Instant/Real-Time Payments Implementation Considerations Guide
Real-Time/Instant Payments: Overview

RTP has been gaining popularity in recent years as a convenient and efficient way to transfer funds between P2B, P2P and B2B payment segments. By 2027, RTPs are expected to account for 27.8% of all electronic payments globally with a 27.3% compound annual growth rate (CAGR) in North America.

What is Real-Time Payment?
- RTP systems generally operate on a 24x7 basis
- Provision of instant and irrevocable debiting/crediting of payers’/payees’ accounts
- Immediate confirmation to both parties that the funds have been transferred and can be re-used immediately
- Closed vs open loop
- Deferred vs Real-Time settlement

Success Factors For Real-Time Payments
- Strong government support and collaboration with banks & FIs is a primary requirement
- Interoperability within a secure and reliable infrastructure. This ensures that payments do not get ‘stuck’ in the flow and appear frictionless
- The impact of regulatory reform is the key driver for Real-time adoption, seeking end-user protection, transparency, and reduced credit risk for consumers and businesses
- Countries that originally built a faster payment system using domestic messaging standards have since decided to transition to more flexible messaging standards such as ISO20022

RTP Adoption Challenges
- Infrastructure to support instant payment systems
- Standardisation across different payment networks. The adoption of ISO 20022 will help address some of this
- Fraud control measures
- Late adoption of innovative ways of making payments - e.g., QR codes
- An API strategy to take advantage of Open Banking legislation will be essential
- Individual banks will need to understand the impact on liquidity dependent on the type clearing introduced

Real-Time Payments Use Cases
- RTP system supports ‘Request for Payment’, which require a payer to authorise a payment in response to the request. In the payment message, the payer is provided with the necessary pre-populated information for the RTP payment
- Bulk/Batch payments (e.g., payroll, etc.) are supported in RTP system though it is processed in form of individual credit transfer payments
- Bill Pay
- Recurring Payments
Payment Processing

Outlined below are the impacted areas in payment processing where RTP implementation considerations are listed out based on our journey with instant payments.

Pre-Processing
- **API over File:** API is preferred for a number of reasons, including: to help achieve SLA compared to file, to support features like scanning invoices in case of a request for payment and because a minimum of two APIs are required - one for payment initiation and another for RFP.
- **Validation:**
  - **Value date:** Qualification of instructed value date to ensure it is valid.
  - **Payment Data:** Amount, instructed currency and account.
- **Enrichment:** Centralised reference data helps to enrich debtor party and account details in order to meet SLA.
  - Important feature to consider calling reference data service is to stamp the data enriched onto the canonical model to avoid multiple calls.

Payment Date Handling
- **SOD/EOD/Rollover:** Business day roll over based on clearing times and DDA. Trigger for EOD activities. For e.g.
  - Legal entity/Branch EOD - EOD can be 11.59PM and SOD can be 12.00AM.
  - Clearing EOD - Depends on payment rail, for Fednow it depends on cycle date 7am to 7pm ET.
- **Forward dated transactions:** Enabling the system to warehouse transactions that have a future processing date.
- **Back Valuation date:** Need to review TCH/Fednow rules if it is allowed to process with current value date.

Operations Considerations
- RTP’s 24x7 availability could require changes to current operations and support structures.
- Readiness plan required to identify the impacted areas and provide support.

Method of Payment
- **Method of Payment** defines the means by which a payment is executed/delivered (for example, Book Transfer, SWIFT, via the RTGS/Clearing House).
- The method of payment determines many aspects of the processing such as:
  - Clearing Settlement account (when using RTGS such as TARGET).
  - Value date determination (by considering the cut-off restrictions & the relevant calendars to be used).
  - Formats and message types to be used.
- **Smart Routing:** How do you derive method of payment in case of RTP and Fednow both using same service level code “PRPT” in ISO message.
  - Since Pain 001 is used as the common api format, can leverage fields like service level code, currency, and few others for building the routing rules.
  - Service level proprietary is one option for the banks to leverage.

Billing and Charges
- **Payment Charges:**
  - Flat fee vs percentage calculations & Tiering.
  - Branch and client configurations.
  - Exception pricing: Differentiated pricing, Rebates & No deduct.
  - E.g. TCH Pricing – No volume discounts with transaction fee of $0.045 vs RFP equals $0.01.
  - FedNow follows similar fee for credit transfer but provides discounted pricing on first 2500 transfer for the month.

