



# Analysing the institution's message traffic with the IBM MERVA for ESA traffic reconciliation feature

## Highlights

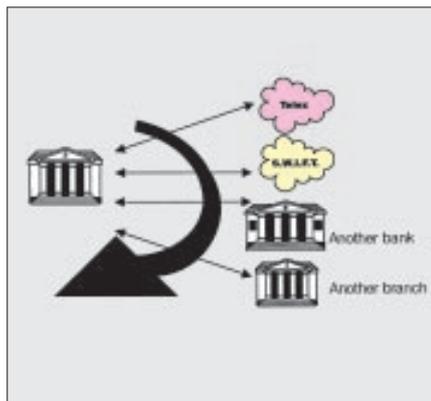
**Today's business environment requires financial institutions to be connected to the external world to enable the constant flow of information. Most of the largest financial institutions use IBM MERVA\* (Message Entry and Routing with Interfaces to Various Applications) to manage the high flow of messages through the S.W.I.F.T., telex, intra-bank, and inter-bank networks. In the past, the focus was mostly to establish reliable communication links. Now that this has been achieved, most of these institutions are moving forward to optimise the message flow and make better use of the valuable information hidden in the large amount of incoming and outgoing financial messages.**

## Reacting to customer needs

To support financial institutions in optimising the message flow, and especially in making more out of the data being transferred, IBM has developed the Traffic Reconciliation Feature. It allows an organisation to:

- Create daily lists of S.W.I.F.T. traffic activity
- Analyse on-line whether S.W.I.F.T./telex messages have been acknowledged or delivered
- Process on-line customer inquiries on messages sent
- Have a standard tool for message post-processing

- Track all the activities executed upon a message from when it was created to when it was transmitted
- Monitor the message exchange with remote MERVA systems
- Generate reports on the message traffic to a specific correspondent.



Monitoring the external traffic flow

## Monitoring the complete message traffic flow

The Traffic Reconciliation Feature provides a set of five event monitors:

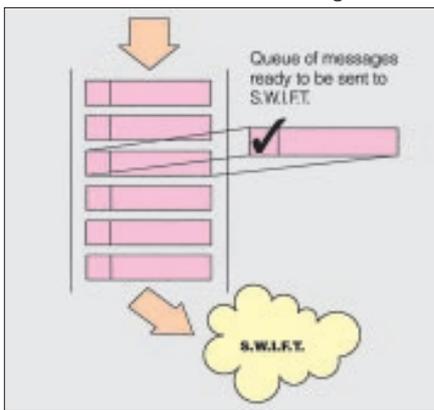
- The S.W.I.F.T. link – all incoming and outgoing messages from/to the S.W.I.F.T. network
- The telex link – all telex messages sent/received
- The MERVA link – all messages exchanged with other MERVA systems through an intra or inter-banking network
- The MERVA queue management – put-off messages into MERVA queues or delete-off messages from such queues
- The MERVA journal – logging of all important and security sensitive events to provide a valuable information source for audit, administrative, and management purposes.

Each of the five event monitors has the capability to intercept and extract data from MERVA and insert that data into a DB2\* table. This whole process is done in real-time mode and in parallel with the operation in MERVA. This provides continuous up-to-date message traffic data.

**Preparing the data for analysis**

The Traffic Reconciliation Feature is highly flexible to adapt to specific user requirements. Firstly, an organisation can decide whether all, or only a subset, of the five event monitors are activated. Secondly, data extraction from the five monitors can be restricted to selected message groups, message categories or specific message types. Similarly, the journal monitor might be restricted to extract only special journal record types. Thirdly, data insertion into the DB2 tables can be limited to only those fields which are important for the specific information requirements of the user.

The customised filtering capability for data extraction and data insertion limits the requirement for further analysis of the data to answer the questions which are important to the individual financial organisation.

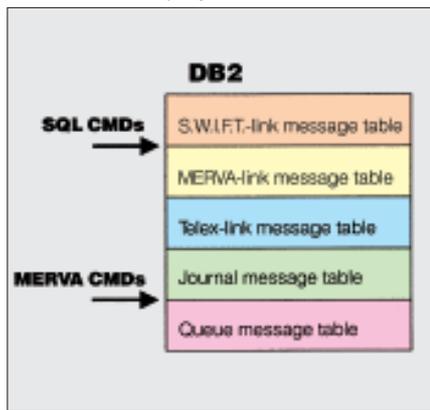


Extracting the relevant data

**Creating reports on the analysed data**

All the information stored on DB2 is accessible using the new MERVA feature. Traffic Reconciliation offers three different ways to access and evaluate the data that has been stored by the event monitors in the DB2 tables:

- Users can easily access the DB2 data by running on-line or batch queries with IBM's Structured Query Language (SQL\*) for DB2
- IBM's Query Management Facility (QMF\*) or any similar product can be used to format the results of the different queries. This environment gives financial institutions a high level of data analysis flexibility for any situations which require specific analysis
- Those users who wish to stay within the MERVA environment are able to access the DB2 data using the MERVA query functions provided by the Traffic Reconciliation Feature. They are integrated into the standard MERVA function selection panel. These imbedded query functions give organisations a level of flexibility and security by restricting access to the traffic analysis data to specific functions and certain employees.

