What's New in

Temenos Transact

October 2020

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|Release Highlights

Analytics

DW Export » Integration of DW with TDE

Data Warehouse (DW) online framework ingests the processed Temenos Transact data to the target relational database, by forming and executing SQL queries which is a realtime execution. Offline framework generates CSV extracts and imports them to the target database.

Additionally, DW data extraction mechanism is extended to support Temenos Data Engineering (TDE) system, where Temenos Transact data is streamed through the streaming platforms (kafka, kinesis and event hub) to the target system, in addition to CSV extraction and real-time database update. This new functionality provides DW offline (initial load processing) and online (real-time data streaming) services. This functionality enables:

- Automatic topic creation with user-defined configurations for parameters based on COMPANY or APPLICATION before data streaming

- Realtime capture and extraction of records from suffixed ($HIS, $NAU, $DEL, $SIM) tables and deleted records

- Cache refresh mechanism to reload configurations of `DW.EXPORT` at specified time intervals

- Avro schema generation and update to schema registry with schema built from `STANDARD.SELECTION` (SS) and `DW.EXPORT.API`

- IRIS API to perform DW related configurations from TDE

> **The topic related to this feature is given below:**
>
> Integration of DW with TDE

TDE - Administrator » Retry and Recovery Feature in Temenos Data Lake

Temenos Data Engineering (TDE) did not notify the source system about the failed records. The records that failed during serialisation were captured in invalid error records table in MYSQL metastore and the records that failed to reach the ODS or SDS database were captured in exception table.

The Retry and Recovery feature is now introduced in TDE, which writes the failed records, that is, the records that failed to reach the target (Operational Data Store (ODS) or Snapshot Data Store (SDS)) database, to exception topic (configured in the Data Event Streaming (DES) connection properties) after retrying for specific number of times in specific intervals. The DES system in turn sends the failed records that are written to the exception topic to the source system through inflow. This functionality promotes data accuracy in TDE.

The topics related to this feature are given below:

Managing Data Event Streaming

Managing Operational Data Store

Managing Snapshot Data Store

Application Framework

System Core » Multiple Alternate Reference Definition

This functionality enables users to define multiple alternate keys for a multi-value field in the `EB.ALTERNATE.KEY` application. When the users use and validate this alternate key value in an application, the functionality enables the application to fetch the corresponding record ID of the alternate key value.

Using this functionality, users can now define alternate key for both single and multi-value fields.

> **The topic related to this feature is given below:**
>
> Multiple Alternate Reference Definition

Banking Framework

Limits » Temporary Limits Exposure Enquiry

The Risk & Exposure Overview (CUSTOMER.SCV.CHECK) enquiry has been enhanced to display the total temporary (sub-allocated) amount for each record in `LIMIT` in the Customer Limit Exposure section. A drilldown option displays for each `LIMIT` record the details of each individual sub-allocation as taken from the `LIMIT.SUB.ALLOC` record:

- Limit from which sub-allocation is done
- Limit to which sub-allocation is done
- The start date and end date of the sub-allocation
- Time band

This functionality allows the users to view sub-allocation details directly from the Risk & Exposure Overview enquiry.

> **The topic related to this feature is given below:**
>
> Risk and Exposure Overview Enquiry

System Tables » Creating Company through an Online Service

When users created a new company in Temenos Transact through the browser, the transaction duration was long, resulting in a session time out. The requirement is to create a company using a permanently connected session (Telnet classic session), thus the company creation process has been split into an online setup phase and a service to do the actual company creation.

The `COMPANY.CREATE` application has been changed to an H type template to remove the dependency between the `COMPANY.CREATE` and `COMPANY`

applications. The user must create a record in `COMPANY.CREATE` manually. The COMPANY.CREATION.SERVICE automatically populates the data from this record in the `COMPANY` application. The status is updated in the *Status* field in the `COMPANY` application during each stage of the process.

Temenos Transact now allows the creation of a company through an online service.

> **The topics related to this feature are given below:**
>
> Company Creation
>
> Illustrating Model Parameters - COMPANY.CREATE

System Tables » Support for Request to Pay in Proxy Directory

Proxy account identifiers are natural identifiers that connect the customers to the payment accounts and help to determine the payee's account. While registering proxy identifiers, banks can capture the payment scheme and role at the proxy identifier level. Using APIs, active proxy identifiers can be determined with details and proxy identifiers can be registered or deregistered in or from the `ST.PROXY.DIRECTORY` application. To enable this functionality:

- The *Scheme* field is added in `ST.PROXY.DIRECTORY` to capture the payment scheme under which the proxy identifier is registered.
- The *Role* field is added in `ST.PROXY.DIRECTORY` to indicate whether a proxy identifier is registered for requestor, payer, both or none.
- The GetActiveProxyIdentifier API is introduced to check the registration status of the proxy identifiers and provide the details of the proxy identifiers with an active status.
- Two APIs are introduced to register (RegisterProxyIdentifier) or deregister (DeregisterProxyIdentifier) proxy identifiers.

