reports. | • 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). |

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\(^{25}\) See Reporting and Reconciliation section for additional details.
8. Message Signing

a. Overview
The FedNow Service requires that all messages exchanged with the FedNow Service are cryptographically signed, except for the Participant Broadcast Ping (admi.004) message. Additional information on messaging signing, including message format and rules, can be found in the FedNow Service Technical Specifications.

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 the Authorized Connection Profile. The key pairs must follow the Technical Specifications 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 will be rejected (admi.002) with the applicable error code. 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. 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 FRB Services 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. The FedNow Service will validate the new key pair and store 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 interface 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 FRB Services Support Center (1-833-FRS-SVCS (377-7827)).
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.

**Active Key Management**

Participants may establish as many key pairs as desired. Key pair owners should always have more than one active key pair, eliminating the risk that all keys will expire. An industry best practice is to have multiple active key pairs, each with a unique expiration date.

Service Providers can use the same key for all FIs or have different sets of keys for each financial institution (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. Participants may also receive all active key pairs via MQ messaging.

**Key Expiration**

Key pairs established via the FedNow interface automatically expire one year, or 365 days, after established unless their owner designates an earlier expiration date upon creation. Key pair established via MQ messaging require an expiration date be included, up to 365 days. Key pair owners can see their active keys and expiration dates in the FedNow interface. Key pair owners are responsible for ensuring there is always at least one active key and 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 will not receive a reminder message before this occurs. After the expiration date, a message signed with the expired key will be rejected with the applicable error code.

**Private Key Storage**

Key pair owners will only exchange public keys with the FedNow Service and must keep their private keys secure. Key pair owners will 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, in both the production and the test environment. Key pair requirements are the same in both environments. However, the same key pair cannot 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 FRB Services 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 365-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) when it establishes a new key pair.

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31 See the FedNow Service Technical Specifications for additional details.
FedNow Service public key. The FedNow interface also will display 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.

**Messages Signed by the FedNow Service**
All messages originated by the FedNow Service are signed with FedNow Service’s internal private keys and must be validated by the Receiver FI using the corresponding public key.

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; and
- 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. Ensure the FedNow Service public keys list is up to date with FedNow Service public keys;
- b. Respond to the message with Message Reject (admi.002), indicating the received message was rejected; and
- c. Call the FRB Services Support Center (1-833-FRS-SVCS (377-7827)) with notification that it received message(s) unsigned or signed with expired keys or signed with unrecognized key pair from the FedNow Service.\(^{32}\)

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\(^{32}\) Initially, the FedNow Service will 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 FRB Services Support Center. The FedNow Service anticipates being able to process the admi.002 message at a later date.
9. 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: Has a FedNow Participant Profile to receive and/or send and receive (instant payments, Liquidity Management Transfers, reports, etc.) 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 interface for a Participant are able to view the other Service Provider’s Connection Party Name, ID and permissions assigned by the Participant.
- Service Providers that are granted permission to receive reports (via FedNow interface and ISO messaging) for the Participant receive reports containing all activity for the Participant, regardless of which Service Provider processed the messages.
- Service Providers that are granted permission to access the FedNow interface for a Participant are able to view some message details via the Adhoc Query tool 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. 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 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 receive messages (including reports) from the FedNow Service or 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. 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 Permissions34 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.

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34 See the Connection Party permissions section below.
Profile requirements are based on the organization’s type, role and connection set-up. The following table shows some common combinations of Participant type and connection set-ups, with the applicable profile requirements.35

<table>
<thead>
<tr>
<th>Organization Type</th>
<th>Acting as a …</th>
<th>Connection Set-up Options</th>
<th>Profile Requirements for the Organization Type</th>
</tr>
</thead>
</table>
| Financial Institution | Financial Institution | Direct – FI connects directly to the FedNow Service | • 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 | • Participant Profile  
• Authorized Connection Profile |
| Financial Institution | Correspondent | Direct – Correspondent connects directly to the FedNow Service | • Participant Profile  
• Authorized Connection Profile |
| Service Provider | – Correspondent connects to the FedNow Service via a Service Provider | Participant Profile |
| Direct and Service Provider | – Correspondent connects directly to the FedNow Service and via a Service Provider | • Participant Profile  
• Authorized Connection Profile |
| No connection | – Correspondent is not connected to the FedNow Service, nor does it have a FedNow Profile. Will not be 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 |

35 This list is not exhaustive.
9.1. 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 information provided during onboarding or via request to the FRB Services Support Center.
   - Viewable in: FedNow interface

The participation type defines the type of service(s) the Participant will use within the FedNow Service. There are three participation types: Customer Credit Transfer, Liquidity Management Transfer and Settlement Only. FIs that enable Customer Credit Transfer are automatically opted-in to LMT and have the option to opt-out if needed. Options within Customer Credit Transfer include the ability to receive only or send and receive instant payments and the ability to receive a request for payment. Options within LMT include the ability to receive only or send and receive LMTs. Settlement Only Correspondents receive reports and notifications on respondent activity.

The participation types are shown in the following table.

<table>
<thead>
<tr>
<th>Participation Types</th>
<th>Details</th>
<th>Configurable Components of Participation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Credit Transfer</td>
<td>Send and Receive</td>
<td>• Receive request for payment (pain.013)</td>
</tr>
<tr>
<td></td>
<td>• Participant can send and must be able to receive Customer Credit</td>
<td>• Maximum transaction value limit – Customer Credit Transfers</td>
</tr>
<tr>
<td></td>
<td>Transfer messages (pacs.008)</td>
<td>• Reserved Receiver FI Response Time</td>
</tr>
<tr>
<td></td>
<td>• Participant must be able to send and receive payment returns</td>
<td>• Receive Account Debit/Credit Notifications</td>
</tr>
<tr>
<td></td>
<td>(pacs.004)</td>
<td></td>
</tr>
<tr>
<td>Customer Credit Transfer</td>
<td>Receive Only</td>
<td>• Reserved Receiver FI Response Time</td>
</tr>
<tr>
<td></td>
<td>• Participant must be able to receive Customer Credit Transfer</td>
<td>• Receive Account Debit/Credit Notifications</td>
</tr>
<tr>
<td></td>
<td>messages (pacs.008)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Participant can send and receive payment returns</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(pacs.004)</td>
<td></td>
</tr>
<tr>
<td>Liquidity Management Transfer</td>
<td>Send and Receive</td>
<td>• Maximum transaction value limit – LMT</td>
</tr>
<tr>
<td></td>
<td>• Participant can send and receive LMT messages (pacs.009)</td>
<td>• Receive Account Debit/Credit Notifications</td>
</tr>
<tr>
<td>Liquidity Management Transfer</td>
<td>Receive Only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Participant must be able to receive LMT messages (pacs.009)</td>
<td></td>
</tr>
<tr>
<td>Settlement Only</td>
<td>Participant (Correspondent) can receive reporting and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>notifications via ISO 20022 messaging from the FedNow Service.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Components configured by the Federal Reserve Banks are expected to be confirmed by Participants.
## 2. Components of Participation Type

Participants or their Service Providers must configure or request specific configurations for Components of Participation Type based on their participation types, as described below.

<table>
<thead>
<tr>
<th>Components of Participation Type</th>
<th>Applicable To</th>
<th>Configured by</th>
<th>Viewable or Editable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receive Request for Payment</strong></td>
<td>Customer Credit Transfer Send and Receive</td>
<td>Federal Reserve Banks, based on information provided during Onboarding or via request to the FRB Services Support Center</td>
<td>Viewable</td>
</tr>
<tr>
<td><strong>Maximum Transaction Value Limit – Customer Credit Transfer</strong></td>
<td>Customer Credit Transfer Send and Receive</td>
<td>Participant or Service Provider(s)</td>
<td>Editable</td>
</tr>
<tr>
<td><strong>Reserved Receiver FI Response Time</strong></td>
<td>Customer Credit Transfer Send and Receive Customer Credit Transfer Receive Only</td>
<td>Participant or Service Provider(s)</td>
<td>Editable</td>
</tr>
<tr>
<td><strong>Maximum Transaction Value Limit – LMT</strong></td>
<td>Liquidity Management Transfer Send and Receive</td>
<td>Participant or Service Provider</td>
<td>Editable</td>
</tr>
<tr>
<td><strong>Receive Account Debit/Credit Notifications (Correspondent)</strong></td>
<td>All, if acting as Correspondent</td>
<td>Participant or Service Provider</td>
<td>Editable</td>
</tr>
</tbody>
</table>

**Receive Request for Payment**

This setting allows the Participant to receive requests for payment (pain.013), respond with a request for payment response (pain.014) and send a subsequent Customer Credit Transfer (pacs.008), if applicable.³⁸ By default, Receive Request for Payment is disabled, and the Participant must ask the FRB Services Support Center (1-833-FRS-SVCS (377-7827)) to enable this capability.

**Maximum Transaction Value Limit – Customer Credit Transfer**

The maximum transaction value limit for a Customer Credit Transfer is a configurable amount for pacs.008 messages that is set by Customer Credit Transfer – Send and Receive Participants and/or Service Provider(s) on their behalf and applies to pacs.008 messages for the sending institution (i.e., instructing agent). The limit applies to all customer credit transfers originating from the Participant Profile’s RTN. This field is disabled if Customer Credit Transfer Receive Only is selected.

The FedNow Service uses a default value for the maximum transaction value, which is set lower than the network limit for Customer Credit Transfers.³⁹ The Participant can adjust the transaction limit by selecting Other Amount and entering the desired value. The value in U.S. dollars must be:

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

³⁷ The maximum transaction limit is only applied when sending a Customer Credit Transfer
³⁸ If the request for payment (pain.013) was accepted.
³⁹ 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.\(^{40}\) 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 FIs to configure a response time frame up to a maximum of five seconds. A Participant and/or Service Provider(s) on its behalf can set the response time to any value between one and five seconds based on the Participant’s ability to process and respond within the selected time. Before sending an instant payment to the 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 will reject 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.

Maximum Transaction Value Limit – Liquidity Management Transfer
The maximum transaction value limit for Liquidity Management Transfers is a configurable amount for pacs.009 messages that is set by Liquidity Management Transfer – Send and Receive Participants and applies to pacs.009 messages for the sending institution (i.e., instructing agent). The limit applies to all LMTs originating from the Participant Profile’s RTN. The field is disabled if Liquidity Management Transfer Receive Only is selected.

The FedNow Service sets the default network limit at the maximum transaction value.\(^{41}\) The Participant and/or Service Provider(s) on their behalf can decrease the transaction limit by selecting Other Amount and entering the desired value. The value in U.S. dollars must be:

- Equal to or less than the network dollar limit for a Liquidity Management Transfer
- A whole number
- A numeric value
- A positive value
- Greater than or equal to $1.00

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 Customer Credit Transfer and/or Liquidity Management Transfer Participation Types.\(^{42}\)

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\(^{40}\) See the Value Messages section for additional details on the payment timeout clock.

\(^{41}\) See the Network Limits section for additional details.

\(^{42}\) See the FedNow interface How to Guide for additional details.
### 3. Settings

<table>
<thead>
<tr>
<th>Settings</th>
<th>Applicable To</th>
<th>Configured by</th>
<th>Viewable or Editable (in the FedNow interface)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Negative List</td>
<td>Customer Credit Transfer Send and Receive</td>
<td>Participant or Service Provider, after being enrolled by the Federal Reserve Banks</td>
<td>Editable</td>
</tr>
<tr>
<td></td>
<td>Customer Credit Transfer Receive Only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Reports</td>
<td>All Participant Profiles</td>
<td>Participant and/or Service Provider</td>
<td>Editable</td>
</tr>
</tbody>
</table>

**Participant Negative List**

To help mitigate fraud, the FedNow Service offers Participants the option of establishing a negative list to reject transactions either coming from or to specific accounts based on a Participant negative list. Participants must contact the FRB Services Support Center (1-833-FRS-SVCS (377-7827)) to enroll in the negative list.

**Daily Reports**

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. Subscribers 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 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 Account Activity Totals Report is enabled, and the Account Activity Details Report is not enabled. Subscribers may adjust these settings to meet their needs and those of each eligible RTN.

### 4. Connection Party Permissions

- **Applicable to**: All Mappings Between Participant Profiles and Connection Parties
- **Configured by**: Federal Reserve Banks, based on information provided during onboarding or via request to the FRB Services Support Center
- **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 ability to send and receive Customer Credit Transfer and Payment Return will not be applicable.

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43 See the Negative List section for additional details.
44 See the Reporting and Reconciliation section for additional details.
Considerations for a Participant with multiple connection parties:

- Only one Connection Party is permissioned for *Receiving Credit Transfer, Payment Return and Nonvalue Messages*. 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, Payment Return and Nonvalue Messages*. See table in the Queue section below for more information.
- Only one Connection Party is permissioned for *Receiving LMT Messages*.
- Only two Connection Parties are permissioned for *Receiving Correspondent Debit/Credit Notification*.
- A Connection Party that is permissioned to receive EOD reporting will receive reports containing **all** activity for the Participant, regardless of which Connection Party processed the messages.
- A Connection Party that is permissioned to access the FedNow interface for a Participant are able to view some message details via the Adhoc Query tool for **all** activity for the Participant, regardless of which Connection Party processed the messages.