Billing:
- Identify payment type and link to applicable new billing code for the processing event and generate feed to billing system.
Controls

Outlined are the payment controls - functionality to interact with applications outside of payment's engine to meet bank’s regulatory responsibilities to monitor and manage payment events e.g. Sanctions, Fraud, FATF, Funds control etc.

Sanctions Screening
- Adopt risk-based approach to manage sanctions risks
- Develop, assess factors, implement, and routinely update the program
- Domestic vs cross border
- Due diligence on customers at onboarding & periodic review
- Communication b/w financial systems on potential sanction alerts
- Exception processing: Removing transaction from automated process to investigate
- Matching strategy including AI tools, Fuzzy & Machine learning which reduces false positives

FATF/AML
- AML and fraud are starting to converge. Finding and identifying mule dispersions is key to combating the fraud
- Invest in real-time inbound payment profiling and begin to integrate fraud and AML
- Beneficiary banks must undertake customer behavioral analytics and transaction profiling to highlight and freeze potential APP funds

Fraud Screening
- All transactions must be sent to fraud system in real time to detect potential fraudulent payments. Fraud system will highlight suspected fraudulent payments for operator review and resolution
- Add suspicious accounts and aliases to a watch list to block potentially fraudulent transactions before the funds leave your institution
- Invoice fraud need to be detected early
- Strategy - Technology & Innovation
  - Multifactor authentication
  - Tokenization
  - Message Signing (Not altering the content)
Payment Execution

RTP/Instant Payment | Considerations

Outlined below are some of the impacted areas in the payment execution (enable transactions to complete), where RTP implementation considerations are listed out based on our journey with instant payments.

Accounting

Accounting entries depend on the type of product offering to clients. Ability to generate accounting, based on various factors at the

► Individual transaction level
► Gross vs Net

Consider the following for Accounting in case of RTP

► Soft posting to be supported 24x7
► Hard posting could be on business day but needs to strive the accounting system to support 7 days.
► FIs should consider how they will monitor balances around the clock or deal with issues during nonstandard business hours

Data Store

► Store all the payment events and generate real time feeds to downstream systems
► Consolidate the weekend transactions onto the following business day while generating feed to reporting
► Elastic Search - Real time
► Provide status updates to client channels in real time

Clearing Reconciliation

Clearing reconciliation is necessary because there may be difference between record in general ledger account and record in clearing account. Reconciliation needs to be done at two levels.

► Account Level: All entries posted in DDA/WASH/NOSTRO needs to be balanced
► Transaction level: Each outward/Inward TXNs needs to be matched between clearing and our system data

Cash Management

Facility to provide details of cash movements against clearing/correspondent settlement accounts to corporate treasury via liquidity system to enable them to manage statement account balances held on the Nostro accounts with clearings or partner banks.

Payment application/data store will provide specific details of applicable cash movements related to ICDT in this case instant payments to ensure cash management can provide accurate predicted intra day position.

Posting on the client and settlement accounts needs to be sent real time to liquidity system.

Reporting

Too dependent on the data store to provide real time notification to generate on demand reports.

Operational Reporting Derived from data elements wit in payment system to create reporting and metrics. Include the weekend transactions as well. E.g., Transactional reporting, Returns reporting.

Client Reporting: Ability to generate report and advices to our clients and other LOB in all supported formats, to/from all supported communication methods in real time. Need to generate statements for 7 days.
Payment Ecosystem

Summary

As RTP pose implications for product and service offerings, operations and more, this deck will support banks strategic planning, with consideration for new product capabilities, technology implications and operations. Outlined below is the key activities which we propose under each flow in the life cycle to ensure efficiency and effectiveness implementing RTP.

