

BOX for SWIFTNet

all the functions needed for
SWIFTNet Message Processing



MERVA Replacement Solution

Suite of components for step-by-step migration off MERVA

Step 1 – Replace MERVA

WBI-FN / SAA		INTERCOPE BOX FOR SWIFTNET				
FIN, INTERACT FILEACT	PKI	RMA	E+R	GUI	API	ROUTING PRINTING
SWIFTNET CONNECTIVITY	SWIFTNET SECURITY	APPLICATION FUNCTIONALITY		BACK-OFFICE INTEGRATION		

MERVA Replacement Solution

Suite of components for step-by-step migration off MERVA

Step 2 – Replace also existing CBT (WBI-FN / SAA)

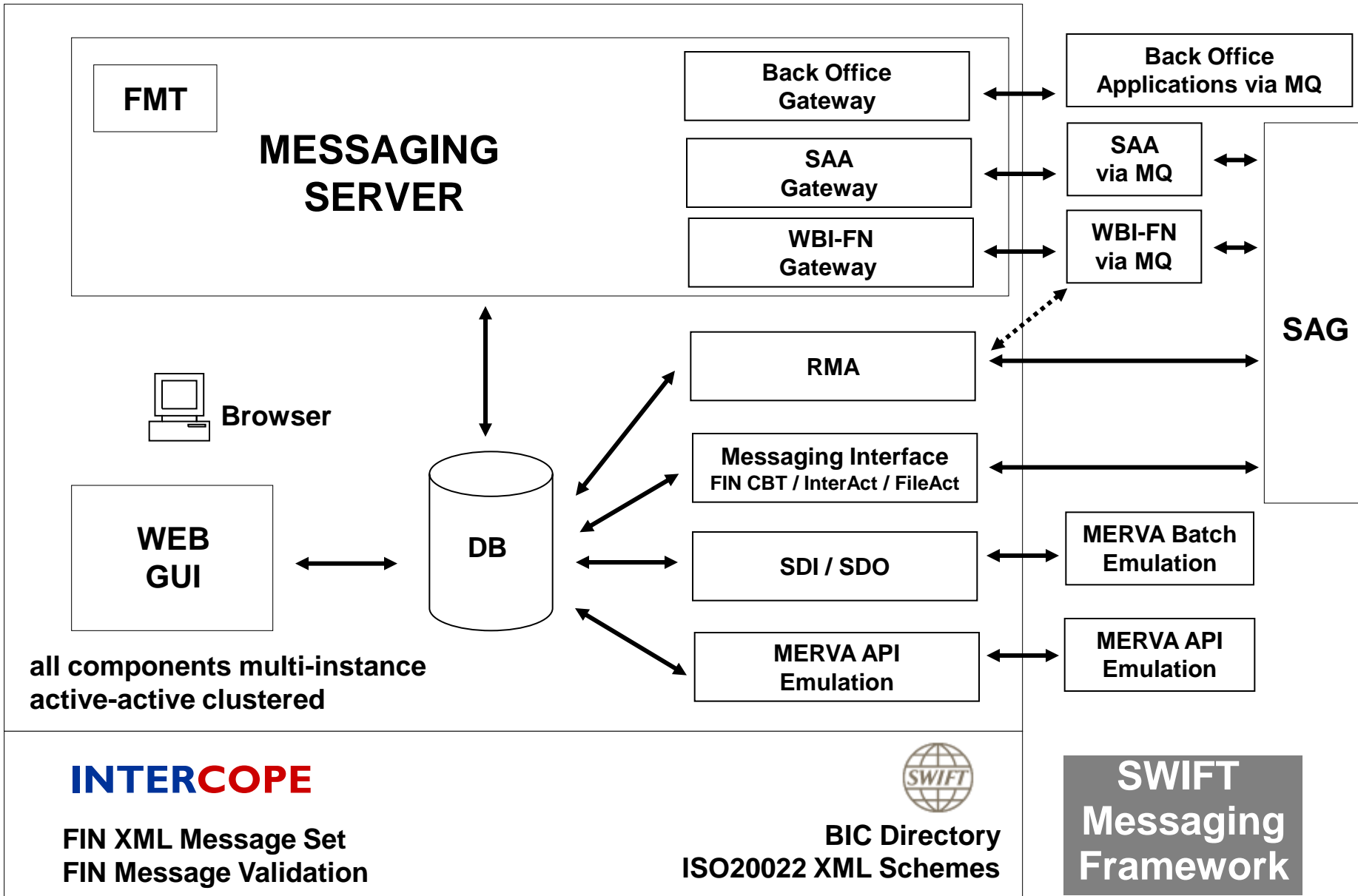
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SWIFTNET CONNECTIVITY	SWIFTNET SECURITY	APPLICATION FUNCTIONALITY		BACK-OFFICE INTEGRATION		