The Connection Party permissions are as follows:

<table>
<thead>
<tr>
<th>Permissions</th>
<th>Description</th>
<th>Credit Transfer</th>
<th>LMT</th>
<th>Settlement Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Transfer and Payment Return Message Origination</td>
<td>Send pacs.008 and pacs.004 messages</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Transfer and Payment Return Message Receiving</td>
<td>Receive pacs.008, pacs.004 and related pacs.002 messages</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LMT Message Origination</td>
<td>Send pacs.009 messages</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>LMT Message Receiving</td>
<td>Receive pacs.009 related pacs.002 messages</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Nonvalue Message Origination</td>
<td>Send camt.056, camt.029, pain.013, pain.014, pacs.028, camt.055, camt.026, camt.028 and adm.007</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Nonvalue Message Receiving45</td>
<td>Receive camt.056, camt.029, pain.013, pain.014, pacs.028, camt.055, camt.026, camt.028 and adm.007</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Account Balance Report Request Origination</td>
<td>Send camt.060 (ABAR)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Receive camt.052</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity Reports Request Origination</td>
<td>Send camt.060 (AATR, AADR, IATR, CATR, CADR, CITR)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Receive camt.052</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report EOD Receiving</td>
<td>Receive the Activity Reports automatically at the end of the day (dependent on daily reports setting)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Administrative Origination</td>
<td>Send admi.004 (Participant broadcast) and admi.006</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Administrative Receiving</td>
<td>Receive admi.004 and admi.011</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Account Management / UI Permissions Will be automatically enabled for FIs with direct connections</td>
<td>Edit applicable setting in the FedNow interface</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Account Management / UI Permissions – Read Only</td>
<td>Read only access to the FedNow interface</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

---

45 If multiple Connection Parties, specific nonvalue messages are not sent to the Connection Party with *Credit Transfer, Payment Return and Nonvalue Message Receiving* permission. See table in the Queue section below for more information.
If the Account Management / UI Permissions and Account Management / UI Permissions – Read Only are not granted, the connection party will have no access to the FedNow interface.

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 Service.46

<table>
<thead>
<tr>
<th>Status</th>
<th>Description of Participant Status</th>
</tr>
</thead>
</table>
| Inactive              | - A status for a Participant Profile that is initially created  
- The Participant 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 set-up is complete and effective date is set                                                                                                           |
| Pending Activation    | - A status for a Participant Profile that has an effective activation date set  
- The Participant 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                | - A status for a Participant Profile once the effective cycle day has commenced  
- The Participant 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 Service51.                                                 |
| Pending Deactivation  | - A status for a Participant Profile that has a deactivation date set  
- The Participant 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 pm ET.                       |

46 See Participant Broadcast for additional details.
47 User's ability to update profiles is controlled by subscriber-level access and permissions.
48 Effective date is decided by the Participant.
49 User's ability to update profiles is controlled by subscriber-level access and permissions.
50 User's ability to update profiles is controlled by subscriber-level access and permissions.
51 See the Participant Broadcast section for additional details about signing on.
52 User's ability to update profiles is controlled by subscriber-level access and permissions.
<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deactivated</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>Messages cannot be sent and/or received.</td>
</tr>
<tr>
<td></td>
<td>Participant is unable to access the FedNow interface.</td>
</tr>
<tr>
<td></td>
<td>Participants that are Customer Credit Transfer Send and Receive or Receive Only will be signed off the FedNow Service.</td>
</tr>
<tr>
<td></td>
<td>Participant Profile can only be reactivated by going through the onboarding process.</td>
</tr>
<tr>
<td>Suspended</td>
<td>A status that restricts a Participant’s access to the FedNow Service for any reason.</td>
</tr>
<tr>
<td></td>
<td>Messages cannot be sent and/or received.</td>
</tr>
<tr>
<td></td>
<td>Participant is unable to access the FedNow interface.</td>
</tr>
<tr>
<td></td>
<td>Participants that are Customer Credit Transfer Send and Receive or Receive Only will be signed off the FedNow Service.</td>
</tr>
<tr>
<td></td>
<td>Once the suspension is lifted, the Participant Profiles will need to sign back onto the FedNow Service to receive instant payments.</td>
</tr>
</tbody>
</table>

53 See the Participant Broadcast section for additional details about signing on.
54 The Federal Reserve Banks maintain the right to terminate or restrict a Participant’s access to the FedNow Service for any reason.
55 See the Participant Broadcast section for additional details about signing on.
9.2. Authorized Connection Profile

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).

Figure D depicts an example relationship between the Participant Profile, Authorized Connection Profile, Connection Party, Connection Point and Queues. Additional details in the section below on each of these components.

Figure D

b. Parts of Authorized Connection Profile

1. Connection Party
   - Applicable to: All Authorized Connection Profiles
   - Configured by: Federal Reserve Banks, based on information provided during onboarding or via request to the FRB Services Support Center
   - 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 MQ connection 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 Permissions enabled by the Participant Profile. The Connection Party is used to maintain all connection information, including queue names, and identify the message categories assigned to specific queues.

See the Connection Party permissions section below.
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 FRB Services Support Center (1-833-FRS-SVCS (377-7827)). The Connection Party ID is used to identify the To/From Authorized Sending Party in 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.

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
   - Configured by: Federal Reserve Banks, based on information provided during onboarding or via request to the FRB Services Support Center
   - 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).\(^57\)

The Participant or Service Provider that owns the Connection Party must name the Connection Point (a maximum of 15 alpha-numeric characters) and can name and configure queues that are outgoing from the FedNow Service (including the message categories they receive and applicable RTNs). The Connection Point ID is autogenerated by the FedNow Service.

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

3. Queues (Endpoints)

\[^57\] Participant Broadcast message admi.004 with code FPCD and FPCR. See the Participant Broadcast section for additional details.
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
- **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.

<table>
<thead>
<tr>
<th>Status</th>
<th>Description of Authorized Connection Profile Status</th>
</tr>
</thead>
</table>
| Inactive                | - A status for an initial Authorized Connection Profile  
- The Participant\(^{58}\) 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 set-up is complete and an effective date\(^{59}\) is set |
| Pending Activation      | - A status for an Authorized Connection Profile that has been assigned an effective activation date  
- The Participant\(^{60}\) 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                  | - A status for an Authorized Connection Profile once the effective cycle day has commenced  
- The Participant\(^{61}\) 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    | - A status for an Authorized Connection Profile that has a deactivation date set  
- The Participant\(^{62}\) 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. |
| Deactivated             | - 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 |

\(^{58}\) User’s ability to update profiles is controlled by subscriber level-access and permissions.  
\(^{59}\) Effective date is decided by the Participant.  
\(^{60}\) User’s ability to update profiles is controlled by subscriber-level access and permissions.  
\(^{61}\) User’s ability to update profiles is controlled by subscriber-level access and permissions.  
\(^{62}\) User’s ability to update profiles is controlled by subscriber-level access and permissions.
| Suspended | • A status that restricts\(^{63}\) 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  
  o 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. |

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\(^{63}\) The Federal Reserve Banks maintain the right to terminate or restrict a Participant’s access to the FedNow Service for any reason.
9.3. FedNow Profile Considerations (Service Providers and Multiple Profiles)

a. Service Providers and Participants using Service Providers

A Service Provider and its Participant 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 will be 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 enables a Service Provider(s) to edit the FedNow interface is allowing the Service Provider(s) to update its Participant Profile. 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**

The FedNow Service sends broadcast messages to the Connection Party. The Service Provider is responsible for conveying all relevant messages to its Participants.

**Suspension**

If a Participant Profile that connects via a Service Provider’s Authorized Connection Profile is suspended, the FRB Services Support Center (1-833-FRS-SVCS (377-7827)) will work to inform the Service Provider of the suspension. The Service Provider also will be able to 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 will receive a FedNow broadcast (admi.004) that the Participant has signed off.

b. Participants using a Correspondent

**Liquidity Management Transfers (LMT)**

For Participants 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 FRB Service Support Center (1-833-FRS-SVCS (377-7827)). If LMT capabilities are allowed by the Correspondent, the respondent may request the desired LMT participation type to be enabled by contacting the FRB Services Support Center (1-833-FRS-SVCS (377-7827)).

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64 See the Connection Party permissions in the FedNow Participant Profile section.
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 permissioned for Receiving Credit Transfer, Payment Return and Nonvalue Messages. 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, Payment Return and Nonvalue Messages. See table in the Queue section below for more information.
- Only one Connection Party is permissioned for Receiving LMT Messages.
- Only two Connection Parties are permissioned for Receiving Correspondent Debit/Credit Notification.
- A Connection Party that is permissioned to receive EOD reporting will receive reports containing all activity for the Participant, regardless of which Connection Party processed the messages.
- A Connection Party that is permissioned to access the FedNow interface for a Participant are able to 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 (CCT) Send and Receive and Liquidity Management Transfer Send and Receive. Financial Institution X is mapped to two Connection Parties. Both Connection Parties can send CCT (pacs.008 and pacs.004) and/or LMT (pacs.009). However, both Connection Parties cannot receive CCT or LMT messages. Only one Connection Party can have permissions to receive all CCT messages (including nonvalue messages) and one (either the same or different) can receive all LMT messages.

Figure F displays three examples of configuration options for a Participant with multiple Connection Parties.
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 have one or more Connection Party mapped to. Figure G shows two examples of configuration options for a financial institution with more than one Participant Profile.
Figure G

Configuration A

Financial Institution X

Participant Profile A
RTN 111111111
CCT Send & Receive

Participant Profile B
RTN 111111112
LMT Send & Receive

Connection Party 1 (From ACP 1)

CCT Send & Receive Permissions

LMT Send & Receive Permissions

Financial Institution has 2 Participant Profiles that use the same Connection Party (from the same ACP). 1 Connection Party has all permissions.

Configuration B

Financial Institution Y

Participant Profile A
RTN 111111111
CCT Send & Receive

Participant Profile B
RTN 111111112
LMT Send & Receive

Connection Party 1 (From ACP 1)

CCT Send & Receive Permissions

Connection Party 2 (From ACP 2)

LMT Send & Receive Permissions

Financial Institution has 2 Participant Profiles that use the 2 Connection Parties (from 2 ACPs). Permissions are split between Connection Party 1 & 2.
10. Participant Negative List for Fraud Mitigation

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 if an entry pair is included in precise fields that match the specific entry pairs included in the sending and/or receiving financial institution’s negative list.

The negative list is managed by Participants through the FedNow Service interface, using either a batch file or the interface for manual maintenance. Participants enter specific RTN and Account Number entry pairs to prohibit these accounts from sending and/or receiving instant payments through the FedNow Service. The FedNow Service will perform an exact match validation for these entry pairs against instant payment messages (pacs.008 and pacs.004) in which the Participant is included as either the Sender FI or Receiver FI. The negative list is applied at the institution level, it is not applied to all transactions across the network.

b. Negative List - Functionality
Once enrolled, all instant payment messages sent to or from the enrolled 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 will be rejected)
- **Restrict receive only** (messages received from this entry pair will be rejected)
- **Restrict both send and receive activity** (messages where this entry pair is either the sender or the receiver will be rejected)

A message rejected by the Sender FI’s negative list will receive a pacs.002 message with a code indicating the Sender’s negative list was the reason for rejection. Likewise, a message rejected by the Receiver FI’s negative list will result in a pacs.002 to the Sender FI with a code indicating the Receiver FI’s fraud controls were the reason for rejection.

For RTN(s) enrolled in the negative list processing option, the negative list checks occur within a timed threshold during the FedNow Service validation phase of message processing. If the negative list checking process exceeds the time limitation, the message will not be checked against the negative list and will be processed. This check is performed within the payment timeout clock time restrictions. Messages that bypassed the negative list check are identified in the Sender and Receiver FI’s end-of-day Account Activity Details Report.

Enrollment in the Negative list
At any time, a financial institution can enroll one or more RTN(s) for the negative list processing option by contacting the FRB Services Support Center (1-833-FRS-SVCS (377-7827)). Any RTN that is not enrolled will not have instant payment messages checked against the Participant’s negative list, as illustrated in the figure below. RTNs can be added or removed at any time after the initial enrollment by the FRB Services Support Center (1-833-FRS-SVCS (377-7827)).

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65 See the Payment Timeout Clock in the Value Messages section for complete details.
The FI designates an administrative RTN to apply a single negative list to all the FIs associated RTNs. This administrative RTN simplifies negative list management and ensures a consistent list is applied across all the FI’s enrolled RTNs. There can be only one administrative RTN per FI. An institution can decide to change the administrative RTN, to another enrolled RTN, if needed and the negative list entries will persist. Negative list entry pairs are added or removed by the administrative RTN via the FedNow Service interface or by uploading a batch file. Each Participant’s negative list has a size limit of 100,000 entry pairs.