This functionality allows the banks to:

- Capture the payment scheme and role while registering proxy identifiers.
- Obtain the details of the active proxy identifiers through an API.
- Register or deregister a proxy identifier using APIs.

The topics related to this feature are given below:

Request to Pay

Capturing Payment Scheme and Role

Registration Status of Proxy Identifier

Registering and Deregistering Proxy Identifier

Accounts » Capturing Receiver BIC in Charge Request for MTn91 Messages

The Charge Request (`AC.CHARGE.REQUEST`) functionality allowed banks to send ad hoc MTn91 messages to nostro banks to request the payment of a charge. The receiving bank was determined based on the nostro account updated in `AC.CHARGE.REQUEST`.

The Charge Request functionality now allows the user to capture the Receiver BIC of the financial institution that does not have a nostro or vostro relationship with the bank. This is applicable only on MTn91 message series (request for payment of charges, interests and other expenses).

The topic related to this feature is given below:

Charge Request

Corporate

DRAWINGS » Generic Changes to DRAWINGS

The `DRAWINGS` module is enhanced to support generic functions as below:

- Input of drawdown account, payment account and payment method during the RD/DC stage of the drawings.
- Change of *Risk Party* for export LC during the DC stage of the drawings.
- *Auto Expiry* of the credit to be set as No for ad hoc instalment payments for Usance drawings.

> **The topics related to this feature are given below:**
>
> LC Introduction
>
> Working With DRAWINGS

Syndicated Lending » Risk Free Rates

Risk-Free Rates (RFRs) are backward-looking rates and are based on actual transaction data. Existing IBOR rates are retiring at the end of 2021 and RFRs are the alternative to these rates.

Syndicated Lending (SL) module supports RFRs with spread inclusive and exclusive methods. The key features are:

- RFR requires daily average (simple or compound) calculation within the current interest period.
- RFRs are based on actual transactional data and these are published with a lag
- There are no credit risk elements involved while calculating the RFRs
- RFR supports Lookback – Narrow definition and Lookback – Observation shift types

The topics related to this feature are given below:

Letter of Credit » Open Account Trading in Trade Finance

The Trade Finance module in Temenos Transact supports two payment methods in international trade namely the documentary letter of credit and documentary collection. This module is now extended to support the Open Account Trade payment method. The `LETTER.OF.CREDIT` application allows booking of trade documents using the new payment method and the `DRAWINGS` application supports initiating of remittances against the trade documents.

In the Open Account Trade, the importer receives the shipment and pays the exporter on a later date or immediately after shipment. The goods and all the necessary trade documents are shipped directly to the importer who has agreed to pay the exporter's invoice at a specified date.

- At the import side, the importer approaches the bank to initiate the import remittances for the trade document handled directly by them. They submit the copy of the trade documents along with the remittance instructions to initiate the outward remittance to the exporter.

- At the export side, upon receipt of the inward remittances, the exporter provides the remittance instruction quoting the reference of the trade documents (if the documents are already booked in Trade Finance module) against which the payment is received or submits the trade documents along with the remittance instruction.

The topics related to this feature are given below:

Open Account Trade

Tasks for Open Account Trade

Outputs for Open Account Trade

Letter of Credit » Trade Evidence for Advanced Payment

In case of advance remittances (outward and inward), the importer pays the exporter the full or partial contract amount in advance, that is, even before receiving the shipment. There is no involvement of trade documents (commercial or transport documents) at the time of initiating or receiving the advance remittances by the importer or exporter other than the payment request. Generally banks handling these advance remittances will require adequate monitoring system and follow up with respect to submission of trade documents as evidence of imports or exports (within stipulated time against the advance remittances).

The Trade Finance module is enhanced to register the trade evidence or documents against the advance payment that is already initiated in the payment platform or module, that is, registering the shipment evidence against the advance payment is handled through the LC module.

The topics related to this feature are given below:

Trade Evidence for Advanced Payment

Tasks for Trade Evidence for Advance Payments

Outputs for Trade Evidence for Advance Payments

Private Wealth

Securities » Bulk Transfers

Bulk Transfers can be classified into Bulk Securities Transfer and Bulk Custodian Transfer (BCT). Bulk Securities Transfer is used when a new customer is on boarded or an existing customer is leaving the bank. So a new customer brings in all his or her positions from their current bank or an existing customer moves out all their positions to their new bank.

System can now process Bulk Custodian Transfer. When there is a change in custodian or transfer agent, BCT migrates all the positions held with the custodian or transfer agent to a new custodian or transfer agent. Bulk Securities Transfer and Bulk Custodian Transfer also supports bulk authorisation.

> **The topics related to this feature are given below:**
>
> Transfer-out Positions in a Portfolio
>
> Bulk Custodian Transfer
>
> Tasks for Transfers
>
> Outputs for Transfers

Corporate Actions » Incremental Elections for Events without Ex-Date

For some optional events (such as Takeover), there may be no ex-date or record date provided by the issuer or custodian. In such events, the election period is long and existing customers can elect multiple times during the event.

