



INETCO® Solutions for ATM Cash Dispute Resolution

The Challenge

Many financial institutions (FIs) spend countless hours searching through bank records in different systems to conduct ATM cash dispute investigations. Resolution of these complaints in a way that meets growing customer demands for expediency is reliant on making **exception management** and system-to-system **transaction reconciliation** processes efficient — across multiple ATM devices, hosts, switches and back-end accounting systems.

Any issues and time lags collecting data off the end-to-end ATM network path will have a direct impact on an FI's ability to identify exceptions or match transactions between systems in a time frame that meets customer expectations. But increasingly sophisticated ATM networks have resulted in more diverse data formats and data sources than ever before. As a result, FIs are often dealing with:

- **Inconsistent ATM electronic journal data gathered across fleets of multi-vendor ATMs**
- **Partial transaction records and incomplete reconciliation due to unstructured- and substandard- data quality**
- **Longer investigations into each disputed transaction due to high volume scalability issues**
- **Human errors introduced when manually combing through data and log files**
- **Reactive investigation of ATM transaction disputes vs. proactive identification of exceptions**

INETCO solutions help you resolve ATM cash disputes in a timely, cost-effective manner:

- Collect and consolidate underlying transaction data across the end-to-end transaction path for faster data matching and reconciliation
- Speed up exception management with real-time transaction alerts and ATM cash handler dispense errors
- Combine transaction data feeds and file based data sources to replace data sources that are harder to access, such as multi-vendor ATM Electronic Journals

The emerging challenge is how to access and reconcile increasing volumes of data generated from multi-vendor ATM electronic journals, switch logs, third party service provider reports and core banking files in a timely, cost effective manner.

The Solution

INETCO's real-time transaction monitoring, analytics and data feed solutions greatly improve the data quality and efficiency of exception management and system-to-system transaction reconciliation processes — especially for those FIs conducting manual, labor-intensive ATM cash dispute resolution. Individual transactions are continuously captured from the network, providing FIs with easy, immediate access to rich transaction intelligence consolidated across all components of the end-to-end transaction chain.

By moving from a manual to automated data gathering process, FIs can meet customer expectations for expedient ATM cash dispute resolution. Real-time visibility into transaction data helps to quickly confirm whether ATM transaction disputes are valid, and easily identify the root-cause of any transaction completion issues — whether they are due to network, application, third party service, device or host communication errors.

A Reliable Transaction Data Feed for Reconciliation Platforms of Choice

INETCO's transaction data feed eliminates the dependency on data sets that are tougher, more costly or manual to get at - such as multiple ATM electronic journals. Real-time transaction data is broken down to the lowest level of granularity — underlying transaction message fields. This enables you to enhance existing reconciliation and cash management applications by feeding them with the transaction data of choice, such as ATM IDs, cash-in-transit depot codes, errors, ATM locations, cash types (denominations) and ATM balances. Customized data feeds can be set up to feed these applications at the pace you require — from the moment data is captured or on a set schedule.

Performing Reconciliation within INETCO Solutions

Another alternative is to perform exception management and transaction reconciliation tasks directly within INETCO solutions. By capturing transaction data in real-time and keeping count of errors, cash levels, bills dispensed and replenishment events, FIs can utilize INETCO solutions to automatically reconcile information across the ATM, terminal handler and back-end hosts to provide an end-to-end view of closing balances.

You can also combine real-time transaction data with trusted, file based data sources, including:

- **ATM transaction information**
- **Financial switch transaction information**
- **Core Banking System transaction information**
- **Card Management System transaction information**
- **Electronic Journals (from different ATM, ADM, VTM brands and models) and ATM Balancing reports**
- **Interbank mismatch reports**
- **Accounting records**