Overview of the Enrollment Process (if done after initial Onboarding):

<table>
<thead>
<tr>
<th>Step 1:</th>
<th>An authorized representative of the financial institution contacts the FRB Services Support Center to enroll.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2:</td>
<td>Identify which RTN(s) to enroll in this processing option. This can be one, some, or all of the institution’s RTNs.</td>
</tr>
<tr>
<td>Step 3:</td>
<td>Identify which RTN to designate as the administrative RTN. This RTN must have a FedNow Participant Profile and will be the only one that can create and maintain the negative list for the Participant.</td>
</tr>
</tbody>
</table>
| Step 4: | From the administrative RTN, Participants can add entry pairs to the negative list via the FedNow Service interface\(^\text{66}\), either individually or via a batch file upload.  
- Upon successful updating of the negative list entries, the FedNow Service will begin performing validation checks against the negative list to process or reject messages based on the Participant’s transfer restriction specifications.  
- Negative list entry pairs will be in effect for message checking in near real time.  
- Each Participant’s negative list has a size limit of 100,000 entry pairs. |

\(^{66}\) See FedNow interface How To Guide for additional details.
Unenroll in the Negative List Processing Option
A FI may unenroll one or more RTNs – or all its RTNs – from the negative list processing option at any time. To unenroll, the Participant must contact the FRB Services Support Center (1-833-FRS-SVCS (377-7827)).

NOTE: Once a FI unenrolls all its RTNs and unenrollment has begun, the FI’s negative list and any previous entry pairs will be removed and unretrievable from the FedNow Service. Before unenrolling, FI’s should download a copy of the most recent negative list from the FedNow interface via a file export.

Negative List Maintenance
Participants will 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 enrolled 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, upon successful acceptance of the update. For each entry pair added to the negative list, the following information is required:

- **Entry Pair**
  - FI’s Routing Transit Number (RTN)
  - Account Number
- **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)\(^\text{67}\)

Participants can make multiple edits at once by logging into the Participant Profile of the administrative RTN and uploading a batch file through the FedNow interface. Separate batch files will be used to add and to remove entry pairs. Batch files will be processed in the order in which they are received. For Participants that need to both add and remove entry pairs, it is recommended to upload the batch file to remove entry pairs first, followed by the batch file to add entry pairs. This may reduce errors and enable FIs to avoid exceeding maximum list size limits.

A FI may update its negative list at any time via the designated administrative RTN. Participants can generate an export of their current negative list at any time through the FedNow interface.\(^\text{68}\) 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.

c. Processing Instant Payments using the Negative List
After FI enrollment and creation of the negative list by the administrative RTN, messages are checked for all enrolled RTNs.

<table>
<thead>
<tr>
<th>Processing steps using the Negative List</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1:</strong> Sender FI sends pacs.008 or pacs.004 message to the FedNow Service.</td>
</tr>
</tbody>
</table>

\(^{67}\) Refer to the FedNow Technical Specifications for complete details.
\(^{68}\) See FedNow interface How To Guide for additional details.
| 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 FI or Receiver FI are enrolled for the negative list. Where one or both FIs are enrolled, the service performs a validation check of the entry pairs 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 in the instant payment message 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 (the Sender FI nor the Receiver FI has an exact match in either negative list), the message will continue through the remaining FedNow Service validations and continue processing. |
| Step 5b: | If the negative list(s) processing exceeds the allotted time threshold, the message will bypass the negative list validation and continue with further 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 will receive a Message Reject (pacs.002) with the appropriate error code (see below). |
| | • If a Participant has questions about the processing or rejection of an instant payment message, it can contact the FRB Services Support Center (1-833-FRS-SVCS (377-7827)). |

**Error Codes Reported for Rejected Messages**

When messages are checked against the Sender FI’s and/or Receiver FI’s negative list and rejected, the Sender FI receives a MessageReject (pacs.002) including a reason code to inform it that transaction was rejected because of fraud controls.

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

- Sender FI will receive a pacs.002 rejection 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 Receiver FI’s fraud controls:

- Sender FI will receive a pacs.002 rejection with reason code F101 indicating rejection is because of a fraud control setting by the Receiver FI

**Reporting of Rejected and Bypassed Messages**

Messages that were rejected due to negative list matches or that bypassed negative list checking that exceeded the time allotment will be listed in the Sender FI’s end-of-day Account Activity Details Report with reason code F004. In addition to the Account Activity Details report, the Sender FI also can check the status of messages related to fraud checking and negative list timeouts via the Adhoc Query functionality in the FedNow interface.  

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11. 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.
12. 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.

a. Overview
All messages sent to the FedNow Service must follow FedNow Service ISO 20022 message specifications\(^70\) and FedNow Service Technical Specifications\(^71\) 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 send or receive ISO 20022 messages to the FedNow Service and therefore, these requirements should 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.

For all 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.
- Retrieval of FedNow active public key(s).
- Use of a reliable time server.
- A unique message identifier,\(^72\) 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.

\(^70\) Published on the Federal Reserve Financial Services’ MyStandards web portal [https://www2.swift.com/mystandards/#/group/Federal_Reserve_Financial_Services/FedNow_Service/portals](https://www2.swift.com/mystandards/#/group/Federal_Reserve_Financial_Services/FedNow_Service/portals).

\(^71\) See the FedNow Service Technical Specifications, which provide additional details that are required to send a completed FedNow Service message.

\(^72\) See the ISO 20022 Specifications for additional details.
c. Duplicate Messages
FedNow Participants must use a unique message identifier for ISO 20022 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.  
If the payment timeout clock has expired and the Participant remains unsure of the message status, 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 search function in the Adhoc Query tool via the FedNow interface. If the FedNow Service has received and processed the message, the Participant will receive a message status update via a pacs.002 or the Adhoc Query tool.
   a. If needed, send a retrieval request (admi.006) indicating the unique message ID of the message to be retrieved. The FedNow Service will return a copy of the message.
2. 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. The Participant should attempt to resend the message with the same message ID, while adhering to the requirements of the message ID (calendar date, Connection Party ID and reference).
3. If issues persist, the Participant should call the FRB Service Support Center (1-833-FRS-SVCS (377-7827)) to inquire about the status.

d. Business Application Header
A Business Application Header (BAH) is required for all ISO 20022 messages sent through the FedNow Service, whether sent by FedNow Participants or the FedNow Service.

<table>
<thead>
<tr>
<th>ISO 20022 Message</th>
<th>Used by</th>
<th>Message Functionality</th>
</tr>
</thead>
</table>
| head.001          | 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 20022 message and the protocols (technical and connectivity requirements) used to transmit the message.  


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. Value messages include Customer Credit Transfer (pacs.008), payment return (pacs.004) and Liquidity Management Transfer (pacs.009).

<table>
<thead>
<tr>
<th>ISO 20022 Message</th>
<th>Used by</th>
<th>Message Functionality</th>
</tr>
</thead>
</table>
| pacs.008                | Participants | Instructs the FedNow Service about a single instant payment where either the initial sender or final receiver, or both, are not FIIs.  

73 See Error Codes and Descriptions for additional details.  
74 See Value Message Overview Section for timeout clock details.  
75 See Adhoc Query Tool section for additional details.  
### f. Nonvalue Messages

A nonvalue message is 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 retrieval requests (admi.006), account report requests (camt.052) and payment status requests to FedNow Service (pacs.028).

<table>
<thead>
<tr>
<th>ISO Message</th>
<th>Used by</th>
<th>Message Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>pain.013 RFP</td>
<td>Participant</td>
<td>Request funds on behalf of a recipient.</td>
</tr>
<tr>
<td>pain.014 RFP response</td>
<td>Participant</td>
<td>Processing status of an RFP previously sent through the FedNow Service.</td>
</tr>
<tr>
<td>camt.055 RFP cancellation request</td>
<td>Participant</td>
<td>Request to cancel a previously sent RFP (pain.013).</td>
</tr>
<tr>
<td>camt.029 RFP cancellation request response</td>
<td>Participant</td>
<td>Processing status of an RFP cancellation request.</td>
</tr>
<tr>
<td>camt.026 Information request</td>
<td>Participant</td>
<td>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).</td>
</tr>
<tr>
<td>camt.029 Information request response</td>
<td>Participant</td>
<td>Processing status of a previously received information request (camt.026).</td>
</tr>
<tr>
<td>camt.028 Additional payment information</td>
<td>Participant</td>
<td>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).</td>
</tr>
<tr>
<td>camt.056 Return request</td>
<td>Participant</td>
<td>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.</td>
</tr>
<tr>
<td>camt.029 Return request response</td>
<td>Participant</td>
<td>Processing status of a previously sent return request (camt.056).</td>
</tr>
<tr>
<td>pacs.028 Payment status request</td>
<td>Participant</td>
<td>Request the processing status of a previously sent pacs.008, pacs.009 or pacs.004 message from the FedNow Service.</td>
</tr>
<tr>
<td>pacs.028 Payment status request</td>
<td>Participant</td>
<td>Request the processing status of a previously sent pacs.008, pacs.004 or pain.013 message from another Participant.</td>
</tr>
<tr>
<td>pacs.002 Participant payment status</td>
<td>Participant</td>
<td>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).</td>
</tr>
</tbody>
</table>
### 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.

<table>
<thead>
<tr>
<th>ISO Message</th>
<th>Used by</th>
<th>Message Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>admi.002 Message reject</td>
<td>Participant</td>
<td>Inform the FedNow Service that the Participant cannot process the message sent by FedNow Service.</td>
</tr>
<tr>
<td>admi.002 Message reject</td>
<td>FedNow Service</td>
<td>Inform the Participant that the FedNow Service has rejected the message.</td>
</tr>
<tr>
<td>admi.004 Participant broadcast</td>
<td>Participant</td>
<td>Notify the FedNow Service of a Participant event or query whether there is a connection (ping) to the FedNow Service.</td>
</tr>
<tr>
<td>admi.006 Retrieval request</td>
<td>Participant</td>
<td>Request the FedNow Service to provide a copy of a messages(s) previously sent or received by the FedNow Participant.</td>
</tr>
<tr>
<td>admi.007 Receipt acknowledgment</td>
<td>FedNow Service</td>
<td>When sent by the FedNow Service, informs the Participant that a previously sent message was successfully processed by the FedNow Service and delivered to the intended receiver.</td>
</tr>
<tr>
<td>admi.007 Receipt acknowledgment</td>
<td>Participant</td>
<td>When sent by a Participant, informs Sender FI that a previously sent message has been received by the Receiver FI.</td>
</tr>
<tr>
<td>admi.998 FedNow Participant file</td>
<td>FedNow Service</td>
<td>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.</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>ISO 20022 Message</th>
<th>Used by</th>
<th>Message Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>camt.060 Account Reporting Request (Participant and Correspondent)</td>
<td>Participant</td>
<td>Request the FedNow Service to send one of the following account reports.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Account Balance Report</strong>: Provides account balance reports for Master Accounts and a subset of the account balance report for subaccounts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Account Activity Totals Report</strong>: Provides account activity totals, including value messages and nonvalue messages.</td>
</tr>
</tbody>
</table>
- **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.

<table>
<thead>
<tr>
<th>camt.052</th>
<th>FedNow Service</th>
<th>Provides the requested report based on report code to the Participant or Correspondent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Reports (Totals and Details)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>camt.054</th>
<th>FedNow Service</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Debit/Credit Notification</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
14. System Messages

a. Broadcast 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 requirements\(^\text{77}\) 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.

\(^\text{77}\) See the FedNow ISO 20022 Messages section for details on requirements.
14.1. Participant Broadcast Message (admi.004)

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Event</th>
<th>Description</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>PING</td>
<td>Connection Check</td>
<td>FedNow Participant checks connection to the FedNow Service</td>
<td>• Following initial setup on FedNow Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Only as required to check connectivity</td>
</tr>
<tr>
<td>FPOF</td>
<td>Participant Offline</td>
<td>A FedNow Participant or FedNow Service Connection Party signing off from the FedNow Service</td>
<td>As needed</td>
</tr>
<tr>
<td>FPON</td>
<td>Participant Online</td>
<td>A FedNow Participant or FedNow Service Connection Party signing on to the FedNow Service</td>
<td>• When first signing onto the FedNow Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• As needed after signing off</td>
</tr>
<tr>
<td>FPCD</td>
<td>Connection Point Disconnect</td>
<td>A FedNow Participant disconnecting a Connection Point from the FedNow Service.</td>
<td>As needed</td>
</tr>
<tr>
<td>FPCR</td>
<td>Connection Point Reconnect</td>
<td>A FedNow Participant reconnecting a Connection Point to the FedNow Service.</td>
<td>As needed after disconnecting</td>
</tr>
</tbody>
</table>

*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.

Participant/Connection Party Sign On or Sign Off
The functionality of signing on and off (via admi.004 code FPON or FPOF) is reserved for Participants and Connection Parties that are enabled (via Participation Type and Connection Party Permissions) to receive instant payments (pacs.008 and pacs.004). Therefore, only these Participants and Connection Parties are required to initially sign 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 Customer Credit Transfers tries to sign on, the FedNow Service will reject the message.

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

79 See the FedNow Profile section for additional details.
After initially signing on via admi.004 code FPON, a Connection Party or Participant can sign off via admi.004 code FPOF or via the FedNow interface. The FedNow Service will notify all other Connection Parties via a FedNow broadcast message (admi.004 code FPON or FROF) that a Participant has signed on or off immediately following the status change. When ready to sign back on to the FedNow Service, this must be done via admi.004 code FPON and cannot be done via the FedNow interface.

A Participant Profile or Connection Party may use the sign off message (admi.004 code FPOF) during maintenance windows or other events when it cannot receive instant payment messages (pacs.008 and pacs.004). 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 messages will 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.