The system now defaults the ex-date based on the earliest date provided in the *Option Reply by Dates* fields. The customers can:

- participate in the event for the quantity held
- purchase additional units and elect the additional units purchased

New customers (who do not hold the security at the time of event creation) can also purchase the event security and become eligible to participate in the event. Temenos Transact also supports trading during the election period and multiple elections for such events.

The topic related to this feature is given below:

Incremental Elections for Events without Ex-date

Securities » Market Fees

There are a number of market fees that are charged in different markets, and there must be provision to calculate and store the market fees in the transaction. The market fee with the relevant qualifier are to be included in the settlement instructions sent to the custodian and reconciled with the confirmation received. In case of institutional customers for whom the bank acts as the custodian, the applicable market fees are included in the instructions (MT541 or MT543) received.

Following are the new features of this functionality.

- The market fees in the incoming message (MT541 or MT543) for custody clients is mapped to respective fee types and stored as part of the transaction.

- The market fees identified or calculated as part of the transaction are mapped to respective qualifiers as part of the MT541 or MT543 message sent to the custodian.

- The start date (from which a fee or tax is applicable) is defined in `SC.CHARGE.TAX.CALC`. The fee or tax is applicable only for the transactions entered after the defined date.

- An enquiry is provided to notify the institutional customers of the market fee

sent to the custodian and the market fee confirmed by the custodian. Using this enquiry, the user can reconcile the market fee. User can define multiple charge calculation rules based on additional criteria such as depository and currency.

The market fee calculation is now in alignment with market standards and enables increased STP.

The topics related to this feature are given below:

Defining Factors or Criteria Based on which Fee or Tax Apply

Defining Fee or Tax as Stamp Duty or Stamp Tax

Setting Start Date

Reconciling Market Fees

Mapping Fee or Tax from Incoming MT541 or MT543

Mapping Fee or Tax to Outward MT541 or MT543

Amending the Failed Custody Trades

Aggregated Market Fees

Mkt Fee Calc

Tax Lots » Staples - Setup, Transactions and Tax Lot Maintenance

Stapled securities are formed when two or more securities are contractually bound together so that they cannot be sold separately but are treated as a single security on the stock exchange. Different types of securities can be stapled together such as, shares, units and debt instruments. The single security which represents the staple is known as the parent, while the constituent securities are the child instruments. Temenos Transact is enhanced to support trading of stapled securities. The following features are available in this functionality:

- Staple static data includes setting up the parent and child instruments in `SECURITY.MASTER`. The unit ratio and value split for each child is captured in `SC.STAPLED.COMPONENT`.

- All the transactions (purchases, sales and transfers) takes place only on the parent security.

- The tax lots and the tax cost are maintained only at the child level and not at the parent level for tax purposes. The capital gains (CG) are calculated for each child.

- The system now allows the bank to define whether the allocation has to be set at parent or child level.

- The system supports corporate action on staples. It also supports scenarios where the standalone security becomes a stapled security or vice versa, using the new `SC.STAPLING.ARRANGEMENT` application.

- A new application `SC.STAPLES.REBUILDER` is introduced to trigger or support rebuilding of transactions when the value split across child securities is published with a backward effective date.

- The `CG.MANUAL.ALLOC` or `CG.STAPLES.MANUAL.ALLOC` applications now supports the specific allocation of parcels.

The topic related to this feature is given below:

Staples

Tasks for Staples

Output for Staples

Regional Banking Solutions

Argentina Model Bank

Taxes » Mapping of AFIP Padron for VAT, Income and Turnover Tax

This functionality allows banks to upload the padron files, store them in the Padron Microservice Database, and send it to Temenos Transact. The padron data will be added to the customer's records so that the data is available for the calculation of the following taxes: Value Added Tax (VAT), Income Tax, Perception, and Retention Tax. This functionality also provides the calculation for the generic VAT.

The *Imp VAT* field is added to the `CUSTOMER` and `CONDITION.PRIORITY` applications to be used for Generic VAT calculation.

> **The topic related to this feature is given below:**
>
> Taxes

Australia Model Bank

Benefit of Interest

Customers availing a home loan can link one or more savings accounts as an offset account to the home loan so that the balance of the savings account(s) can be offset with the outstanding principal of the loan amount. The interest will be calculated only on the offset balance. This way, the customer can save interest on the loan.

This functionality is used to display the benefit of interest, for example, the difference between the actual interest calculated on the outstanding principal and the interest calculated with the offset balance at the arrangement level.

For calculating the benefit of interest (the difference between the actual outstanding principal and the offset balance) new property (INFOINT) is created for the Interest property class.

The BENINT.INTEREST.DETAILS enquiry is provided to display the interest benefitted by the customer and the user can input a specific period to find out the overall interest benefitted.

> **The topic related to this feature is given below:**
>
> Benefit of Interest

Withholding Tax and TFN Number » Term Deposit Schedules

This functionality allows banks to generate term deposits API extracts for upcoming payments. The schedule information will appear as additional rows during any payment event.