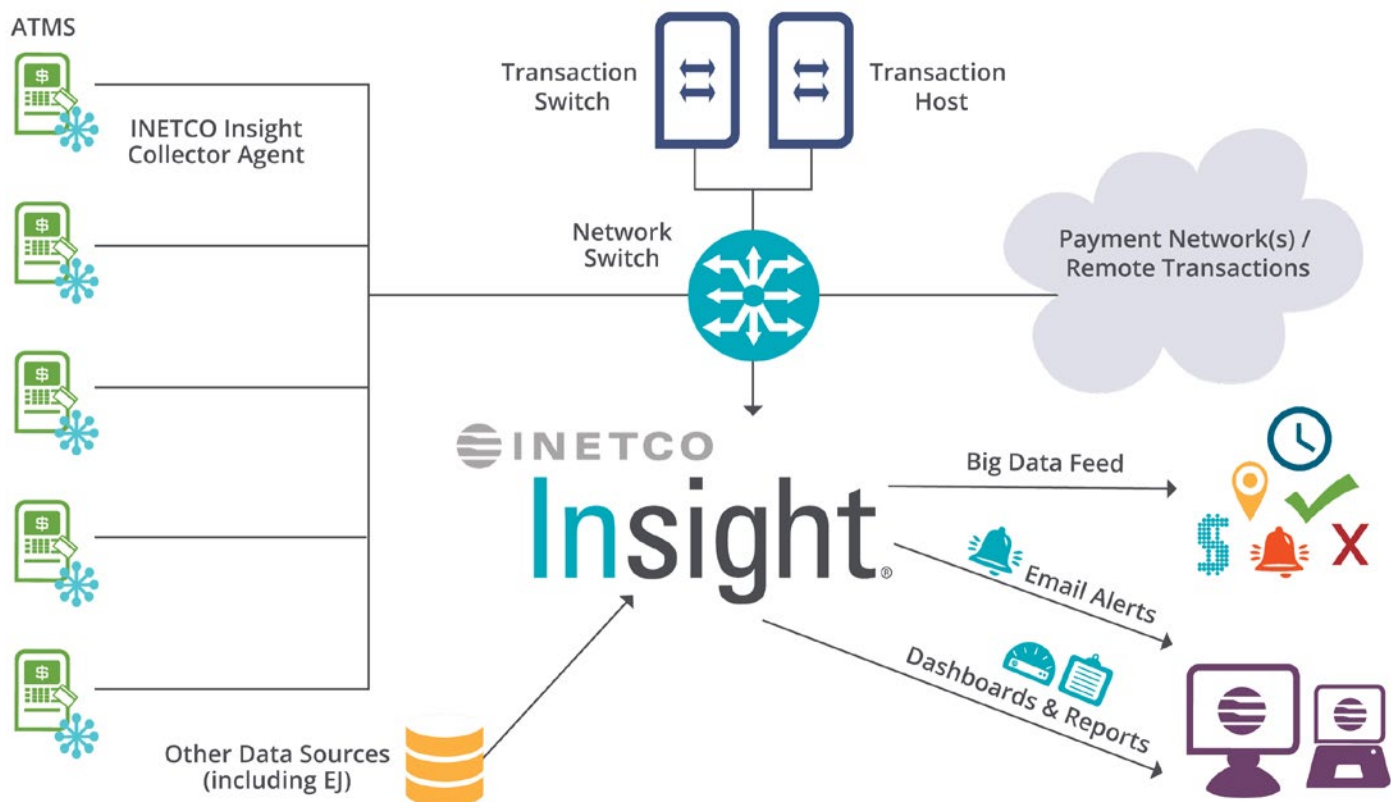


DIAGRAM 1: INETCO Architecture — ATM Reconciliation

Customized, Real-time Alerting Capabilities for Exception Management

INETCO's real-time alerts can be customized based on a wide variety of transaction message fields, solicited and unsolicited messages. This includes transactions under dispute and ATM cash handler dispense errors, such as:

- **Short Dispense**
- **No Notes Dispensed**
- **Unknown Notes Dispensed**
- **Notes Retracted After Timeout**
- **Card Not Ejected**

Visibility into these errors can be used to provide an early warning system for the dispute resolution process. Configurable rules trigger real-time alerts to proactively notify FI personnel of any potential ATM transaction discrepancies. By doing so, these discrepancies can be investigated before a customer even reports them.