Participants and their Service Providers should check to see if the Receiving FI is active on the service and not signed off before sending a value message to the FedNow Service. While other messages will be 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 the 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 and subsequent FedNow broadcast communication:

- **To sign on/off an individual Participant Profile**: The Event Parameter field must contain the FedNow Participant routing number for the FedNow Service to sign on/off that RTN.
  - When an individual Participant Profile is signed on/off, a FedNow broadcast (admi.004 code FPON or FPOF) will be sent to all Connection Parties including the Participant Profile’s Connection Party.
- **To sign on/off a Connection Party, which will sign on/off all RTNs (with the customer credit transfer receive permission enabled) under that Connection Party**: The Event Parameter field must be left blank. The FedNow Service will sign on/off the Authorized Connection Profile based on the RTN/ETI (Electronic Transaction Identifiers) listed in the BAH “from” field of the admi.004 received.
  - When a Connection Party is signed on/off, a FedNow broadcast (admi.004 code FPON or FPOF) will be sent to all other Connection Parties that own the Connection Profile that signed on/off will not be sent the FedNow broadcast. The Connection Party is required to communicate with the Participants they support as needed.

If necessary, the Federal Reserve Banks will sign off a Participant or ACP on their behalf.

**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. 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 will not send a broadcast message to other Connection Parties about a connect or disconnect.

If a Connection Party that is operating in the production environment adds an additional Connection Point, the Connection Party must connect that new connection point to the FedNow Service by sending an admi.004 with code FPCR once the setup is complete.
## Participant Broadcast Message Flows

### Connectivity Check (Ping)

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Sends a Participant broadcast message (admi.004) to the FedNow Service to check connectivity, include the appropriate report identification code PING.</td>
</tr>
</tbody>
</table>
| FedNow Service    | If connected, the FedNow Service:  
|                   | 1. Receives the broadcast message from the Participant.  
|                   | 2. 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.  
|                   | If not connected, the FedNow Service will not respond. |

### Sign On/Off

Sign-off is denoted throughout in parenthesis.

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Send a broadcast message to the FedNow Service to sign on (or sign off). Include the appropriate report identification code <strong>FPON</strong> for sign on (<strong>FPOF</strong> for sign off).</td>
</tr>
</tbody>
</table>
| FedNow Service    | Receives broadcast message (admi.004) from Sender FI and runs through all applicable validations:  
|                   | ✓ Valid message signature  
|                   | ✓ 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  
|                   | If message fails validations, the FedNow Service will reject the message immediately and send the Sender FI a **Message Reject (admi.002)** with the appropriate reason code. |
| FedNow Service    | If message passes validations:  
|                   | 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 Participant is now signed on (off). |

### Connection Point Disconnect/Reconnect

Reconnect is denoted throughout in parenthesis.

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Send a broadcast message to the FedNow Service to disconnect (reconnect) a Connection Point. Include the appropriate report identification code <strong>FPCD</strong> (<strong>FPCR</strong> reconnect).</td>
</tr>
</tbody>
</table>
| FedNow Service    | Receives broadcast message (admi.004) from Sender FI and runs through all applicable validations  
|                   | ✓ Valid Message Signature  
|                   | ✓ Valid Message Size |
FedNow Service Operating Procedures

| ✔ 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 |

If message fails validations, FedNow Service will reject the message immediately and send a **Message Reject (admi.002)** with the appropriate reason code to the Sender FI.

| FedNow Service |
| If message passes validations: |
| 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 will route new messages from the disconnected Connection Party to one of the other Connection Points associated with the Connection Party. When reconnected, the FedNow Service will route messages to any of the connected Connection Points. |
14.2. FedNow Service Broadcast Messages (admi.004)

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 and therefore, Participants may receive multiple broadcast messages if they utilize multiple Service Providers. It is a best practice to automatically ingest these messages into your system and take the 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 Points regardless of permissions.

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

**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 will inform all Connection Parties that instant payments can again be sent to the Participant.

If a Participant or ACP is suspended the FedNow Service will sign 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 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 will inform Connection Parties but not indicate new timing. Instead, a second system rollover broadcast is sent when the cycle day rolls.
FedNow Keys
Connection Parties will receive a broadcast message when the FedNow Service establishes a new key pair. A Participant must go to the FedNow interface or send message\(^\text{80}\) to retrieve the new FedNow key. 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.

\(^{80}\) See the Technical Specification for additional details.
14.3. FedNow Participant List (admi.998)

a. Scope

The FedNow Participant list (admi.998) is the message that provides a daily list of all active FedNow Participants who can send and/or 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.

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:
  - Customer 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.
  - Customer Credit Transfer Send and Receive (CTRS): 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 will receive a request for payment (pain.013). Without this service enabled, an RFP message sent to the Participant will be 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.

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.

Delivery of Participant List

The Participant list is delivered to all Connection Parties at the start of a new FedNow Service cycle day. Connection Parties are expected to share the list with all Participants they connect to the FedNow Service as needed. Connection Parties cannot request the Participant list via intraday messaging. The Participant list can be downloaded in XML format via the FedNow interface, and Participants or Service Providers may obtain the details 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 will receive a rejection if the new participation type does not support the message sent. For example, if a Participant changes from Customer Credit Transfer Send and Receive with RFP to Customer Credit Transfer Send and Receive intraday, the

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81 Includes Participants with the Participant Profile status of active, suspended or pending deactivation.
participation type change will be effective immediately and will be 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 will be rejected by the FedNow Service. The Sender FI should check the Participant list at the start of the next cycle day.
14.4. Receipt Acknowledgment (admi.007)

a. Overview

The receipt acknowledgment (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. All Participants are required to send the receipt acknowledgment (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 Acknowledgment from the FedNow Service

A receipt acknowledgment (admi.007) sent by the FedNow Service to the Sender FI will confirm 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 acknowledgment, 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 Acknowledgment from the Receiver FI

A receipt acknowledgment (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 times 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 acknowledgment 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, they should:

- 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 Sender FI 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 Acknowledgment in the Operating Procedures

Multiple message flows described in these Operating Procedures include receipt acknowledgment (admi.007) sending and receiving from both the FedNow Service and Receiver FI. The admi.007 will not be included in the step by step flows. Instead, see the callout at the beginning of the applicable message flows.
14.5. Retrieval Request (admi.006)

a. Overview
Participants use a retrieval request message (admi.006) to ask for a copy of message(s) they previously sent or received.

b. Additional Details

Retrieval Request Details
Message retrieval requests are available only for the current FedNow cycle day or up to the six previous cycle days. In a single request, the Participant can ask for retrieval of up to 50 individual messages it sent or received. Larger quantities require multiple retrieval requests. The unique message ID must be included for each message copy requested. The FedNow Service will respond with a separate message for each retrieved copy, which will be sent on the message queue of the original message.\(^\text{82}\)

If the request includes multiple message IDs, the Participant will receive individual copies of each message. The Participant will receive copies of available messages or rejection (not available) messages for unreceived/unprocessed messages. The Participant should confirm message ID accuracy before resubmitting any request for unreceived messages. Contact FRB Services Support Center for additional support, as needed.

This capability can be useful during system disruptions. For example, messages that were dropped or expired from queues during maintenance can be retrieved when normal operations resume.

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. Instead, Participants should use a payment status request (pacs.028)\(^\text{83}\) to obtain the processing status of a previously sent message. Refer to the value messages section for more on payment status request messages.

\(^{82}\) Details related to retrieval request are subject to change.
\(^{83}\) Or the Adhoc Query Tool via the FedNow interface.
Available Retrieval Request Messages
The table below describes the various messages that can and cannot be retrieved using a retrieval request (admi.006). For messages that cannot be retrieved with an admi.006, Participants can either resubmit the request as needed or check the status of the message in the Adhoc Query Tool via the FedNow interface.

<table>
<thead>
<tr>
<th>INCLUDED VALUE MESSAGES</th>
<th>INCLUDED NONVALUE MESSAGES</th>
<th>EXCLUDED MESSAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO Code</td>
<td>Description</td>
<td>ISO Code</td>
</tr>
<tr>
<td>Pacs.008</td>
<td>Customer Credit Transfer</td>
<td>pain.013</td>
</tr>
<tr>
<td>Pacs.009</td>
<td>LMT</td>
<td>pain.014</td>
</tr>
<tr>
<td>Pacs.004</td>
<td>Payment return</td>
<td>pacs.028</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.056</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.029</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.055</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.029</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.026</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.029</td>
</tr>
<tr>
<td></td>
<td></td>
<td>camt.028</td>
</tr>
</tbody>
</table>

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

1. Validation Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Send the retrieval request (admi.006) to the FedNow Service, including the unique message ID and cycle day for every message copy requested up to a limit of 50 per request.</td>
<td>FedNow Service receives request with all necessary details</td>
<td>Request is not able to be processed due to missing or incorrect details.</td>
<td>1. Review the error code description, details in Error Codes and Descriptions section</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Take necessary steps to correct the error identified and ensure all subsequent messages sent to FedNow Service meet requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Send a new message, as needed, with a new unique message ID</td>
</tr>
<tr>
<td>FedNow Service</td>
<td>Receive the retrieval request (admi.006) message from Sender FI and run through all validations</td>
<td>Message passes all validations</td>
<td>Message fails validation and the FedNow Service will reject the message and send a Message Reject (admi.002) with the appropriate reason code to the Sender FI. The validations are listed below.</td>
<td></td>
</tr>
</tbody>
</table>
Validations for Account Report Request (camt.060)

<table>
<thead>
<tr>
<th>Validations</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Valid Message Signature</td>
<td>✓ Confirm Unique Message ID</td>
</tr>
<tr>
<td>✓ Valid Message Size</td>
<td>✓ FedNow Service ISO 20022 Schema Rules followed</td>
</tr>
<tr>
<td>✓ XML Syntax</td>
<td>✓ Message is not a duplicate</td>
</tr>
<tr>
<td>✓ Authorized Sender</td>
<td></td>
</tr>
</tbody>
</table>

### 2. Response Stage

**FedNow Service**

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respond to a successfully validated retrieval request message (admi.006) with a copy of each of the requested message(s) within seconds.</td>
<td>The FedNow Service sends copies of the original messages. The copy of the messages will be sent on the message queue of the original message.84</td>
<td>If the retrieval request was not successfully processed, the FedNow Service will send a message reject (admi.002) to the FedNow Participant. OR No response from the FedNow Service.</td>
<td>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, with a new unique message ID OR If a response from the FedNow Service is not received within seconds, submit a new request.</td>
</tr>
</tbody>
</table>

---

84 Details related to retrieval request are subject to change.
15. Value Messages

a. Value Message

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. 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, should be implemented before sending messages. This includes following the requirements for all ISO 20022 messages[^85] and additional value message requirements:

- Ensure an active Participant Profile is set to one of the below, as appropriate:
  - Customer Credit Transfer Send and Receive OR Customer 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 timestamp(s) to determine start of the timeout clock. The timestamp[^86] is indicated either in the message header or a creation date time element in the BAH if a timestamp[^87] if not in the message header.
- Adhere to the FedNow Service network limits.
- Implement system to support defined receiver response time rules and guidelines.

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.

For instant payments, the payment timeout clock starts based on the timestamp 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 will reject the message and send a message reject (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 will send a message reject (pacs.002) to the Receiver FI, as well.

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

[^85]: See the FedNow ISO 20022 Messages section for details on requirements.
[^86]: Note: the creation date time element in the BAH is always required.
[^87]: See the Technical Specifications for additional details.
c. FedNow Service Rejections

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

See the Error Codes and Descriptions section for additional details.

---

d. Accept Without Post (ACWP)  

Accept without post (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 will 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) the 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 (and return funds) the transaction or make funds available to the intended recipient by midnight Eastern Time (ET) of the next standard business day (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 status of pending (PNDG) 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.

---

e. Payment Status Request

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

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 (when inquiring on a value message). The FedNow Service will reject the pacs.028 if the payment status request is sent while the message is still in process and/or before the timeout clock expires.

If the Participant needs a copy of the message, the Participant can send a retrieval request (admi.006) to receive a copy of the message.

Payment Status Request to the FedNow Service

A pacs.028 can be sent to the FedNow Service to inquire on the status of a previously sent pacs.008, pacs.004 or pacs.009. The FedNow Service will run through validations of the pacs.028 including that the requestor 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 pcs.002, within seconds.

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

Can only be used to inquire on the status of a value message or RFP.
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 pacs.008 message is accepted without post (ACWP), this will be the status provided, even if the Receiver FI offers a subsequent status update (PNDG, 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 is accepted without post (ACWP), when a follow-up pacs.028 is sent to the Receiver FI that status will be either PNDG, BLCK, RJCT or ACCC.
15.1. Customer Credit Transfer (pacs.008)

a. Overview
The Customer Credit Transfer message (pacs.008) is designed 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 involved in sending and receiving the payment to the Participant receiving the payment.

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 and Participant system actions that can resolve the issues described.