The core `FD.SCHEDULES.DEFINE` application displays both future and past payments. The API extracts display the payment information together with the status of the immediate next payment for all the subsequent payments.

> **The topic related to this feature is given below:**
>
> Term Deposit Schedules

Withholding Tax and TFN Number » Stapled Securities Post Settlement Processing

This functionality allows users to enter the WHT components after the settlement process of entitlements is complete and also allows for the updated WHT component values to be extracted in the Income API extract of the stapled securities.

The following applications and versions are introduced as part of this functionality:

- The `AUWHTX.INCOME.WHT.DETAILS` application is updated when entitlements are already authorised. Any changes to the `AUWHTX.INCOME.WHT.DETAILS` application is treated as a change at the entitlement level and is captured in the income API extracts for staples.
- The `AUWHTX.INCOME.DIST.ENTRY` application allows the user to update the components for stapled securities and update other downstream applications based on the updated component percentages.
- The `AUWHTX.IDC.YEAR.END.TAX.PROFILE,INPUT` version allows the user to enter separate percentages for each child security.

> **The topic related to this feature is given below:**
>
> Stapled Securities Post Settlement Processing

Brazil Model Bank

Parceled Credit Product » Credit Operations

In Brazil, the Financial Institution offers loan products to its clients (individuals and legal entities).

This functionality allows financial institutions to collect the Imposto sobre

Operações Financeiras (IOF) tax when issuing a loan for a customer. The IOF can be discounted in the release of the amount to the borrower (client) or the financial institution can finance it.

The IOF tax can be applied in two ways:

- Discounted from the principal amount of the loan. With this option, the Financial Institution deducts the total IOF from the principal amount debited from the current account of the customer on the same date. The Financial Institution will transfer the IOF amount to the Brazilian Federal Revenue (IRS).
- Financed by a Financial Institution. With this option, the Financial Institution adds the pro-rata amounts of the IOF in the instalments.

The `BRMB.LENDING.PARAM` application is used to define the maximum number of days (calendar days) to consider for the calculation of the IOF tax.

> **The topic related to this feature is given below:**
>
> Parceled Credit Product

CEMAC Model Bank

Alyssa - Centralization of Payment Incident » Non-Payments

This functionality allows banks to configure the nature of a declaration and a notification, to capture additional information required by a bank, during the on-boarding process of a customer or the creation of an account, and to format and generate Alyssa Centralization of Payments (CIP) files.

> **The topic related to this feature is given below:**

Alyssa - Centralization of Payment Incident

Finland Model Bank

Account Related Processing (Including Support of ASP Accounts) » ASP Account Closure Extract

This functionality allows banks to collate the details of the following ASP (House Builder Savings Account) accounts and sent them to the State Treasury:

- ASP accounts closed during the previous month.
- ASP accounts from last month.
- ASP accounts that have zero balance and for which the construction of the house properties has begun.

The NORACC.ASP.STATE.TREASURY.REPORT enquiry is introduced to allow the user to run and generate the required details for state treasury reporting.

> **The topic related to this feature is given below:**
>
> Account Related Processing (Including Support of ASP Accounts)

Invoicing Capability (Fininvoice) » Subsidy Invoicing and Credit Note

This functionality allows banks to generate invoices in the Finvoice format for the subsidy interest that is due from a subsidy provider on the same due date. Also, when an invoice sent to the subsidy provider is incorrect, a credit note for that invoice will be generated in the Finvoice format.

The following applications are introduced as part of this functionality:

- The `FIVOCE.INVOICING.PARAM` application allows users to configure the invoicing related properties.
- The `FIVOCE.INVOICING.STAGGING.APPL` application allows users to store the invoices that are generated by Temenos Transact.
- The `FIVOCE.SUBSIDY.CONCAT` application allows users to view all the bills and the corresponding amounts generated for the subsidy interest with the same due date, currency, and subsidy provider.

The topic related to this feature is given below:

Invoicing Capability (Fininvoice)

Payments Posting and Validations » Automatic Processing of Recall Message

This functionality allows banks to handle the outgoing and incoming camt.056 request and perform certain validations and enrichments.

The following versions are introduced as part of this functionality:

- The `EB.QUERIES.ANSWERS,BANK.CREATE.FI` version allows users to enter the alternate credit account number at the time of initiating the camt.056 cancellation request.
- The `EB.QUERIES.ANSWERS,INWARD.AMEND.FI` version allows users to amend the details for an incoming camt.056 cancellation request.

The topic related to this feature is given below:

Payments Posting and Validations

India Model Bank

Lending Compliance » Bank Guarantee Validations and Restrictions

This functionality allows users to define the guarantee beneficiaries and validate the specific records.

The `PAYMENT.CATEG.PURPOSE` application allows users to define the beneficiary categories for the guarantees.

