



PROSWITCHING MIDDLEWARE



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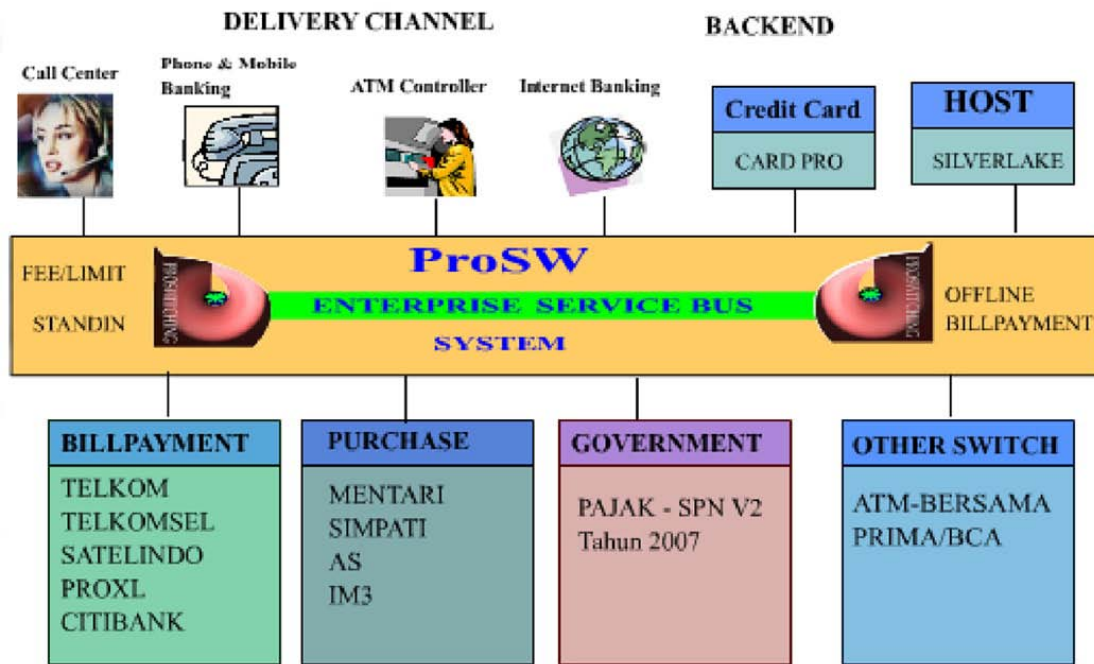
INTRODUCTION

Today, banking industry require a broader range of system and delivery channel to service their customers. Managers are often challenged to provide new delivery channels or new technology to accommodate the new banking need. Many found it is difficult or even imposible to extend their technology for the new system in a short period of time with reasonalbe cost. As a result banks are often lost money and competitive advantages as they have tried using outdated / unmanagable platform.

ProSwitching Middleware (ProSwiching Enterprise Service Bus)

ProSwitching middleware are designed to enable organization/banks to integrate a wide variety of systems, delivery channels without altering the existing infrastructure, and provides a flexible, scalable software solution that seamlessly bridges real-world payment channels and banking system applications with third party connections.

ProSwitching Middleware Solution



ProSwitching manage reliable delivery between systems. ProSwitching has delivered more than 500.000 transactions daily on banking payment system. ProSwitching handle a large number of transaction volume and connetions with high speed throughput, providing extremely efficient and reliable core messages platform for financial institutions.