1. COMMON PAYMENT INTERFACE
   - Payment instruction could be received via API/File
   - Open banking API is the recommended option as it supports to meet SLA and beneficial for RFP to scan invoices
   - ISO formats could be transformed to canonical model

2. ORCHESTRATION/PROCESSING
   - Usage of Payments services
     - It is recommended to use micro services for the payment orchestration
     - Centralised Ref Data Service - Enrich the account/client details
     - Processing should happen 24x7 e.g. branch EOD should be set to 11.59PM and SOD to be 12:00AM

3. PAYMENT EXECUTION
   - Execution
     - Accounting – Soft posting will be supported 24x7 while hard posting can be during branch business day
     - Controls (Decouple from hub)
     - Controls like sanctions is not required for RTP unless it is done while onboarding client
     - All transactions must be sent to fraud system in real time to detect potential fraudulent payments

4. MESSAGE TRF
   - Transform the canonical model back to the ISO format supported by RTP clearing

5. PAYMENT DATA STORE
   - Data Store
     - Store all the payment events in order to support the downstream systems real time
     - Provide status updates to client channels
   - Reporting
     - Data store need to support client and operational reporting provide the payment transaction data to the reporting system
     - Weekend transactions needs to be included on Monday
   - Cash Management
     - Posting on the client and settlement accounts needs to be sent real time to liquidity system
# US Instant Payments
## TCH RTP vs FEDNOW

### Key Features
- TCH RTP
  - 24x7
  - ISO 20022
  - Via TCH RTP Network
  - Support RFP

- FEDNOW
  - 24x7
  - ISO 20022
  - Via Fedline Network
  - Support RFP

### Settlement Model
- TCH RTP
  - RTP follows Pre-funded RTGS model – participating Fis have to provide upfront funds (IXB)
  - Banks need to open joint RTP account at Fed to settle

- FEDNOW
  - Prefunding not required as master account could be used
  - Fednow will allow for intelligent liquidity management, allowing banks to transfer funds between their FedNow account and their Federal Reserve master account

### Amount Limit & Domestic
- TCH RTP
  - US $1 Million Limit
  - Allow certain inbound foreign payments
  - Participates in IXB

- FEDNOW
  - US $0.5 Million Limit
  - Purely domestic

### Value Added Services
- TCH RTP
  - Ability to attach PDF or XML documents to payment requests (Remittance advice)
  - Account number Tokenisation (These tokens are used like real account numbers in the RTP network)

- FEDNOW
  - Optional Fraud mitigation tools which include negative lists
  - Message signing services

### Maturity/Scope of access to Market
- TCH RTP
  - RTP has about 300 bank participants and roughly 65% of US bank accounts

- FEDNOW
  - Potential to reach as high as over 10000 Fis

### Interoperability: What does it mean to Banks?
- RTP and FedNow won’t be inherently interoperable because they only have message routing interoperability even though both use ISO 20022
- To send an RTP payment, the receiver will need to be using RTP and vice versa. This is also true for FedNow, both sending and receiving parties will need to be using accounts that are enabled for FedNow transactions

### Message exchange interoperability
you can initiate a payment without the receiving financial institution being on the same service. But for message routing interoperability, both senders and receivers of a payment must be on the same service.

### Reference:
Federal Reserve released Operating Circular 8, which specified the following:

“A FedNow Participant may not send a payment order through the FedNow Service identifying an originator or beneficiary that is not either (i) a FedNow Participant or (ii) a holder of a deposit account on the books of the FedNow Sender and FedNow Receiver, respectively, in the United States.”
Looking to have an Impact Assessment completed on Instant/Real Time Payments?

Significant and complex internal changes are on the horizon for banks because of Instant Payments implementation. Being aware of the magnitude of these changes is imperative and an assessment by our experts will be an effective way to get started on the journey.

► **Our Industry SMEs have ‘been there and done it’**:
  Delta Capita has extensive experience of strategic reviews and readiness/impact assessments. We have carried out an impact assessment for various Global Tier 1 & 2 banks over the last two years.

► **We bring together specialist consultants with years of payments and banking industry experience**:
  Delta Capita has a knowledgeable payments team led by subject matter experts with many decades of industry experience across market infrastructures, financial institutions and technology.

► **We are thought leaders with practical experience in the ever-changing payment transformation space**:
  From advising top tier banks on their current technology and commercial strategy to working with existing and new market infrastructure initiatives and their early adopter communities.

**How Delta Capita can help**

Delta Capita’s unique market position allows us to bring insight, skills and capacity to help solve your pain points as the payments market evolves. This is all supported by our experience working with financial market infrastructures, sell and buy side, and technology companies - and across our domains of expertise. Our vast experience and coverage mean we can craft bespoke solutions to help you maximise commercial benefits from the ongoing tumultuous changes in the banking industry.

To find out more and speak to one of our experts, [contact us](#) today.

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