The following versions of the `MD.DEAL` application are introduced for each type of beneficiaries of the guarantees:

- `MD.DEAL,IN.INST.GUARANTEE.DGSD.`
- `MD.DEAL,IN.INST.GUARANTEE.CSTM.`
- `MD.DEAL,IN.INST.GUARANTEE.IATA.`
- `MD.DEAL,IN.INST.GUARANTEE.STEX.`
- `MD.DEAL,IN.GUARANTEE.FINANCIAL.`
- `MD.DEAL,IN.GUARANTEE.PERFORMANCE.`
- `MD.DEAL,IN.GUARANTEE.EXIM.`

The `IN.MD.CUST.SECTOR.RISK.CLASS` application is introduced to identify the sector values, using the entered sector codes.

The ENQ.MD.IN.INST enquiry lists the issues of the guaranteed based on the selected `MD.DEAL` version.

> **The topic related to this feature is given below:**
>
> Lending Compliance

Lending Compliance » Loan Rolled Over

The term rollover refers to the practice of extending the due date of a loan. As

per the current regulatory guidelines defined for rollover short-term loan contracts, the number of times a loan contract can be rolled over is 2.

This functionality allows users to repay past-due loans and then roll over those loans as well from the date of repayment.

> **The topic related to this feature is given below:**
>
> Lending Compliance

Goods and Services Tax (GST) » Calculating Split Tax

The Goods and Services Tax (GST) is an indirect tax for the entire country. This functionality also allows banks to calculate the split tax using the `FUNDS.TRANSFER` and `MM.MONEY.MARKET` applications.

> **The topic related to this feature is given below:**
>
> Goods and Services Tax (GST)

Israel Model Bank

Matrix Tax Server Interface » Matrix Tax Engine Interface

This functionality allows banks to send the Ex Event Ratio, Index Rate, Security Trust Fund, and the Foreign Currency files to the Matrix Tax Server during the Close of Business (COB). The Matrix Tax Server is used to do the calculations of all Israeli taxes. Once the Matrix Tax Server returns the taxes to be charged, accounting entries are initiated to the account linked in the original transaction.

The following services are used to generate the XML files:

- The ILMATX.EXTRACT.EX.EVENT.RATIO service is used to generate the Ex Event Ratio file.
- The ILMATX.EXTRACT.SECURITY.INDEX.RATE service is used to generate the Index Rate file.
- The ILMATX.EXTRACT.TRUST.FUND.RATE service is used to generate the Security Trust Fund file.
- The ILMATX.EXTRACT.CURRENCY.RATE service is used to generate the Foreign Currency file.

The topic related to this feature is given below:

Matrix Tax Server Interface

Stock Borrowing and Lending (SBL) Agreement Conditions » Contract Conditions Framework

This functionality allows the Securities Borrowing and Lending (SBL) framework to hold certain details, such as the minimum or maximum borrowing or lending amount or percentage. Securities Borrowing and Lending (SBL) trade

validations trigger override messages whenever there is a breach of limit in terms of percentages or other values of any of the hierarchy levels displayed. If there is a breach of hierarchy at multiple levels, multiple override messages are triggered.

The topic related to this feature is given below:

Stock Borrowing and Lending (SBL) Agreement Conditions

Netherlands Model Bank

iDIN Authorisation Service » iDIN Issuing

This functionality enables banks to offer the iDIN service to customers. This service allows a customer to use the bank's login methods for online shopping, login to insurance companies or public institutions.

The `NLIDIN.IDIN.TRANSACTION` application is used to capture the iDIN transaction details when a customer uses the iDIN services to perform the login authentication from a merchant's site. The `NLIDIN.IDIN.TRANSACTION,NLIDIN.API.UPDATE.TXN.1.0.0` version of the `NLIDIN.IDIN.TRANSACTION` application is provided with an API for updating the status. The middleware is responsible to update the status through this API based on the user or consumer action.

The NLIDIN.API.CUSTOMER.QUERY.1.0.0 enquiry is provided to fetch customer-related information. Information like BIN, name, age, address, email, etc. will be passed from Temenos Transact to middleware. Middleware will filter which one to be displayed on the consumer screen based on the actual request.

The `NLIDIN.BIN.DETAILS` application is used the capture the Bank Identification Number (BIN) of a customer which is used as part of the customer authentication process. This is a live application and records can only be read. The input function is not allowed in this application.

> **The topic related to this feature is given below:**
>
> iDIN Authorisation Service

iDEAL Payments » iDEAL

This functionality allows banks to offer their customers the possibility to make payments from their current account using the iDEAL online payment method.

In Netherlands, iDEAL is a brand and online payment method for online

guaranteed payments in a (web) store. It's a guaranteed online transfer from a buyer's IBAN to the beneficiary's IBAN.

The following application and enquiries are introduced as part of this functionality:

- The `NLIDLP.TXN.DETAILS` application is used to record the iDEAL transaction and customer details, which is received from the acquirer.
- The NLIDLP.TXN.DETAILS enquiry is provided for the above application so that the middleware can fetch the status of the transaction.
- The NLIDLP.API.TRANSACTION.STATEMENT.1.0.0 enquiry is used to list all the transaction-related information.
- The NLIDLP.API.TRANSACTIONSTATUS.STATEMENT.1.0.0 enquiry is used to display the status of a transaction.

