

WealthSuite

Core Banking integration capabilities

Standard Chartered Bank



TEMENOS

The software specialist for banking and finance

Information in this document is subject to change without notice.

No part of this document may be reproduced or transmitted in any form or by any means, for any purpose, without the express written permission of TEMENOS HEADQUARTERS SA.

© 2016 Temenos Headquarters SA - all rights reserved.

Table of Contents

| | |
|---------------------------------------|---|
| Document History..... | 3 |
| Introduction..... | 4 |
| Online | 4 |
| Synchronous Call - Inward | 4 |
| Synchronous Call - Outward..... | 4 |
| Asynchronous Call – Inward..... | 4 |
| Asynchronous Call – Outward..... | 5 |
| Batch File processing..... | 5 |
| DFE Inward File Processing | 5 |
| Data Extraction..... | 5 |
| DFE Outward File Extract Process..... | 5 |
| DW.EXPORT | 5 |
| External BPM Integration | 6 |
| User Interface..... | 6 |
| Standard Solutions | 6 |
| edgeConnect IDE | 6 |
| IRIS & Data Service..... | 6 |
| T24 Custom Adaptor for ESB..... | 6 |
| T24 Custom Outbound Adaptor | 6 |
| T24 Custom Inbound Adaptor | 6 |

Document History

| Author | Version | Date |
|-------------------|---------|-------------|
| Vijaya Ramanathan | V1.0 | 07-Nov-2016 |

Comments:

Introduction

The purpose of the document is to describe the integration capabilities available as part of T24 and serve as a guideline for integrating WealthSuite with SCB systems. The integration capabilities are described as per the following classification.

- Online
- Batch files processing
- Data Extraction
- External BPM Workflow Integration
- User Interface

Online

Synchronous Call - Inward

Temenos Web Services

Temenos Web Service Composer (TWS) is designed to provide robust SOA web services for T24. TWS exposes Business Services and Business Operations as WS-I compliant Web APIs via JEE. Web Services can be built and WAR files generated using Design Studio.

Format: XML

Protocol: SOAP

Synchronous Call - Outward

DFE Real-Time Outward Message Process

T24 Core utility Data Formatting Engine (DFE) provides a solution to consume Webservice of external system and make a synchronous call from a transaction through Version API.

Format: XML

Protocol: SOAP

Note: Since this call is not part of the T24 transaction boundary, any update through this call cannot be cancelled when T24 transaction is cancelled. Hence it is recommended to use synchronous call to retrieve information from external system to enrich T24 and complete the transaction and not to perform updates to external system.

Asynchronous Call – Inward

TAFJEE Application

TAFJ JEE Application provides MDB to handle JMS messages and EJB to process T24 request sent as JMS message. Out of the four types of channels 2 are available for external systems to make asynchronous communication with T24.

OFS Request/Reply based on JMS request/reply queues. This channel is configured by default for OFS, Browser, TWS, ARCMOB, TCIB, AML and SEAT.

CALLAT Request/Reply based on JMS request/reply queues. This channel will initialize a TAFJ Session with JF.INITIALIZE and do a CALL @ with parameters.

Format: OFS and OFSML

Protocol: JMS

DFE Real-time Inward Message Process

DFE Real-time Inward message process provides support for non-standard message formats using TAFJEE channel **OFS Request/Reply**. This is recommended only for legacy interfaces.

Format: Delimited and Fixed Length text

Protocol: JMS

Asynchronous Call – Outward

IF Event

The Integration Framework allows an event to be emitted from any T24 transaction. This event is then enriched and delivered to JMS message queues by INTEGRATION.SERVICE. The event is generated only when the T24 transaction is successful. The Exit Points to generate an Event are T24 Application, Version, Component Service and TSA Service. Multiple Events per transaction is possible. Events and related Flows can be created and published to T24 using Design Studio.

Format: XML

Protocol: JMS

Batch File processing

DFE Inward File Processing

DFE Inward File Processing can process ASCII files sent to T24 Application Server to upload data in T24. The upload process is multi-threaded and uses OFS to perform the update in T24.

Protocol: N/A

Format: Delimited and Fixed Length text, OFS

Data Extraction

DFE Outward File Extract Process

Data formatting engine can extract financial / non-financial data from T24 and writes the data in the output directory mapped in the interface parameter table. The extraction process is multi-threaded to provide better performance. It is not recommended to transform data or merge data from multiple tables in T24 for performance reasons.

Protocol: N/A

Format Delimited and Fixed Length text, XML

DW.EXPORT

The DW.EXPORT application is a standard interface between T24 and Temenos BI products (Insight and Insight Risk) which extracts data from T24 in comma separated value (CSV) text files. The entire data extraction process can be run as part of T24 system COB or through an online service.

It is recommended to have single set of extraction from T24 to avoid duplicate extracts. In case if Insight is implemented then it is strongly recommended to take a copy of the DW.EXPORT extraction files for other downstream systems. If required additional data extraction can be included in DW.EXPORT to cater for other downstream systems.

Protocol: N/A

Format CSV

External BPM Integration

There is no standard integration solution available for Pega BPM. Temenos recommended approach for this will be to use TWS for Synchronous and TAFJ MDB and IF Events for Asynchronous integration methods. Alternately T24 functions exposed through EDMi (webMethods) can be extended to include business functions required for Pega BPM and integration can be built through EDMi.

User Interface

Standard Solutions

The standard solutions available for T24 are

T24 Browser for internal bank users. A Web Archive (WAR) application developed specifically for T24 as its frontend solution.

Temenos Connect – for bank's customers. A packaged solution with presentation layer is built using the edgeConnect IDE and the integration to T24 is provided by TWS and IRIS.

edgeConnect IDE

edgeConnect is an IDE for building the presentation layer, and generates a war file for deployment. This is a configuration-only IDE which can be used to develop and modify screens without programming language knowledge. edgeConnect IDE allows backend integration with any system using industry standard integration methods.

IRIS & Data Service

At the heart of Temenos' Interaction Framework is a Temenos-built application called IRIS (Interaction, Reporting & Information Services). IRIS runs a high-level language called RIM (Resource Interaction Model) that describes services at a conceptual level; these services are the means of accessing data and functionality in an underlying business application like T24.

T24 Business Services and Business Operations can be exposed as RESTful service in ODATA protocol. The formats supported are ATOM and JSON.

Data Service can be built using Design Studio to describe services and expose them (API creation) through configuration (no coding) to any user interface that needs to use them.

T24 Custom Adaptor for ESB

ESB based integration is standard approach taken by many banks and this necessitate T24 to provide integration capabilities to ESB solutions. T24 Custom Adaptor aims to fill this need. 2 types of adaptors are available for ESB integration

T24 Custom Outbound Adaptor

Facilitates communication from ESB to T24. T24 business functions can be exposed to the ESB through this adaptor and make Synchronous call to T24. Message format is XML.

T24 Custom Inbound Adaptor

Facilitates communication from T24 to ESB. T24 IF events can be pulled in to ESB and made available for other systems to consume by this adaptor. This can be considered as a replacement to INTEGRATION.SERVICE that delivers IF Events to external systems via JMS queues. However both can co-exist.

Note: T24 Custom Adaptors for EDMi (webMethods) is currently not available and requires product enhancement.