ProSwitching Middleware Increase Productivity

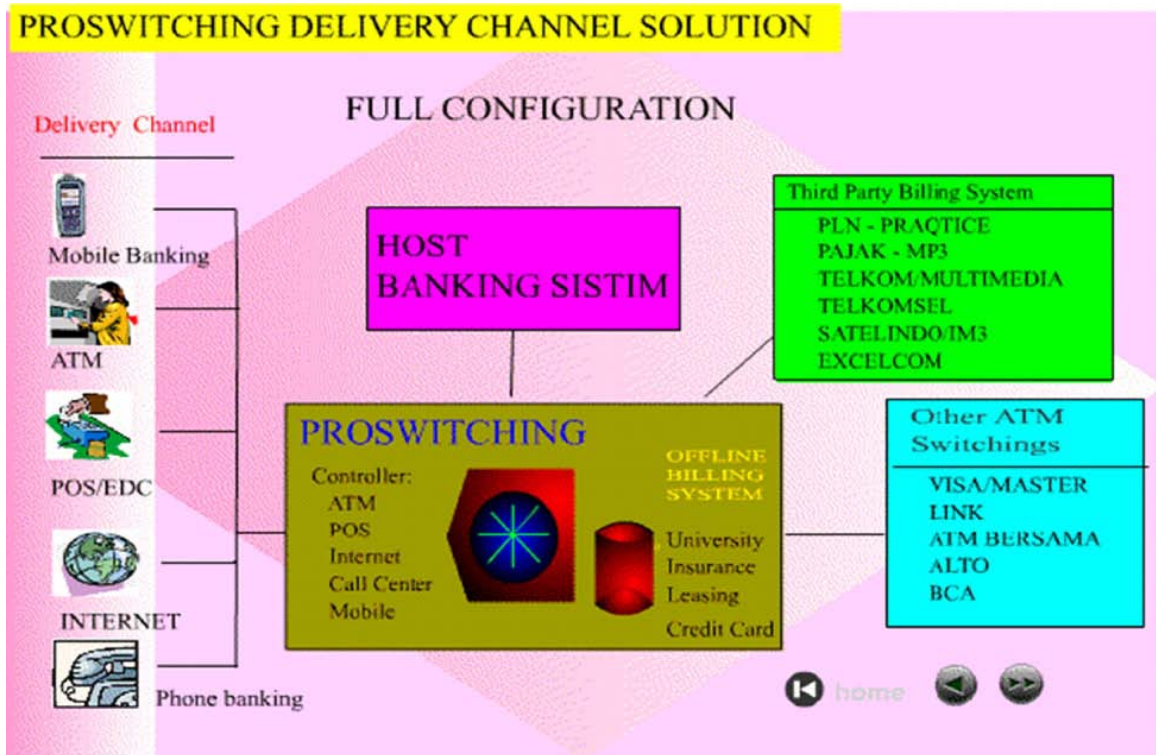
ProSwitching Middleware allow bank to share a common set of payment by all different delivery channels. ProSwitching Middleware is scalable to accommodate growth in transaction volume without interrupting the banking services.





PROSWITCHING PLATFORM

ProSwitching Middleware operate on open platform - UNIX & Linux based high availability servers, using Progress RDBMS as the database engine and 4GL middleware language. ProSwitching offers the customer benefits of rich front office and back office functionality, low cost of ownership, scalability, availability, performance and investment protection.



PRODUCT DESCRIPTION

Network Protocols

Industry standard protocols TCP/IP

ProSwitching Monitoring and Management

ProSwitch Monitor provide complete information on the status of each other host connection or device connection and message status. GUI based workstations allow ProSwitch operators to view summary status of all connection and drill down to enquire on the status of each connection/devices. Operators automatically receive alerts, requiring attention, on the console workstation. Inactivity timers can be defined to allow operators notification of an unexpected drop in transaction activity.

ProSwitch operators can send commands from a console workstation to manage all connection/devices; bring connection into service, take it out of service, download a new configuration file, or perform key exchange.





Limit & Pre Screening

Financial institutions can select pre-screening options at card/account range level. Options can be set to check:

- PIN
- Card Expiration Date
- Account Check Digit
- Limits
- Velocity

Limits can be set as follows:

- Online and offline transactions
- Daily and periodic limits
- Domestic and international originated transactions
- Per Transaction limits

Limits can be set at card product, card range, and card level. If limits are not set at card level it will automatically inherit those set at card range level or product level.

Routing

Routing of transactions to authorization destinations is easily configurable. ProSwitch supports the following methods of routing:

Routing on BIN

Transactions are routed based on the BIN. This is typically used for routing of interchange transactions acquired by ProSwitch . Interchanges can be international payment systems such as VISA, MasterCard or national or regional switches.