The topic related to this feature is given below:

iDEAL Payments

Saudi Arabia Model Bank

Customer Infrastructure » Specific Account Products

Banks in Saudi Arabia have to adhere to the rules set by the Saudi Arabia Monetary Agency (SAMA).

This functionality allows banks to follow the rules set by the Saudi Arabia Monetary Agency (SAMA) for opening new accounts and create new customers.

The following rules are developed as part of this functionality:

- SAMA 5: There is a validation to check if the customer information update expiry date is less than or equal to the *Legal ID Expiry Date* of the customer.
- SAMA 42: If the *Legal ID Type* or *Legal ID Number* of a customer is amended then an over-ride is generated.
- SAMA 27: The number of Power of Attorney (POA) allowed in an account based on the customer sector can be parametrised in the `SACUIN.CUSTOMER.PARAM` application.

> **The topic related to this feature is given below:**
>
> Customer Infrastructure

SIMAH Credit Bureau Interface » SIMAH File Naming Convention

The Saudi Credit Bureau (SIMAH) is a body-offering consumer credit information services to respective members in the Kingdom of Saudi Arabia. Financial institutions in Saudi Arabia, sanction loans, and credits are only based on the credit report issued by SIMAH.

This functionality allows banks to report the Performing/Regular file by product wise and also report the monthly update file which contains all the active contracts. The file name format is changed to <Member Code>_<TYPE>_ <Temenos Transact Product Name>_<Frequency>_<Date YYYYMMDD>.xml.

The topic related to this feature is given below:

SIMAH Credit Bureau Interface

Spain Model Bank

Allfund Bank (AFB) Interface » Automated Generation of Legal Documentation for International Funds

This functionality allows banks to generate a report in XML format to customers to advise them that the cut off time of a security has changed.

The *Afb Session Time* field is added to the `ALLFND.AFB.PARAMETER,INPUT` existing parameter version to configure the cut off time.

> **The topic related to this feature is given below:**
>
> Allfund Bank (AFB) Interface

Lending and Mortgages » Mortgage Act 2019 Early Repayment & Cancellation

This functionality allows banks to calculate and charge compensatory fees when early refunds are triggered by customers, considering the thresholds and rules established in the Spanish Regulation for Mortgages and Loans, 2019 LCCI (Ley Reguladora de Contratos de Crédito Hipotecarios).

The following applications are introduced as part of this functionality:

- The `ESLEND.BDE.RATES` application allows users to store the data of the interest rate swap received from the Spanish Central Bank (BDE).
- The `ESLEND.LENDING.PARAM` application allows users to hold the user definitions of the write-off parameters.

- The `ESLEND.LOSS.CALC.VARIABLES` application allows users to store the value of the industry average rate, the calculated value of the spread and the calculated value of the updated interest rate.

> **The topic related to this feature is given below:**
>
> Lending and Mortgages

Lending and Mortgages » APR for Multi-Tier Interest Rate Loans

This functionality allows banks to see the highest Annual Percentage Rate (APR) rate in the stimulation overview screen so that banks can consider the worst-case when calculating the APR for multi-tiers interest loans to the customer.

The ESLEND.CASHFLOW.DETAILS enquiry is introduced to allow the bank to view the cashflow details of the simulated loan contract.

> **The topic related to this feature is given below:**
>
> Lending and Mortgages

Tunisia Model Bank

Account Infrastructure » Account Statement, Chequebook or Passbook

This functionality allows banks to check the customer's eligibility for issuing chequebooks and generate account statements in the AFB120 format.

The following enquiry, application, and versions are introduced as part of this functionality:

- The TNACIN.CHEQUE.ELIGIBILITY.CHECK enquiry lists the customers that are eligible for issuing chequebooks.
- The `TNACIN.CHEQUE.ELIGIBILITY` application allows users to store the requested eligibility details.
- The `PRINT.STATEMENT,AFB120.ADHOC` version allows users to generate the statements on an ad-hoc basis in the AFB120 format, at the account level.
- The `PRINT.STATEMENT,AFB120.CUSTOMER.LEVEL` version allows users to generate the statements on an ad-hoc basis in the AFB120 format, at the customer level.
- The `DFE.PARAMETER,AFB120.INPUT` version allows users to generate the individual or combined statements in the AFB120 format.

> **The topic related to this feature is given below:**
>
> Account Infrastructure

Customer Infrastructure » Garnishment Handling

This functionality allows users to create garnishment orders and freeze the funds

from customer accounts.

The following applications and enquiries are introduced as part of this functionality:

- The `TNCUIN.GARNISH.ORDER` application is used to create and amend the garnishment order.
- The `TNCUIN.GARNISHMENT.PARAM` application is used to parameterise the details for the garnishment order.
- The `TNCUIN.LOCK.DETAILS` live application is used to store the details of the locked account details.
- The TNCUIN.LOCKED.DETAILS enquiry displays the list of locked amounts for the customer and the garnishment order.

The locked amounts in the accounts can be increased or decreased, and further on released.