1. Validation Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Sends the CCT (pacs.008) to the FedNow Service.</td>
<td>FedNow Service receives pacs.008 from Sender FI.</td>
<td>FedNow Service does not receive pacs.008 from Sender FI.</td>
<td>Sender FI should wait a minimum of 25 seconds from the payment message timestamp to inquire about its status. This can be done by: 1. Sending a payment status request to the FedNow Service (pacs.028) or searching in the FedNow interface Adhoc Query tool a. Status will be 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. 2. If issues persist, contact the FRB Services Support Center.</td>
</tr>
<tr>
<td>FedNow Service</td>
<td>Receives CCT (pacs.008) message from Sender FI and runs through all</td>
<td>Message passes all validations and is sent to the Receiver FI.</td>
<td>Message fails a validation. Depending on the reason, the FedNow Service will: 1. Reject the message immediately and send a message reject (admi.002) with the appropriate reason code to the Sender FI.</td>
<td>1. Review the error code description. 2. Correct the identified error to ensure subsequent messages sent to the service meet requirements.</td>
</tr>
</tbody>
</table>

91 The list of exceptions is not exhaustive.
92 See the Participant Broadcast section for additional details.
94 See Error Codes and Descriptions section of these Operating Procedures
### Validates for Customer Credit Transfer

| ✓ Valid message signature | ✓ Message is not future dated |
| ✓ Valid message size | ✓ Within Receiver FI reserved response time |
| ✓ XML syntax | ✓ Within FedNow Service network transaction limit or Sender FI transaction limit, if configured to be less than the FedNow Service limit |
| ✓ Authorized sender | ✓ Receiver FI is active/signed on and profile is set to send/receive or receive only for CCT |
| ✓ Confirm unique message ID | ✓ Sender FI is active and profile is set to send and receive CCT |
| ✓ FedNow Service ISO 20022 schema rules followed | ✓ Sender and Receiver FIs have valid settlement relationships |
| ✓ Sending and Receiving FIs are FedNow Participants | ✓ Optional: Negative list check, if enabled |
| ✓ Payment timeout clock has not been exceeded | |

---

2. **Response Stage**

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receiver FI</strong></td>
<td>Receives and begins to validate CCT (pacs.008) message from FedNow Service</td>
<td>Able to open and read the pacs.008 from the FedNow Service</td>
<td>Unable to validate the FedNow Service message (e.g., unable to read, technical error). Receiver FI sends message reject (admi.002) to the FedNow Service.</td>
<td>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. 3. If issues persist, contact the FRB Services Support Center (1-833-FRS-SVCS (377-7827)).</td>
</tr>
</tbody>
</table>
| **Receiver FI** | Reviews message and responds with:  
  (ACTC) Accept  
  (ACWP) Accept without post  
  (RJCT) Reject | Receiver FI indicates its planned acceptance by sending a payment status report (pacs.002) | If the Receiver FI does not accept, the Receiver FI could:  
  1. Indicate its planned rejection by sending a payment status report (pacs.002) with code RJCT to the FedNow Service along with the reason for rejection. The FedNow Service | N/A |

---

93 The FedNow Service will consolidate validation failures when possible.

95 Receiver FI should also call the FRB Services Support Center with notification that it rejected with an admi.002. Initially, the FedNow Service will 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.
### FedNowSM Service Operating Procedures

#### Who Required Steps | If no Exceptions | If Exceptions Occur | Action(s) to Correct Failure
--- | --- | --- | ---
**FedNow Service** | Receives pacs.002 from the Receiver FI and runs through all applicable validations. | Message passes all applicable validations. | **FedNow Service** checks that the payment timeout clock has not expired for the CCT (pacs.008). **Payment timeout Clock Stops**

**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 Unable to verify settlement relationship(s) and sends 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.

---

#### 3. Settlement Stage

<table>
<thead>
<tr>
<th>Who Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
</table>
| **FedNow Service** | Receives pacs.002 from the Receiver FI and runs through all applicable validations. | Message passes all applicable validations. | **FedNow Service** checks that the payment timeout clock has not expired for the CCT (pacs.008). **Payment timeout Clock Stops**

**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 Unable to verify settlement relationship(s) and sends 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. |
4. Notification Stage (post settlement)

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

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps (required unless otherwise noted in gray text)</th>
<th>If no Exceptions Occur</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>FedNow Service</td>
<td>Sends payment status report (pacs.002) with code ACSC as confirmation to Sender &amp; Receiver FIs (acknowledgment to the Sender FI and advice of credit to the Receiver FI).</td>
<td>Sender FI and Receiver FI receive pacs.002 confirmation that the Customer Credit Transfer settled. The pacs.002 and pacs.008 are both used to reconcile the transaction.</td>
<td>Sender or Receiver FI does not receive pacs.002 message.</td>
<td>The Participant [either Sender or Receiver FI] should wait a minimum of 25 seconds from the payment message creation date/timestamp 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 will be provided. b. If no response from the FedNow Service, check connection via Ping (admi.004) message. 2. If issues persist, contact the FRB Services Support Center (1-833-FRS-SVCS (377-7827)).</td>
</tr>
<tr>
<td>FedNow Service</td>
<td>If applicable and enabled, sends respective Correspondent(s) an account debit/credit notification (camt.054)</td>
<td>Notifies Correspondent in real time that respondent activity settled in the Correspondent’s Master Account.</td>
<td>Correspondent does not receive the camt.054.</td>
<td>Correspondent can look up camt.054 messages sent by the FedNow Service in the activity reports after end-of-day processing is complete.</td>
</tr>
</tbody>
</table>

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

97 See the Participant broadcast section for additional details.

98 Only applicable for Correspondents.
### FedNowSM Service Operating Procedures

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps (required unless otherwise noted in gray text)</th>
<th>If no Exceptions Occur</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sender FI</strong></td>
<td><strong>Best practice: Upon receipt of acknowledgment (pacs.002), notify end customer of successful or unsuccessful transaction.</strong></td>
<td>End customer is made aware of status of the payment transfer.</td>
<td>End customer is not made aware of the status of the payment.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Receiver FI</strong></td>
<td><strong>Upon receipt of advice of credit (pacs.002), makes the funds available to the recipient immediately.</strong>&lt;sup&gt;99&lt;/sup&gt;</td>
<td>Funds are available.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td><strong>Best practice: Notify recipient of funds availability.</strong></td>
<td>Recipient is made aware of transfer and funds availability.</td>
<td>Recipient is not made aware of the transfer and funds availability.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
|                      | **Best practice: Send payment status report (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 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. | Receiver FI can:  
1. Review the error code description.<sup>100</sup>  
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 payment status report (pacs.002) with code ‘ACCC’ to the Sender FI regarding availability of funds.<sup>101</sup> | 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** | End customer knows recipient received funds. | End customer is not aware of the completed transaction and funds availability. | N/A                          |

---

<sup>99</sup> As soon as practicable, but no longer than a few seconds

<sup>100</sup> See Error Codes and Descriptions section of these Operating Procedures.

<sup>101</sup> Can only happen if the Receiver FI has informed FedNow Service in step above.
### FedNowSM Service Operating Procedures

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps (required unless otherwise noted in gray text)</th>
<th>If no Exceptions Occur</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>receiving the final confirmation of posting (pacs.002) from the FedNow Service.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Process if Receiver FI Responds with Accept Without Posting (ACWP)

| FedNow Service | Sends payment status report (pacs.002) with code ACWP 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 Customer Credit Transfer settled with a status of ACWP. | Sender or Receiver FI does not receive pacs.002 message. | 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/timestamp.  
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 will be provided.  
   b. If no response from the FedNow Service, check connection via Ping (admi.004) message103.  
2. If issues persist, contact the FRB Services Support Center (1-833-FRS-SVCS (377-7827)). |
| Receiver FI | Investigate CCT (pacs.008) and provide a status update (pacs.002) (ACC, BLCK, RJCT, PNDG) to the FedNow Service by midnight (ET) of the next standard day (M-F, except holidays). | FedNow Service receives pacs.002, validates message and provides to Sender FI for a status update. | FedNow Service does not receive pacs.002 so the Sender FI and customer are not aware of transaction status.  
-or-  
Message (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. |

---

102 Can only happen if the Receiver FI has informed the FedNow Service in the step 2 lines above.  
103 See Participant Broadcast for additional details.
<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps (required unless otherwise noted in gray text)</th>
<th>If no Exceptions Occur</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver FI</td>
<td><strong>Applicable if a payment status request (pacs.028) has been received from the Sender FI</strong>&lt;br&gt;Must respond to a payment status request (pacs.028) sent by the Sender FI regarding a Customer Credit Transfer (pacs.008) with a status of ‘ACWP’</td>
<td>FedNow Service sends FedNow acknowledgment (admi.007) to the sender of pacs.028 and passes the status update through to the Sender FI. Receiver FI provides latest status.</td>
<td>Receiver FI does not respond to pacs.028 and the Sender FI is not aware of the status of the transaction.</td>
<td>Sender FI can submit another payment status request (pacs.028) to the Receiver FI if it has not received a response.</td>
</tr>
<tr>
<td>Receiver FI</td>
<td><strong>After review is complete, if the Receiver FI accepts the transaction, it sends payment status report (pacs.002) with code ‘ACCC’ to FedNow Service.</strong></td>
<td>Receiver FI makes funds available to end customer and process above for “accepted” (ACCC) is followed.</td>
<td>Receiver FI chooses to block the funds and sends Payment Status Report (pacs.002) with code ‘BLCK’ to FedNow Service.&lt;br&gt;-or-&lt;br&gt;Rejects transaction and sends Payment Status Report (pacs.002) with code ‘RJCT’ to FedNow Service.&lt;br&gt;-or-&lt;br&gt;Receiver FI never finalizes the ACWP status of a transaction.</td>
<td>• If Receiver FI Blocks or Rejects the pacs.008, it should include justification reason in pacs.002 message for Sender FI to review. FIs can discuss as needed.&lt;br&gt;• 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 Customer Credit Transfer (pacs.008) message and justification.</td>
</tr>
</tbody>
</table>
15.2. Return Request (camt.056) & Payment Return (pacs.004)

a. Overview

The FedNow Service supports exception handling process to return funds from a previously received Customer Credit Transfer (pacs.008) or liquidity management transfer (pacs.009).

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. Once a payment return (pacs.004) is initiated the message follows the same end-to-end processing across the FedNow Service as a Customer Credit Transfer (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:

- Customer Credit Transfer Send and Receive
- Customer Credit Transfer Receive Only

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 Customer Credit Transfer within the message.

<table>
<thead>
<tr>
<th>ISO 20022 Message</th>
<th>Message Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Return request</strong> (camt.056)</td>
<td>Participants use a return request to ask another Participant to return a portion or full amount of a previously settled Customer Credit Transfer (pacs.008) or LMT (pacs.009).</td>
</tr>
<tr>
<td><strong>Return request response</strong></td>
<td>The FedNow Service(^{104}) or Participant use a return request response to communicate:</td>
</tr>
<tr>
<td>(camt.029)</td>
<td>• Return request accepted (IPAY) and funds will be returned.</td>
</tr>
</tbody>
</table>

\(^{104}\) A negative return request response is sent by the FedNow Service if the return request fails business validation(s).
Payment return (pacs.004)  A Participant uses a payment return message to return funds of a previously accepted Customer Credit Transfer 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
The return request (camt.056) message 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. This message is processed as noted below and fulfills the FedNow Service fraud reporting requirement.¹⁰⁵

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 acknowledgment (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.

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>ISO 20022 Message</th>
<th>Response Code</th>
<th>Response Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>FI that receives the return request should provide a response within the given time frame to the FI that sent the request.</td>
<td>Return request response (camt.029)</td>
<td>Return request accepted (IPAY) -or- Partially executed return request (PECR)</td>
<td>(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. Initiate a payment return 2. Simultaneously, Participant should provide final response (either IPAY or PECR)</td>
</tr>
<tr>
<td></td>
<td>Return request rejected (RJCR)</td>
<td>Return request rejected (RJCR)</td>
<td>(Final response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays)</td>
</tr>
</tbody>
</table>
| | 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 the investigation for further information, or within 10 standard business days (M-F, except holidays) |

¹⁰⁵ See the Fraud Reporting section for additional details, including alternative options for reporting confirmed fraud to the network.
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 occur\(^\text{106}\) 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 Customer Credit Transfer (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 acknowledgment (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 acknowledgment (admi.007) to the Sender FI acknowledging the receipt of the nonvalue message (including camt.029 and camt.056).\(^\text{107}\)

1. **Validation Stage**

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no exceptions</th>
<th>If exceptions occur</th>
<th>Action(s) to correct failure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sender FI</strong></td>
<td>Sends the return request (camt.056) to the FedNow Service, including</td>
<td>FedNow Service receives camt.056 from Sender FI.</td>
<td>FedNow Service does not receive camt.056 from Sender FI.</td>
<td>• Sender FI should resend the camt.056 if this is a one-time non-receipt of admi.007.</td>
</tr>
<tr>
<td></td>
<td>• Return request Reason code.</td>
<td></td>
<td></td>
<td>• Sender FI should check its connection to the FedNow Service with a ping (admi.004) if</td>
</tr>
<tr>
<td></td>
<td>• Message details for the original Customer Credit Transfer (pacs.008) or LMT</td>
<td></td>
<td></td>
<td>multiple admi.007 are not received.</td>
</tr>
<tr>
<td></td>
<td>(pacs.009).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FedNow Service</strong></td>
<td>Receives return request (camt.056) message from Sender FI and runs through</td>
<td>Message passes all validations and is sent to the Receiver FI.</td>
<td>Message fails validation. Depending on the reasons, the FedNow Service will:</td>
<td>The Participant should:</td>
</tr>
<tr>
<td></td>
<td>all applicable validations listed below.</td>
<td></td>
<td>1. Reject the message immediately and send a message reject (admi.002) with the</td>
<td>1. Review the error code description.(^\text{109})</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>appropriate reason code to the Sender FI.</td>
<td>2. Correct the identified error(s) to ensure all subsequent messages sent to FedNow Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Continue processing through validations to collect any additional errors. The</td>
<td>meet requirements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FedNow Service will send a negative return request response (camt.029) with all(^\text{108})</td>
<td>3. If needed, send a new message with a new unique message ID.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>applicable error reason codes.</td>
<td></td>
</tr>
</tbody>
</table>

### Validations for Return Request

\(^{106}\) The list of exceptions is not exhaustive.