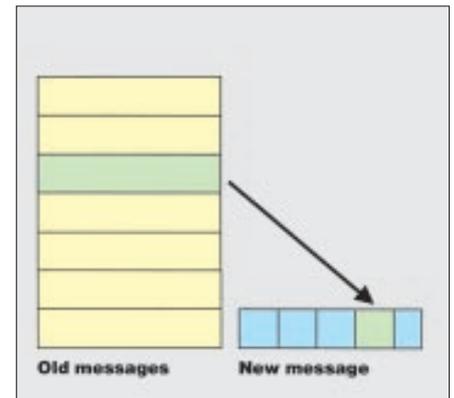


Analysing the relevant data

**Finding messages in the databases**

In addition to creating reports on traffic activity, the Traffic Reconciliation Feature can help an organisation to list messages that meet a certain selection criteria. An organisation can search messages using the transaction reference number (TRN), message user reference (MUR), input sequence number (ISN), output sequence number (OSN), as well as any other field within the messages that are being analysed.

Once the message has been found, the Traffic Reconciliation Feature will insert the message into a new S.W.I.F.T. message with a simple keystroke. This enables cancellation requests, queries and answers to be sent about messages that have been previously sent out or have just been received.



Referencing to old messages

**Describing possible customer scenarios**

When the S.W.I.F.T link is being monitored, users can utilise the Traffic Reconciliation Feature to control the integrity of the message traffic (to avoid messages being sent twice), and obtain business information (for example, a summary of all daily payments to a certain bank) from the consolidated view of the message traffic. The Traffic Reconciliation feature can be configured to monitor all messages being sent to S.W.I.F.T, extract important parts of the message and store them, e.g. by transaction sequence number in a DB2 table.

This process easily identifies S.W.I.F.T. messages that have been sent twice.

In cases when MERVA queues are monitored, users can identify all securities trading messages that have been rejected by a certain person within the financial institution. In this case the Traffic Reconciliation Feature monitors the 'securities trading approval message queue' accessed only by a specific person within the bank. All outgoing messages of that queue (i.e. all approvals and rejections) are analysed to identify only those that have been rejected and routed to a rejection queue.

Once the rejected messages are identified, important parts of the message (name of message originator, date, time, reason for denial) are stored in a DB2 database. With this in place, on-line or batch reporting tools are able to analyse this specific information to better understand how the organisation is performing.

### Helping customers to get started

The MERVA ESA Traffic Reconciliation Feature is delivered together with 52 pre-defined SQL queries and various QMF procedures and formats. This will enable the organisation to quickly start monitoring the complete message processing activity of MERVA. An organisation will receive samples for:

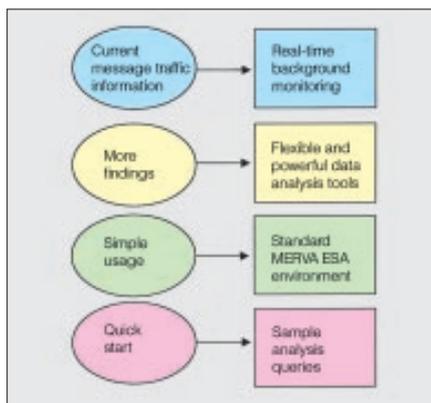
- S.W.I.F.T. message flow reports, e.g. cross references for acknowledgements
- Completeness verifications, e.g. undelivered, missing, duplicated or retrieved messages
- Exception reports, e.g. cancelled, rejected, delayed, not acknowledged or unmatched messages
- Session control reports, e.g. session monitoring, bill control
- Journal reports
- Queue management reports
- Telex message reports.

### Integrating into the user's environment

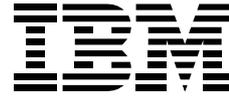
The Traffic Reconciliation Feature enables customers to monitor message processing activities in real-time by delivering on-line query information on the system. Users can obtain immediate information on message traffic to better understand conflicting situations and quickly react to the findings.

After installing the Traffic Reconciliation Feature, there is no interruption to the standard operating environment mainly because this additional feature runs simultaneously with the central MERVA system.

The MERVA ESA Traffic Reconciliation Feature is available for the MVS/CICS and MVS/IMS environment.



Customer benefits



## Further information

For further information about MERVA, IBM's Financial Messaging System, please contact your local IBM representative.

Or visit us at:  
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