> **The topic related to this feature is given below:**
>
> Customer Infrastructure

Retail

Retail Lending, Retail Deposits and AA » Risk Free Rates

As all interbank lending rates (IBORs), like London Interbank Offered Rate, will be retiring at the end of 2021, the industry is moving to an alternative Lookback Risk Free Rates (RFRs) as part of a regulatory obligation. These are different from IBORs and affect the way contracts are priced and risks are managed. Some key characteristics of RFRs are:

- RFRs are derived purely from the market data.

- RFRs are published with a lag, that is, rates published today are applicable for the previous business day.

- There is no term structure.

To support RFR through the Lending and Deposits modules in Temenos Transact, the Interest Property Class is enhanced with new attributes to accept appropriate market conventions, compounding methodology and options for margin treatment. Each market convention and spread treatment leads to a specific way of handling the interest accruals. Market convention supported by AA is Lookback, that is, use of historical RFRs for daily compounding. The following two RFR calculation methods are available:

- Rate Compounding – This method is more accurate in compounding interest when principal remains unchanged during the interest period.

- Simple Averaging – This method is used where RFR rates are sourced daily and multiplied by the outstanding principal.

The topics related to this feature are given below:

Risk Free Rates - Deposits

Risk Free Rates – Lending

Risk Free Rates - AA

Tasks for Interest on Loan

Technology

Integration Framework

Data Event Streaming » Data Event Streaming API Security

In Data Event Streaming (DES), a new component called des-api has been added. The Reconciliation API which was part of config installer is now moved to this new component with security features such as HTTPS, JWT and XACML.

The security features ensures sub component level health check such as kafka, schema registry, database, DES components (like EP, EPA and so on.), and valid user authentication.

ESB Adapter for IBM Integration Bus » Encryption of Credentials in IIB Outbound Adapter

This feature provides a list of cryptographic algorithms using which users can encrypt the plain text password and then use this encrypted password in Integration Framework (IF) products. These products are stored in a file. During runtime of any IF product (especially when using Temenos Transact Custom Outbound Adapter for IIB), users can securely decrypt this encrypted password provided in a file.

Using this feature, users can securely provide a password in an external file.

> Click here to understand the installation and configuration updates for this enhancement.

> **The topic related to this feature is given below:**
>
> Encrypting the Credentials in IIB Outbound Adapter

Data Quality Feedback Mechanism » Data Quality Feedback Mechanism

The Data Quality Feedback Mechanism is introduced in Temenos Transact, which provides features to consume, convert and store the error records in Temenos Transact. It consumes error records from Temenos Data Lake (TDL) error topic and stores the corresponding Temenos Transact record in the `EB.DATA.QUALITY.CHECK` application.

> **The topic related to this feature is given below:**
>
> Data Quality Feedback Mechanism

Interaction Framework

IRIS R18 » Multiple API Support in ODS Workbench

Currently in IRIS R18, it is possible to create only one API at a time using the ODS workbench. This feature now allows the users to create multiple APIs in ODS workbench.

Using this feature, a user can:

1. Create multiple API definitions at a time for ODS.
2. Generate an inventory from workbench and post this inventory to IRIS to generate the swagger and service.xml for multiple API definitions.
3. Construct the GraphQL query when multiple tables are used in API definition and access the GraphQL endpoint to get the response.

> **The topic related to this feature is given below:**
>
> Multiple API Support in ODS Workbench

IRIS R18 » Default XACML Authorisation

The XACML authorisation feature is enabled by default, whenever a user creates a new container WAR using the latest version of service archetype container.

This feature allows users to control the authorization for every API and restricts anonymous user requests. In order to use the feature effectively, users need to ensure that they define relevant policy file to control the authorisation for every API. This will help to improve the security level of the product.

> **The topic related to this feature is given below:**
>
> Default XACML Authorisation

UXP Browser » Version Dropdown Enquiry

In UXP Browser, users can now pass additional selection criteria while executing a dropdown enquiry in a Version. Additionally, users can further filter the dropdown results based on a text entered in the dropdown input field.

> **The topic related to this feature is given below:**
>
> Version Dropdown Enquiry

Platform Framework

Temenos Workbench V1 (UXP) » Wildcard and Content Assist Support

The Data Packager feature now supports wildcards and content assist when adding a record to a package through web interface or IDE import menu. The wildcard (*) can either be used separately or combined with characters as required, to import records in bulk mode.

> **The topic related to this feature is given below:**
>
> Managing data packages
>
> Eclipse IDE Features

Infrastructure » Scheduler

Scheduler is a framework feature that comes bundled with Temenos Micro Services Framework (MSF). It enables the underlying microservice applications to schedule the business processes for execution at regular intervals using CRON expressions. It also provides support for monitoring of scheduler instances.

> **The topic related to this feature is given below:**
>
> Scheduler

Temenos Workbench V1 (UXP) » Packaging Data Structures

In Data Packager, the data structure feature has been enhanced such that users can now load maximum possible dependencies for a given model. Also, the users can filter and load only L3 records into the package.