\(^{107}\) See the receipt acknowledgment (admi.007) section for additional details.

\(^{108}\) FedNow Service will consolidate validation failures when possible.

\(^{109}\) See Error Codes and Descriptions section of these Operating Procedures.
2. Response Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver FI</td>
<td>Receives return request (camt.056) message from FedNow Service and begins to</td>
<td>Able to open and read the camt.056 from the FedNow Service.</td>
<td>Not able to validate message from FedNow Service (unable to read, digital signature,</td>
<td>1. Ensure the Participant’s internal FedNow Service public keys list is up to date.</td>
</tr>
<tr>
<td></td>
<td>validate the message.</td>
<td></td>
<td>technical error, etc.). Receiver FI sends message reject (admi.002) to the FedNow Service.</td>
<td>2. Respond with a message reject (admi.002) indicating the received message was rejected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. If issues persist, contact the FRB Services Support Center.</td>
</tr>
<tr>
<td>Receiver FI</td>
<td>Reviews message to determine if it intends to accept the message</td>
<td>Sends FedNow Service a return request response (camt.029) with code IPAY indicating it intends to</td>
<td>Intends to reject return request (camt.056) and responds to the FedNow Service with return</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>accept the return request.</td>
<td>request response (camt.029) with code RJCR to FedNow Service along with the reason for</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-or- Sends FedNow Service a return request response (camt.029) with code PECR indicating it</td>
<td>rejection.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>intends to partially accept the return request.</td>
<td>-or-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Return request (camt.056) requires further review and responds to the FedNow Service with</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>return request response (camt.029) with code PDCR to FedNow Service.</td>
<td></td>
</tr>
<tr>
<td>FedNow Service</td>
<td>Validate return request response (camt.029) from Receiver FI and passes through</td>
<td>Sender FI will be informed of the status of the return request.</td>
<td>Return request response (camt.029) fails validations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to Sender FI.</td>
<td></td>
<td>-or-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sender FI does not receive the return request response (camt.029)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>If the request response (camt.029) fails validations the Receiver FI should,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. Review the error code description.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Take necessary steps to correct the error identified and ensure all subsequent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>messages sent to FedNow Service meet requirements.</td>
</tr>
</tbody>
</table>

110 Receiver FI should also call the FRB Services Support Center (1-833-FRS-SVCS (377-7827)) with notification that it rejected with an admi.002. Initially, the FedNow Service will 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.  
111 See Error Codes and Descriptions section of these Operating Procedures.
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.

**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.008) follows the same end-to-end processing across the FedNow Service as a Customer Credit Transfer (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)

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 will 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. 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 will be able to 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 will need 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 will 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 Limit
  - The maximum transaction value limit for LMT (pacs.009). Pacs.009 messages that contain a dollar value that exceeds the limit will be rejected by the FedNow Service.
  - Participants can configure their maximum LMT limit to be less than the Network limit set by the FedNow Service.

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112 See Network Limits section for additional details.
113 See Network Limits for LMT Maximum Transaction Value Limit
FedNowSM Service Operating Procedures

- LMT Cumulative Daily Limit\(^{114}\)
  - A cumulative daily value limit an FI is eligible to send via the FedNow Service. The limit is set by Federal Reserve Banks and monitored for breaches of the daily cumulative limit on an ex post basis.

**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\(^ {115}\) 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 will deliver a pacs.009 to confirm processing and as an advice of credit to the Receiver FI.

### 1. Validation Stage:

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Sends the LMT (pacs.009) to the FedNow Service. (See system and message preparation guidelines in the value messages section of these Operating Procedures.)</td>
<td>FedNow Service receives pacs.009 from the Sender FI.</td>
<td>FedNow Service does not receive pacs.009 from the Sender FI.</td>
<td>The Sender FI should wait a minimum of 25 seconds from the payment message creation date/timestamp to check message status by: 1. Sending a payment status request to the FedNow Service (pacs.028) or searching in the FedNow interface Adhoc Query tool  a. If the message was received and processed by the FedNow Service, a status will be 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.(^{116}) 2. If issues persist, contact the FRB Services Support Center.</td>
</tr>
</tbody>
</table>

\(^{114}\) See Network Limits for LMT Maximum Transaction Value Limit

\(^{115}\) The list of exceptions is not exhaustive.

\(^{116}\) See the Participant broadcast section for additional details.
FedNowSM Service Operating Procedures

FedNow Service Receives (pacs.009) message from Sender FI and runs through all applicable validations listed below.

If no Exceptions: Message passes all validations and is sent to the Receiver FI.

If Exceptions Occur: Message fails a validation. Depending on the reason, the FedNow Service will:
1. Reject the message immediately and send a Message reject (admi.002) with the appropriate reason code to the Sender FI.
2. Continue processing through validations to collect any additional errors. The FedNow Service then sends a Payment Status Message (pacs.002) with the consolidated117 error reason codes.

The Participant should:
1. Review the error code description.118
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

- 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
- 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

2. Settlement Stage

FedNow Service Confirms settlement relationships, assigns a settlement date and settles transaction by recording it.

The transaction settles with finality when the FedNow Service records the debit and credit to the Sender FI and Receiver FI designated master

Payment timeout Clock Stops

N/A

N/A

---

117 FedNow Service will consolidate validation failures when possible.
118 See the Error Codes and Descriptions section of these Operating Procedures.
or joint accounts, respectively.\textsuperscript{119}

### 3. Notification Stage (Post-Settlement)

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no Exceptions Occur</th>
<th>If Exceptions Occur</th>
<th>Action(s) to Correct Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>FedNow Service</td>
<td>Sends Payment Status Report (pacs.002) with code ACSC as confirmation to Sender FI and LMT (pacs.009) to the Receiver FI.</td>
<td>Sender FI and Receiver FI receive pacs.002 and pacs.009, respectively, from the FedNow Service.</td>
<td>Sender or Receiver FI does not receive pacs.002 or pacs.009 messages from the FedNow Service.</td>
<td>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 send a retrieval request (admi.006) to receive a copy of the pacs.009. The Receiver FI also can contact the Sender FI for additional information.</td>
</tr>
</tbody>
</table>

\textsuperscript{119} 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. A nonvalue message is a request about the details or status of an instant payment message, report or message retrieval request, 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 requirements\(^\text{120}\) apply to all Participants intending to send nonvalue messages to the FedNow Service.

\(^{120}\) See the FedNow ISO 20022 Messages section for details on requirements.
16.1. Request for Payment (RFP) (pain.013)

a. Overview
A Request for Payment (RFP) allows a Participant or its end customer to request a payment from another Participant’s end customer, which in turn causes the receiving end customer to initiate a Customer Credit Transfer (pacs.008).

b. Additional Details

Participant Profile Requirements for RFP
All Participants enabled for Customer 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., Customer Credit Transfer Send and Receive with Receive Request for Payment.

RFP and RFP Cancellation Request Overview and Usage
Below is a high-level description of RFP messages, potential use cases and message status codes.\(^{121}\)

The FedNow Service supports an RFP that is used as an inquiry to determine if an account is enabled to receive and respond to an RFP. Additional information will be provided at a later date.

<table>
<thead>
<tr>
<th>Message</th>
<th>RFP Message Description</th>
<th>Potential Usage(^{122})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request for payment (RFP) (pain.013)</td>
<td>Sender FI requests funds.</td>
<td>A Sender FI can initiate an RFP on behalf of itself or its end customer, which can be:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Individuals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Businesses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Government agencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>…for services that include:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Payment or repayment of a debt between two individuals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bill pay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tax or fee collection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RFPs can request an immediate payment or payment in the future.</td>
</tr>
<tr>
<td>RFP response (pain.014)</td>
<td>Receiver FI informs Sender FI about an RFP message’s processing status.</td>
<td>RFP Response Options:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Received (RCVD): Confirms RFP was accepted by the Receiver FI.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Presented (PRES): RFP was presented to the end customer for response.</td>
</tr>
</tbody>
</table>

\(^{121}\) See the FedNow Service ISO 20022 Implementation Guide for additional details.
\(^{122}\) Not all inclusive.
• Accept (ACTC): Forthcoming payment via Customer Credit Transfer (pacs.008).
• Reject (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.\textsuperscript{123}

<table>
<thead>
<tr>
<th>Message</th>
<th>RFP Cancellation Message Description</th>
<th>Potential Usage\textsuperscript{124}</th>
</tr>
</thead>
</table>
| RFP cancellation request (camt.055)          | Sender FI asks to cancel a previously sent RFP (pain.013).                 | An RFP cannot be changed. Instead, Sender FI must cancel the initial RFP and submit a new RFP to address:
                                                                                                    • Duplicate RFP.
                                                                                                    • Error in initial RFP.
                                                                                                    • RFP is no longer applicable.
                                                                                                    • RFP was paid via another channel, etc.                                                                 |
| RFP cancellation request response\textsuperscript{125} (camt.029) | Receiver FI informs Sender FI about the processing status of a previous RFP cancellation request (camt.055). | RFP cancellation request response options:
                                                                                                    • 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.                                      |

\textbf{c. RFP Processing Recommended Response Time Guidelines}

\begin{tabular}{|l|l|}
\hline
Key Term\textsuperscript{126} & Description                                                                                                                                                           \\
\hline
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 expiration 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. \\
\hline
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. For example, an RFP with an expiry date of Friday, Oct. 15 allows the end customer to act upon the RFP until 23:59:59 ET on Friday, Oct. 15. \\
\hline
\end{tabular}

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.

\textbf{RFP Response Time Guidelines}

\textsuperscript{123} See the FedNow Service ISO 20022 Implementation Guide for additional details.
\textsuperscript{124} Not all inclusive.
\textsuperscript{125} Participant can inquire about the status using an information request (camt.026). See the Information Request section for additional details.
\textsuperscript{126} See the FedNow Service ISO 20022 Implementation Guide for additional details.
<table>
<thead>
<tr>
<th>Participant Action</th>
<th>Message</th>
<th>Response Code</th>
<th>Recommended Response Time</th>
</tr>
</thead>
</table>
| Receiver FI provides an initial RFP response to the Sender FI. | Initial RFP Response (pain.014) | Received (RCVD) | • 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. |
| 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 Customer Credit Transfer (pacs.008) immediately or by the expiry date.  
| | | Rejected (RJCT) | • Immediately, if the Receiver FI is the rejecting party (include the reason code).  
• As soon as possible, if the Receiver FI’s end customer is the rejecting party (include reason code). |

### RFP Cancellation Request Response Time Guidelines

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>ISO 20022 Message</th>
<th>Response Code</th>
<th>Recommended Response Time</th>
</tr>
</thead>
</table>
| 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. | 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 | FINAL RFP cancellation | Cancelled (CNCL) | Immediately or up to the expiry date of the initial RFP (pain.013). |

128 See the FedNow Service ISO 20022 specifications for a list of reason codes.
d. 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 acknowledgment (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 acknowledgment (admi.007) to the FedNow Sender acknowledging the receipt of the nonvalue messages, including pain.013 and pain.014.129

1. Sending & Validation Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI</td>
<td>Sends the RFP (pain.013) to the FedNow Service.</td>
</tr>
</tbody>
</table>
| FedNow Service | 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 will:  
|                |   o Reject the message immediately and send a Message Reject (admi.002) with the appropriate reason code to the Sender FI.  
|                |   o Continue processing through additional validations to collect any additional errors and send a negative RFP Response (pain.014) with the consolidated130 appropriate error reason codes.131 |

Validations for RFP (pain.013)

- ✓ Valid message signature
- ✓ Valid message size
- ✓ XML syntax
- ✓ Authorized sender
- ✓ Confirm unique message ID
- ✓ FedNow Service ISO 20022 schema rules followed

2. Response Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
</table>

---

129 See the receipt acknowledgment (admi.007) section for additional details.
130 The FedNow Service will consolidate validation failures when possible.
131 See the Error Codes and Descriptions section for additional details.
### e. 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 acknowledgment (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 acknowledgment (admi.007) to the FedNow Sender acknowledging the receipt of the nonvalue message, including camt.055 and camt.029.  