MERVA Replacement Project Timeline

- Step 1 : Replace MERVA
 - Readily available
 - POC possible any time
- Step 2 : Replace also existing CBT (WBI-FN / SAA)
 - Available Q4 2010

Solution Concept

- 'MERVA-like' solution covering all aspects of SWIFT messaging connected to SAG via SAA or WBI-FN or from Q4 2010 via own CBT
- Modern, future-oriented solution
- One central database as part of high-availability concept
- All components multi-instance enabling maximum scalability
- High-availability support thru active-active cluster
- Single code base yet platform independent
- Proven throughput of 30 messages/second per instance
- Solution is composed of
 - SWIFT messaging framework
 - Customer specific business process
 - Customer specific configuration
 - Customer specific SLA



Solution Architecture

- XML based, own XML message set for FIN
- Platform independent
 - AIX, Linux, Solaris, Windows, z/Linux, z/OS USS
- Integrated with high-availability features
 - Multi instances using one database, active / active cluster
- Browser based web client, nothing to be installed locally
 - WAS required : IBM, Oracle BEA or Tomcat
- Relational database : DB2 or Oracle
- Java API
- User Profile Management controlled multi institution
 - Total separation of business entities / service provider enabled
- Functions available as SOA services
 - Message validation / RMA permission check
- SNMP integration with system supervision

SWIFT Messaging Framework

- SWIFT XML schemes / BIC directory / currency tables
- Own FIN XML message set
- Messaging engine
 - Back office integration
 - CBT options
 - SAA gateway
 - WBI-FN gateway
 - Own CBT (from Q4 2010)
 - RMA
 - FMT
 - MERVA-like functionality
 - SDI / SDO
 - MERVA API emulation
- SWIFT optimized browser based GUI

Customer Specific Business Process

- User Profile Management
 - Access control
 - Mirroring of organizational structure
- Business Rules
 - Authorization (4 eyes, low value borders)
 - Workflow
 - Analyzing / Routing / Printing
 - Duplicate checking / Manual intervention
- Journals / Queues
 - Comprehensive reporting options
 - Flexible extension of visualization (XHTML)
- End-of-day processing
 - Statistics
 - Archiving

Message Processing

- Freely configurable workflow and queues
- Message validation like in MERVA
 - Syntactical / semantic / cross-field as per SWIFT definition
- FMT
- Duplicate checking
- OFAC filter integration
- Performance optimized message routing
- Automatic printing
- Interception for manual intervention
- Matching of SWIFT ACKs and notifications
- Archiving

MERVA Replacement Step-by-Step

- The solution was designed with MERVA replacement in mind
- All MERVA functionality is implemented including
 - MERVA API emulation
 - MERVA batch processing
 - Emulation of MERVA queues and attributes
- This approach allows to replace MERVA without changing existing back office applications
- First step : Replace MERVA, keep existing CBT SAA or WBI-FN
- Second step : Replace also CBT

Specific MERVA Functions Retained in BOX

- MERVA API Emulation
 - Queue Management Services
 - Message Format Services
 - TOF (Tokenized Form Services)
 - DSLAPPFS / DSLAPFTS
- SDI / SDO Emulation
- TOF Field Support
- 'MERVA like' Queues
- FMT (Financial Message Transfer)
- RMA Relationship Check equivalent to MERVA BKE lookup
- Message Validation Check equivalent to MERVA validation API call

End User Functions

- Manual Message Entry & Repair
 - all MT and MX messages
 - dynamic generation of panels from XML message set
- Message Authorization
 - 4 / 6 / 8 eyes
- Message Search & Retrieval
 - Quick / Standard / Advanced
- Manual Printing
- Operator control of message flow, throughput and system status

BOX – Latest Topics

- Messaging Interface
 - FIN CBT
 - InterAct / FileAct
- Performance enhancements for journal queues
- Performance benchmarks
- Enhanced BOX queue implementation
- Optimized Multi Institution Staging for Service Providers
- MX MT message transformation

FIN Messaging Interface

- Status
 - Certification Process in progress
- Current project plan
 - Implementation until September 2010
 - SWIFT conformance testing starting September 6th 2010
 - Pilot customer testing with Bank Austria in October 2010
 - Available for customer testing November 2010
- Next step
 - Certification for SWIFTNet7 will follow in 2011