> **The topic related to this feature is given below:**
>
> Default data structure

Infrastructure » NuoDB Support in Microservices Framework

In Microservices Framework, NuoDB is introduced which is an elastic SQL database for hybrid cloud applications that scales-out on-demand and ensures continuous availability of services. It provides standard database interfaces, operations, and guarantees consistency and durability. The database is

accessed by users through an ANSI SQL interface as a single logical database, even across data centers or Amazon availability zones.

> **The topic related to this feature is given below:**
>
> NuoDB Support

Microservices » Entitlements

Entitlements are sets of privileges configured for users which define the type of operations an application user can perform on the resources.

A centralized solution is introduced which helps banks to configure Entitlements on the resources (products) for retail or corporate customers. Also it provides API interface for product channel applications to enquire entitlements based on the user Id.

> **The topic related to this feature is given below:**
>
> Entitlements

TAFJ Database Installations » TAFJ Stored Functions

TAFJ provides stored functions, which are loaded in the database and used while performing DB Operations on I-Type fields whose values are aggregated based on a condition or from other columns in the table. These stored functions require a JVM or CLR (in case of SQL Server).

In cloud environment, JVM or CLR may not be available. Therefore, for cloud or on premise support, a new feature is introduced which replaces the Java stored functions with native PLSQL functions specific to database. However, the names of the functions remain the same, as the invocation from runtime does not have

effect with underlying functions.

> **The topic related to this feature is given below:**
>
> Loading Stored Functions

Treasury

OTC Clearing » EMIR Regulatory Requirement

European Market Infrastructure Regulation (EMIR) regulatory amendment 2017 has significant changes in the lifecycle of Over the Counter (OTC) derivative transactions. The OTC derivatives operational workflow of Temenos Transact is enhanced as follows to support the regulatory and clearing requirements of EMIR:

- New data fields in the OTC derivative applications (Foreign Exchange, Non-Deliverable Forward, Forward Rate Agreements, Swaps and Derivatives)

- Additional data fields for trade reports in OTC clearing module

This enables the bank to capture EMIR reportable data when inputting new transactions.

> **The topics related to this feature are given below:**
>
> Introduction to OTC Clearing
>
> Working with Regulatory Reporting Data

OTC Clearing » MiFID II Transaction Reporting

Markets in Financial Instruments Directive (MiFID) II is a significant post-2007 crisis regulatory change within the European Union (EU), which impacts all entities that transact with EU counterparties. The Over the Counter (OTC) derivatives operational workflow in Temenos Transact is enhanced as follows to support the transaction reporting requirements of MiFID II:

- New data fields in OTC derivative applications (Foreign Exchange, Non-Deliverable Forward, Forward Rate Agreements, Swaps and Derivatives)

- Additional information fields in OTC Clearing module

This helps the bank to capture and store MiFID II related reportable data for transaction reporting purposes.

The topics related to this feature are given below:

Introduction to OTC Clearing

Working with Regulatory Reporting Data

|Technical Notes

Banking Framework

New Module - Balance Files

A new module, Balance Files (BF), has been carved out of Reporting (RE).

- The `EB.CONTRACT.BALANCES` and `EB.CONTRACT.BALANCES.HIS` tables have been moved from the RE to BF module.

- This module will be automatically installed during the upgrade process and requires no manual intervention.

- Any local developments referring to the `EB.CONTRACT.BALANCES` and `EB.CONTRACT.BALANCES.HIS` tables in componentised format should be modified to refer BF accordingly.

Installation and Configuration Notes

Technology

Integration Framework

ESB Adapter for IBM Integration Bus » Encryption of Credentials in IIB Outbound Adapter

IIB Outbound Design time should be changed, which means the security credential column in the TAFJ runtime should contain the encrypted text instead of plain text.

|Extensibility APIs

Technology

Java Extensibility

The extensibility APIs for Java are:

S-.-N-o	Pac-kag-e	Class	Method name	Exte-nde-d As	Exten-sib-ility Cat-egory	Description
1	system	RecordLifec ycle	isDataAccessRestric ted	Hoo k	New	To return a boolean value to decide whether to restrict or allow access to the data
2	system	DataFormatt ingEngine	updateRecord	Hoo k	New	To update the records of any table
3	system	ServiceLife cycle	updateLoanDepositRe cordWithSchedule	Hoo k	New	To update only LD.LOANS.AN D.DEPOSITS and LD.SCHEDULE .DEFINE record during the service using the specified version and id
4	system	RecordLifec ycle	postUpdateRequest	Hoo k	Enhan ced	Enabled for Delete function at unauthorised phase of lifecycle.
5	pay men ts	PaymentLife cycle	getExternalRequestF ieldValue	Hoo k	New	To get a field value to be

S.-No	Pac-kag-e	Class	Method name	Exte-nde-d As	Exten-sib-ility Cat-egory	Description
						mapped to an external request
6	pay men ts	PaymentLife cycle	updateProduct	Hoo k	New	To override the product related information including the routing product.