---

#### 1. Sending & Validation Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sender FI</strong></td>
<td>1. The Sender FI or its end customer wants to cancel the RFP it initiated. Before sending a cancellation…</td>
</tr>
<tr>
<td></td>
<td>2. The Sender FI should confirm the initial RFP (pain.013) has either:</td>
</tr>
<tr>
<td></td>
<td>- Been accepted by the Receiver FI (or end customer), but the subsequent Customer Credit Transfer (pacs.008) was not received.</td>
</tr>
<tr>
<td></td>
<td>- Not been accepted or rejected by the Receiver FI or its end customer; status is either Received (RCVD) or Presented (PRES).</td>
</tr>
<tr>
<td></td>
<td>3. Sender FI verifies the expiry date has not elapsed or been exceeded, then sends an RFP cancellation request (camt.055) to the FedNow</td>
</tr>
<tr>
<td></td>
<td>Service.</td>
</tr>
<tr>
<td><strong>FedNow Service</strong></td>
<td>1. Receives an RFP cancellation request (camt.055) from the Sender FI and runs through all applicable validations listed below.</td>
</tr>
<tr>
<td></td>
<td>2. If the message passes all validations, the FedNow Service sends the camt.055 to the Receiver FI.</td>
</tr>
<tr>
<td></td>
<td>3. If the message fails validation, the FedNow Service will:</td>
</tr>
<tr>
<td></td>
<td>- Reject the message immediately and send a message reject (admi.002) with the appropriate reason code(s) to the Sender FI.</td>
</tr>
</tbody>
</table>

---

132 See the receipt acknowledgment (admi.007) section for additional details.
Continue processing through additional validations to collect any additional errors and send a negative RFP Cancellation Request Response (camt.029) with the consolidated\(^{133}\) appropriate error reason code(s).\(^{134}\)

### Validations for RFP Cancellation Request (camt.055)

| ✓ Valid message signature | ✓ Authorized sender |
| ✓ Valid message size | ✓ Confirm unique message ID |
| ✓ XML syntax | ✓ FedNow Service ISO 20022 schema rules followed |

### 2. Response Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
</table>
| **Receiver FI** | 1. Receives the RFP cancellation request (camt.055).  
2. Verifies the initial RFP (pain.013) was not rejected or accepted – or if accepted, the subsequent Customer Credit Transfer (pacs.008) has not yet been sent.  
3. As a best practice, the Receiver FI should send an RFP cancellation request response (camt.029) of pending (PDCR) if an immediate accept (CNCL) or reject (RJTC) if not possible. |
| **Receiver FI honors the cancellation request** | The Receiver FI should:  
1. Cancel the original RFP (pain.013) it received.  
2. Send an RFP cancellation request response (camt.029) with a cancelled (CNCL) response code to the FedNow Service.  
3. If the message passes all validations, the FedNow Service forwards the camt.029 to the Sender FI. |
| **Sender FI** | 1. 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.  
2. The Sender FI should notify its end customer of the request status.  
   *No further action is needed.* |
| **Receiver FI does not honor the cancellation request** | 1. The Receiver FI sends an RFP cancellation request response (camt.029) with a rejection (RJTC) response code to the FedNow Service indicating the initial RFP cancellation request is rejected  
2. If the message passes all validations, the FedNow Service forwards the camt.029 message to the Sender FI. |
| **Sender FI** | 1. The Sender FI receives the RFP cancellation request response (camt.029) with the RFP cancellation request response code RJTC indicating the request was rejected.  
2. The Sender FI should notify its end customer of the request status.  
   *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).* |

\(^{133}\) The FedNow Service will consolidate validation failures when possible.  
\(^{134}\) See the Error Codes and Descriptions section for details on error codes.
16.2. Information Request (camt.026)

a. Overview
An information request is used by a Participant or its 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. Subsequent sections will provide the more detailed message flow.

<table>
<thead>
<tr>
<th>ISO 20022 Message</th>
<th>Message Descriptions</th>
<th>Potential Usage</th>
</tr>
</thead>
</table>
| 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). | For a Customer Credit Transfer (pacs.008) or payment return (pacs.004), the Receiver FI or end customer:  
  - Responds with accept without post (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.  

For the RFP (pain.013), the Receiver FI or end customer:  
  - 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. | Information request response options:  
  - Pending (PDNG): Information request is being reviewed.  
  - Payment instruction is duplicate (IDUP). |

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136 Not all inclusive.
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.

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>ISO 20022 Message</th>
<th>Response Code</th>
<th>Response Guideline</th>
</tr>
</thead>
</table>
| 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.  
As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays). |
| Sender FI provides a response to the Receiver FI. | Initial or final information request response (camt.029) | Additional information sent (INFO) | 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). |

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 acknowledgment (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 acknowledgment (admi.007) to the FedNow Sender acknowledging the receipt of nonvalue messages, including camt.055 and camt.029.\(^\text{137}\)

### 1. Sending & Validation Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver FI</td>
<td>Sends an information request (camt.026) to the Sender FI to obtain more information about pacs.008, pacs.004 or pain.013 messages.</td>
</tr>
</tbody>
</table>
| FedNow Service   | 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 will reject the message immediately and send a message reject (admi.002) with the appropriate reason code to the Sender FI. |

| Validations for Information Request Messages                                                                 |  |
|---------------------------------------------------------------|  |
| ✓ Valid message signature                                    | ✓ Authorized sender            |
| ✓ Valid message size                                         | ✓ Confirm unique message ID    |
| ✓ XML syntax                                                  | ✓ FedNow Service ISO 20022 schema rules followed |

### 2. Response Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
</tr>
</thead>
</table>
| Sender FI        | 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.  
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. |
| FedNow Service   | 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 will reject the message immediately and send a message reject (admi.002) with the appropriate reason code to the Sender FI. |
| Receiver FI      | 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. |

\(^{137}\) See the receipt acknowledgment (admi.007) section for additional details.
16.3. Account Credit/Debit Notification (camt.054)

a. Overview

The FedNow Service offers account debit/credit notifications on an opt-in basis for Correspondents that have enabled a Participant Profile. 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 will 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.

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no exceptions</th>
<th>If exceptions occur</th>
<th>Action(s) to correct failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correspondent</td>
<td>Within the FedNow Service profile, enable credit/debit notifications (camt.054) to support reconciliation of respondents’ activity.</td>
<td>Correspondent receives notifications for each credit or debit transaction settled across the FedNow Service for activity on its respondents’ RTNs.</td>
<td>No notifications are received.</td>
<td>Confirm the credit/debit notifications (camt.054) service is enabled for the desired respondent RTN via the FedNow Service Participant Profile settings and permissions.</td>
</tr>
<tr>
<td>Respondent</td>
<td>Sends or receives an instant payment message (pacs.008 or pacs.004) or a LMT (pacs.009) to be processed via the FedNow Service.</td>
<td>The FedNow Service processes and completes settlement of the transaction.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>FedNow Service</td>
<td>Settles the transaction and notifies both the Sender and Receiver FIs of the transaction settlement.</td>
<td>The respondent receives the payment status notification (pacs.002 or pacs.009).</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Sends the Correspondent an account debit credit notification (camt.054 with identification ADCN) to confirm funds settlement, but not to indicate ACSC or ACWP status.</td>
<td>Correspondent receives the camt.054.</td>
<td>Correspondent does not receive the notification.</td>
<td>Confirm the credit/debit notifications (camt.054) service has been enabled for the respondent/Correspondent settlement relationship via their FedNow Service Participant Profile settings and permissions.</td>
</tr>
</tbody>
</table>

138 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 provided at the master/primary RTN, subaccount RTN or other secondary RTN (OSRTN) levels. 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, should be implemented before sending or receiving messages. This includes following the requirements for all ISO 20022 messages and additional reporting message requirements:

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Participant Report Name</th>
<th>Code</th>
<th>Correspondent Report Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABAR</td>
<td>• Account balance report</td>
<td>CATR</td>
<td>• Correspondent activity totals report</td>
</tr>
<tr>
<td>AATR</td>
<td>• Account activity totals report</td>
<td>CADR</td>
<td>• Correspondent activity details report</td>
</tr>
<tr>
<td>AADR</td>
<td>• Account activity details report</td>
<td>CITR</td>
<td>• Correspondent intraday totals report</td>
</tr>
<tr>
<td>IATR</td>
<td>• Intraday activity totals report</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 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.

139 See the FedNow ISO 20022 Messages section for details on requirements.
17.1. FedNow Service & Accounting Reports

a. Overview

The FedNow Service provides reports so Participants can reconcile their FedNow Service activities. Participants must monitor their balances to ensure appropriate funding because the FedNow Service will not check balances before processing transactions. Correspondents also can receive reports on their respondents’ activities.

All reports are 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 reconciliations of FedNow Service activity: FedNow Service reports, Correspondent reports, Adhoc Query and Accounting reports (which include FedNow account activity). Report access limitations 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.

Access to FedNow Service Reports

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

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.

140 See FedNow interface How To Guide for additional details.
141 Reference the Participant Profile section for additional details.
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 respondent 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 with a Participant Profile also can use the request for retrieval (admi.006) message and Adhoc Query tool capabilities on the FedNow interface. Correspondents that do not have a Participant Profile or are not connected to the FedNow Service will only receive reports related to FedNow Service activity for their respondent(s)’ activity via Accounting Reports.

**Obtaining Historical FedNow Service Reports**

Historical FedNow Service reports can be obtained via the account activity report request (camt.060) for the previous 90 cycle days. The Adhoc Query tool in the FedNow interface can provide historical messages with original message content for the 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. Reports are not generated for dates where the Participant status was inactive.

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

<table>
<thead>
<tr>
<th>Reporting Request</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Request for cycle day(s) reports when the Participant Profile was active and had FedNow Service activity.</td>
<td>Separate report is sent for each cycle day.</td>
</tr>
<tr>
<td>2. Request for a cycle day(s) report when the Participant Profile was active status but did not have FedNow Service activity.</td>
<td>Report will reflect null values in all fields.</td>
</tr>
<tr>
<td>3. Request for cycle day(s) when the Participant Profile was in inactive, pending activation or deactivated.</td>
<td>Message reject (admi.002) is sent to the Participant</td>
</tr>
<tr>
<td>4. Request for cycle days that included dates when the Participant Profile was active and other dates when it was inactive, pending activation or deactivated.</td>
<td>Reports are provided for active dates; no additional communication or error messages are provided for dates when status was inactive, pending activation or deactivated.</td>
</tr>
</tbody>
</table>

**Accounting Reports**

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 weekend and holidays, the provisional balance will remain until the next standard business day.

**Real-Time Notifications**

Immediate reconcilement functions are supported by real time advices, acknowledgments and notifications of credit/debit activity using:

- For instant payments (pacs.008 and pacs.004) - advice of credit and acknowledgments (pacs.002).
- For Liquidity Management Transfer – acknowledgment (pacs.002) and liquidity management transfer (pacs.009).
- For Correspondents - Credit/debit notifications (camt.054) show respondent settlement activity\(^{142}\) for both instant payment and LMT.

\(^{142}\) See Account Credit Debit Notification section for additional details.
## List of Available Reports (FedNow Service and Accounting)

<table>
<thead>
<tr>
<th>Report Name</th>
<th>Default FedNow Profile Setting</th>
<th>Reporting Availability</th>
<th>Report Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FedNow Service Reports</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Account Balance Report (camt.052)</td>
<td>N/A</td>
<td>Intraday by request</td>
<td>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: 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 unless the accounting form is completed to grant affiliate access.</td>
</tr>
<tr>
<td>Report code: ABAR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Account activity totals report (camt.052) | Enabled for automatic end-of-day distribution by default; can be disabled by Participants and/or Service Providers. | Daily at approximately 7:30 p.m. ET | 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:  
- 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:  
  - Instant payments (pacs.008 and pacs.004)  
  - LMT (pacs.009)  
  - Total number of nonvalue messages received  
  - Total number of nonvalue messages sent  
- Non-value messages include:  
  - 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 (camt.029)  
  - Information request (camt.026) and information request response (camt.029)  
  - Additional payment information (camt.028) |
| Report code: AATR | | | |
| Intraday account activity totals report (camt.052) | N/A | Intraday by request | |
| Account activity details report  
(camt.052) | Disabled for automatic end-of-day distribution by default; can be enabled by Participants and/or Service Providers. | End-of-day only (for current cycle day) at approximately 9:00 p.m. ET. | Data is at the transaction level per RTN. Includes successfully processed and rejected messages within the cycle day. Includes both value messages and nonvalue messages. Value messages and nonvalue messages are the same as in the account activity totals Report: • Message identification • Message type • Creation date/time • Business processing date/time • Acceptance date/time • Instructing agent • Instructed agent • Amount • Message status. |
| Correspondent account activity totals report  
(camt.052) | Enabled for automatic end-of-day distribution by default; can be disabled by Participants and/or Service Providers. | Daily at approximately 7:30 p.m. ET | In addition to an account activity totals report (AATR/IATR), Correspondents can receive a Correspondent account activity totals report with all their respondent RTN totals: • Sub-totaled by each direct respondent RTN. • Includes only the value messages that was successfully settled in the Correspondent’s account. 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 will include activity for all respondents. If Correspondents have enabled automatic end-of-day distributions, they will receive both AATR and CATR reports. |
| Correspondent intraday account activity totals report  
(camt.052) | N/A | Intraday by request | 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. And includes individual reports for each Correspondent RTN. Correspondents may request reports on their own activities (AADR), reports for all its 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, Correspondents will 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) | • 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. |
and Other Secondary RTNs) must subscribe via Accounting Information Services (AIS) form

| Financial institution reconcilement data file | FIRD file | Must subscribe to receive; In addition, must request to have FedNow Service detail included | • Available to subscribing Master Account holders.  
• Allows automation of internal reconcilement and posting functions for Participants’ convenience.  
• Designed to interface with an institution’s internal accounting system.  
• Includes all transaction data in:  
  • 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 | • Available to subscribing Master Account holders.  
• Statement provided in spreadsheet format to assist with reconcilement functions.  
• Includes:  
  • 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.  