On-Demand Analysis

With a comprehensive real-time view into ATM transactions and messages, INETCO solutions can calculate individual ATM cash levels based on withdrawals and replenishment events. Comparing electronic journal data with cash levels and errors picked up from in-flight ATM transactions, FIs can perform near real-time reconciliation of transactions and errors associated with cash dispensing. Flexible, on-demand dashboards and reports provide visualization into transactions under dispute and quickly highlight those eligible for transaction reversals.

Transaction Summaries					Message Timings	
Business Unit	Name	Category	Status	Start Time	Duration	
Reversal		NDC+		Jul 19 22:28:40.246	0.800 sec	
Link Messages		NDC+	Normal	Jul 19 22:28:40.246	0.800 sec	
	NDC+ Unsolicited	NDC+		Jul 19 22:28:40.246		
	TCP ACK			Jul 19 22:28:40.246		

Summary		Network Type	
Msg Type	NDC+	Network Type	TCP
Cassette 1 Bills Dispensed	00	Cassette 1 Error Severity	No Error
Cassette 1 Supplies Status	Sufficient Notes	Cassette 2 Bills Dispensed	00
Cassette 2 Error Severity	No Error	Cassette 2 Supplies Status	Unchanged or Unknown Status
Cassette 3 Bills Dispensed	00	Cassette 3 Error Severity	No Error
Cassette 3 Supplies Status	Unchanged or Unknown Status	Cassette 4 Bills Dispensed	00
Cassette 4 Error Severity	No Error	Cassette 4 Supplies Status	Out of Notes
Cassette 4 Supplies Status	Unchanged or Unknown Status	Device Fault Reason	No error
Device Error Severity	No Error	Device Name	Cash Handler
Device ID Graphic	E	Device Status Meaning	Notes Retracted After Timeout
Device Status	309000000	Error Severity	00000
Diagnostic Status	00	Message Format	NDC+ Unsolicited Status
Link ID	ATM-Bus24	Msg Class	1
Message Tabiset	NDC	Reject Bin Supplies Status	Sufficient Notes
Msg Sub Class	2	Terminal Id	600
Supplies Status	11003		

Data Frame Type	Ndc	Transport Protocol	None
Destination IP Address	10.28.97.22	Link Name	ATM-Bus24
Source IP Address	10.80.78.284	Destination TCP Port	5008
Source TCP Port	5001	TCP Ack Number	1360242660
TCP Chk/Bits/ACK	1	TCP Chk/Bits/Psh	1
TCP Sequence Number	294169728	TCP Window	253

SCREENSHOT 1: This “unsolicited status” message was sent by the ATM after a customer completed a withdrawal transaction, but did not take the cash. The Delivery Status Meaning field shows “Notes Retracted After Timeout”. INETCO Insight classifies this as a transaction reversal.

Transaction Reversal

Based on the results of transaction dispute investigations, FIs benefit from the ability to quickly generate a file with a list of eligible transactions for initiating the transaction reversal process. The process minimizes manual communication and coordination between multiple investigation and adjustment teams.

The Conclusion

INETCO solutions for ATM cash dispute resolution provide a uniquely comprehensive end-to-end view of real-time ATM transactions. Through the automation of end-to-end transaction data collection, FIs have the opportunity to greatly improve the data quality and efficiency of exception management and system-to-system transaction reconciliation processes related to ATM cash dispute investigations. INETCO solutions also help you speed up exception management by providing real-time transaction discrepancy alerts and highlighting eligible transactions for initiating the transaction reversal process.

Whether you are interested in a transaction data feed for your existing applications, or choose to use INETCO solutions as your reconciliation platform of choice, there is no longer a need to have a transaction reconciliation process that is reliant on data sets that are tougher, more costly or manual to get at.

To learn more about INETCO solutions, visit www.inetco.com or email sales@inetco.com