- **Routing on Card Range**
Routing parameters can be specified at the card range level. ProSwitch will route the transaction after perform pre-screening checks to the host specified in the routing parameters.
- **Account Based Routing**
ProSwitch supports the linking of multiple accounts to a card. If different account types are stored in different hosts, then ProSwitch can route the transaction using the account number instead of the card.
- **Alternate Path Routing**
ProSwitch can be configured to attempt to send the transaction to be authorized to a different authorization destination in case the primary host is unavailable or the link to it is down. This enables the financial institution deliver superior service to the users of its network.





- Issuer Transaction Routing (when link to other Net established)
ProSwitch will use the above pre-screening, authorization methods, authorization levels and routing methods in case of transactions of the financial institutions that are acquired by other bank networks.

Reversals

ProSwitch can be configured to generate reversals if the host or the link to it is unavailable or the transaction timed out in the course of being processed at the host. As per the ISO 8583:1993 protocol, which is implemented in the product, when authorizing a transaction in cases where the host is unavailable, ProSwitch will generate a reversal before generating a SAF transaction. This is done to ensure that the host processes possible duplicate messages correctly. In situations where the transaction is approved by the host but is unable to be delivered to the destination, ProSwitch will generate a reversal and send it to the host, via SAF, for guaranteed delivery.

Interfaces

Host Interface

ProSwitch supports ISO 8583:1993 and ISO 8583:1987 based interface to hosts. It also supports interfaces to CardPack, Silverlake (abcs) host using their proprietary message formats.

Interchanges (Optional)

ProSwitch supports to ATM-BERSAMA, LINK, BCA, ALTO, VISA Plus, VISA Electron, MasterCard Cirrus, MasterCard Banknet, MasterCard Maestro, Amex International, and, variety of ISO 8583 based networks. Both online and batch interfaces are supported.

Transaction and Access Security

Transaction Security

ProSwitch supports transaction security via both hardware and software. Hardware security boxes supports RACAL HSM.

Access Security

ProSwitch allows financial institutions to establish individual user access restrictions for each user of the application. The access security facility defines what modules and functions each user can access. Each access is authenticated and changes made by the user are audited.

Cardholder and Account Balance Update

ProSwitch provides interfaces to update the cardholder and account information. In case of account balances, ProSwitch provides full-file, incremental file batch facility to update the balances and an online update upon acknowledgement facility to keep the account balance in sync with the host.





Reports

ProSwitch module is extremely flexible in its support for reports. Reports can be generated to meet the requirements of the financial institution.

A sample of the reports generated at business day cutover is as follows:

- Daily exception transaction details, by transaction type
- Daily reversal transaction details, by transaction type
- Daily Host/Branch wise transaction details, by transaction type
- Daily summary of transactions
- Daily Interchange-wise, successful transaction details, by acquirer and issuer
- Monthly summary of successful transactions
- Report detailing master records modified by authorized users.

Translation/Transformation Support

ProSwitch allows multi-bank networks to be hosted on a single server or cluster of servers. ATMs, cardholder data, account information pertaining to multiple banks can be managed within single instance of ProSwitch. Transactions performed by cardholders will be processed as per the business rules applicable to each bank and routed to the particular bank's host for authorization. Reconciliation and settlement and reporting will be performed per other system wise.

Reconciliation and Settlement

ProSwitch also provides facility to generate files for use in reconciliation and settlement with the various hosts. It fully supports requirements of VISA, MasterCard, and Amex for settlement including outgoing file generation, incoming file processing and chargebacks.

FEATURES SUMMARY:

- HIGH VOLUME TRANSACTION SUPPORTS
- MODULAR ARCHITECTURE
- MULTI Q ARCHITECTURE
- MULTI TIER ARCHITECTURE
- MULTI APPROVAL SUPPORT
- FLEXIBLE
- SCALABLE HARDWARE
- LOCAL PRODUCT
- 24 HOUR SUPPORT

REFERENCES: BANK BRI, BANK MEGA, ASTRA, BAPERTARUM, etc