FIN Messaging Interface Design

- Built on proven BOX functionality
 - Not a completely new solution
- New Communication Adapter like the Interact / RMA adapter
 - Configuration via BOX WEB GUI
 - Uses own database connection
- Uses the RMA Datastore of BOX
- Uses Journals & Query functions of BOX

InterAct / FileAct Messaging Interface

- Status
 - Initially implemented for SWIFTNet 6.3
No certification required
 - Implementations for SWIFTNet 7 will follow in 2011 including Relationship Management Application (RMA) enhancements
Certification required
- Current project plan for InterAct and FileAct
 - Infrastructure and SWIFT connection completed
 - First two installations planned in Q3 2010

Performance enhancements for journal queues

- GUI-Performance Improvements
 - Introduction of Sophisticated Date Filter
 - Date filter enforced
 - Normalizing text data in Message Ware House
 - Solving the upper / lower case problem of DB2 V8
- Routing with multiple Owner
 - Available for DB2V9

Performance benchmarks

- Performance measurement
 - 20,000 messages downloaded from SWIFT TANK file
 - On a QuadCore Linux System with 32 bit these messages were processed in 342 seconds via MQ FIN link (FMT)
 - 58.5 messages / second
 - around 200k messages per hour

Enhanced BOX queue implementation

- BOX queues may now be used to schedule message processing
- New configurable object 'Application queue' now enable automatic or manual scheduled processing for :
 - Backend applications
 - Printers
 - SWIFT traffic
 - Traffic bulking

Optimized Multi Institution Staging for Service Providers

- Individual parameters per stage
 - Development
 - UAT
 - QA
 - Production
- are stored in replacement files for workflow updates without manual intervention
- New enterprise level workflow update for all institutions

MX MT message transformation

- Available for MTs for which SWIFT has released transformation rules, initially for FUNDS messages MT5xx
- Enabling legacy host applications to make use of MX ISO20022 messages
- MT -> MX:
 - Convert MT directly from wire to MX using own conversion rules repository.
- MX -> MT:
 - Convert MX directly to MT wire format using own conversion rules repository and message model derived from FIN repository (SWIFT User Handbook)

MX MT message transformation transforming FIN

MT-From-Backend

View Message

Message

[+/-]

MT509 Trade Status Message:

[+/-]

Message Headers:

[+/-]

Basic Header:

Application Identifier:	FIN - financial application(F)
Service Identifier:	FIN/GPA - 01
Logical Terminal(LT) Address:	PTSADESSAXX
Session Number:	0343
Sequence Number:	008668

Application Header:

Input

[+/-]

Destination Address: PTSADESAXXX

PTSADESAXX [INTERCOPE TEST BIC 2 / WINTERHUDE]

Format: BCX(Based On IFX)

Back

MX MT message transformation to MX

setr.016.001.03 - Order Instruction Status Report V03

From: To:

[\[Collapse All\]](#) [\[Expand All\]](#) [\[All Mandatory/Data\]](#)

[\[- | MD\]](#)
setr.016.001.03 - Order Instruction Status Report V03:

[\[- | MD\]](#)
Message Identification:
Identification:
Creation Date Time:

Other Reference

Individual Order Details Report

[\[- | MD\]](#)

Master Reference:
Order Reference:
Client Reference:
Deal Reference:
Cancellation Reference:

Repaired Conditions:

Status Initiator:

BOX for SWIFTNet Customers

- Australia
 - ANZ
- Austria
 - 3 Banken
 - Bank Austria
 - BAWAG
 - Erste Bank
- Croatia
 - ZABA
- Denmark
 - Danske Bank
 - Jyske Bank
- Norway
 - EDB
 - Norske Bank
- Germany
 - Commerzbank
 - Deutsche Bundesbank
 - Finanz-Informatik
 - GAD / WGZ
 - HVB
- Italy
 - BPER
 - Cassa Compensazione
 - CSE
 - Mediosystems
 - Monte Paschi
 - Seceti
 - Unicredito
- USA
 - Bear Stearns (now JPMC)
 - Citi SSB

Prices

- OTC list price
 - 200k € for < 5k messages per day
 - 300k € for < 20k messages per day
 - 400k € for < 50k messages per day
 - 500k € for <100k messages per day
- Discount for early adopters
 - 40 % if signed Q4 2009
 - 30 % if signed Q1 2010
 - 20 % if signed Q2 2010
 - 10 % if signed Q3 2010
- Step 1 : Replace MERVA / first 50 % of OTC list price
- Step 2 : Replace also CBT / second 50 % of OTC list price