### 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 flow and issue resolutions:

#### 1. Sending & Validation Stage

<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no exceptions</th>
<th>If exceptions occur</th>
<th>Action(s) to correct failure</th>
</tr>
</thead>
</table>
| 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. | 1. Review the error code description.  
2. Correct the identified error(s) to ensure all subsequent messages sent to FedNow Service meet requirements.  
3. If needed, send a new message with a new unique message ID. |
| 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 will reject the message immediately and send a Message Reject (admi.002) with the appropriate reason code to the Sender FI. | |

### Validations for Account Report Request (camt.060)

143 See the Error Codes and Descriptions section.
<table>
<thead>
<tr>
<th>Who</th>
<th>Required Steps</th>
<th>If no exceptions</th>
<th>If exceptions occur</th>
<th>Action(s) to correct failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>FedNow Service</td>
<td>The FedNow Service delivers the requested camt.052 report with corresponding report code.</td>
<td>Report(s) is received by Participant within seconds.</td>
<td>Report(s) is not received by Participant.</td>
<td>The Participant should send a new request with a unique message ID.</td>
</tr>
</tbody>
</table>
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.

\(^{144}\) Details related to retrieval request are subject to change.
Appendix

a. Consolidated Response Times
b. Support
c. Network Limits
d. Error Codes & Descriptions
e. FedNow Service Required Test Cases for Certification
f. FedNow Service ISO Messaging Charts
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

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>ISO 20022 Message</th>
<th>Response Code</th>
<th>Response Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant responds to the instant payment within the specified time frame.</td>
<td>Customer Credit Transfer (pacs.008) or Payment Return (pacs.004)</td>
<td>Accept (ACTC)</td>
<td>(Final response) – Within Receiver FI reserved response time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reject (RJCT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accept without Post (ACWP)</td>
<td>(Initial response) - Within Receiver FI reserved response time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pending (PNDG)</td>
<td>(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 (PNDG) must be provided.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reject (RJCT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Block (BLCK)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accept (ACSC)</td>
<td></td>
</tr>
</tbody>
</table>

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).

### Return Request Response (camt.029) Time Guidelines

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>ISO 20022 Message</th>
<th>Response Code</th>
<th>Response Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant responds to the return request sender within the specified time frame.</td>
<td>Return request response (camt.029)</td>
<td>Return request accepted (IPAY)</td>
<td>(Final response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Partially executed return request (PECR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return request rejected (RJCR)</td>
<td>(Final Response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return request pending (PDCR)</td>
<td>(Initial response) - As soon as possible, but no later than midnight (ET) of the next standard business day (M-F, except holidays).</td>
</tr>
</tbody>
</table>

Participant should immediately:
1. Initiate a payment return.
2. Simultaneously, Participant should provide final response (either IPAY or PECR).
**RFP Response (pain.014) Time Guidelines**

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>Message</th>
<th>Response Code</th>
<th>Recommended Response Time</th>
</tr>
</thead>
</table>
| Receiver FI provides an initial RFP response to the Sender FI.  
*This optional step is a recommended best practice.* | Initial RFP Response (pain.014) | Received (RCVD) | • 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. |
| 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 Customer Credit Transfer (pacs.008) immediately or by the expiry date. |
| | | Presented (PRES) | • 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. |
| | | Rejected (RJCT) | • Immediately, if the Receiver FI is the rejecting party (include the reason code 146).  
• 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**

<table>
<thead>
<tr>
<th>Participant Action</th>
<th>ISO 20022 Message</th>
<th>Response Code</th>
<th>Recommended Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender FI asks Receiver FI to cancel a previous RFP.</td>
<td>RFP cancellation request (camt.055)</td>
<td>N/A</td>
<td>A Sender FI can request an RFP cancellation if the payment has not been made.</td>
</tr>
</tbody>
</table>

---


146 See the FedNow Service ISO 20022 specifications for a list of reason codes.
Receiver FI provides an initial response to the Sender FI. *This optional step is a recommended best practice.*

<table>
<thead>
<tr>
<th>Initial RFP cancellation request response (camt.029)</th>
<th>Pending (PDCR)</th>
<th>Immediately: Receiver FI should inform the Sender FI that the request is being investigated.</th>
</tr>
</thead>
</table>

Receiver FI provides a final response to Sender FI that payment has been executed.

<table>
<thead>
<tr>
<th>Final RFP cancellation request response (camt.029)</th>
<th>Cancelled (CNCL)</th>
<th>Immediately or up to the expiry date of the initial RFP (pain.013).</th>
</tr>
</thead>
</table>

| Rejected (RJCR) | • Immediately on confirmation from the customer/Receiver FI.  
• Required if status is PDCR pending. |

<table>
<thead>
<tr>
<th>Information Request Response (camt.029) Time Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participant Action</strong></td>
</tr>
<tr>
<td>------------------------</td>
</tr>
</tbody>
</table>
| 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 FRB Services Support Center via 1-833-FRS-SVCS (377-7827).

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

FedNow Service support is available via the FRB Service 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) or FedNow interface. 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 will be 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 will be 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 will be 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

147 https://www.frbservices.org/contacts/index.jsp
○ 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.

<table>
<thead>
<tr>
<th>Network Limits</th>
<th>Description</th>
<th>Value</th>
<th>Applicable to</th>
</tr>
</thead>
</table>
| Customer Credit Transfer maximum transaction value limit | The maximum transaction value limit for Customer Credit Transfer and payment return (pacs.008 and pacs.004).  
- Pacs.008 and pacs.004 messages exceeding the limit will be 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.  
148 | $500,000 | Participants that have any of the following participation types enabled in their Participant Profiles:  
- Customer Credit Transfer send and receive |
| Liquidity Management Transfer (LMT) maximum transaction value limit | The maximum transaction value limit for LMT (pacs.009).  
- Pacs.009 messages exceeding the limit will be rejected by the FedNow Service.  
- Participants can configure their limit to be less than the limit set by the FedNow Service.  
149 | $2,500,000 | Participants that have any of the following participation types enabled in their Participant Profiles:  
- Liquidity Management Transfer send and receive  
- Liquidity Management Transfer receive only |
| Liquidity Management Transfer (LMT) operating hours     | The hours in which Participants enrolled in LMT can send and or receive Financial Institution Transfers (pacs.009).  
- Pacs.009 messages sent outside these hours will be rejected by the FedNow Service.  
149 | See FedNow Service Schedule on frbservice.org | Participants that have any of the following participation types enabled in their Participant Profiles:  
- Liquidity Management Transfer send and receive  
- Liquidity Management Transfer receive only |
| LMT daily limit                                          | A cumulative daily send value limit at the FI level.                                                                                                                                                    | $10,000,000 | Participants that have any of the following participation types enabled in their Participant Profiles:  
- Liquidity Management Transfer send and receive |

148 See FedNow Profile section for additional details regarding parameters for configuration.
149 See FedNow Profile section for additional details regarding parameters for configuration.
| **Timeout clock** | **Maximum allowable time for a transaction (pacs.008, pacs.004 or pacs.0009) to settle or be rejected.** | **20 seconds** | **Participants that have any of the following participation types enabled in their Participant Profiles:**
- Customer Credit Transfer send and receive
- Customer Credit Transfer receive only
- Liquidity Management Transfer send and receive |
D. Error 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

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.
### F.FedNow Service ISO Messaging Charts

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

<table>
<thead>
<tr>
<th>Customer Credit Transfer Messages</th>
<th>Credit Transfer Receive Only</th>
<th>Credit Transfer Send/Receive</th>
<th>Send/Receive with Receive RFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>pacs.008 – Customer Credit Transfer</td>
<td>Prohibited</td>
<td>Mandatory</td>
<td>Mandatory</td>
</tr>
<tr>
<td>pacs.002 – Payment Status Report</td>
<td>Mandatory</td>
<td>Mandatory</td>
<td>Mandatory</td>
</tr>
<tr>
<td>pacs.002 ACTC – Accepted Technical Validation</td>
<td>Mandatory</td>
<td>Mandatory</td>
<td>Mandatory</td>
</tr>
<tr>
<td>pacs.002 RJCT – Rejection</td>
<td>Mandatory</td>
<td>Mandatory</td>
<td>Mandatory</td>
</tr>
<tr>
<td>pacs.002 ACWP – Accepted without Post</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
</tr>
<tr>
<td>pacs.002 ACCC – Confirmation of posting</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
</tr>
<tr>
<td>pacs.002 PNDG – Pending following ACWP</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
</tr>
<tr>
<td>pacs.002 BLCK – Blocked following ACWP</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
</tr>
<tr>
<td>pacs.028 – Payment Status Request</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Payment Returns</th>
<th>Credit Transfer Receive Only</th>
<th>Credit Transfer Send/Receive</th>
<th>Send/Receive with Receive RFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>camt.056 – Return Request</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
</tr>
<tr>
<td>camt.029 – Return Request Response</td>
<td>Mandatory</td>
<td>Conditional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>pacs.004 – Payment Return</td>
<td>Optional</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requests for Payment</th>
<th>Credit Transfer Receive Only</th>
<th>Credit Transfer Send/Receive</th>
<th>Send/Receive with Receive RFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>pain.013 – Request for Payment (RFP)</td>
<td>Optional</td>
<td>Prohibited</td>
<td>Optional</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Request for Payment Response</th>
<th>N/A</th>
<th>Conditional</th>
<th>N/A</th>
<th>Conditional</th>
<th>Mandatory</th>
<th>Conditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>camt.055 – RFP Cancellation Request</td>
<td>Optional</td>
<td>Prohibited</td>
<td>Optional</td>
<td>Prohibited</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>camt.029 – RFP Cancellation Request Response</td>
<td>N/A</td>
<td>Conditional</td>
<td>N/A</td>
<td>Conditional</td>
<td>Mandatory</td>
<td>Conditional</td>
</tr>
<tr>
<td>Information Request Messages</td>
<td>Credit Transfer Receive Only</td>
<td>Credit Transfer Send/Receive</td>
<td>Send/Receive with Receive RFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>Conditional</td>
<td>N/A</td>
<td>Conditional</td>
<td>Mandatory</td>
<td>Conditional</td>
<td></td>
</tr>
<tr>
<td>camt.026 – Information Request</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
<td>Mandatory</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>camt.029 – Information Request Response</td>
<td>Mandatory</td>
<td>Conditional</td>
<td>Mandatory</td>
<td>Conditional</td>
<td>Mandatory</td>
<td>Conditional</td>
</tr>
<tr>
<td>camt.028 – Additional Payment Information</td>
<td>Optional*</td>
<td>Conditional</td>
<td>Optional</td>
<td>Conditional</td>
<td>Optional</td>
<td>Conditional</td>
</tr>
<tr>
<td>Account Reporting Messages</td>
<td>Credit Transfer Receive Only</td>
<td>Credit Transfer Send/Receive</td>
<td>Send/Receive with Receive RFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>Conditional</td>
<td>N/A</td>
<td>Conditional</td>
<td>Mandatory</td>
<td>Conditional</td>
<td></td>
</tr>
<tr>
<td>camt.060 – Account Reporting Request</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
</tr>
<tr>
<td>camt.052 – Account Balance Report</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
</tr>
<tr>
<td>camt.052 – Account Activity Totals Report</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
</tr>
<tr>
<td>camt.052 – Account Activity Details Report</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
</tr>
<tr>
<td>camt.054 – Account Debit/Credit Notification</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
<td>N/A</td>
<td>Optional</td>
</tr>
<tr>
<td>System Messages</td>
<td>Credit Transfer Receive Only</td>
<td>Credit Transfer Send/Receive</td>
<td>Send/Receive with Receive RFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>Conditional</td>
<td>N/A</td>
<td>Conditional</td>
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<tr>
<td>admi.002 – Message Reject</td>
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<tr>
<td>admi.004 – FedNow Broadcast</td>
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<td>admi.004 – Participant Broadcast</td>
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*Optional*
<table>
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<tr>
<th>Credit Transfer Messages</th>
<th>Settlement Only[^150]</th>
<th>Liquidity Management Transfers (LMT) Receive Only</th>
<th>LMT Send/Receive</th>
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<tbody>
<tr>
<td></td>
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<td>pacs.009 – Financial Institution Credit Transfer</td>
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<td>Prohibited</td>
<td>Prohibited</td>
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<tr>
<td>pacs.002 – Payment Status Report</td>
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<td>pacs.028 – Payment Status Request</td>
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<tr>
<th>Account Reporting Messages</th>
<th>Settlement only</th>
<th>LMT Receive Only</th>
<th>LMT Send/Receive</th>
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<td></td>
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<td>camt.060 – Account Reporting Request</td>
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<td>camt.052 – Account Activity Totals Report</td>
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<th>System Messages</th>
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[^150]: Stand-alone participation type.

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

Table 2 – Financial Institution Credit Transfers - Liquidity Management Transfers; table below outlines the requirements for coding based on participation type.
<table>
<thead>
<tr>
<th>Service Code</th>
<th>Service Description</th>
<th>Broadcast 1</th>
<th>Broadcast 2</th>
<th>Response 1</th>
<th>Response 2</th>
<th>File</th>
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